City of Santa Rosa
CALIFORNIA



Santa Rosa General Plan 2050

Draft Environmental Impact Report

SCH: 2023020166 | October 2024

PLACEWORKS


City of
Santa Rosa
CALIFORNIA

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October 2024

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1. Introduction

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14 of the California Code of Regulations, Section 15378(a), the proposed Santa Rosa General Plan 2050 (also known as Santa Rosa Forward), along with the associated Specific Plan and Santa Rosa City Code (SRCC) amendments, and Community-wide Greenhouse Gas Reduction Strategy (GHG Reduction Strategy) is considered a "project" subject to environmental review. The implementation of these plans is "an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment." This Draft Environmental Impact Report (EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the proposed Santa Rosa General Plan 2050, associated Specific Plan and SRCC amendments, and GHG Reduction Strategy, herein referred to together or separately as the "proposed project."

This Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce significant impacts. This Draft EIR compares the development of the proposed project with the existing baseline condition, described in detail in Chapter 4.0, *Environmental Analysis*, of this Draft EIR. The City of Santa Rosa (City) is the lead agency for the proposed project. This assessment is intended to inform the City's decision makers, other responsible agencies, and the public of the nature of the proposed project and its effect on the environment.

1.1 PROPOSED ACTION

If approved by the Santa Rosa City Council, the proposed project would replace the City's existing General Plan, which was last comprehensively updated in 2009 and has a buildout horizon of 2035. The proposed project is intended to guide development and conservation in the city. The proposed General Plan 2050 would build off the current General Plan 2035 and provide a direct framework for the upcoming changes in Santa Rosa and the expected growth in the coming decades; as well as land use, transportation, and conservation decisions through the horizon year of 2050. Because California Government Code Section 65860 requires the city's Specific Plans and Zoning Code to be consistent with its General Plan, the proposed project would also introduce amendments to the maps in the North Station Area Specific Plan and Downtown Station Area Specific Plan, as well as new zoning provisions including zoning map revisions on certain parcels throughout the city to ensure that the Specific Plans and Zoning Code conforms to the proposed General Plan 2050. Lastly, the proposed project would replace the City's existing Climate Action Plan, which was adopted in 2012, with a GHG Reduction Strategy that would serve as the City's strategic plan to reduce community-wide GHG emissions through 2045 and beyond.

The environmental analysis in this Draft EIR assumes that the adoption and implementation of the proposed project would result in up to 24,090 new housing units, 65,766 new residents, and 14,091 new jobs by 2050. See Chapter 3, *Project Description*, of this Draft EIR for additional details on the proposed project. See Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR for a comparison of the current General Plan 2035 (No Project) and the proposed General Plan 2050.

1.2 EIR SCOPE

This EIR is a program EIR that analyzes the adoption and implementation of the proposed project. This is in contrast to a project-level EIR, which is used to identify and analyze the potential impacts of site-specific construction and operation. CEQA[1] and the CEQA Guidelines[2] allow the lead agencies to prepare a number of types of EIRs. Different types of EIRs are used for varying situations and intended uses. CEQA Guidelines Section 15168 states that program EIRs are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.

In this case, the proposed project that is the subject of this EIR consists of long-term plans and a set of regulatory changes that would be implemented over time as policy documents and regulations guiding future development activities and City actions. No specific development projects are proposed as part of the proposed project. Therefore, this EIR is a program-level EIR that analyzes the potential environmental effects of the adoption and implementation of the proposed project. As a program EIR, it does not evaluate the impacts of individual projects that may be proposed in the future under the proposed project. However, if the program EIR addresses the program's effects as specifically and comprehensively as is reasonably possible, and later activities are within the scope of the effects examined in the program EIR, then additional environmental review may not be required for those future projects.[3]

When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into the subsequent activities (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR, unless the activity qualifies for an exemption. For these subsequent environmental review documents, this program EIR will serve as the first-tier environmental analysis. The program EIR can also serve to streamline future environmental review of subsequent projects.

[1] The CEQA Statute is found at Public Resources Code, Division 13, *Environmental Quality*, Sections 21000 to 21189.

[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, *Natural Resources*, Division 6, *Resources Agency*, Chapter 3, *Guidelines for Implementation of the California Environmental Quality Act*, Sections 15000 to 15387.

[3] CEQA Guidelines Section 15168(c) and CEQA streamlining provisions.

1.3 ENVIRONMENTAL REVIEW PROCESS

1.3.1 DRAFT EIR

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City determined that the proposed project could result in potentially significant environmental impacts and that a program EIR would be required. In compliance with CEQA Section 21080.4, the City circulated a Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Planning and Research State Clearinghouse and interested agencies and persons on February 7, 2023, for a 30-day review period. A public Scoping Meeting was held virtually on Monday, February 27, 2023, at 5:30 p.m. The NOP and scoping process solicited comments from responsible and trustee agencies, as well as interested parties regarding the scope of the environmental analysis to be conducted in the Draft EIR. Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR contains the NOP as well as the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period starting Monday, October 7, 2024, and ending Wednesday, November 20, 2024. The Planning Commission will conduct a public hearing during this period to receive comments on the Draft EIR. During the comment period, the public is invited to submit written comments via mail or email on the Draft EIR to the City of Santa Rosa Planning and Economic Development Department by 5:00 p.m. on Wednesday, November 20, 2024. Comments may also be hand-delivered to the Planning and Economic Development Department, Room 3, by this deadline.

Written comments should be submitted to Amy Nicholson to the address or email below with "*Santa Rosa General Plan 2050 EIR"* as the subject.

Mail: Amy Nicholson, Supervising Planner- Advance Planning
Planning & Economic Development Department
City of Santa Rosa
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

Email: anicholson@srcity.org

1.3.2 FINAL EIR

After completion of the 45-day review period for the Draft EIR, the City will review all written comments received and prepare written responses to each comment on the adequacy of the Draft EIR. A Final EIR will then be prepared, which contains all of the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. The Final EIR will then be presented to the Planning Commission where a public hearing will allow for public comment on the Final EIR and to consider recommendation for certification of the Final EIR. Following the public hearing, the Final EIR will be presented to the City Council for consideration of the certification as the environmental document for the proposed project. All persons who commented on the Draft EIR and provided contact information will

be notified of the availability of the Final EIR and the date of the public hearing, which is tentatively scheduled to be held in early 2025.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certification of the EIR. The City Council will make findings regarding the extent and nature of the impacts as presented in the Final EIR. The Final EIR will need to be certified as having been prepared in compliance with CEQA by the City prior to deciding to approve or deny the proposed project. Public input is encouraged at all public hearings before the City.

If the City Council certifies the EIR, it may then consider action on the proposed project. If approved, the City Council would adopt and incorporate into the project all feasible mitigation measures identified in the EIR and may also require other feasible mitigation measures.

In some cases, the City Council may find that certain mitigation measures are outside the jurisdiction of the City to implement, or that no feasible mitigation measures have been identified for a given significant impact. In that case, the City Council, pursuant to CEQA Guidelines Section 15093, may nonetheless determine that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

1.3.3 MITIGATION MONITORING

CEQA Section 21081.6 requires that the lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for any project for which it has made findings pursuant to CEQA Section 21081 or adopted a Negative Declaration pursuant to CEQA Section 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. If mitigation measures are required, the MMRP for the proposed project will be completed congruently as part of the Final EIR process.

1.4 USE OF THE GENERAL PLAN EIR

1.4.1 TIERING PROCESS

CEQA includes several provisions to streamline the environmental review of qualified projects based on several factors. These include where environmental review has already occurred (e.g., a program-level EIR), which could apply to future development in the EIR Study Area.

The CEQA concept of “tiering” refers to the evaluation of general environmental matters in a broad program-level EIR, with subsequent focused environmental documents for individual projects. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the program EIR and by incorporating those analyses by reference.

CEQA Guidelines Section 15168(d) provides for simplifying the preparation of environmental documents by incorporating by reference analyses and discussions. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]).

By tiering from the program EIR, the environmental analysis for a future project would rely on the program EIR for the following:

- A discussion of general background and setting information for environmental topic areas;
- Overall growth-related issues;
- Issues that were evaluated in sufficient detail in the program EIR for which there is no significant new information or change in circumstances that would require further analysis;
- Assessment of cumulative impacts; and
- Mitigation measures adopted and incorporated into the proposed project.

1.4.1.1 BASE RESOURCE FOR GENERAL PLAN IMPLEMENTATION AND REVIEW OF FUTURE DEVELOPMENT PROJECTS

As a program EIR, this document and the mitigation measures presented herein, will be used as a guide for implementing the proposed General Plan 2050 goals, policies, and actions, as well as adopting changes in City codes, regulations, and practices. This program EIR will also be used as a base resource for reviewing future development projects. This document will assist in guiding the assessment of projects and provide environmental review tiering, where appropriate. Currently, the City completes the following steps in reviewing development projects, which will be carried forward under the proposed General Plan 2050 if adopted.

- Project Consistency with the General Plan and City Codes. When a new development project is filed with the City, it is reviewed for completeness and consistency with the General Plan 2050 goals, policies, and actions, and City codes and practices. Because City policies, actions, and codes, presented in this program EIR will minimize impacts, development projects will implement these measures to: (a) mitigate environmental impacts and (b) achieve consistency with the General Plan 2050 and compliance with City codes.
- Projects Subject to Environmental Review. For future development projects subject to environmental review, the resources contained in this EIR and carried forward in the General Plan 2050 will guide the scope of this review. For project-level environmental review, many of the topic areas studied in this program EIR will adequately cover and provide environmental clearance for the project. However, the preparation of site-specific studies and reports may be necessary based on the location and nature of the development project. The resources presented in this program EIR will assist in determining when and where a special, site-specific study is warranted. The City will develop a checklist that will be used as a guide for determining the scope of environmental analysis required for subsequent projects.
- Projects Exempt from Environmental Review. CEQA includes a long list of environmental review exemptions. Some of the future development projects may be exempt from environmental review as the project impacts will be adequately covered by this program EIR. However, many of the CEQA exemptions require compliance with specific criteria for the development project to qualify for the

exemption. The resources contained in this EIR and carried forward in General Plan 2050 will be used to determine if the CEQA-prescribed criteria have been met to qualify for the exemption. One example of a CEQA exemption is for projects that are infill development and consistent with the General Plan land use designation and zoning district. CEQA provides for these types of projects to conduct streamlined review under CEQA Guidelines Section 15332 and CEQA Guidelines Section 15138.3 where the project meets certain criteria.

2. Executive Summary

This chapter presents an overview of the proposed Santa Rosa General Plan 2050 (also known as Santa Rosa Forward), along with the associated Specific Plan and Santa Rosa City Code amendments, and Community-wide Greenhouse Gas Reduction Strategy (GHG Reduction Strategy) herein referred to together or separately as the "proposed project." This chapter also provides a summary of the alternatives to the proposed project, identifies issues to be resolved, areas of controversy, and conclusions of the analyses contained in Chapters 4.1 through 4.18 of this Draft Environmental Impact Report (EIR). For a complete description of the proposed project, see Chapter 3, *Project Description*, of this Draft EIR. For a discussion of alternatives to the proposed project, see Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR.

This Draft EIR addresses the environmental effects associated with adoption and implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and State governmental agency decision makers with an analysis of potential environmental consequences to support informed decision making.

This Draft EIR has been prepared pursuant to the requirements of CEQA[1] and the CEQA Guidelines[2] to determine if approval of the identified discretionary actions and related subsequent development could have a significant physical impact on the environment. As lead agency, the City of Santa Rosa (City) has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical reports. Information for this Draft EIR was obtained from on-site field observations; discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, cultural resources, biological resources, greenhouse gas emissions, noise, transportation, tribal cultural resources, and utilities and service systems).

[1] The CEQA Statute is found at Public Resources Code, Division 13, *Environmental Quality*, Sections 21000 to 21189.

[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, *Natural Resources*, Division 6, *Resources Agency*, Chapter 3, *Guidelines for Implementation of the California Environmental Quality Act*, Sections 15000 to 15387.

2.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with implementation of the proposed project. The main objectives of this document, as established by CEQA, are:

- To disclose to decision makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statute and CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations[3] if the proposed project would result in significant and unavoidable impacts.

2.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- Chapter 1, *Introduction*. Provides an overview describing the Draft EIR.
- Chapter 2, *Executive Summary*. Summarizes environmental consequences that would result from implementation of the proposed project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- Chapter 3, *Project Description*. Describes the proposed project in detail, including the characteristics, objectives, and the structural and technical elements of the proposed action.
- Chapter 4, *Environmental Analysis*. Organized into Chapters 4.1 through 4.18 corresponding to the environmental resource categories identified in CEQA Guidelines Appendix G, *Environmental Checklist*, these chapters provide a description of the physical environmental conditions in the vicinity of the

[3] CEQA Guidelines Section 15093.

proposed project as they existed at the time the Notice of Preparation was published, from both a local and regional perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the proposed project, and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each chapter provides baseline physical conditions, which provides a context that the lead agency uses to determine the significance of environmental impacts resulting from the proposed project. Each chapter also includes a description of the thresholds used to determine if a significant impact would occur, the methodology to identify and evaluate the potential impacts of the proposed project, and the potential cumulative impacts associated with the proposed project.

- Chapter 5, *Alternatives to the Proposed Project*. Considers alternatives to the proposed project, including the CEQA-required "No Project Alternative" and "Environmentally Superior Alternative."
- Chapter 6, *CEQA-Required Conclusions*. Discusses growth inducement, unavoidable significant effects, and significant irreversible changes as a result of the proposed project.
- Chapter 7, *Organizations and Persons Consulted*. Lists the people and organizations that were contacted during the preparation of this EIR for the proposed project.
- Chapter 8, *Acronyms and Abbreviations*. Lists the common acronyms and abbreviations in this Draft EIR.
- Appendices: The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation and Scoping Comments
  - Appendix B: Air Quality and Greenhouse Gas Emissions Data
  - Appendix C: 2020 VMT Guidelines
  - Appendix D: Water Supply Assessment

2.1.2 TYPE AND PURPOSE OF THIS EIR

According to CEQA Guidelines Section 15121(a), the purpose of an EIR is to inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses. Because of the long-term planning horizon of the proposed project and the permitting, planning, and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this EIR has been prepared as a program EIR for the proposed project, pursuant to CEQA Guidelines Section 15168.

Once a program EIR has been certified, subsequent activities within the program must be evaluated to determine whether additional CEQA review needs to be prepared. However, if the program EIR addresses the program's effects as specifically and comprehensively as possible, subsequent activities could be found to be within the program EIR scope, and additional environmental review may not be required (CEQA Guidelines Section 15168[c]). When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into

the subsequent actions (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects that are not within the scope of a program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR. For these subsequent environmental review documents, this Program EIR will serve as the first-tier environmental analysis.

2.2 SUMMARY OF PROPOSED PROJECT

The proposed project would replace the City's existing General Plan with an updated General Plan. The existing General Plan was prepared in 2009 and included a horizon year of 2035. While this horizon year is still approximately 11 years away, in the years between 2009 and 2022, Santa Rosa has experienced low housing production and increased homelessness, the destruction of housing and displacement of residents by the Tubbs fire, the impact of cannabis business activity on industrial and commercial land, and the annexation of the Roseland community into the city limit. A number of State and federal laws guiding General Plan policies have also been updated during this time. As such, there is a need to take stock of the existing situation and plan for sustainable development in line with a vision. The proposed General Plan 2050 focuses on meeting current community requirements and future needs.

The City determined that the current General Plan 2035 provided a good foundation for General Plan 2050. The current General Plan 2035 included a comprehensive review process, resulting in a broad range of community goals and policies. Many of the community issues vetted in the current General Plan 2035 are still relevant, well addressed, and do not require major change. Therefore, the approach to the proposed General Plan 2050 is not a comprehensive update, rather, it builds off of the current General Plan 2035 by incorporating the topics that are now required by State mandate and revises relevant policies and programs to meet those requirements. It also incorporates regional forecasts for 2050, thus moving the planning horizon forward by 15 years from the 2035 horizon year of the current General Plan. Because California Government Code Section 65860 requires the city's Specific Plans and Zoning Code to be consistent with its General Plan, the proposed project would also amend the maps in the North Station Area Specific Plan and Downtown Station Area Specific Plan, as well as SRCC Code. The proposed project would also replace the City's existing 2012 Climate Action Plan with a GHG Reduction to reduce community-wide GHG emissions through 2045 and beyond. Chapter 3, *Project Description*, of this Draft EIR includes a detailed description of the proposed project.

2.3 SUMMARY OF PROJECT ALTERNATIVES

This Draft EIR analyzes alternatives to the proposed project that are designed to reduce the significant environmental impacts of the proposed project and feasibly attain most of the proposed project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the City. The following alternatives to the proposed project were considered and analyzed in detail:

- Alternative A: No Project (Current General Plan). Consistent with CEQA Guidelines Section 15126.6(e)(2), Alternative A presents the No Project scenario. Accordingly, under this alternative, the proposed project would not be adopted or implemented, and further development in the city would continue to be subject to existing policies, regulations, development standards, and land use designations under the existing General Plan 2035, existing Zoning districts, and a new GHG Reduction Strategy would not be implemented.
- Alternative B: Increased Density Alternative. Alternative B, like the proposed project, would focus future commercial and residential growth in Priority Development Areas (PDA) and/or Transit Priority Areas (TPA) and in Areas of Change that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities. Alternative B assumes the same number of households, residential units, population, and jobs would occur as under the proposed project, but would allow for more opportunity for dense housing connected to transit facilities. Alternative B presumes the same General Plan land use designations as the proposed project, except that the parcels designated as Medium Low density residential in Areas of Change that are in or adjacent to PDAs and/or TPAs would be redesignated as Medium High density residential.

Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR includes a complete discussion of these alternatives. As discussed in Chapter 5, Alternative B is the Environmentally Superior Alternative pursuant to CEQA Guidelines Section 15126.6.

2.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the City of Santa Rosa, as lead agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the proposed project.
- Whether the benefits of the proposed project override those environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.
- Whether the proposed land use changes are compatible with the character of the existing area.
- Whether the identified goals, policies, or mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the proposed project besides those mitigation measures identified in the Draft EIR.
- Whether there are any alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

2.5 AREAS OF CONTROVERSY

The City issued a Notice of Preparation (NOP) on February 7, 2023. The CEQA-mandated scoping period for this EIR was between February 7, 2023, and March 8, 2023, during which time interested agencies and the public could submit comments about the potential environmental impacts of the proposed project.

During this time, the City received comment letters from a variety of State and local agencies as well as several organizations and members of the public. Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR contains the NOP as well as the comments received by the City in response to the NOP.

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. Though every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive, but rather attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Protection of biological resources
- Adequacy of existing water supply and increased water demand
- Annexation of land into the city limit
- Protection from radiofrequency radiation

2.6 SUMMARY OF SIGNIFICANT IMPACTS

Table 2-1, *Summary of Significant Impacts and Mitigating Policies and Actions,* summarizes the conclusions of the environmental analysis in this Draft EIR and presents a summary of the identified significant impacts and the proposed mitigating General Plan 2050 policies and actions.[4] These proposed policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied. Please see Chapter 4.0, *Environmental Analysis*, of this Draft EIR for further discussion of the proposed mitigating General Plan 2050 policies and actions.

As summarized in Table 2-1, and as required by CEQA, some impacts remain significant and unavoidable after implementation of the proposed mitigating General Plan 2050 policies and actions. Table 2-1 is organized to correspond with the environmental issues in Chapters 4.1 through 4.18 of this Draft EIR. Table 2-1 is arranged in three columns: (1) impact, (2) proposed mitigating General Plan 2050 policies and actions, and (3) significance with proposed mitigating policies and actions. All environmental topics not listed in this table were found to have less-than-significant impacts without mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.18 of this Draft EIR.

[4] Public Resources Code Section 21081.6(b) and CEQA Guidelines Section 15126.4(a)(2) establish that when a project examined in an EIR is a plan (such as a General Plan), policy, regulation, or other public project, mitigation measures may be incorporated into the plan, policy, regulation, or project design. Therefore, as this is a General Plan EIR, some policies and actions in the proposed General Plan 2050 are also required as means to mitigate environmental impacts under CEQA.

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
AGRICULTURAL RESOURCES (AG)		
Impact AG-1: Implementation of the proposed project could result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland land (together referred to as "CEQA Important Farmland") to non-agricultural land uses.	**Mitigation Measures Considered.** In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of the project it carries out or approves whenever it is feasible to do so."[5] The term "feasible" is defined in CEQA to mean, "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."[6] CEQA Guidelines Section 15370 defines "mitigation" as: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments. The following is a brief discussion of the mitigation measures considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses and their infeasibility. However, as shown, no feasible mitigation measures are available that would reduce the agricultural resource impact to less-than-significant levels. ▪ **Replacement of Agricultural Resources.** This measure would replace the existing agricultural use with the same use on other property that is not currently used for agriculture. From a statewide perspective, the replacement of farmland means that there will be no net loss of farmland in the state. However, CEQA Important Farmland would still be developed. There is limited undeveloped land in the EIR Study Area that is not currently designated as agricultural, restricting the amount of agricultural land that would be able to be replaced elsewhere in the area, and thus conversion of these lands would be insufficient to achieve no net loss. Moreover, even if adequate land could be identified to achieve no net loss, the challenges of creating the soil, irrigation, climatic, and economic conditions that are required for productive farmland (i.e., that achieve the same CEQA Important Farmland status) are significant, and there would be no guarantee that replacement land could be successfully farmed. In addition, replacing existing undeveloped areas with active agriculture could trigger a range of negative environmental impacts, including increased groundwater consumption, habitat destruction, erosion, air quality impacts, and herbicide and pesticide application. As such, the replacement of the existing agricultural uses on other properties within the Sphere of Influence is infeasible.	Significant and unavoidable

[5] Public Resources Code, Section 21002.1(b).
[6] Public Resources Code, Section 21061.1

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	▪ **Transfer of Development Rights.** Transferring development rights would involve the purchasing of the right to develop land from a currently undeveloped piece of land and transferring those rights to farmland within the city. Thus, this option is also infeasible because there would still be a net loss of farmland (i.e., the farmland preserved would still likely be preserved anyhow). Even if farmland would be preserved elsewhere in Sonoma County, the CEQA Important Farmland in the city would be developed, resulting in a net loss of CEQA Important Farmland. Therefore, for the reasons outlined previously, and in this paragraph, it would not prevent significant impacts from occurring in the city and it would not be an effective CEQA mitigation measure; nor is this mitigation measure feasible from an economic perspective within this region. ▪ **Relocation of Prime Farmland Topsoil.** This measure would remove the top 12 to 18 inches of topsoil from affected areas and haul this soil to a farm site or several farm sites that have lower-quality soils. The Prime Farmland soils may assist in increasing crop yield at the relocated site. This measure would have its own environmental impacts, including increased truck traffic on local roadways from both hauling soil off-site and replacement of soil on-site, increased diesel truck emissions, construction noise, and increased duration of construction. The relocation of prime farmland soils to another active farm would increase other environmental impacts and is therefore considered infeasible. As described, these measures were considered and found to be infeasible for mitigating or avoiding the impact of the conversion of agricultural lands to other uses pursuant to the definition of CEQA in that there is no guarantee that measures would result in successfully establishing CEQA Important Farmland, if doing so could happen within a reasonable period of time, that their implementation would not potentially cause greater environmental impacts, and that acquiring additional lands to be established as CEQA Important Farmland would be economically possible.	
	As discussed previously, implementation of the proposed General Plan 2050 would designate CEQA Important Farmland land to non-agricultural land uses. Through the proposed General Plan 2050 goals, policies, and actions, impacts related to the conversion of qualifying agricultural lands would be reduced, but not to a less-than-significant level. The proposed General Plan 2050 contains policies and actions to reduce the conversion of qualifying agricultural lands. Specifically, proposed Policy 3-6.6 and Policy 3-6.7 to conserve and preserve agricultural land and soils, and Action 3-6.28 to prioritize conservation of agricultural properties. Proposed Action 3-6.16 discourages the conversion of agricultural land to non-agricultural use, Action 3-6.17 promotes restorative agricultural and landscaping techniques, and Action 3-6.19 requires the City to partner with the Sonoma County Agricultural Preservation and Open Space District and Sonoma Resource Conservation District to identify opportunities for conserving agricultural lands and preserving soil quality. These proposed General Plan 2050 policies and actions would not reduce the amount of acreage converted through implementation of	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	the proposed project; however, they would forestall development of the best agricultural land within the EIR Study Area. While these efforts and other mitigation measures were considered, such as preserving agricultural uses in the EIR Study Area, replacement of agricultural resources by replacing lost agricultural uses to other areas of the city, and relocation of Prime Farmland topsoil to other areas, these mitigations are not feasible. Additionally, other mitigating efforts, such as conservation easements, one-to-one preservation, and right-to-farm ordinances all work to mitigate impacts; however, the only way to fully avoid the agricultural impact from implementation of the proposed project is to not allow development on state-designated CEQA Important Farmland, thereby eliminating the agricultural impact. However, doing so is not feasible or practical as the City has a responsibility to meet other conflicting obligations, including to increase the number and types of jobs available in Santa Rosa and to reduce the need for residents to commute to high-quality jobs. These measures are critical to reducing single-occupant vehicle travel to and from Santa Rosa and meeting State targets for greenhouse gas reduction. The City needs to promote both economic development and corresponding residential development, as required by State housing law, within its adopted growth boundary. While possible forms of mitigation for, or avoidance of, conservation of agricultural lands in the EIR Study Area would be implemented by the City through its proposed General Plan 2050 policies and actions, doing so to reduce impacts to a less-than-significant level would be infeasible and inconsistent with City planning goals and objectives. Therefore, impacts would remain *significant and unavoidable.*	
Impact AG-2: Implementation of the proposed project could result in the loss of agricultural land under the Williamson Act.	**Mitigation Measures Considered.** As described under impact discussion AG-1, pursuant to CEQA, the City has considered mitigation to reduce impacts from implementation of the proposed project that could conflict with lands under a Williamson Act contract. However, as shown, no feasible mitigation measures are available that would reduce the agricultural resource impact to less-than-significant levels. Specifically, the City considered a measure that would result in the replacement of Williamson Act contract farmland that would place other farmland under Williamson Act contract. Even if feasible, the placing of alternative farmland under Williamson Act contract would establish a commitment to retain that alternative farmland for agricultural use. The length of time that the alternative land will remain in agricultural use would depend on the terms of the Williamson Act contract. However, the Williamson Act contract will only reduce the potential that the alternative land will convert to non-agricultural use. The individual and cumulative loss of agricultural land caused by the proposed project would still occur. Therefore, this mitigation measure will not reduce the proposed project's impacts on agriculture to below the level of significance. For these reasons, placing alternative privately held land under permanent restriction through Williamson Act contracts is considered infeasible.	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	As described under impact discussion AG-1, the proposed General Plan 2050 includes goals, policies, and actions to minimize impacts to agricultural lands. Those same proposed General Plan 2050 goals, policies, and actions would also minimize impacts from conflicts with Williamson Act lands and reduce the likelihood of premature contract cancellations by the property owners of the Williamson Act parcels in the EIR Study Area. Mitigation for this impact was considered, including the placement of other farmland under Williamson Act contract. However, the individual and cumulative loss of agricultural land under the Williamson Act caused by the proposed project would still occur. Given that CEQA does not require that the project be changed to avoid an impact, and no additional mitigation is available, this would result in a *significant and unavoidable* impact.	
Impact AG-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact with respect to the conversion of CEQA Important Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) and Williamson Act properties to non-agricultural uses.	As described previously, implementation of the proposed project would result in significant and unavoidable impacts related to the conversion of CEQA Important Farmland and Williamson Act properties to non-agricultural uses. Although the proposed General Plan 2050 goals, policies, and actions would reduce and partially offset regional agricultural impacts, as well as consideration of mitigation measures to preserve agricultural lands, the only way to fully avoid the agricultural impact of the proposed project is to not allow development on state-designated CEQA Important Farmland, thereby eliminating the agricultural impact. However, this would be infeasible and inconsistent with City planning goals and objectives. Further, the amount of growth foreseen in the region and the decisions of Sonoma County and other surrounding counties regarding conversion of agricultural land are outside the control of the City of Santa Rosa. Therefore, this cumulative impact would be *significant and unavoidable*.	Significant and unavoidable
AIR QUALITY (AIR)		
Impact AIR-2a: Construction activities that could occur over the buildout horizon of the proposed General Plan 2050 could potentially violate an air quality standard or cumulatively contribute to an existing or projected air quality violation.	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-6.31:** Require projects that exceed the Bay Area Air Quality Management District (BAAQMD) screening sizes to evaluate project-specific operation and construction emissions in conformance with the BAAQMD methodology and if operation or construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, require the project applicant to mitigate the impacts to an acceptable level. ***Action 3-6.32:** Continue to implement the Bay Area Air Quality Management District (BAAQMD) Basic Control Measures included in the latest version of BAAQMD's CEQA Air Quality Guidelines to control fugitive dust (i.e., particulate matter $PM_{2.5}$ and PM_{10}) during demolition, ground-disturbing activities, and/or construction.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
Impact AIR-2b: Buildout of the proposed project could generate operational emissions that could exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$ and PM_{10}).	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-6.31:** Require projects that exceed the Bay Area Air Quality Management District (BAAQMD) screening sizes to evaluate project-specific operation and construction emissions in conformance with the BAAQMD methodology and if operation or construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, require the project applicant to mitigate the impacts to an acceptable level. Buildout in accordance with the proposed project would generate long-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin (SFBAAB). The proposed General Plan 2050 goals, policies, and actions would reduce air pollutant emissions to the extent practicable. Additionally, the proposed General Plan 2050 goals, policies, and actions covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the EIR Study Area. Specifically, proposed *Action 3-6.31 requires potential future development in Santa Rosa that exceeds the BAAQMD screening sizes to evaluate project-specific operation emissions in conformance with the BAAQMD methodology. Where the technical assessment determines the BAAQMD-adopted thresholds are exceeded, the applicants for new development projects would be required to incorporate mitigation measures to reduce air pollutant emissions during operational activities. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following: ▪ Implementing commute trip reduction programs. ▪ Unbundling residential parking costs from property costs. ▪ Expanding bikeway networks. ▪ Expanding transit network coverage or hours. ▪ Using cleaner-fueled vehicles. ▪ Exceeding the current Title 24 Building Envelope Energy Efficiency Standards. ▪ Establishing on-site renewable energy generation systems. ▪ Implementing all-electric buildings. ▪ Replacing gas-powered landscaping equipment with zero-emission alternatives. ▪ Implementing organics diversion programs. ▪ Expanding urban tree planting.	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	This EIR quantifies the increase in criteria air pollutants emissions in the EIR Study Area. However, at the programmatic level, it is not feasible to quantify the increase in toxic air contaminants (TAC) from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above BAAQMD's significance thresholds correlate with basin wide health impacts. To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper prepared by the Association of Environmental Professionals' Climate Change Committee, We Can Model Regional Emissions, But Are the Results Meaningful for CEQA, describes several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the Friant Ranch case describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan. The white paper and amicus briefs are provided in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR. To achieve and maintain air quality standards, BAAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The numerical emission indicators are based on the recognition that the air basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards (AAQS) have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing the plan's emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. BAAQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BAAQMD has not provided methodology to assess the specific correlation between mass emissions generated and their effect on health (note Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR provides the San Joaquin Valley Air Pollution Control District's amicus brief, and South Coast Air Quality Management District's amicus brief).	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	Ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of particulate matter and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region. The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a general plan level because the location of emissions sources and quantity of emissions are not known. However, because cumulative development within the EIR Study Area would exceed the regional significance thresholds, this EIR finds that the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SFBAAB. In summary, as described above, implementation of the proposed project would generate emissions that would exceed BAAQMD's regional significance thresholds (no net increase). The proposed General Plan 2050 includes goals, policies, and actions to reduce these long-term regional criteria air pollutant emissions. However, due to the programmatic nature of the proposed project, no additional mitigating measures are available, and the impact is considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent individual projects that meet applicable project-level thresholds of significance.	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
Impact AIR-3a: Construction activities associated with potential future development could expose nearby receptors to substantial concentrations of toxic air contaminants.	General Plan 2050 Chapter 6, *Health, Equity, Environmental Justice, and Parks* ***Action 6-1.5:** As recommended by the California Air Resources Board, require projects that would result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants (e.g., hospitals, nursing homes, day care centers), as measured from the property line of the project, to prepare a construction health risk assessment in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the BAAQMD threshold.	Less than significant
Impact AIR-3b: Large industrial or warehouse development projects under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminants (TAC) and particulate matter ($PM_{2.5}$) concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.	General Plan 2050 Chapter 6, *Health, Equity, Environmental Justice, and Parks* ***Action 6-1.6:** Require an operational health risk assessment for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use or Overburdened Community, as defined by BAAQMD. The operational HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and BAAQMD. If the operational HRA shows that the incremental cancer risk exceeds 10 in a million, the noncancer hazard index of 1.0, or the thresholds as determined by BAAQMD, require the project applicant to identify and demonstrate measures, such as those listed in the General Plan Environmental Impact Report, that can reduce potential cancer and noncancer risks to acceptable levels. Potential future development over the buildout horizon of the proposed project could result in new sources of TACs or $PM_{2.5}$ near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gas stations) in addition to proposed General Plan 2050 goals, policies, and actions would ensure that health risks are minimized. Specifically, the implementation of project-specific operational health risk assessments (HRA) as required by proposed General Plan 2050 *Action 6-1.6 would identify any impacts and mitigation measures to reduce the operational health risks for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes) or an "overburdened community," as measured from the property line of the project to the property line of the nearest sensitive use. Operational HRAs would be required to be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and BAAQMD. If the operational HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or $PM_{2.5}$ exceeds the respective threshold as established by BAAQMD and project-level risk of 10 in one million at the time a project is considered, the project applicant would be required to identify "best available control technologies for toxics" and appropriate enforcement mechanisms, and demonstrate that	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	they are capable of reducing potential cancer, noncancer risks, and $PM_{2.5}$ to an acceptable level. Best available control technologies for toxics may include but are not limited to: ▪ Restricting idling on-site beyond air toxic control measures idling restrictions ▪ Electrifying warehousing docks ▪ Requiring use of newer equipment ▪ Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year ▪ Truck electric vehicle (EV) capable trailer spaces ▪ Restricting off-site truck travel through the creation of truck routes The same proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, would serve to protect sensitive receptors from poor air quality in the EIR Study Area. Specifically, proposed Action 6-1.11 would require the City to update the Zoning Code to require health impact assessments for nonresidential and developments of 100,000 square feet or more in Equity Priority Areas (EPA) to identify and mitigate any potential negative health implications of the project. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TAC and $PM_{2.5}$ project-level impacts would be less than significant. However, these projects could contribute to significant cumulative risk in the Bay Area that could affect sensitive populations and EPAs. As a result, the proposed project's contribution to cumulative health risk is considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent individual projects that meet applicable project-level thresholds of significance.	
Impact AIR-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative air quality impacts with respect to generation of criteria pollutant and exposure of substantial pollutant concentrations to sensitive receptors.	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-6.31:** Require projects that exceed the Bay Area Air Quality Management District (BAAQMD) screening sizes to evaluate project-specific operation and construction emissions in conformance with the BAAQMD methodology and if operation or construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, require the project applicant to mitigate the impacts to an acceptable level. ***Action 3-6.32:** Continue to implement the Bay Area Air Quality Management District (BAAQMD) Basic Control Measures included in the latest version of BAAQMD's CEQA Air Quality Guidelines to control fugitive dust (i.e., particulate matter $PM_{2.5}$ and PM_{10}) during demolition, ground-disturbing activities, and/or construction.	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	General Plan 2050 Chapter 6, *Health, Equity, Environmental Justice, and Parks* ***Action 6-1.5:** As recommended by the California Air Resources Board, require projects that would result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants (e.g., hospitals, nursing homes, day care centers), as measured from the property line of the project, to prepare a construction health risk assessment in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the BAAQMD threshold. ***Action 6-1.6:** Require an operational health risk assessment for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use or Overburdened Community, as defined by BAAQMD. The operational HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and BAAQMD. If the operational HRA shows that the incremental cancer risk exceeds 10 in a million, the noncancer hazard index of 1.0, or the thresholds as determined by BAAQMD, require the project applicant to identify and demonstrate measures, such as those listed in the General Plan Environmental Impact Report, that can reduce potential cancer and noncancer risks to acceptable levels.	
	Criteria air pollutant emissions generated by land uses within the proposed project could exceed the Bay Area Air Quality Management District's regional thresholds. Air quality impacts identified under Impacts AIR-2a, AIR-2b, AIR-3a, and AIR-3b constitute the proposed project's contribution to cumulative air quality impacts in the San Francisco Bay Area Air Basin. Proposed General Plan 2050 goals, policies, and actions would help reduce project-related emissions to the extent feasible. Specifically, proposed *Action 3-6.31, *Action 3-6.32, *Action 6-1.5, and *Action 6-1.6 would reduce impacts at the project level. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available. Air pollutant emissions associated with the proposed project would result in a cumulatively considerable contribution to air quality impacts and remain *significant and unavoidable* at the program level.	
BIOLOGICAL RESOURCES (BIO)		
Impact BIO-1: Impacts to special-status species or the inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), could occur as a result of implementation of the proposed project.	General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction* ***Action 3-5.7:** Continue to consult with the California Department of Fish and Wildlife to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the populations of plants and animals currently found in the UGB.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 3-5.10:** Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species. ***Action 3-5.11:** Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat. ***Action 3-5.12:** Require that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. Compliance guidelines are detailed in the General Plan Environmental Impact Report. ***Action 3-5.13:** Develop and adopt a bird-safe design ordinance to provide specific criteria and refined guidelines as part of design review of new buildings and taller structures to protect birds from injury and mortality from collisions with buildings, towers, and other human-made structures. Preserve and restore wildlife habitats and corridors. Continue to provide some protection for habitat areas in the city, such as for the rookery on West 9th Street.	
Impact BIO-2: Impacts to riparian areas, drainages, and sensitive natural communities could occur from potential future development under the proposed General Plan 2050 where natural habitat remains.	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-5.7:** Continue to consult with the California Department of Fish and Wildlife to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the populations of plants and animals currently found in the UGB. ***Action 3-5.10:** Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species. ***Action 3-5.11:** Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat. ***Action 3-5.19:** Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 3-5.20:** Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.	
Impact BIO-3: Potential future development from implementation of the proposed General Plan 2050 could result in direct and indirect impacts to wetland habitat.	General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction* ***Action 3-5.10:** Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species. ***Action 3-5.11:** Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat.	Less than significant
CULTURAL RESOURCES (CUL)		
Impact CUL-1: Impacts to known or yet to be classified historic buildings or structures could occur from potential future development under the proposed General Plan 2050.	General Plan 2050 Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture* ***Action 4-3.2:** Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of historic properties. ***Action 4-3.6:** Identify and minimize or remove obstacles for owners of historic properties to support preservation, including guides for repurposing facilities. Identify resources to: ▪ Keep cultural surveys relevant. ▪ Periodically update the City's Cultural Heritage Survey to ensure consistency with current guidelines and best practices, to reflect potential changes in status, and to include properties that have become age-eligible for listing. ▪ Conduct cultural and/or historic inventories or surveys of areas of the city that have not been surveyed. ▪ Install plaques and/or educational signage at locations of cultural significance and significant events. ▪ Implement recommendations in the City's Cultural Heritage studies. ▪ Partner with the local tourism industry, property owners, businesses, nonprofit organizations, and other public agencies to develop and promote Heritage Tourism opportunities, integrating efforts with ongoing initiatives for economic development and the creative economy. ▪ Work with local schools and historic organizations to engage and interest residents of all ages in Santa Rosa's history and historic sites, structures, and neighborhoods.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 4-3.7:** Identify buildings that should be recognized for cultural significance and/or considered for landmark designation. ***Action 4-3.9:** Preserve historic aspects of parks while integrating modern uses and amenities.	
Impact CUL-2: Impacts to known and unknown archeological resources could occur from potential future development under the proposed General Plan 2050.	General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction* ***Action 3-5.19:** Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation. ***Action 3-5.20:** Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals. General Plan 2050 Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture* ***Action 4-2.1:** Continue to review proposed developments in conjunction with the California Historical Resources Information System, Northwest Information Center, at Sonoma State University to determine whether project areas contain known archaeological resources, both prehistoric and/or historic-era, and tribal cultural resources, or if they have the potential to hold such resources and if so, implement mitigation to protect the resource. ***Action 4-2.2:** Work in good faith with interested communities to evaluate proposed development sites for the presence of subsurface historic, archaeological, and tribal cultural resources. These efforts may include: ▪ Consideration of existing reports and studies. ▪ Consultation with Native American tribes as required by State law. ▪ Appropriate site-specific investigative actions. ▪ On-site monitoring during excavation if appropriate. ***Action 4-2.3:** Continue to require that project areas found to contain significant archaeological resources be examined by a qualified consulting archaeologist with recommendations for protection and preservation. ***Action 4-2.4:** If tribal cultural resources are encountered during development, halt work to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation and recorded identified tribal cultural resources—which may include animals, structures, landscapes, or plants—and determined suitable mitigation measures.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
GEOLOGY AND SOILS (GEO)		
Impact GEO-1: Impacts from potential future development under the proposed General Plan 2050 where there are known geological hazards could occur over the buildout horizon of the proposed project.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Policy 5-1.1:** Ensure that new development, redevelopment, and major remodels shall avoid or adequately mitigate seismic and geologic hazards. ***Action 5-1.1:** Prior to new development approval, ensure geologic studies and analyses are deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer for applicable hazard conditions. ***Action 5-1.2:** Restrict development in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a California Certified Engineering Geologist and/or Geotechnical Engineer.	Less than significant
Impact GEO-3: Impacts from potential future development under the proposed General Plan 2050 where there are potentially unstable soils could occur over the buildout horizon of the proposed project.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Policy 5-1.1:** Ensure that new development, redevelopment, and major remodels shall avoid or adequately mitigate seismic and geologic hazards. ***Action 5-1.1:** Prior to new development approval, ensure geologic studies and analyses are deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer for applicable hazard conditions. ***Action 5-1.2:** Restrict development in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a California Certified Engineering Geologist and/or Geotechnical Engineer.	Less than significant
Impact GEO-4: Impacts from potential future development under the proposed General Plan 2050 where there are expansive soils could occur over the buildout horizon of the proposed project.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Policy 5-1.1:** Ensure that new development, redevelopment, and major remodels shall avoid or adequately mitigate seismic and geologic hazards. ***Action 5-1.1:** Prior to new development approval, ensure geologic studies and analyses are deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer for applicable hazard conditions. ***Action 5-1.2:** Restrict development in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a California Certified Engineering Geologist and/or Geotechnical Engineer.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
HYDROLOGY (HYD)		
Impact HYD-1: Impacts to water quality could occur from implementation of the proposed project.	General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction* ***Action 3-5.10:** Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species. ***Action 3-5.12:** Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat. ***Action 3-5.19:** Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation. ***Action 3-5.20:** Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals. General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-2.14:** Require improvements that maintain and improve the storm drainage system citywide and prioritize areas needing significant investment, consistent with the Santa Rosa Citywide Creek Master Plan goals of preserving natural conditions of waterways and minimizing channelization of creeks. ***Action 5-2.15:** Ensure creek-side paths and trails are consistent with the Citywide Creek Master Plan and Bicycle and Pedestrian Master Plan and are incorporated into stormwater improvement projects along creek corridors. ***Action 5-2.17:** Require implementation of best management practices for all new development to reduce discharges of nonpoint-source pollutants to the storm drain system. ***Action 5-9.30:** Evaluate stormwater capture and reuse consistent with goals of the Santa Rosa Citywide Creek Master Plan and the MS4 National Pollutant Discharge Elimination System (NPDES) permit to preserve natural conditions of waterways, minimize channelization of creeks, and protect water quality, and identify, educate, and label to promote community awareness that storm drains flow untreated into creeks.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
NOISE (NOI)		
Impact NOI-1a: Construction activities associated with potential future development could expose sensitive receptors to excessive noise from construction equipment.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.2:** Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process. ***Action 5-7.10:** Update the Noise Ordinance to incorporate construction best management practices to minimize construction noise.	Significant and unavoidable
	In most cases, construction of individual developments associated with implementation of the proposed project would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. The policies and actions of the proposed General Plan 2050 would minimize the effects of construction noise. Specifically, proposed *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts, and *Action 5-7.2 and *Action 5-7.10 would mitigate noise impacts by requiring the City to use the noise and vibration thresholds based on the Federal Transit Administration's criteria for acceptable levels of construction noise and vibration to evaluate and mitigate impacts, and adopt construction best management practices, respectively. However, because construction activities associated with any individual development may occur near noise-sensitive receptors and because—depending on the project type, equipment list, time of day, phasing, and overall construction durations—noise disturbances may occur for prolonged periods of time, during the more sensitive nighttime hours, or may exceed 80 dBA L_{eq} at residential land uses even with future project-level mitigation, construction noise impacts associated with implementation of the proposed project are considered *significant and unavoidable*. Due to the programmatic nature of this EIR, project-level conclusions of construction noise would be speculative; however, the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the noise thresholds.	
Impact NOI-1b: Operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.2:** Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process.	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 5-7.3:** Require conditions of approval or mitigation to reduce noise exceeding normally acceptable levels as identified in Figure 5-13, unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. ***Action 5-7.7:** Work with Caltrans to evaluate and develop traffic noise mitigation programs along Highway 101 and State Route 12. ***Action 5-7.9:** Use conditions of approval to achieve measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.	
	Implementation of proposed General Plan 2050 *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts. Proposed *Action 5-7.2 requires the City to apply the Federal Transit Administration's vibration thresholds to assess impacts to surrounding land uses. Proposed *Action 5-7.3 requires conditions of approval or mitigation to reduce noise exceeding normally acceptable levels unless the activities are specifically exempted by the City Council on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. Proposed *Action 5-7.7 requires the City to work with Caltrans to evaluate and develop traffic noise mitigation programs along US Highway 101 and State Route 12. Furthermore, proposed *Action 5-7.9 requires conditions of approval to achieve measures to reduce noise impacts primarily through site planning and avoid engineering solutions for noise mitigation, such as sound walls, if possible. Since project-specific details are unknown and future conditions of approval may not be feasible or reduce vehicle traffic noise below significance thresholds in all cases, this impact is conservatively considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the noise thresholds.	
Impact NOI-1c: Operational noise increases could exceed the City's significance thresholds and could be incompatible with existing uses.	**General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*** ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.3:** Require conditions of approval or mitigation to reduce noise exceeding normally acceptable levels as identified in Figure 5-13, unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. ***Action 5-7.9:** Use conditions of approval to achieve measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
Impact NOI-2a: Construction activities associated with potential future development under the proposed General Plan 2050 could generate excessive short-term vibration levels during project construction.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.2:** Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process. ***Action 5-7.10:** Update the Noise Ordinance to incorporate construction best management practices to minimize construction noise.	Less than significant
Impact NOI-2b: Operational activities associated with potential future development under the proposed General Plan 2050 could generate excessive long-term vibration levels.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.2:** Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process. ***Action 5-7.9:** Use conditions of approval to achieve measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.	Less than significant
Impact NOI-4: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative noise impacts, with respect to generation of construction-and transportation related noise.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-7.1:** Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards. ***Action 5-7.2:** Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process. ***Action 5-7.3:** Require conditions of approval or mitigation to reduce noise exceeding normally acceptable levels as identified in Figure 5-13, unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. ***Action 5-7.7:** Work with Caltrans to evaluate and develop traffic noise mitigation programs along Highway 101 and State Route 12. ***Action 5-7.9:** Use conditions of approval to achieve measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.	Significant and unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 5-7.10:** Update the Noise Ordinance to incorporate construction best management practices to minimize construction noise.	
	Construction activities associated with potential future development could expose sensitive receptors in close proximity to a construction site to excessive noise from construction equipment (see Impact NOI-1a). Implementation of proposed General Plan 2050 *Action 5-7.1, *Action 5.7-2, and *Action 5-7.10 would help reduce construction-related noise impacts. In addition, operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project and expose sensitive receptors in close proximity to new development-generated roadway noise to excessive levels (see Impact NOI-1b). As with construction noise, implementation of proposed *Action 5-7.1, *Action 5.7-2, and *Action 5-7.10 would help reduce transportation-related noise impacts along with *Action 5-7.3, *Action 5-7.7, and *Action 5-7.9. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available. As such, the cumulative noise impact is considered *significant and unavoidable* at the program level.	
TRANSPORTATION (TRAN)		
Impact TRAN-2a: Implementation of the proposed project could result in a significant vehicle miles traveled (VMT) impact for residential VMT per capita.	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-1.1:** Require an analysis of projected VMT and mitigation, as necessary, as part of the project review process for projects with the potential to increase VMT.	Significant and unavoidable
	Implementation of the proposed General Plan 2050 goals, policies, and actions would reduce the VMT generated by all development including residential uses. In support of proposed General Plan 2050 Policy 3-1.1 to reduce VMT, proposed *Action 3-1.1 requires an analysis of project VMT and mitigation as part of the project review process. Proposed Action 3-1.2 requires the City to work with other local and regional partners to explore developing a VMT mitigation bank. Proposed Action 3-1.3 and Action 3-1.5 supports prioritizing investments that will reduce VMT and GHG emissions. If all individual development projects achieve the required residential VMT per capita through mitigation, use of a bank, or implementation of offsite measures, impacts would be reduced to a less-than-significant level. There are, however, two important aspects that introduce uncertainty as to whether these reductions can consistently be achieved. First, the proposed General Plan 2050 is a programmatic plan. Specific development plans defining the size, configuration, and characteristics of residential projects affect VMT projections, but site-specific information about future development projects is not available at this time. Because VMT performance is sensitive to these factors, it is not currently possible to conclusively determine VMT performance metrics and the effectiveness of VMT reduction strategies for individual sites. Second, there is uncertainty about the ability of all residential development projects to achieve the required VMT reductions—particularly projects in suburban locations in the outer areas of Santa Rosa where it may be infeasible to provide new or more frequent transit service and very few VMT reduction strategies are viable. Programs such	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	as VMT mitigation exchanges or banks may provide a viable mitigation mechanism for developments, but the timing of when such programs may become available is unknown. Given the programmatic nature of the proposed project, uncertainties as to whether individual development projects will be able to successfully meet VMT standards even with mitigation, and uncertainties as to the availability of other mitigation strategies such as VMT exchanges or banks, the impact is considered *significant and unavoidable*. Note that this impact conclusion does not preclude the finding of less than significant at the project level for future projects over the 2050 buildout horizon.	
Impact TRAN-2b: Implementation of the proposed project could result in a significant roadway network vehicle miles traveled (VMT) impact associated with increasing the capacity of the arterial street network.	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-1.1:** Require an analysis of projected VMT and mitigation, as necessary, as part of the project review process for projects with the potential to increase VMT. Implementation of the proposed General Plan 2050 goals, policies, and actions listed under impact discussion TRAN-1 and TRAN-2 would improve the active transportation network, work with partner agencies to reduce VMT, encourage development in TPAs and PDA, amongst other to reduce VMT generated by all development. Specifically, proposed *Action 3-1.1 requires an analysis of project VMT and mitigation as part of the project review process. Even with implementation of the proposed General Plan 2050 goals, policies, and actions related to VMT reduction, the effectiveness of VMT-reduction strategies and availability of alternative mitigation strategies such as VMT exchanges or banks is not certain. As such, the impact on roadway network VMT is considered *significant and unavoidable*.	Significant and Unavoidable
Impact TRAN-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in significant cumulative impact with respect to vehicle miles traveled (VMT).	**General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*** ***Action 3-1.1:** Require an analysis of projected VMT and mitigation, as necessary, as part of the project review process for projects with the potential to increase VMT. Even with the proposed General Plan 2050 goals, policies, and actions described under impact discussion TRAN-2, including proposed *Action 3-1.1, the effectiveness of VMT-reduction strategies is not certain. As such, the cumulative impact on VMT is considered *significant and unavoidable.*	Significant and Unavoidable

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
TRIBAL CULTURAL RESOURCES (TCR)		
Impact TCR-1: Impacts to unknown tribal cultural resources (TCR) could occur from potential future development under the proposed General Plan 2050.	General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction* ***Action 3-5.19:** Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation. ***Action 3-5.20:** Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals. General Plan 2050 Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture* ***Action 4-2.1:** Continue to review proposed developments in conjunction with the California Historical Resources Information System, Northwest Information Center, at Sonoma State University to determine whether project areas contain known archaeological resources, both prehistoric and/or historic-era, and tribal cultural resources, or if they have the potential to hold such resources and if so, implement mitigation to protect the resource. ***Action 4-2.2:** Work in good faith with interested communities to evaluate proposed development sites for the presence of subsurface historic, archaeological, and tribal cultural resources. These efforts may include: ▪ Consideration of existing reports and studies. ▪ Consultation with Native American tribes as required by State law. ▪ Appropriate site-specific investigative actions. ▪ On-site monitoring during excavation if appropriate. ***Action 4-2.4:** If tribal cultural resources are encountered during development, halt work to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation and recorded identified tribal cultural resources—which may include animals, structures, landscapes, or plants—and determined suitable mitigation measures.	Less than significant
WILDFIRE (WF)		
Impact WF-1: Implementation of the proposed General Plan 2050 could result in inadequate evacuation access the impair the implementation of an emergency evacuation plan.	General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities* ***Action 5-5.14:** Require all new development projects to provide adequate access for fire and emergency response personnel. ***Action 5-5.15:** Prohibit the creation of new single ingress/egress roadway conditions in the city. ***Action 5-5.16:** Retrofit existing single-access residential neighborhoods to include additional access routes or other provisions to increase evacuation safety.	Less than significant

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
	***Action 5-5.17:** Analyze the capacity, viability, and safety of evacuation routes for hazard areas in the city (e.g., WUIFA) and incorporate the results into the City's Emergency Operations Plan.	
Impact WF-2: Potential future development over the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.	**General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*** ***Action 5-3.8:** Require the preparation of fire protection plans for new development and major remodels in the City's Wildland-Urban Interface Fire Area (WUIFA). Require that fire protection plans be consistent with requirements of the California Fire Code and include a risk analysis, fire response capabilities, fire safety requirements (e.g., defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for non-conforming fuel modifications, wildfire education maintenance and limitations, and evacuation plans.	Significant and unavoidable
	Goals, policies, and actions identified in the proposed General Plan 2050 provide the best wildfire hazard reduction measures available. Specifically, proposed *Action 5-3.8 requires the preparation of fire protection plans for new development and major remodels in the City's Wildland-Urban Interface Fire Area (WUIFA), which are highly vulnerable areas; that are consistent with requirements of the California Fire Code and include a risk analysis, fire response capabilities, fire safety requirements (e.g., defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for nonconforming fuel modifications, wildfire education maintenance and limitations, and evacuation plans. However, the only way to fully avoid the wildfire impact from implementation is to prohibit development in Very High Fire Hazard Severity Zones (FHSZ) and the WUIFA. The majority of northern and eastern Santa Rosa is in a Very High FHSZ and/or the WUIFA. Prohibiting new development in this portion of Santa Rosa is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. Therefore, this measure is considered and rejected, and there are no feasible mitigation measures beyond the policies and plans described above. Due to potential unknown impacts from future development over the buildout horizon of the proposed project, impacts at the programmatic level would remain *significant and unavoidable*. This conclusion does not preclude a finding of less-than-significant impacts at the project level.	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATING POLICIES AND ACTIONS

Environmental Impact	Proposed Mitigating General Plan 2050 Policies and Actions	Significance with Mitigation
Impact WF-5: Potential development over the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas (SRA), Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface Fire Areas (WUIFA), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.	**General Plan 2050 Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*** ***Action 5-3.8:** Require the preparation of fire protection plans for new development and major remodels in the City's Wildland-Urban Interface Fire Area (WUIFA). Require that fire protection plans be consistent with requirements of the California Fire Code and include a risk analysis, fire response capabilities, fire safety requirements (e.g., defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for non-conforming fuel modifications, wildfire education maintenance and limitations, and evacuation plans. Same as Impact WF-2, even with implementation of the proposed General Plan 2050 goals, policies, and actions, including proposed *Action 5-3.8, the only way to fully avoid the cumulative wildfire impact is to prohibit development in the SRA, Very High FHSZs, and WUIFA throughout the region. As a full prohibition of development in these areas is not feasible in the region, this impact is *significant and unavoidable*.	Significant and unavoidable

Note: In addition to the proposed General Plan 2050 policies and actions, potential future development under the proposed project would also be required to comply with applicable federal, State, and local regulations. Please see Chapter 4.1 through Chapter 4.18 of this Draft EIR for the regulatory framework for each environmental resource topic.

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3. Project Description

This chapter of the Draft Environmental Impact Report (EIR) describes the proposed update to the Santa Rosa General Plan (General Plan 2050, also known as Santa Rosa Forward), along with the associated Specific Plan and Santa Rosa City Code (SRCC) amendments, and Community-wide Greenhouse Gas Reduction Strategy (GHG Reduction Strategy), hereinafter referred to separately or together as the "proposed project." This Draft EIR has been completed in accordance with the California Environmental Quality Act (CEQA). CEQA requires that State and local public agencies analyze proposed projects to determine potential impacts on the environment and disclose any such impacts.[1] As described in more detail in Chapter 1, *Introduction*, of this Draft EIR, consistent with CEQA Guidelines Section 15168, this Draft EIR provides a programmatic analysis of the environmental impacts associated with implementation of the proposed project, including the projected buildout of the proposed General Plan 2050. This Draft EIR is also intended to be used for purposes of tiering, pursuant to CEQA Guidelines Section 15152 and other tiering and streamlining provisions of CEQA and the CEQA Guidelines. The City of Santa Rosa (City) is the lead agency for the environmental review of the proposed project. This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the General Plan Planning Area; as well as the project objectives; the principal report components; and required permits and approvals.

3.1 BACKGROUND

Every city and county in California is required to have an adopted comprehensive long-range general plan for the physical development of the county or city and, in some cases, land outside the city or county boundaries.[2] It is the community's overarching policy document that defines a vision for future change and sets the "ground rules" for: locating and designing new projects that enhance the character of the community, expanding the local economy, conserving and preserving environmental resources, improving public services and safety, minimizing hazards, and fostering community health. The General Plan, which includes a vision, guiding principles, goals, policies, and actions, functions as the City's primary land use regulatory tool. It provides a basis for judging whether specific development proposals and public projects are in harmony with the General Plan. It is the constitution for future change in Santa Rosa. Pursuant to State law, a general plan must contain eight mandated elements: land use, circulation, housing, conservation, open space, noise, environmental justice, and safety. Typically, general plans cover a time frame or forecast of 15 to 20 years. However, general plan housing elements are required to be updated every eight years to comply with the Regional Housing Needs Allocation (RHNA).

[1] CEQA Guidelines, Section 15002(a).

[2] California Government Code Section 65300.

The City's General Plan Land Use Map is integrated with the City's Zoning Map, which shows the parcel-specific delineation of the zoning districts throughout the city and depicts permitted and conditionally permitted uses. A parcel's zoning district stems directly from its General Plan Land Use designation, with the zoning district acting to implement the General Plan by refining the specific uses and development standards for that parcel.

All specific plans, master plans, and zoning in the city must be consistent with the General Plan.[3] Similarly, the General Plan must be used as the basis for all planning-related decisions made by City staff, the Planning Commission, and the City Council. Other decision-making bodies that rely on the General Plan to guide future decisions include, but are not limited to, the Art in Public Places Committee, Bicycle and Pedestrian Advisory Board, Cultural Heritage Board, Design Review Board, Transportation and Public Works Department, and the Recreation and Parks Department. The General Plan itself, however, does not approve or entitle any development project. Future project applicants have control over when they wish to propose a project, and final development approval decisions are made on a project-by-project basis by City staff, the Planning Commission, and/or the City Council.

3.2 OVERVIEW

The existing General Plan was adopted in 2009 and included a horizon year of 2035. While this horizon year is still approximately 11 years away, in the years between 2009 and 2022, Santa Rosa has experienced low housing production and increased homelessness, the destruction of housing and displacement of residents by wildfires between 2017 and 2020 (e.g., the Tubbs and Glass fires,) the impact of cannabis business activity on industrial and commercial land, and the annexation of the Roseland community into the city. A number of State and federal laws guiding general plan policies have also been updated during this time. As such, there is a need to take stock of the existing situation and plan for sustainable development in line with a vision. The proposed General Plan 2050 focuses on meeting current community requirements and future needs. The City determined that the current General Plan 2035 provided a good foundation for General Plan 2050. The current General Plan 2035 included a comprehensive review process, resulting in a broad range of community goals and policies. Many of the community issues vetted in the current General Plan 2035 are still relevant, well addressed, and do not require major change. Therefore, the approach to the proposed General Plan 2050 is not a comprehensive update, rather, it builds off of the current General Plan 2035 by incorporating the topics that are now required by State mandate and revises relevant policies and programs to meet those requirements. It also incorporates regional forecasts for 2050, thus moving the planning horizon forward by 15 years from the 2035 horizon year of the current General Plan.

The proposed General Plan 2050 guides the city's economic and physical growth as well as preservation of natural and agricultural resources over an approximately 25-year buildout horizon and replaces the City's existing General Plan, with the exception of the Housing Element. The City's Housing Element (2023 to 2031) was adopted by the City Council in February 2023, certified by the State Housing and Community Development Department on April 7, 2023, and is incorporated into the proposed General Plan 2050 by

[3] Government Code Section 65860.

reference. The Housing Element underwent a separate environmental review as part of its adoption process; however, the residential development that could occur under the Housing Element is incorporated into the residential development analyzed as part of this EIR.

As part of the proposed project, the City will make amendments to the North Station Area Specific Plan (NSASP), Downtown Station Area Specific Plan (DSASP), and the SRCC to ensure consistency with the proposed General Plan 2050. Concurrent with the proposed General Plan 2050, the City is updating its 2012 Community-wide Climate Action Plan (CCAP) in support of Santa Rosa Forward. The proposed GHG Reduction Strategy is an update to and replacement of the CCAP. It is a strategic planning document that would provide policies and actions that would help the City and the community at large to reduce their GHG emissions and improve community resilience to hazardous conditions associated with climate change. The proposed General Plan 2050, Specific Plan, and SRCC amendments, and the proposed GHG Reduction Strategy are discussed in detail in Section 3.7.1, Section 3.7.2, Section 3.7.3, and Section 3.7.4,respectively.

3.3 LOCATION AND SETTING

Santa Rosa is approximately 55 miles north of San Francisco, in the south-central part of Sonoma County. As the county seat and the largest city in Sonoma County, Santa Rosa is bordered by unincorporated communities of Sonoma County, including Fulton and Larkfield-Wikiup. Incorporated cities near Santa Rosa include Windsor, Healdsburg, Rohnert Park, Cotati, Sebastopol, Petaluma, and Sonoma, in Sonoma County, and Calistoga, and St. Helena in Napa County. Santa Rosa is generally bordered by regional and State parks, including Spring Lake Regional Park, Trione-Annadel State Park, Sugarloaf Ridge State Park, and North Sonoma Mountain Regional Park, to the east and Taylor Mountain Regional Park and Open Space Preserve to the south. See Figure 3-1, *Regional and Vicinity Map.* US Highway 101 and California State Route (SR) 12 each bisect the city, running north-south and east-west, respectively. SR 116 to the west also provides regional access to the city. Public transit in Santa Rosa is served by several transit providers, including the Sonoma-Marin Area Rail Transit (SMART), Golden Gate Transit, Sonoma County Transit, and the Santa Rosa CityBus. Santa Rosa residents and visitors also navigate the city by a variety of arterial, collector, and residential streets, as well as regional and local pedestrian and bicycle routes.

3.4 PLANNING BOUNDARIES AND EIR STUDY AREA

This section explains the planning boundaries referenced in the proposed General Plan 2050 and the relationship of those boundaries to the EIR Study Area. The State of California encourages cities to look beyond their borders when undertaking the sort of comprehensive planning required of a General Plan. Under State law, the City can establish a Planning Area that consists of land in the city and, "any land outside its boundaries which, in the planning agency's judgment, bears relation to its planning."[4] The

[4] Government Code, Title 7, *Planning and Land Use*, Division 1, *Planning and Zoning*, Chapter 3, *Local Planning*, Article 5, *Authority for and Scope of General Plans*, Section 65300.

Santa Rosa Planning Area encompasses approximately 31,555 acres (about 49 square miles), and includes the lands within the city limit, the Urban Growth Boundary (UGB), and the Sphere of Influence (SOI).

3.4.1 PLANNING BOUNDARIES

A description of these planning boundaries as proposed for General Plan 2050 is provided in the following sections and shown on Figure 3-2, *General Plan 2050 Planning Boundaries and EIR Study Area.*

3.4.1.1 CITY LIMIT

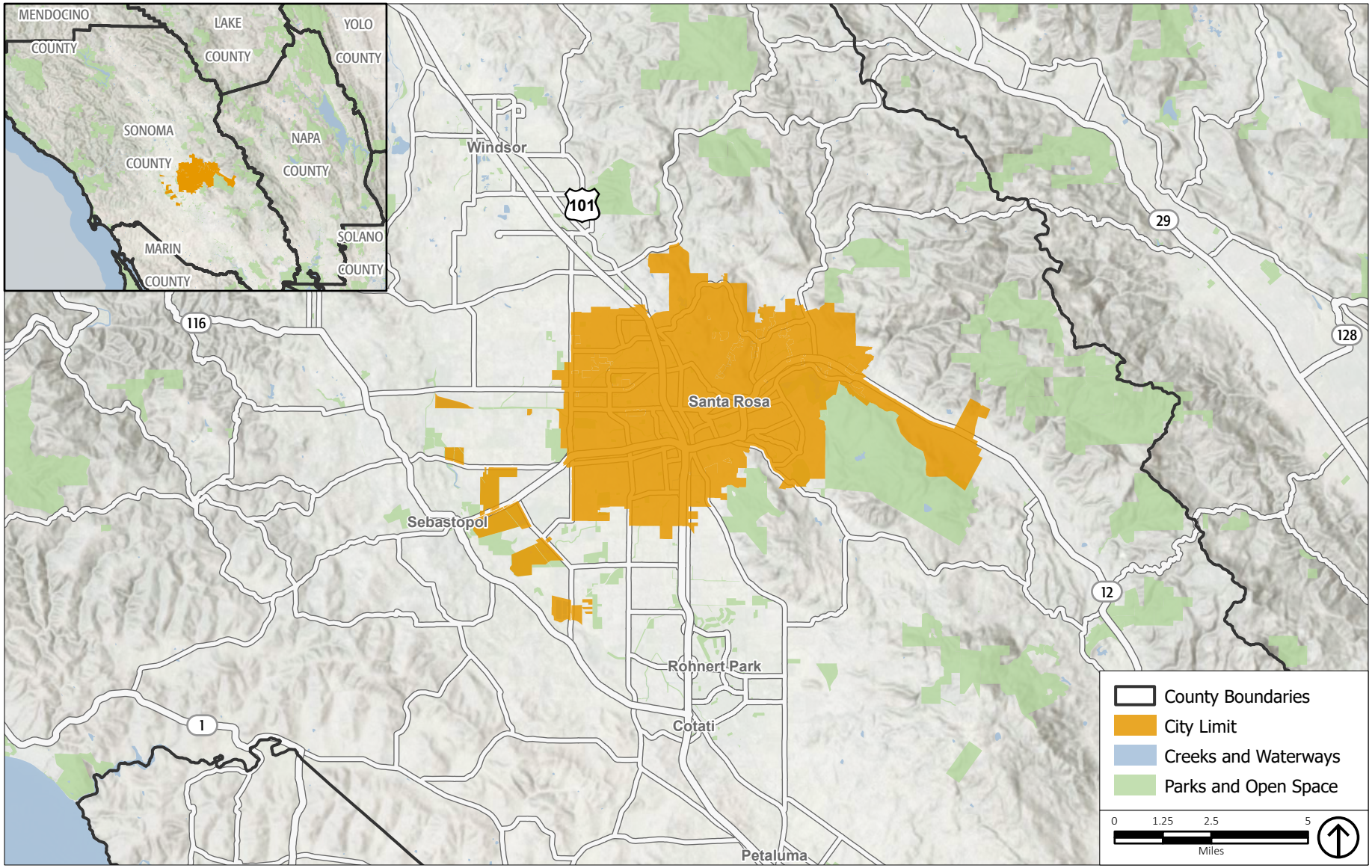
The city limit encloses the incorporated territory where the City currently has jurisdictional authority. The city limit encompasses approximately 26,500 acres (about 42 square miles). The city limit extends below Mark West Spring Road to the north, is generally bound by agricultural lands to the west and State Parks to the east and extends to Bellevue Avenue to the south. The land outside the city limit is unincorporated Sonoma County. Changes to the city limit are made when the City annexes land that is currently under the jurisdiction of Sonoma County. Annexations must go through a legal process that requires input from residents or property owners and are subject to Sonoma Local Agency Formation Commission (Sonoma LAFCO) review and approval. The proposed project has no changes to the city limit.

3.4.1.2 URBAN GROWTH BOUNDARY

The UGB is created and defined by the City, and like the SOI, represents land that the City anticipates for future annexation. The UGB separates urban areas from the surrounding natural and agricultural lands, or greenbelts, and limits how far out a city can expand. The purpose of the UGB is to direct growth in a focused, compact way to protect surrounding agricultural and open space land, and to create greenbelt buffers between cities. As shown on Figure 3-2, the SOI and UGB coincide. The UGB covers approximately 29,252 acres (about 45 square miles) and encompasses all incorporated city land plus some unincorporated land expected to be annexed to receive City services at some point in the future.

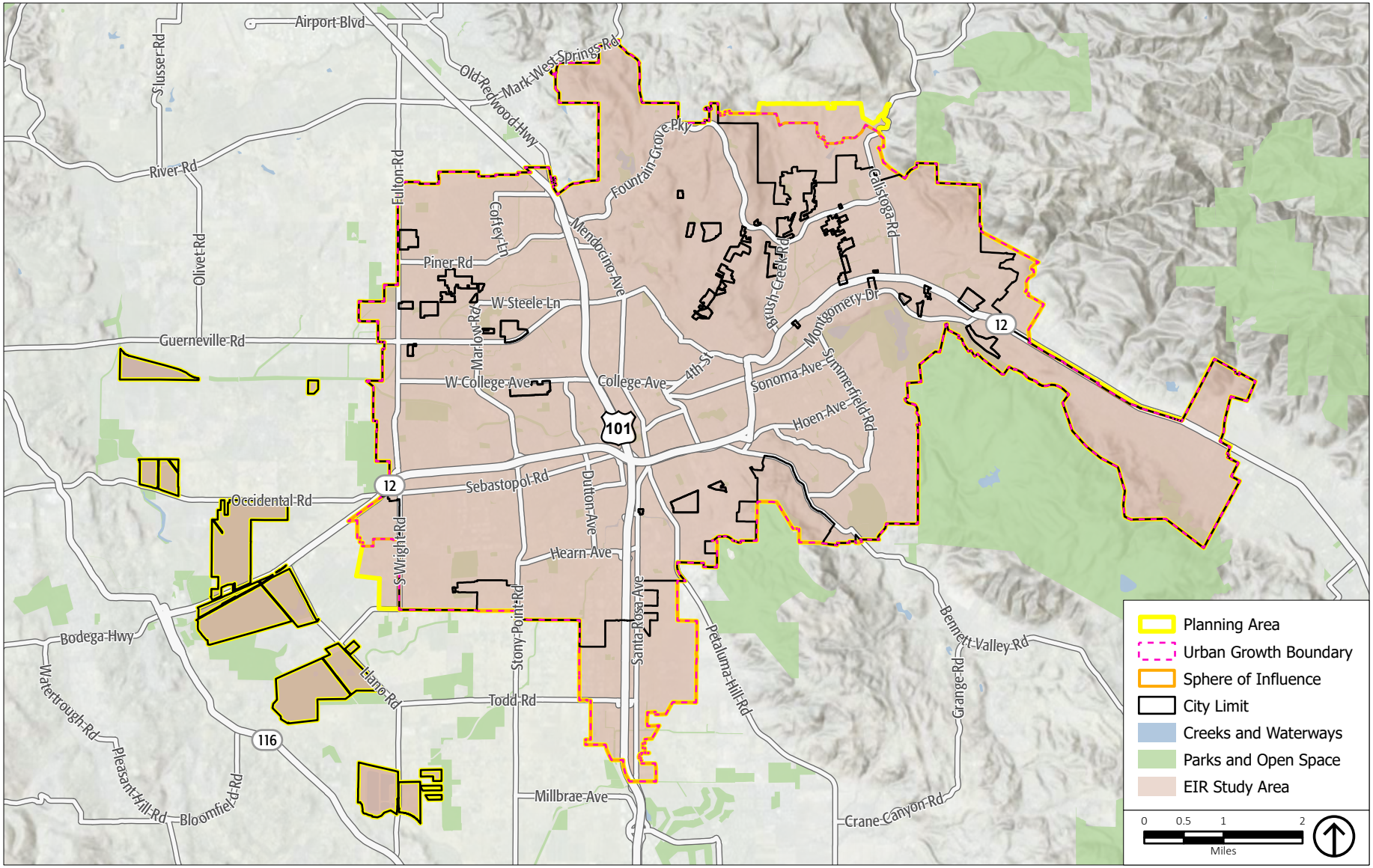
3.4.1.3 SPHERE OF INFLUENCE

The SOI, approximately 3,677 acres (about 6 square miles), is defined and determined by Sonoma LAFCO, although the City can propose the area that it would like its SOI to include. The current Santa Rosa SOI was approved by Sonoma LAFCO in May 2024. The SOI is considered the City's ultimate potential area for future annexation and provision of City services. Establishment of this boundary is necessary to determine which governmental agencies can provide services in the most efficient way to the people and property in the area. For Santa Rosa, land in the SOI receives services from the city or may in the future. The Sonoma LAFCO identifies unincorporated neighborhoods north, northeast, south, and southwest of the city limits as within Santa Rosa's SOI. If land in the City's SOI is annexed by the City in the future, it would then be within the city limit and under the jurisdiction of Santa Rosa at that time.



Source: City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 3-1
Regional and Vicinity Map



Source: City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 3-2
General Plan 2050 Planning Boundaries and EIR Study Area

3.4.2 EIR STUDY AREA

As shown in Table 3-1, *EIR Study Area*, the EIR Study Area includes all land within the city limit, planning area, UGB, and SOI. The EIR Study Area is previously shown on Figure 3-2.

TABLE 3-1 EIR STUDY AREA

Planning Boundaries	Acreage	Square Miles
Planning Area	31,555	49
Urban Growth Boundary	29,252	45
City Limit	27,464	42
Sphere of Influence	3,677	6

Note: Square miles are rounded.
Source: City of Santa Rosa, 2023.

3.5 PLANNING PROCESS

The process to update the existing General Plan began in 2019 and is scheduled to be completed with the adoption of the proposed General Plan 2050 by the City Council in early 2025. To support the General Plan update process, the City formed two advisory bodies: a Community Advisory Committee (CAC) and a Technical Advisory Committee (TAC). The CAC was formed based on their collective ability to represent the full range of community interests, perspectives, and backgrounds of Santa Rosa. Roles of CAC members include serving as liaisons to their constituent groups, inviting input into the process, encouraging community participation throughout the planning process, and assisting the City with gaining a broader understanding of the needs and desires of the local community. The TAC was made up of technical experts from various City departments and partner agencies that provided feedback and ensured the plan concepts could be achieved. The City also created a General Plan website at *www.santarosaforward.com* to enhance and inform the public process. The website provides all of the documents, maps, and meeting agendas, which are available for public download. The website offers information in both English and Spanish and provides contact information for City staff so that members of the public can send their thoughts and questions about Santa Rosa and the General Plan update throughout the process.

The preparation process of the proposed General Plan 2050 was divided into five phases. During each of these phases, robust community engagement efforts were made, including presenting draft products to the community, Planning Commission, and City Council to gather their input. Depending on the phase and direction from the Planning Commission and City Council, revisions were made to finalize the product and/or move on to the next phase of work. Phase 1 was to develop a community involvement strategy that identifies numerous opportunities for the public, key civic and business leaders, as well as City staff and elected officials to be involved in the General Plan update process. Phase 2 involved preparation and publication of an existing conditions report detailing current conditions in the community. The Vision Statement was also crafted during this phase and serves as the guide for the proposed General Plan 2050. Phase 3 developed three land use and circulation alternatives that aimed to implement the community vision, each offering a unique approach to distributing future housing and improving circulation. With feedback from the community, Phase 4 resulted in a Preferred Alternative that serves as the foundation of the proposed General Plan 2050. Phase 5 resulted in the preparation of the proposed General Plan 2050.

3.6 PROJECT OBJECTIVES

Implementation of the proposed project is guided by the Santa Rosa Vision as a diverse, equitable, and sustainable community built on civic engagement that empowers everyone to provide and support equal and affordable opportunities to obtain housing, education, and jobs; to enjoy vibrant cultural events and arts; and to live healthy lives in resilient neighborhoods that adapt to social and environmental change. The primary purpose of the proposed project is to plan for the growth and conservation of Santa Rosa over an approximately 25-year time horizon while achieving the vision. The project objectives to realize the Santa Rosa Vision are related specifically to growth in the 21 Areas of Change, the majority of which capitalize on infill opportunities in and around Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). Development of infill sites near transit make the most of existing infrastructure and allow for the streamlining of future development in a manner that is consistent with the proposed General Plan 2050. Meeting the vision also includes making major improvements to the transportation network, which focus on bridging east and west and enhancing multimodal connectivity and safety citywide. Achieving the vision also entails creating complete streets and complete neighborhoods to activate the Areas of Change. This requires extending the buildout horizon to year 2050 and updating goals, policies, and actions so that they meet current State requirements and community priorities. As part of this process, the City has identified the following, which build on the framework of the Santa Rosa Vision and reflect the community's desires for the future of Santa Rosa and will serve as the project objectives for the Draft EIR.

1. Realize Santa Rosa's Vision as a diverse, equitable, and sustainable community built on civic engagement that empowers everyone to provide and support equal and affordable opportunities to obtain housing, education and jobs; to enjoy vibrant cultural events and arts; and to live healthy lives in resilient neighborhoods that adapt to social and environmental change. The full Santa Rosa Vision, with all 13 ideals, is as follows and as depicted on the image.



   - Just: Social and environmental justice are achieved for everyone—all abilities, ages, ethnicities, gender identities, immigration status, income levels, language speakers, races, religions, and sexual orientations and identities—EVERYONE.
   - Sustainable: Natural resources are restored, protected, and expanded to provide accessible green space for everyone in all neighborhoods, mitigate drought, and minimize greenhouse gas emissions.
   - Inclusive: Everyone is welcome and actively encouraged to join in neighborhood and citywide decision making, and barriers to participation are identified and eliminated.
   - Healthy: All neighborhoods have low pollution level and good air quality, are vibrant, connected, full-service communities, with the resources to be civically organized, and anchored by inclusive and accessible public outdoor spaces and buildings offering safe and welcoming places for everyone. Every person has the opportunity to attain their full health potential.

- **Resilient:** All facets of the community, including housing, infrastructure, and social services are sustainable and resilient to hazards and economic changes.
- **Prepared:** The health and safety of everyone is supported by neighborhood, City, and county-wide efforts to prepare for natural and human-caused hazards, and roadways are optimized to support efficient evacuations.
- **Sheltered:** A diverse mix of high-quality, safe, thoughtfully designed, efficiently planned, and well-served housing at all affordability levels is available throughout the community to accommodate everyone, including formerly homeless, immigrants, local workers, multigenerational households, seniors, students, and formerly incarcerated people.
- **Equitable:** Everyone has what they need to enjoy long, fulfilling, healthy lives, including affordable access to meet their daily needs—including healthy food, recreation, education, childcare, employment opportunities, reliable internet, and physical and mental health services.
- **Successful:** Top employers gravitate; Black-, Latino/Latina-, and other minority-owned businesses are in all corners of the community; equitable investments are made in all neighborhoods; local shops, food and beverage establishments and food trucks, and entertainment spaces support a vibrant city; and meaningful work in a thriving economy is available for people of all ages and backgrounds.
- **Connected:** High-quality, reliable, and safe transit service, bicycle and pedestrian facilities, and other forms of mobility connect all ages across the city and region at all times and support healthy lifestyles, clean air, equity, and resilience.
- **Safe:** Streets are safe; public safety services are provided by caring and thoughtful community members who are representative of and familiar with the neighborhoods, groups, and individuals they serve; and everyone, including immigrants and people of color, can safely access these services.
- **Educated:** Life-long education, enrichment, and supportive services and resources engage and empower young people, strengthen families (of any family structure), connect and activate seniors, and foster the success and well-being of everyone.
- **Cultural:** Art, cultural resources, and activities, historic assets, and live music thrive in every neighborhood, are accessible to everyone, and work to celebrate our diverse community, bring people from all areas of the city together, and support the local economy.

2. Ensure compliance with changes in State Law, including but not limited to, developing an Environmental Justice element, and a Safety Element that is correlated with the requirements of the Local Hazard Mitigation Plan.
3. Develop a plan that accommodates a level of growth that could reasonably occur over the next 2.5 decades, and that plans for both growth and conservation.
4. Create a city with an increasingly dense urban core. Streamline future development by focusing on infill sites near transit to make the most of existing infrastructure. Ensure strong connections between land use, transportation, utilities, and other infrastructure.
5. Focus development in the 21 Areas of Change, the majority of which capitalize on infill opportunities in and around Priority Development Areas and Transit Priority Areas. Activate Areas of Change by developing complete neighborhoods that are walkable/bikeable and increasingly protected from environmental hazards.

6. Provide a range of housing types to meet the needs of all Santa Rosa residents, including multi-family structures, "missing middle" units (such as duplex, triplex, cottage court, multiplex and live/work), and single-family residences with accessory dwelling units, within neighborhoods that are increasingly walkable/bikeable.
7. Create a cross-sector approach to integrating greenhouse gas reduction into all parts of the general plan, so that implementing the plan supports the City in reaching its climate mandates.
8. Create new opportunities for a vital, thriving downtown and entertainment district.
9. Preserve community character and environmental, historic, and cultural resources, as the city develops and becomes denser. Creatively blend old and new development to create a cohesive urban fabric and public realm.

3.7 PROJECT COMPONENTS

As required by State law, the proposed project includes multiple components to ensure that each element of the Santa Rosa General Plan is internally (or horizontally) consistent[5] and the NSASP, DSASP, the SRCC, and GHG Reduction Strategy are consistent with the General Plan (also known as vertical consistency).[6] The section provides a description of each project components.

3.7.1 GENERAL PLAN 2050

The proposed project updates the current General Plan 2035 goals, policies, and actions, and makes changes to land use designations on a limited number of parcels to reflect current conditions, issues, resources, and community perspectives. For example, changes are needed to address the evolving state of the city and region and to cover global issues such as climate change and emerging transportation technologies. The update also incorporates regional forecasts for 2050 that extend the planning horizon forward by 15 years from the current General Plan 2035 horizon. This section provides a summary of the major components of the proposed General Plan 2050.

3.7.1.1 CONTENTS AND ORGANIZATION

The proposed General Plan 2050 includes an introductory chapter, six separate chapters that identify the goals, policies, and actions, and two appendices. The chapters cover the elements required by California Government Code Section 65302 as well as other topics of particular interest to Santa Rosa. A brief explanation of each General Plan chapter and appendix is provided herein.

- Chapter 1, *Introduction*: Describes the required elements of the General Plan, its planning context, and provides an overview of the General Plan's organization. This chapter also covers existing land use conditions and the policy framework; describes the General Plan update process; and presents the location, intensity, and type of future growth and development allowed in the city.

[5] Government Code Section 65300.5 (internal consistency).
[6] Government Code Section 65860 (vertical consistency).

- Chapter 2, *Land Use and Economic Development*: Provides overall land use and economic development policies for the city. The State-mandated land use content addresses the connection between land use and transportation, utilities, and other infrastructure.
- Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*: Satisfies the State law requirement that transportation be addressed by the General Plan and provides the general location and extent of existing and proposed major streets and other transportation facilities. This chapter correlates with the Land Use chapter to provide adequate pedestrian, bicycle, motor vehicle, transit, air, and water transportation to serve both new and existing land uses. Further, this chapter addresses the State law requirement for open space and conservation elements, relating to both the natural and built environment.
- Chapter 4, *Urban and Environmental Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*: Is made up entirely of optional topics for General Plans and includes goals, policies, and actions related to urban and environmental design, cultural and tribal cultural resources, historic preservation, and art and culture. Each of these components are considered essential to the character and future growth of the Santa Rosa community.
- Chapter 5, *Safety, Noise, and Public Services and Facilities*: Addresses State-required safety considerations. It provides information about risks in Santa Rosa due to natural and human-made hazards, and contains goals, policies, and actions designed to protect the community and property from hazards. It specifically addresses risks associated with flooding and storm drainage, geologic and seismic hazards, hazardous materials and waste, and wildland fires. This chapter also includes goals, policies, and actions addressing the legally required topic of noise as well as public services and facilities.
- Chapter 6, *Health, Equity, Environmental Justice, and Parks*: Addresses the State-mandated Environmental Justice element, along with optional element topics of community health, equity, parks, and children and families. The optional elements complement the mandated element as each topic directly impacts environmental justice and considering them on their own supports more sustainable change.
- Chapter 7, *Housing*. Identifies the housing needs of the city for all income levels and strategies and policies for providing housing to meet those needs. Since the Housing Element is updated more frequently than the other elements, as required by State law, it exists as its own document outside of the proposed General Plan 2050 and is therefore not part of the proposed project. The current Housing Element, adopted February 14, 2023, and certified by HCD on April 7, 2023, was updated by the City through a separate process. The current Housing Element addresses housing needs in Santa Rosa for the 2023 to 2031 planning period.
- Chapter 8, *Glossary*: Provides users of the General Plan with a description of all the key terms and acronyms used throughout the document.
- Appendix A, *Greenhouse Gas Reduction Strategy*: Includes the GHG Reduction Strategy that will serve as the strategic plan for how the City will reduce GHG emissions and foster a sustainable community through 2050 and beyond.

- Appendix B, *Climate Change Vulnerability Assessment Report*: Includes an assessment of climate change vulnerability and addresses climate change adaptation and resilience to enable the community to prepare for, respond to, withstand, and recover from disruptions exacerbated or caused by climate change. It describes the regulatory framework and method for integrating adaptation and resilience into City policies; the climate change hazards affecting the resilience of Santa Rosa; the specific populations and assets included in the assessment; and provides a summary of the results.

3.7.1.2 GOALS, POLICIES, AND ACTIONS

Each chapter of the proposed General Plan 2050 contains background information and a series of goals, policies, and actions. Policies and actions are at the same level of importance and are both intended to support goals. In most cases, goals have both policies and actions. However, it is also possible for a goal to be supported exclusively by policies or actions. Public Resources Code Section 21081.6(b) and CEQA Guidelines Section 15126.4(a)(2) establish that when a project examined in an EIR is a plan (such as a General Plan), policy, regulation, or other public project, mitigation measures may be incorporated into the plan, policy, regulation, or project design. Therefore, as this is a General Plan EIR, some policies and actions in the proposed General Plan 2050 are also required as means to mitigate environmental impacts under CEQA. The following provides a description of goals, policies, and actions and explains the relationship between them:

- A *goal* is a description of the general desired result that the City seeks to create through the implementation of its General Plan.
- A *policy* is a specific statement that regulates activities in the city, guides decision making, and directs ongoing efforts as the City works to achieve a goal. A policy is ongoing and requires no further implementation. The General Plan's policies establish the standards that will be used by City staff and the other decision makers in their review of land development projects and in decision making about City actions.
- An *action* is a measure, procedure, or technique intended to help reach a specified goal. An action may be ongoing or something that can be completed in a discrete timeframe. The City must take additional steps to implement each action in the General Plan.

3.7.1.3 LAND USE DESIGNATIONS

The proposed General Plan 2050 land use map shows the land use designations that establish the uses, density ranges, and development intensities allowed on each parcel of land. In general, standards of building intensity for residential uses are stated as the allowable range of dwelling units per gross acre (units/acre). Gross acreage includes the entire site (as opposed to net acreage, which excludes unbuildable areas). Nonresidential uses are described with square footage per employee (sf/employee) or stated as maximum floor-area ratios (FAR) based on net acreage. FAR is a ratio of the building square footage permitted on a lot to the net square footage of the lot. For example, on a site with 10,000 square feet of net land area, a FAR of 1.0 will allow 10,000 square feet of building floor area to be built. This could take the form of a two-story building with 50 percent lot coverage, or a one-story building with 100 percent lot coverage. A FAR of 0.4 would allow 4,000 square feet of floor area. The number of residential units permitted and nonresidential FAR are further modified by the zoning district, which, pursuant to

California Government Code Section 65860(a), is required to be consistent with the General Plan. The following sections describe the land use designations for the proposed General Plan 2050, which would be carried forward from the existing General Plan 2035. The land use types are residential, mixed use, commercial, office, industrial, and other, which includes public/institutional, parks and recreation, open space, and agriculture. The proposed General Plan 2050 does not introduce any new land use designation types.

Residential

- Very Low Density (0.2-2.0 units/gross acre). This land use designation accommodates rural and hillside developments within the UGB and is intended for single-family detached units, but clustered single-family attached and multifamily may be permitted.
- Low Density /Open Space (2.0-8.0 units/gross acre). This land use designation permits single-family residential development at a density assumed at only 80 percent of each site due to wetlands constraints. This classification is mainly intended for detached single-family dwellings but attached single-family and multifamily units may be permitted.
- Low Density (2.0-8.0 units/ gross acre). This land use designation is mainly intended for detached single-family dwellings but attached single family and multifamily units may be permitted.
- Medium Low Density (8.0-13.0 units/gross acre). This land use designation is intended for attached single-family residential development (such as townhomes), but single-family detached housing and multifamily development may be permitted. Development at the mid-point of the density range is encouraged but not required.
- Medium Density (8.0-18.0 units/gross acre). This land use designation permits a range of housing types, including single-family attached and multifamily developments, and is intended for specific areas where higher density is appropriate. Missing Middle Housing types, including Duplex-Triplex, Fourplex, and Cottage Court, are also compatible. New single-family detached housing is not permitted except in historic neighborhoods where single-family detached units are allowed.
- Medium High Density (18.0-30.0 units/gross acre). This land use designation permits a range of housing types, including single-family attached and multifamily developments, and is intended for specific areas where higher density is appropriate. Missing Middle Housing types, including Multiplex (small and large), Courtyard buildings, Townhomes, and Live/Work units, are also compatible. Single-family detached housing is not permitted.
- Mobile Home Parks (4.0-18.0 units/gross acre). This land use designation permits residential mobile home development of two or more mobile home units. Mobile homes and manufactured homes are the only allowed housing type.

Mixed Use

- Transit Village Medium (25-40.0 units/gross acre and 300 sf/employee). This land use designation is intended to accommodate mixed-use development within approximately one-half mile of a transit facility. Development should transition from less intense uses at the outlying edges to higher intensity uses near the transit facility. Residential uses are required, and ground-floor neighborhood-serving retail and Missing Middle Housing types, including Live/Work uses, are encouraged.

- Transit Village Mixed Use (40 units/gross acre minimum and 300 sf/employee). This land use designation is intended to accommodate a well-integrated mix of higher-intensity residential, including Missing Middle Housing, such as Multiplex (small and large), Courtyard buildings, Townhouses, and Live/Work units, office, and commercial uses within one-quarter mile of a transit facility. Development is designed and oriented to create a central node of activity at or near the transit facility. There is no maximum density requirement for this designation.
- Core Mixed Use. This land use designation is intended to foster a vital mix of residential, retail, office, governmental, entertainment, cultural, educational, and hotel uses to activate the greater Courthouse Square area and key transit corridors. The principal objectives of this land use designation are to strengthen the role of this area as a business, governmental, retail, and entertainment hub for the region, and accommodate significant new residential development that will extend the hours of activity and create a built-in market for retail, service, and entertainment uses. High-rise development in all-residential or mixed-use buildings is envisioned in a walkable, bikeable environment with civic spaces such as plazas, courtyards, or parks and easy access to public transit. The Core Mixed Use designation has a maximum FAR range of 3.0 to 8.0 except for 12 contributor properties on B, 7th, and 10th Streets, to which height and density maximums apply.
- Station Mixed Use. This land use designation is intended to provide for a range of visitor-serving uses, including retail, restaurants, entertainment, cultural amenities, and hotels in proximity to the Downtown SMART station. While commercial uses are emphasized, new multifamily housing will also be allowed to support daytime and evening vitality in the Downtown Station Area. New development will be required to respect the historic character of the Railroad Square area, adding to the mix of uses and enhancing the walkable, pedestrian-oriented streets and public spaces that attract local residents, SMART train riders, and visitors from the wider region. The Station Mixed Use designation has a maximum FAR range of 3.0 to 6.0.
- Maker Mixed Use. This land use designation emphasizes a balanced mix of residential, creative, and maker-oriented uses, including artisan shops, studios, media production, printing and publishing, distilleries and micro-breweries, cannabis, tech start-ups, research and development facilities, limited light industrial uses, and home-based businesses. Multifamily residential units are encouraged in all-residential or mixed-use buildings, as are Live/Work units. Supportive uses that contribute to a vibrant village atmosphere, such as bodegas, specialty food stores, cafes, coffee shops, performing arts venues, theatres, restaurants, schools, and educational facilities are also permitted. The Maker Mixed Use designation has a maximum FAR range of 3.0 to 6.0.
- Neighborhood Mixed Use. This land use designation allows for new multifamily residential development in all-residential or mixed-use buildings, together with a broad mix of uses that primarily serve local residents, including professional office, retail, entertainment, service, and other neighborhood-scale supporting uses. Housing development will include low- and mid-rise apartments and condominiums, as well as small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes). Missing Middle Housing, including Live/Work spaces and maker-oriented uses, are permitted subject to performance standards. Street design that integrates Complete Streets concepts for accommodating all roadway users and incorporates traffic-calming features will be required with on-street parking where appropriate. FAR for the Neighborhood Mixed Use designation varies downtown.

Commercial

- Retail and Business Services (300 sf/employee). This land use designation allows retail and service enterprises, offices, and restaurants. It includes regional centers, which are large complexes of retail and service enterprises anchored by one or more full line department stores, and destination centers, which are retail centers anchored by discount or warehouse stores. Large grocery stores are expressly permitted in Community Shopping Centers and downtown only, and they may be considered through a Conditional Use Permit process on other commercial sites.
- Community Shopping Center (300 sf/employee). The vision for this land use designation is a complex of retail services and enterprises anchored by a large grocery store and serving a community clientele. Typical uses include restaurants and shops offering convenience goods. These sites are in areas surrounded by residential development and are intended to be walkable areas with a mix of uses that meet the shopping needs for surrounding neighborhoods and provide housing integrated with commercial development. Residential uses shall be incorporated into the overall design but may be provided over time as part of a phased development. Existing community shopping centers are not required to include residential uses for minor alterations or re-occupancy but are required to evaluate and demonstrate through site planning that future residential would not be precluded when significant additions or reconstruction are proposed.
- Neighborhood Shopping Center (300 sf/employee). This land use designation includes small groups of retail and service enterprises providing shopping and services to satisfy the day-to-day needs of local neighborhoods and workplaces. Typical neighborhood center uses include small grocery stores, restaurants, barber or beauty shops, cleaners, shoe repair, and shops offering convenience goods. Residential development is encouraged but not required. New neighborhood centers are allowed in any land use designation where they can be supported.

Office

- Office (250 sf/employee). This land use designation provides sites for administrative, financial, business, professional, medical, and public offices. There is flexibility in how office space is designed to accommodate changing market conditions.

Industrial

- Business Park (350 sf/employee). This land use designation accommodates holistically planned, visually attractive centers for businesses that do not generate nuisances (noise, clutter, noxious emissions, etc.) in campus-like environments for corporate headquarters, research and development facilities, offices, light manufacturing and assembly, industrial processing, general service, incubator facilities, testing, repairing, packaging, and publishing and printing. Warehousing and distribution facilities, retail, hotels, and residential uses are permissible on an ancillary basis. Restaurants and other related services are permitted as accessory uses. Outdoor storage is not permitted.
- Light Industry (400 sf/employee). This land use designation supports light industrial, warehousing, and some heavier commercial uses. Uses appropriate to this land use category include auto repair, bulk or warehoused goods, general warehousing, manufacturing/assembly, home improvement and landscape materials retail, freight or bus terminals, research-oriented industrial, accessory offices,

employee-serving commercial uses, and services with large space needs, such as health clubs. Professional office buildings are not permitted.

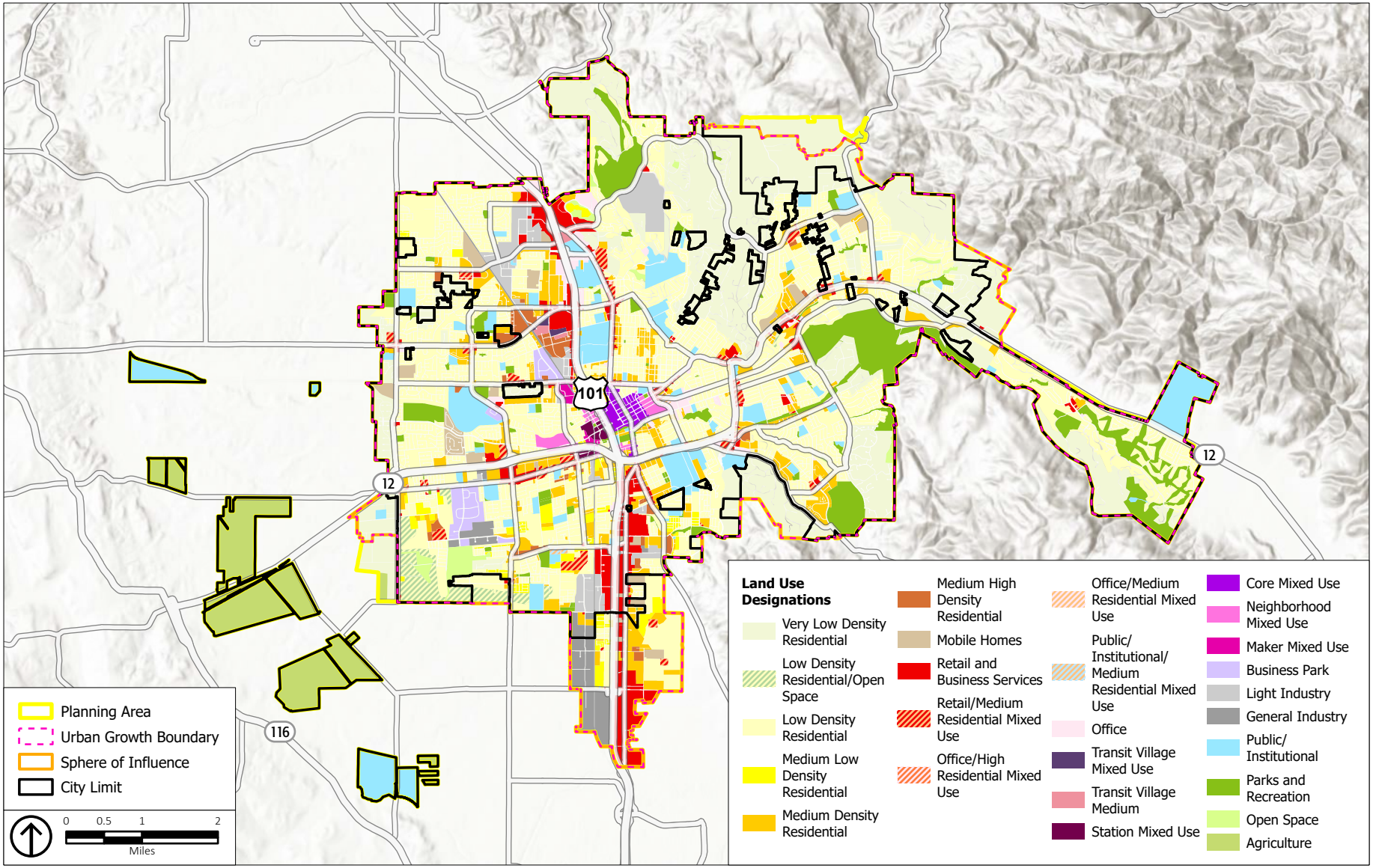
- General Industry (400 sf/employee). This land use designation provides areas for manufacturing and distribution activities with potential for creating nuisances, along with accessory offices and retailing. Unrelated retail and service commercial uses (which can be appropriately located elsewhere in the city) are not permitted. Uses may generate truck traffic and operate 24 hours a day.

Other

- Public/Institutional (25-40 units/gross acre minimum and 300 sf/employee). This land use designation allows for governmental or semi-public facilities, such as hospitals, utilities, and government office centers; however, such facilities may also be allowed in areas with other land use designations, provided they comply with applicable zoning code standards.
- Parks and Recreation. This land use designation permits neighborhood, community, trail and open space parks, special purpose parks and recreational facilities, and civic spaces.
- Open Space. This land use designation features special environmental conditions or significance, may be subject to wildfire, flood, or geologic hazards, or contain watershed lands or important wildlife or biotic habitat. Where otherwise not excluded by noise, aircraft safety, or other environmental standards, residential development is generally permitted at a density of 1.0 unit per 40 acres.
- Agriculture (0.5 units/gross acre). This land use designation is applied only to a limited number of sites outside the UGB in the southwestern portions of the Planning Area and includes orchards and cropland, grasslands, livestock, and related processing and distribution facilities. Residential density may not exceed one housing unit per 20 acres, provided that one housing unit is allowed on each existing parcel. Agriculture is permitted with fewer restrictions on keeping animals than in the residential classifications.

3.7.1.4 LAND USE AND ZONING MAP REVISIONS

The proposed General Plan 2050 land use map is shown on Figure 3-3, *Proposed General Plan 2050 Land Use Map.* The proposed project includes revisions to the land use designations and as required, zoning districts on 11 parcels, as recommended by City staff to better align with the vision of the proposed General Plan 2050. These revisions are shown in Table 3-2, *General Plan Land Use and Zoning Revisions,* and on Figure 3-4, *General Plan Land Use and Zoning Revisions*.



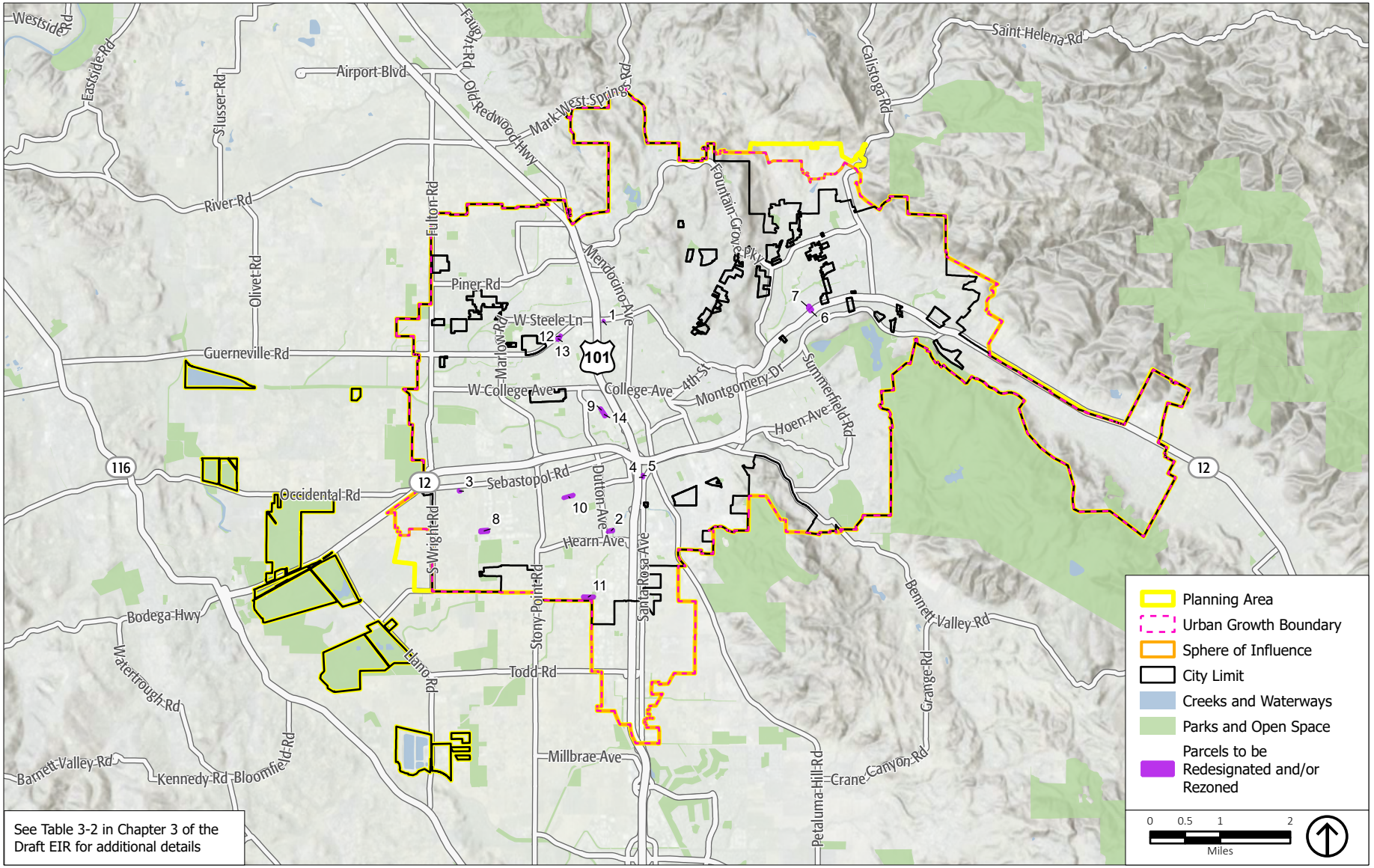
Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 3-3
Proposed General Plan 2050 Land Use Map

TABLE 3-2 GENERAL PLAN LAND USE AND ZONING REVISIONS

Map No.	APN	General Plan Land Use Designation		Zoning District		Current Capacity (DU)	Future Capacity (DU)	Net Capacity (DU)
		Existing	Proposed	Existing	Proposed			
1	180-270-050	Low Density Residential	Retail and Business Services	Single-Family Residential (R-1-6)	General Commercial (CG)	1	4	3
2	043-041-034	Low Density Residential	Medium Density Residential	Single-Family Residential (R-1-6)	Medium Density Multi-Family Residential (R-2)	4	4	0
3	035-700-077	Low Density Residential	Retail and Business Services	Planned Development Residential (PD95-001)	General Commercial (CG)	14	11	-3
4	037-131-018	Medium Density Residential	Retail and Business Services	General Commercial (CG)	no change	6	6	0
5	037-131-019	Medium Density Residential	Retail and Business Services	General Commercial (CG)	no change	5	5	0
6	182-520-098	Low Density Residential	Medium High Density Residential	Rural Residential (RR-40)	Multi-Family Residential (R-3-10)	2	10	8
7	180-520-099	Low Density Residential	Medium High Density Residential	Rural Residential (RR-40)	Multi-Family Residential (R-3-10)	3	12	9
8	035-530-044	General Industry	Business Park	General Industrial (IG)	Business Park (BP)	72	72	0
9	010-091-001	Neighborhood Mixed Use	Maker Mixed Use	Neighborhood Mixed Use – Historic (NMU-H)	Maker Mixed Use – Historic (MMU-H)	4.0 FAR	4.0 FAR	0
10	125-252-003	Medium Residential	Parks/ Recreation	Single-Family Residential (R-3-18)	Open Space-Recreation – Scenic Road (OSR-SR)	47	0	-47
11	043-122-007	Medium Residential	Parks/ Recreation	Single-Family Residential (R-3-18)	Open Space-Recreation – Scenic Road (OSR-SR)	69	0	-69
12	041-043-056	Public/Institutional	Transit Village Mixed Use	North Station Area Combining District (PI-SA)	Transit Village-Mixed	0	17	17
13	041-043-057	Public/Institutional	Transit Village Mixed Use	North Station Area Combining District (PI-SA)	Transit Village-Mixed	0	42	42
14	010-091-007	Neighborhood Mixed Use	Maker Mixed Use	Neighborhood Mixed Use – Historic (NMU-H)	Maker Mixed Use – Historic (MMU-H)	4.0 FAR	4.0 FAR	0
					Total	**223**	**183**	**-40**

Note: APN = Assessor Parcel Number; FAR = Floor Area Ratio
Source: City of Santa Rosa, 2024



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 3-4
General Plan Land Use and Zoning Revisions

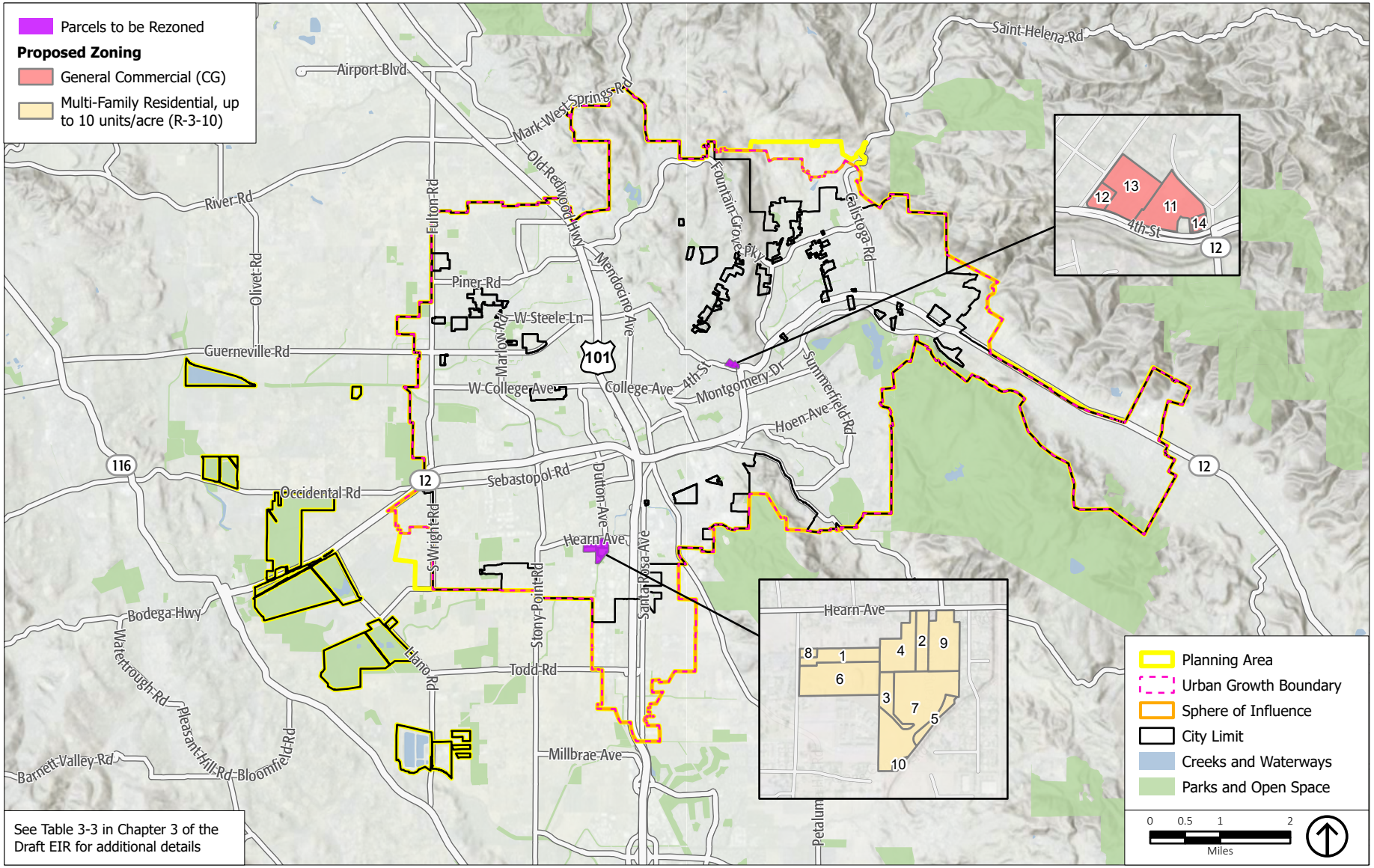
In addition to the parcels with General Plan land use and zoning amendments, the City has identified 14 parcels where revisions to the zoning district are recommended to better align with the vision of the proposed General Plan 2050. These revisions to the zoning districts only are shown in Table 3-3, *Proposed Rezoning Sites*, and on Figure 3-5, *Proposed Rezoning Sites*.

TABLE 3-3 PROPOSED REZONING SITES

Map No.	APN	Existing Zoning	Proposed Zoning	Current Capacity (DU)	Future Capacity (DU)	Net Capacity (DU)
1	043-071-022	Single-Family Residential (R-1-6)	Multi-Family Residential (R-3-10)	29	35	6
2	043-191-021	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	32	25	-7
3	043-200-006	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	27	21	-6
4	043-191-024	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	60	47	-13
5	043-200-007	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	16	12	-4
6	043-071-007	Single-Family Residential (R-1-6)	Multi-Family Residential (R-3-10)	66	81	15
7	043-200-010	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	171	133	-38
8	043-071-023	Single-Family Residential (R-1-6)	Multi-Family Residential (R-3-10)	4	5	1
9	043-191-019	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	73	57	-16
10	043-200-009	Planned Development Residential (PD 06-001)	Multi-Family Residential (R-3-10)	44	35	-9
11	181-190-004	Planned Development Residential (PD 98-003)	General Commercial (CG)	0	88	88
12	181-190-008	Planned Development Residential (PD 98-003)	General Commercial (CG)	0	16	16
13	181-190-009	Planned Development Residential (PD 98-003)	General Commercial (CG)	0	76	76
14	181-190-006	Planned Development Residential (PD 98-003)	General Commercial (CG)	0	7	7
			Total	**522**	**638**	**116**

Source: City of Santa Rosa, 2024.

As shown in Table 3-2 and Table 3-3, the proposed revisions to the land use designations and as required, zoning districts on 13 parcels would result in a net loss for the potential future development of 40 residential units, and the proposed revisions to the zoning districts on 14 parcels would result in a net gain of 116 residential units. Therefore, with these changes there would not be a loss in housing potential but rather would result in a net gain for the potential future development of 76 residential units.



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 3-5
Proposed Rezoning Sites

3.7.1.5 TRANSPORTATION AND INFRASTRUCTURE IMPROVEMENTS

The proposed project includes new and improved circulation infrastructure. Many of the circulation modifications reflected in the proposed General Plan 2050 are also identified in the recent *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan*.[7]

A summary of the improvements reflected in the technical modeling and analysis discussed in Chapter 4.15, *Transportation*, of this Draft EIR, is shown in Table 3-4, *Major Planned Roadway Circulation Improvements*, and Table 3-5, *Major Planned Multimodal Circulation Improvements*.

TABLE 3-4 MAJOR PLANNED ROADWAY CIRCULATION IMPROVEMENTS

Improvement	Description
Freeway Interchanges and Overcrossings	
Baker Ave	Overpass widening including pedestrian and bicycle improvements
Bellevue Ave*	New US Highway 101 overcrossing connecting Corby Avenue to Santa Rosa Avenue
Fulton Road*	New freeway interchange at SR 12 including pedestrian and bicycle facilities
Hearn Ave*	Upgraded interchange and overpass widening including pedestrian and bicycle improvements
Mendocino Ave overcrossing*	Widening including the addition of turn lanes, bike lanes, and sidewalks
Roadway Improvements	
B Street-Healdsburg Ave	Remove one southbound lane between Tenth Street and Seventh Street
Bellevue Ave*	Stony Point Road to Santa Rosa Avenue - add center turn lane, sidewalks, bike lanes (including US Highway 101 overcrossing)
Chanate Rd*	Resiliency corridor - Mendocino Avenue to Parker Hill Road
Cleveland Ave	Remove one through lane in each direction and add bike lanes - Piner Road to Guerneville Road
College Ave	Widen westbound direction to the west of Stony Point Road to Halyard Drive; includes pedestrian and bicycle improvements
Dutton Ave	Remove one through lane in each direction, adding bike lanes - south of College Avenue to north of West Third Street
Dutton Ave Extension*	Roadway extension filling gap south of Hearn Avenue; includes pedestrian and bike improvements
Dutton Meadow*	Realign and extend to Dutton Avenue extension, including sidewalks and bike lanes
Evacuation Route Upgrades*	Primarily on arterials within wildland-urban interface, including Fountaingrove Parkway and Montgomery Drive
Farmers Ln Extension*	Bennett Valley Road to Petaluma Hill Road - sidewalks, bike lanes, transit route, and evacuation routes
Fourth St	Remove one through lane each direction, adding bike lanes - Brookwood Avenue to Bryden Lane
Fresno Ave*	Extension from Northpoint Parkway to Ludwig Avenue including sidewalk and bike lanes
Fulton Rd	Widen to two lanes in both directions between Piner Road and Guerneville Road
Hearn Ave	Widen between Dutton Avenue and Santa Rosa Avenue including pedestrian and bicycle improvements
SR 12	Widen to two lanes each direction between Melita Road and Pythian Road
Kawana Springs Rd*	Widen with turn lanes, sidewalks, and bike lanes

[7] Sonoma County Transit Authority, 2021, *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan.*

TABLE 3-4 MAJOR PLANNED ROADWAY CIRCULATION IMPROVEMENTS

Improvement	Description
Mendocino Ave	Remove one northbound lane and add bike lanes - College Avenue to Fourth Street
Northpoint Parkway extension*	Western extension to South Wright Road and eastern extension to Hearn Avenue, including sidewalks and bike lanes
Petaluma Hill Rd*	Improvements including turn lanes, sidewalks, and bike lanes
Piner Rd*	Widening to four lanes between Fulton Road and Marlow Road including sidewalks and bike lanes
Santa Rosa Ave	Remove one through lane each direction, adding bike lanes - Third Street to Maple Avenue
Sebastopol Rd*	Improvements including turn lanes, sidewalks, and bike lanes from Dutton Avenue to Olive Street
Sebastopol Rd	Widen to two lanes each direction including pedestrian and bicycle improvements between Lombard Lane and Fulton Road
Stony Point Rd*	Widening to four lanes between Hearn Avenue and south city limit including sidewalks and bike lanes
West College Ave	Remove one lane in each direction, filling gaps in sidewalk and bike lane networks - Fulton Road to Halyard Drive
West Ave*	Reconstruction including sidewalks and bike lanes
Yolanda Ave*	Widening to two westbound and one eastbound lane with center turn lane, sidewalks, and bike lanes

Note: *Projects identified in the *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan* (Sonoma County Transit Authority, 2021).
Source: City of Santa Rosa, Sonoma County Transit Authority, and W-Trans, 2023.

TABLE 3-5 MAJOR PLANNED MULTIMODAL CIRCULATION IMPROVEMENTS

Improvement	Description
Bicycle and Pedestrian Improvements	
Bicycle and Pedestrian High Priority Improvements*	Fourth Street/College Avenue improvements, Stony Point Road improvements, Northeast connection improvements, and Roseland Creek trail
East-West Bicycle and Pedestrian Connections*	New bicycle and pedestrian overcrossing of US Highway 101 near Santa Rosa Junior College Campus, construction of a bike and pedestrian grade crossing of the SMART corridor at Jennings Avenue, and installation of bike lanes on Steele Lane/Guerneville Road corridor
Southeast Greenway Multiuse Path and Crossings*	Provide non-motorized transportation connections from Spring Lake Regional Park to Farmers Lane and links to downtown Santa Rosa, surrounding neighborhoods and schools, and the regional trail system
Climate Adaptation Technology Innovation Transport Initiatives*	Improve transit corridor efficiency, implement technologies to improve traffic flow and adapt to autonomous vehicles, upgraded signal controllers; implement short-term goals identified in the 2018 Bicycle and Pedestrian Master Plan (BPMP), such as Vision Zero, safe routes to school, first- and last-mile connections to transit and rail, regional bike share, bike and pedestrian safety, and education activities
Farmers Lane Extension Multiuse Pathway*	Construct multiuse pathway along Farmers Lane Extension between Bennett Valley Road and Petaluma Hill Road
Santa Rosa Bicycle and Pedestrian Master Plan	Implementation of remaining projects in the 2018 BPMP (including future updates to the 2018 BPMP) *Note, the 2018 BPMP is updated approximately every 5 to 8 years. The City of Santa Rosa began an update to the 2018 BPMP in 2023. As part of the update, the BPMP is proposed to be renamed "Active Transportation Plan." Anticipated adoption is March 2025.*

TABLE 3-5 MAJOR PLANNED MULTIMODAL CIRCULATION IMPROVEMENTS

Improvement	Description
Transit Improvements	
Enhanced core CityBus network*	50 percent increases in service hours and 15-minute service on core corridors
CityBus infrastructure improvements*	Expansions of Transit Mall and Coddingtown Transit hubs, Southside Transit Center, improved connectivity to SMART stations, park-and-ride improvements
CityBus new mobility projects*	Projects may include mobility on demand, shared mobility, or mobility as service applications and potentially autonomous vehicle technologies
CityBus Rapid Bus*	Planning efforts supporting future implementation of Rapid Bus on key corridors
CityBus Fare Programs*	Scalable programs oriented toward fare-free transit and paratransit services
CityBus Short Range Transit Plan (SRTP)	Implement projects and programs identified in the current Short Range Transit Plan (including future updates to the SRTP)

Note: * Projects identified in the *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan* (Sonoma County Transit Authority, 2021).
Source: City of Santa Rosa, Sonoma County Transit Authority, and W-Trans, 2023.

3.7.2 SPECIFIC PLAN AMENDMENTS

In September 2012, the City Council adopted the NSASP. The primary objective of NSASP is to support future rail transit by increasing the number of residents and employees within walking distance of the SMART station by improving pedestrian, bicycle, auto, and transit connections, increasing residential density, promoting economic development, and enhancing aesthetics and quality of life. In October 2020, the City Council adopted an updated DSASP. The DSASP was updated with the stated purpose to address land use, transportation and infrastructure needs associated with intensification of housing development in the Downtown. The proposed project would update the NSASP and DSASP to be consistent with the proposed General Plan 2050 by eliminating the references to local streets in the NSASP and DSASP circulation/mobility figures and text.

3.7.3 SANTA ROSA CITY CODE AMENDMENTS

The SRCC is a collection of laws, or ordinances, that are passed by the City of Santa Rosa. These laws are the primary code of the municipality. The SRCC is organized by title, chapter, and section and in some cases, articles. The proposed project includes the modifications to SRCC Title 19, *Subdivisions*, and Title 20, *Zoning*, described herein.

3.7.3.1 TITLE 19: SUBDIVISIONS

Pursuant to SRCC Section 19-04.020, *Purpose*, the provisions of Title 19 are to regulate and control the division of land within the City and to supplement the provisions of the Subdivision Map Act concerning the design, improvement, and survey data of subdivisions, the form and content of all required maps provided by the Subdivision Map Act, and the procedure to be followed in securing the official approval of the City regarding the maps. To accomplish this purpose, the regulations contained in this title are determined to be necessary to preserve the public health, safety and general welfare; to promote orderly growth and development and to promote open space, conservation, protection, and proper use of land; and to ensure provision for adequate traffic circulation, utilities, and other services in the city.

SRCC Chapter 19-70, *Park and Recreation Land and Fees*, as described in Section 19-70.010, *Authority, General Purpose and Definitions,* is adopted pursuant to the California Government Code Section 66477 (Quimby Act) and California Government Code Sections 66000 through 66025 (Mitigation Fee Act) and the general police power of the City, for the purpose of executing and implementing the General Plan of the City of Santa Rosa. It is the purpose of this chapter to provide for: (1) the acquisition of park land for neighborhood and community parks through dedication of land; and (2) the acquisition of park land for neighborhood and community parks and development of park and recreation facilities by imposition of fees in connection with the development of new dwelling units. The proposed project would specifically amend SRCC Section 19-70.030, *Park Acreage Standard*, to clarify how parkland requirements would be satisfied and would remove school recreational land as a means to satisfy acreage.

3.7.3.2 TITLE 20: ZONING CODE

New Zoning District: Missing Middle Housing

SRCC Title 20, *Zoning*, would be amended to include a new combining district to accommodate the type of housing referred to as "Missing Middle." This proposed new combining district provides zones and standards to implement the City's vision of enabling Missing Middle Housing. Missing Middle Housing refers to housing that provides diverse housing options along the spectrum of affordability, which includes duplexes, triplexes, fourplexes and bungalows. Other examples can include cluster homes and cottage courts. The proposed Missing Middle Housing combining district would be denoted as "-MMH" and could be combined with any residential or mixed-use primary zoning district established by SRCC Section 20-20.020, *Zoning Map and Zoning Districts*, provided the provisions of the standards of the proposed new combining district are met. The proposed new zoning district identifies Missing Middle Housing zones and allows for a Missing Middle Housing Bonus (MMH Bonus) for potential future housing within these zones. The MMH Bonus would be determined on a case-by-case basis for qualifying projects as determined by the City during the project application and approval process.

Existing Zoning District Amendments

As listed, several sections of SRCC Title 20 would be revised to align with the proposed General Plan 2050, some of which are directed by proposed General Plan 2050 actions. Underlined text represents language that has been added to the SRCC; text with strikethrough represents language that has been deleted from the SRCC.

- SRCC Section 20-16.040, *Temporary Structures and Activities.* B.2a. Temporary Use Permits issued pursuant to Section 20-52.040.D.3, *Events*, shall be eligible for up to 21 consecutive days, or 36 weekend days, within a 12-month period when conducted on nonresidential properties. Events considered under this subsection include, but are not limited to, ~~arts and crafts exhibits,~~ carnivals, circuses, concerts, fairs, ~~farmers' markets,~~ festivals, flea markets, food events, outdoor entertainment/sporting events, rodeos, rummage sales, second hand sales, and swap meets. (Revised pursuant to proposed General Plan 2050 Action 2-9.2: Update the Zoning Code to allow mobile food and crafts vendors, farmers markets, art and artisan pop-ups, and community gathering events in all nonresidential zoning districts.)

- SRCC Section 20-20.020, *Zoning Map and Zoning Districts.* Table 2-1, *Zoning Districts*, would be revised to indicate that the General Plan land use designations for Retail and Business Services and Neighborhood Shopping Center would be implemented by the Neighborhood Commercial Zoning District.
- SRCC Section 20-22.030, *Residential District Land Uses and Permit Requirements.* Table 2-2, *Allowed Land Uses and Permit Requirements for Residential Zoning Districts*, would be revised to reflect permitted uses in the Neighborhood Mixed Use Zoning District to be consistent with the General Plan land use designation for Neighborhood Mixed Use.
- SRCC Section 20-22.040, *Residential district subdivision and density standards*. D. Development in all R-3 and TV-R districts shall provide at least the midpoint of the allowed density, unless topography, parcel configuration, heritage trees, historic preservation, or utility constraints make the midpoint impossible to achieve. (Revised pursuant to proposed General Plan 2050 Action 2-3.4: Require development at the midpoint or higher of the density range in the Medium and Medium High Density Residential land use designations, unless topography, parcel configuration, heritage trees, historic preservation, or utility constraints make achieving the midpoint infeasible.)
- SRCC Section 20-23.030, *Commercial District Land Use and Permit Requirements*. Table 2-6, *Allowed Land uses and Permit Requirements for Commercial Zoning Districts*, in the Retail Trade land use designation change to 'P' for Artisan Shop and Sales and add a Farmers Markets row with 'P' in all districts. (Revised pursuant to proposed General Plan 2050 Action 2-9.2: Update the Zoning Code to allow mobile food and crafts vendors, farmers markets, art and artisan pop-ups, and community gathering events in all nonresidential zoning districts.)
- SRCC Section 20-24.030, *Industrial District Land Use and Permit Requirements*. Table 2-10, *Allowed Land Uses and Permit Requirements for Industrial Districts*, in the Retail Trade land use designation, add rows for Artisan Sales and Farmers Markets with 'P' in all districts. (Revised pursuant to proposed General Plan 2050 Action 2-9.2: Update the Zoning Code to allow mobile food and crafts vendors, farmers markets, art and artisan pop-ups, and community gathering events in all nonresidential zoning districts.)
- SRCC Section 20-30.090, *Performance Standards.*
  - M. Biological Resource Assessment. Any development proposed on a site with natural habitat conditions that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters shall provide a biological resource assessment from a qualified biologist. (Revised pursuant to proposed General Plan 2050 Action 3-5.11: Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts for protecting the resource and surrounding habitat.)
  - N. Health Impact Assessment. Any nonresidential development proposals of 100,000 square feet or more in an Equity Priority Area (as mapped in the General Plan) shall include health impact assessment that address any potential negative health implications of the project. (Revised pursuant to proposed General Plan 2050 Action 6-1.11: Update the Zoning Code to require health impact assessments for nonresidential projects of 100,000 square feet or more in Equity Priority Areas to identify and address any potential negative health implications of the project.)

Zoning Map and General Plan Land Use Map Conformance

As previously described, under State law the Zoning district for each parcel is required to be consistent with the General Plan land use designation.[8] Accordingly, the proposed project includes amendments to the Zoning Map to bring consistency between the General Plan land use designation and Zoning district for each parcel that is not currently consistent with the General Plan land use designation. Because these amendments are being made to reflect what is currently allowed on the property under the General Plan, these amendments would not result in new development potential at these locations.

3.7.4 GREENHOUSE GAS REDUCTION STRATEGY

Concurrent with the proposed General Plan 2050, the proposed Community-wide GHG Reduction Strategy is an update to and replacement of the City's 2012 CCAP. The proposed GHG Reduction Strategy will serve as the strategic plan for how the City will reduce GHG emissions and foster a sustainable community through 2050 and beyond. Through the qualified GHG Reduction Strategy, Santa Rosa Forward will (1) accelerate reductions in GHG emissions from community-wide sources in an equitable and sustainable manner, (2) provide a comprehensive set of goals, policies, and actions to reduce community emission sources through 2050, (3) meet State requirements related to GHG emissions reduction, (4) leverage work of the Regional Climate Protection Authority, and (5) integrate climate and GHG reductions throughout the General Plan. The proposed GHG Reduction Strategy includes an inventory and forecast of GHG emissions within the city limit and planning area, mandates for future GHG emissions, strategies to reduce GHG emissions, and an implementation plan. The proposed GHG Reduction Strategy is made up of three sections: (1) Introduction, (2) Community-wide Greenhouse Gas Emissions, and (3) GHG Emissions-Reduction Measures and Programs. A complete copy of the proposed GHG Reduction Strategy is included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR. It is also included in Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.

The proposed GHG Reduction Strategy incorporates many of the proposed goals, policies, and actions of the proposed General Plan 2050 and consolidates these items into a set of measures and implementation programs and presents detailed quantification and other details consistent with CEQA Guidelines Section 15183.5, to support ongoing reductions through 2050. The proposed GHG Reduction Strategy's GHG emissions-reduction measures and programs include both pre-existing measures that have already started to be implemented, and new measures that are being introduced for the first time as part of this GHG Reduction Strategy. Projected emissions reductions within the city limits are presented for the years 2030, 2045, and 2050 for both new and pre-existing measures. The proposed GHG Reduction Strategy provides a clear roadmap to meeting the per-capita GHG emissions target consistent with State guidance as well as demonstrates the path to achieving the State's mandate of carbon neutrality by 2045 required by Executive Order B-55-18. See Chapter 4.0, *Environmental Analysis*, of this Draft EIR under subheading "Greenhouse Gas Reduction Strategy" for a description of how the proposed GHG Reduction Strategy is a Qualified GHG Reduction Strategy pursuant to CEQA and how development projects that are consistent with the local qualified reduction strategy would not result in a cumulatively considerable GHG emissions impact, reducing the need for additional analyses or mitigation measures.

[8] Government Code Section 65860 (vertical consistency).

3.8 2050 DEVELOPMENT PROJECTIONS

This Draft EIR analyzes the potential for growth to 2050, which represents an approximately 25-year buildout horizon. Under CEQA Guidelines Section 15126.6(3)(A), when a project consists of the revision of a plan or policy, the project's impacts are assessed against existing conditions, and future conditions under the existing plan are treated as the "No Project" alternative.

Under Section 15064(d) of the CEQA Guidelines, "In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project." The projections represent the City's estimation of all "reasonably foreseeable" development, including the application of current and future density bonuses, the proposed Missing Middle Housing Bonus described in Section 3.7.3.2, *Title 20: Zoning Code,* and other development incentives, that could occur over the next 25 years. These projections are used as the basis for the EIR's environmental assessment that rely on quantitative analysis. See Chapter 4.0, *Environmental Analysis*, for a description of environmental analysis scenarios for this EIR. The projections do not presume that every parcel is developed to the maximum level allowed under the proposed General Plan 2050. Rather, they recognize regional demographic and economic forecasts, and the probable share of regional growth that would be captured by Santa Rosa given its policies and land use regulations. Horizon year (2050) projections in the EIR Study Area are shown in Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*.

TABLE 3-6 PROPOSED 2050 BUILDOUT PROJECTIONS IN THE EIR STUDY AREA

Category	Existing Conditions (2019)	Projected Growth 2019-2050 (Proposed Project)	Buildout Estimates (2050)
Housing Units	75,850	24,090	99,940
Total Population	197,980	65,760	263,740
Jobs	77,590	14,090	91,680

Notes: Numbers are rounded from original sources.
Source: City of Santa Rosa, PlaceWorks, Sonoma County Transportation Authority, and W-Trans, 2023, *Santa Rosa General Plan 2050 Travel Demand Model*.

Through the 2050 buildout horizon, implementation of the proposed project is estimated to result in the following net growth by land uses:

- 2,128,000 square feet of office space
- 727,000 square feet of institutional space
- 945,000 square feet of retail space
- 71 acres of recreation-based uses
- 69 hotel rooms
- 800,000 square feet of industrial space
- 700,000 square feet of warehouse space

Areas of Change

The expansion of the city into surrounding lands is no longer a focus of City planning efforts. Growth and change in the city will be tailored to support maintenance and development of complete neighborhoods, particularly in Areas of Change. These are places where the City will focus efforts to address housing,

services, connectivity, and/or infrastructure needs and help provide complete neighborhoods with goods and services that are easily available. The proposed General Plan 2050 identifies 21 Areas of Change, as shown on Figure 3-6, *Proposed General Plan 2050 Areas of Change*. Eleven Areas of Change are located within or directly adjacent to a PDAs and/or TPAs. See Chapter 4.0, *Environmental Analysis*, for more discussion on the Areas of Change and PDAs and TPAs.

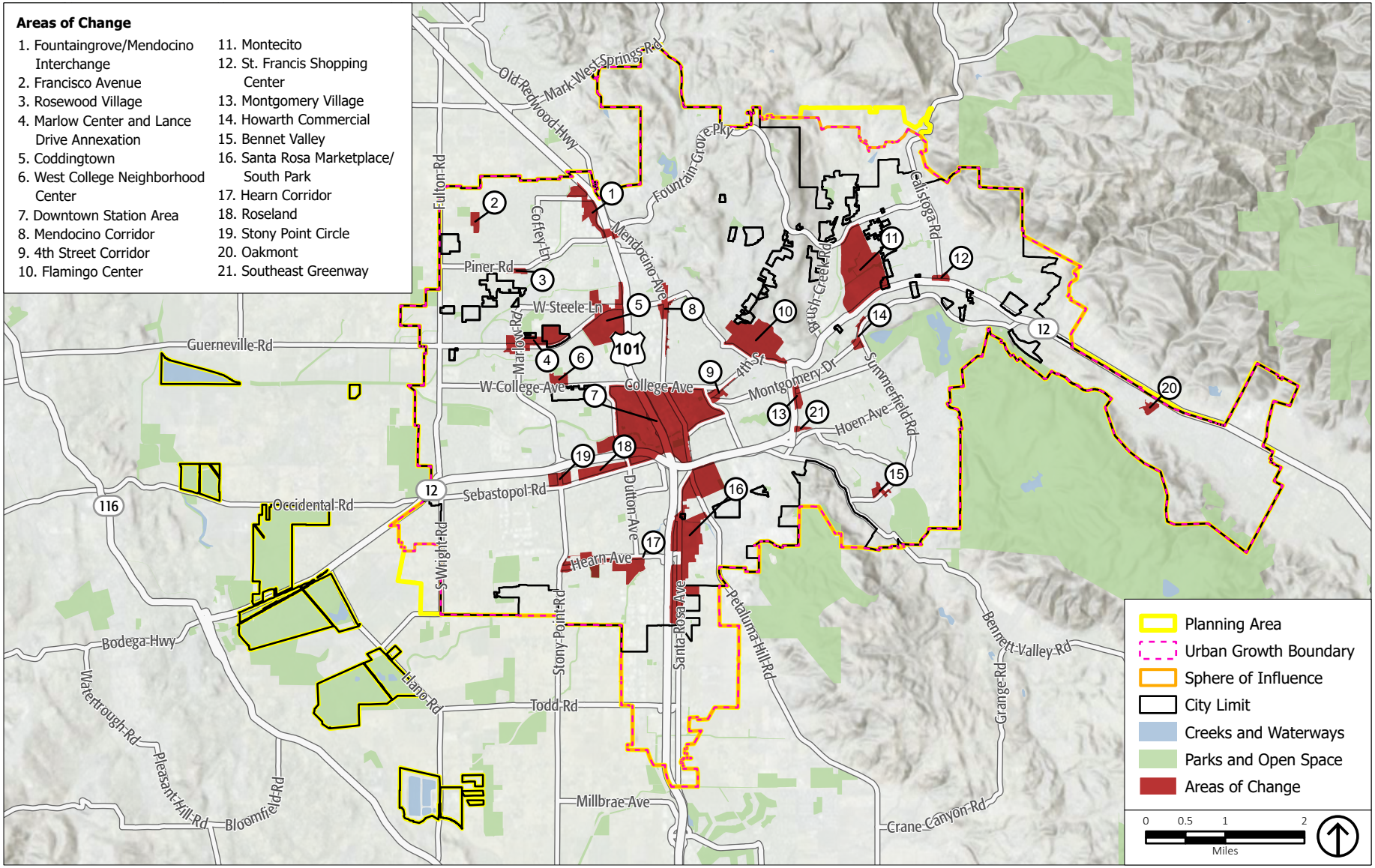
3.9 INTENDED USES OF THE EIR

This EIR is intended to review potential environmental impacts associated with the adoption and implementation of the proposed project and determine corresponding mitigation measures, as necessary. This EIR is a program-level EIR and does not evaluate the impacts of specific, individual developments that may occur over the buildout horizon. Each specific future project would conduct separate environmental review, as required by CEQA, to secure the necessary discretionary development permits. Therefore, while subsequent environmental review may be tiered off this EIR, this EIR is not intended to address impacts of individual projects. Subsequent projects will be reviewed by the City for consistency with the proposed project and this EIR. Projects successive to this EIR include, but are not limited to, the following:

- Approval and funding of major public projects and capital improvements
- Updates to the utility infrastructure master plans, such as the Water, Wastewater, and Stormwater Master Plans
- Updates or amendments to the City's Zoning Code
- Issuance of permits and other approvals necessary for implementation of the proposed project
- Annexation of land into the city limit
- Property rezoning consistent with the proposed General Plan 2050
- Development plan approvals, such as tentative maps, variances, conditional use permits, and other land use permits
- Permit issuance and other approvals necessary for public and private development projects
- Development agreement processes and approvals

3.10 REQUIRED PERMITS AND APPROVALS

The proposed project would require adoption by the Santa Rosa City Council. The Planning Commission will review the proposed project and make recommendations to the City Council. While other agencies may be consulted during the General Plan update process, their approval is not required for the adoption of the proposed General Plan 2050. However, subsequent development under the proposed General Plan 2050 may require approval of State, federal, responsible, and trustee agencies that may rely on the programmatic EIR for decisions in their areas of permitting



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 3-6

Proposed General Plan 2050 Areas of Change

4. Environmental Analysis

This chapter describes the organization of the environmental analysis section of this Draft Environmental Impact Report (EIR) and the assumptions and methodology of the impact analysis and the cumulative impact setting.

CHAPTER ORGANIZATION

The Draft EIR is made up of 18 chapters that evaluate the direct, indirect, and cumulative environmental impacts of the proposed project. In accordance with Appendix F, *Energy Conservation*, and Appendix G, *Environmental Checklist Form*, of the California Environmental Quality Act (CEQA) Guidelines, the potential environmental effects of the proposed project are analyzed for potential significant impacts in the following environmental issue areas, which are organized with the listed abbreviations:

4.1 Aesthetics (AES)
4.2 Agricultural Resources (AG)
4.3 Air Quality (AIR)
4.4 Biological Resources (BIO)
4.5 Cultural Resources (CUL)
4.6 Energy (ENE)
4.7 Geology and Soils (GEO)
4.8 Greenhouse Gas Emissions (GHG)
4.9 Hazards and Hazardous Materials (HAZ)
4.10 Hydrology and Water Quality (HYD)
4.11 Land Use and Planning (LU)
4.12 Noise (NOI)
4.13 Population and Housing (POP)
4.14 Public Services, Parks, and Recreation (PS)
4.15 Transportation (TRAN)
4.16 Tribal Cultural Resources (TCR)
4.17 Utilities and Service Systems (USS)
4.18 Wildfire (WF)

Each chapter is organized into the following sections:

- Environmental Setting offers an overview of federal, state, regional, and local laws and regulations relevant to each environmental issue, and a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared.
- Standards of Significance refer to the quantitative or qualitative standards, performance levels, or criteria used to evaluate the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines, and also may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.
- Impact Discussion gives an overview of the potential impacts of the proposed project and explains why impacts are found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts related to the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section.

STANDARDS OF SIGNIFICANCE

As stated, significance criteria are identified before the impact discussion subsection, under the subsection, "Standards of Significance." For each impact identified, a level of significance is determined using the following classifications:

- No impact. A no impact conclusion describes circumstances where there is no adverse effect on the environment.
- Less than significant. A less-than-significant impact includes effects that are noticeable, but do not exceed established or defined thresholds, or can be mitigated below such thresholds.
- Significant. A significant impact includes a description of the circumstances where an established or defined threshold would be exceeded.
- Significant and unavoidable. For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measure would reduce the impact to a less-than-significant level successfully, this is stated in the EIR. Significant and unavoidable impacts are described where mitigation measures would not diminish these effects to less-than-significant levels. The identification of a program-level significant and unavoidable impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with the applicable regulations and meet applicable thresholds of significance.

EVALUATION METHODOLOGY

Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved to the discretion of the City of Santa Rosa, acting as the lead agency, based on substantial evidence in the record as a whole, including views held by members of the public. An ironclad definition of significant effect is not always possible because the significance of an activity may vary based on the setting. The analysis in the Draft EIR is based on scientific and factual data that has been reviewed by the lead agency and represents the lead agency's independent judgment and conclusions.[1] This section describes the methodology for the program-level evaluation in Chapters 4.1 through 4.18 with respect to the horizon year, the baseline, the application of the proposed General Plan 2050 policies, amendments to the Zoning Map, the strategies to reduce GHG emissions, potential future projects in a priority development area (PDA) or a transit priority area (TPA), parking impacts, effects of the environment on the project, and cumulative impacts.

2050 HORIZON DEVELOPMENT POTENTIAL

The proposed project is made up of long-range policy documents (General Plan 2050, Zoning Map, and GHG Reduction Strategy) that do not directly result in development without additional approvals. Before any development can occur in the EIR Study Area, it must be analyzed for consistency with the adopted

[1] California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15064(b).

General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA as applicable; and obtain all necessary clearances and permits from regulatory agencies. The environmental analysis in this EIR discusses the potential for adverse impacts to occur from extending the buildout potential in the EIR Study Area to horizon year 2050; increasing the buildout potential in the EIR Study Area; new and modified General Plan goals, policies, and actions; amending the Zoning Map for consistency with the General Plan, and the new strategies to reduce GHG emissions.

The 2050 horizon development potential under the proposed project includes the net increase of realistic development potential for the city, including the application of current and future density bonuses, the proposed Missing Middle Housing Bonus described in Section 3.7.3.2, *Title 20: Zoning Code,* of Chapter 3, *Project Description*, of this Draft EIR*,* and other development incentives, that could occur over the next 25 years. Buildout methodology focused on vacant and underutilized lands and pipeline development projects in the city of Santa Rosa. Various unit per acre density factors and developable lot coverage were applied for each parcel based on zoning code requirements, total parcel size, site location, and possible constraints. Constraints included existing structures, fire hazard zones, and/or lands within 500 feet of select highway right of way. Opportunity sites within the Areas of Change were also closely analyzed to determine total growth capacity and investigate rezoning opportunities to meet the development goals for each growth area.

As shown in Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*, in Chapter 3 of this Draft EIR, this combined projected new growth in the entire EIR Study Area for the 2050 horizon year includes approximately 24,090 new residential units; 65,760 new residents; and 14,090 new jobs. Because the proposed project consists of long-term policy documents (i.e., General Plan 2050, Zoning Ordinance, and GHG Reduction Strategy) that are intended to guide future development activities and City actions, and because no specific development projects are proposed as part of the project, it is reasonable to assume that future development would occur incrementally or gradually over the approximately 25-year buildout horizon (e.g., 2025 to 2050). However, while this assumption describes the long-range nature of the proposed project, it does not prohibit or restrict when development can occur over the horizon period.

BASELINE

This EIR evaluates the impacts of the proposed project relative to existing conditions of the EIR Study Area, as required by CEQA Guidelines Section 15126.2. As described in Chapter 3, *Project Description*, of this Draft EIR, the EIR Study Area includes all land within the city limit, planning area, Urban Growth Boundary and Sphere of Influence (see Figure 3-2, *General Plan 2050 Planning Boundaries and EIR Study Area*, in Chapter 3 of this Draft EIR). The baseline represents the existing conditions on the ground ("physical conditions") at the time that the Notice of Preparation (NOP) was issued (February 7, 2023). However, some baseline conditions apply 2019 data.

As described in Chapter 3 of this Draft EIR, the process to update the existing General Plan 2035 began in 2019 and the collection of data was initially hindered by the disruptions created by the coronavirus disease 2019 (COVID-19) pandemic. The COVID-19 pandemic introduced a substantial amount of uncertainty in human lives. It directly affected human behavior, by initially requiring people to shelter in place, implement social/physical distancing, and make other changes to the way they live. Indirectly, it affected the economy, resulting in reduced consumer spending, business closures, and widespread

unemployment. Though some of these trends were considered short term and, in some cases, have reversed, some permanent changes in the ways humans live and behave have occurred in the post-pandemic world. Because the NOP was issued in early 2023, where feasible, baseline data has been applied that reflects the 2023 NOP. However, transportation data, which, in addition to the transportation analysis, is relevant to air quality, energy, greenhouse gas emissions, and noise, relies on the Sonoma County Transportation Authority (SCTA) Sonoma County Travel Model (SCTM19, revised December 2021). The SCTA updates the SCTM on an approximately five-year cycle. Each major revision includes updates to existing land use inventories for all jurisdictions in the County, as well as calibration to both reflect current travel patterns within the County and align with the inputs and projections produced by the nine-County regional travel demand model maintained by the Metropolitan Transportation Commission (MTC). The SCTA travel demand model used in the analysis for this EIR is keyed to a 2019 base year and remains the model version used in Sonoma County to establish baseline VMT values. The next revision of the SCTM model is anticipated to be released by SCTA in 2025.

As discussed in Chapter 3 of this Draft EIR and shown in Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*, the baseline for the EIR Study Area includes the following existing conditions:

- Housing Units: 75,850
- Population: 197,980
- Jobs: 77,590

GENERAL PLAN 2050 GOALS, POLICIES, AND ACTIONS

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the proposed General Plan 2050 goals, policies, and actions aim to reduce vehicle miles traveled (VMT), GHG emissions, air and water pollutants, wasteful energy consumption, and solid waste generation, and improve water use efficiency by promoting infill development; increase opportunities for alternative modes of transportation, pedestrian and bicycle access and connectivity, and local jobs; protect open space; conserve natural resources; and require adherence to green building practices. The proposed General Plan 2050 goals, policies, and actions aim to avoid hazardous conditions and facilitate a healthy and safe environment for residents and visitors to Santa Rosa. In addition, General Plan policies aim to protect cultural resources, including historic buildings, and ensure new development and redevelopment is compatible with neighboring land uses. While the proposed General Plan 2050 policies and actions aim to reduce environmental impact, the EIR process provides an additional opportunity to modify the policies and programs to ensure they adequately reduce impacts from potential future projects in Santa Rosa.

For each significant impact, the EIR must identify one or more feasible mitigation measures or explain why no feasible mitigation measures are available. CEQA Guidelines Section 15370 defines “mitigation” as including: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or (5) compensating for the impact by replacing or providing substitute resources or environments. An EIR

should focus on mitigation measures that are feasible,[2] practical, and effective. Pursuant to CEQA Guidelines Section 12156.4(a)(1)(B), it is ordinarily not appropriate to defer the formulation of mitigation measures until some future time. The CEQA Guidelines acknowledge an exception, explaining that mitigation measures may specify performance standards for mitigating a significant impact that might be accomplished in various ways. Therefore, when it is known that mitigation is feasible, but it is impractical to devise specific measures during the planning process, the agency can commit itself to devising measures that satisfy performance criteria.

Public Resources Code (PRC) Section 21081.6(b) and CEQA Guidelines Section 15126.4(a)(2) establish that when a project examined in an EIR is a plan (such as a General Plan), policy, regulation, or other public project, mitigation measures may be incorporated into the plan, policy, regulation, or project design. Therefore, as this is a General Plan EIR, some policies and actions in the proposed General Plan are also required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker and use the imperative "shall," and in all cases are mandatory. The mitigating policies and actions described in the EIR that are fully enforceable through permit conditions, agreements, or other legally binding instruments and include performance criteria are marked with an asterisk (*). These proposed General Plan policies and actions are listed in the impact discussions of Chapters 4.1 through 4.18 of this Draft EIR to illustrate where the proposed polices and actions would reduce impacts from future development in Santa Rosa.

Additionally, the EIR considers the potential for environmental impacts from the implementation of General Plan policies and actions. Amended and new policies collectively reflect the changes to the current General Plan 2035. Substantive General Plan policy and action changes include the addition, removal, or functional revisions (i.e., not purely semantic) to the text in ways that have the potential to result in a physical impact on the environment. Nonsubstantive changes include the renumbering of policies and actions or minor text revisions, which do not have the potential to result in a physical change to the environment. The content of the proposed General Plan 2050 policies and actions is directly integrated with and reflective of the proposed project as a whole. Therefore, impact discussions for the effects of the proposed project necessarily encompass analysis of the effects of the substantive policy changes as a whole, and those with relevance to CEQA topics are discussed in the appropriate chapters.

ASSOCIATED SPECIFIC PLAN AND CODE AMENDMENTS

As required by State law, the proposed project includes multiple components to ensure that each element of the Santa Rosa General Plan is internally (or horizontally) consistent[3] and the North Station Area Specific Plan (NSASP), Downtown Station Area Specific Plan (DSASP), the Santa Rosa City Code (SRCC), and GHG Reduction Strategy are consistent with the General Plan (also known as vertical consistency).[4] The impacts from the proposed amendments to the NSASP, DSASP, and SRCC are therefore analyzed concurrently with the impacts of the proposed General Plan 2050.

[2] Pursuant to CEQA Section 21061.1, the term "feasible" is defined to mean, "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

[3] Government Code Section 65300.5 (internal consistency).

[4] Government Code Section 65860 (vertical consistency).

GREENHOUSE GAS REDUCTION STRATEGY

As described in Chapter 3, *Project Description*, of this Draft EIR the proposed GHG Reduction Strategy is an update to and replacement of the City's 2012 Community-wide Climate Action Plan and would serve as the strategic plan for how the City will reduce GHG emissions and foster a sustainable community through 2045 and beyond. The proposed GHG Reduction Strategy provides a framework for reducing GHG emissions through recommended community-wide GHG reduction strategies. The proposed GHG Reduction Strategy provides a clear roadmap to meeting the per-capita GHG emissions target consistent with State guidance as well as demonstrating the path to the goal of carbon neutrality by 2045 mandated by Executive Order (EO) B-55-18.

Under CEQA Guidelines Section 15183.5, *Tiering and Streamlining the Analysis of Greenhouse Gas Emissions*, local strategic plans to reduce GHG emissions can help with the environmental review process for new development proposals defined as projects under CEQA. Plans that may be used this way are referred to as Qualified GHG Reduction Strategies or Plans and must satisfy the following criteria:

- Quantify emissions, both existing and projected over a specified period, resulting from activities within a designed geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from an activity covered by the plan would not be cumulatively considerable.
- Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify GHG reduction strategies or a group of strategies, including performance standards that, if implemented on a project-by-project basis, substantial evidence demonstrates they would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving specific levels and to require amendment if the plan is not achieving those levels.
- Include an environmental review of the plan.

If these plans meet the State criteria as determined by the City as the lead agency, potential future development projects that are consistent with the local qualified reduction strategy would not result in a cumulatively considerable GHG emissions impact, reducing the need for additional analyses or mitigation measures. Additionally, the GHG Reduction Strategy must identify measures and performance standards that can be clearly shown to achieve this determination. As a result, a GHG Reduction Strategy seeking to be a "Qualified" GHG Reduction Strategy must have a GHG emission-reduction target or targets that substantially reduce GHG emissions, can also be feasibly achieved, and reasonably tracked and reported over time.

As a component of the proposed project, the implementation of the proposed GHG Reduction Strategy, including potential new development associated with the new reduction measures and programs, will be analyzed at a programmatic level as part of this EIR. Following certification of this EIR, this would allow the proposed GHG Reduction Strategy to support and streamline environmental review of GHG emissions for future development projects in the city pursuant to CEQA Guidelines Section 15183.5.

The proposed GHG Reduction Strategy includes the strategies that are required to reduce GHG emissions. Like the proposed General Plan 2050 policies, the proposed GHG Reduction Strategy aims to reduce community-wide GHG emissions. The GHG emission-reduction strategies include a mix of education and outreach programs to encourage GHG emission-reduction activities, rebates, and other enticements to incentivize GHG emissions reductions, and mandates to require GHG emissions-reduction efforts. The GHG emission-reduction strategies also support broader sustainability initiatives.

Additionally, the proposed GHG Reduction Strategy implementation would not result in changes to the land use plan under the proposed General Plan 2050. Thus, because there is no specific land use component associated with the proposed GHG Reduction Strategy, its implementation would not directly result in the generation of GHG emissions. The proposed General Plan 2050 references the proposed GHG Reduction Strategy, recognizing that the City's climate action planning efforts must be updated more regularly to be responsive to the changing regulations, guidance, technology, best practices, and science.

PRIORITY DEVELOPMENT AND TRANSIT PRIORITY AREAS

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Government (ABAG) *Plan Bay Area* is the San Francisco Bay Area's Regional Transportation Plan/Sustainable Community Strategy. *Plan Bay Area* is the long-range integrated transportation and land use/housing strategy through 2050 for the Bay Area, pursuant to the Sustainable Communities and Climate Protection Act (Senate Bill [SB] 375). MTC and ABAG adopted the current version of *Plan Bay Area* on October 21, 2021.[5] *Plan Bay Area* 2050 is a limited and focused update to the *Plan Bay Area* 2040, with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last several years.[6] As part of the implementing framework for *Plan Bay Area*, PDAs and TPAs are identified as areas where concentrated development can have beneficial environmental effects and reduce adverse environmental impacts. Additional details about PDAs and TPAs are provided in the sections that follow.

PRIORITY DEVELOPMENT AREAS

A PDA is a place that has convenient public transit service, often referred to as "transit-oriented," that is prioritized by local governments, such as Santa Rosa, for housing, jobs, and services within existing communities. All PDAs are created and planned by local governments, which nominate eligible areas to ABAG for adoption. The PDAs identified throughout the Bay Area in *Plan Bay Area* 2050 were projected to accommodate 72 percent (or 985,000 units) of new housing and 48 percent (or 679,000) of new jobs in the region from the 2015 baseline.[7] Development in PDAs leverage existing infrastructure and therefore can minimize development in green field (undeveloped) areas and maximize growth in transit-rich

[5] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 21, 2023.

[6] Metropolitan Transportation Commission and Association of Bay Area Governments, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed February 27, 2023.

[7] Metropolitan Transportation Commission and Association of Bay Area Governments, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed February 27, 2023.

communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels and reduce wasteful, inefficient, or unnecessary consumption of energy resources. Additionally, due to the location, infill development in PDAs result in fewer impacts related to agricultural, forestry, mineral, archaeological, and biological resources, energy, geology and soils, hydrology and water quality, and wildfire. Impacts related to concentrated development in the PDAs is discussed throughout this Draft EIR, and specific quantified impacts are described in Chapter 4.3, *Air Quality*, Chapter 4.8, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR.

Certain potential future residential or mixed-use residential projects and projects in PDAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining. For example, while not exclusive to PDAs, due to their urban setting, development in a PDA is more likely to qualify for a CEQA Guidelines Section 15332, *Infill Development Projects*, Class 32 Categorical Exemption.

TRANSIT PRIORITY AREAS

Plan Bay Area 2050 also identifies TPAs, referred to as Transit-Rich PDAs.[8] These are areas within 0.5 miles of a major transit stop (i.e., a stop with service frequency of 15 minutes or less) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon of a Transportation Improvement Program adopted pursuant to Section 450.216 or Section 450.322 of Title 23 of the Code of Federal Regulations. TPAs generally include existing neighborhoods served by transit and contain a wide range of housing options along with jobs, schools, and amenities. Certain potential future residential or mixed-use residential projects and projects[9] in TPAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining. Like development in PDAs, developing in TPAs also minimizes development in green field (undeveloped) areas and maximizes growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels and reduce wasteful, inefficient, or unnecessary consumption of energy resources.

With respect to potential future development in a TPA, SB 743, which became effective on January 1, 2014, amended CEQA by adding PRC Section 21099 regarding analysis of transportation, aesthetics, and parking impacts for urban infill projects, among other provisions.

SB 743 required the Governor's Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts under CEQA, shifting from a congestion-based (level of service or LOS) standard to a VMT standard. With the passage of SB 743 and the subsequent adoption of revised CEQA Guidelines (December 2018), level of service can no longer be used as a criterion for identifying significant transportation impacts for projects regardless of their location. Transportation impacts are discussed in Chapter 4.15, *Transportation*, of this Draft EIR.

[8] Association of Bay Area Governments and Metropolitan Transportation Commission, 2021, *Plan Bay Area 2050: Regional Growth Framework Update – Overview of Existing and Updated Geographies*, https://www.planbayarea.org/sites/default/files/pdfs_referenced/2019_Regional_Growth_Framework_Update_-_Whats_Changed_1.pdf, accessed June 5, 2023.

[9] A project in a transit priority area is referred to as a transit priority project (TPP).

With respect to aesthetics and parking, CEQA Section 21099(d)(1), states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a TPA shall not be considered significant impacts on the environment." Accordingly, these topics are no longer to be considered in determining significant environmental effects for projects that meet all three of the following criteria:

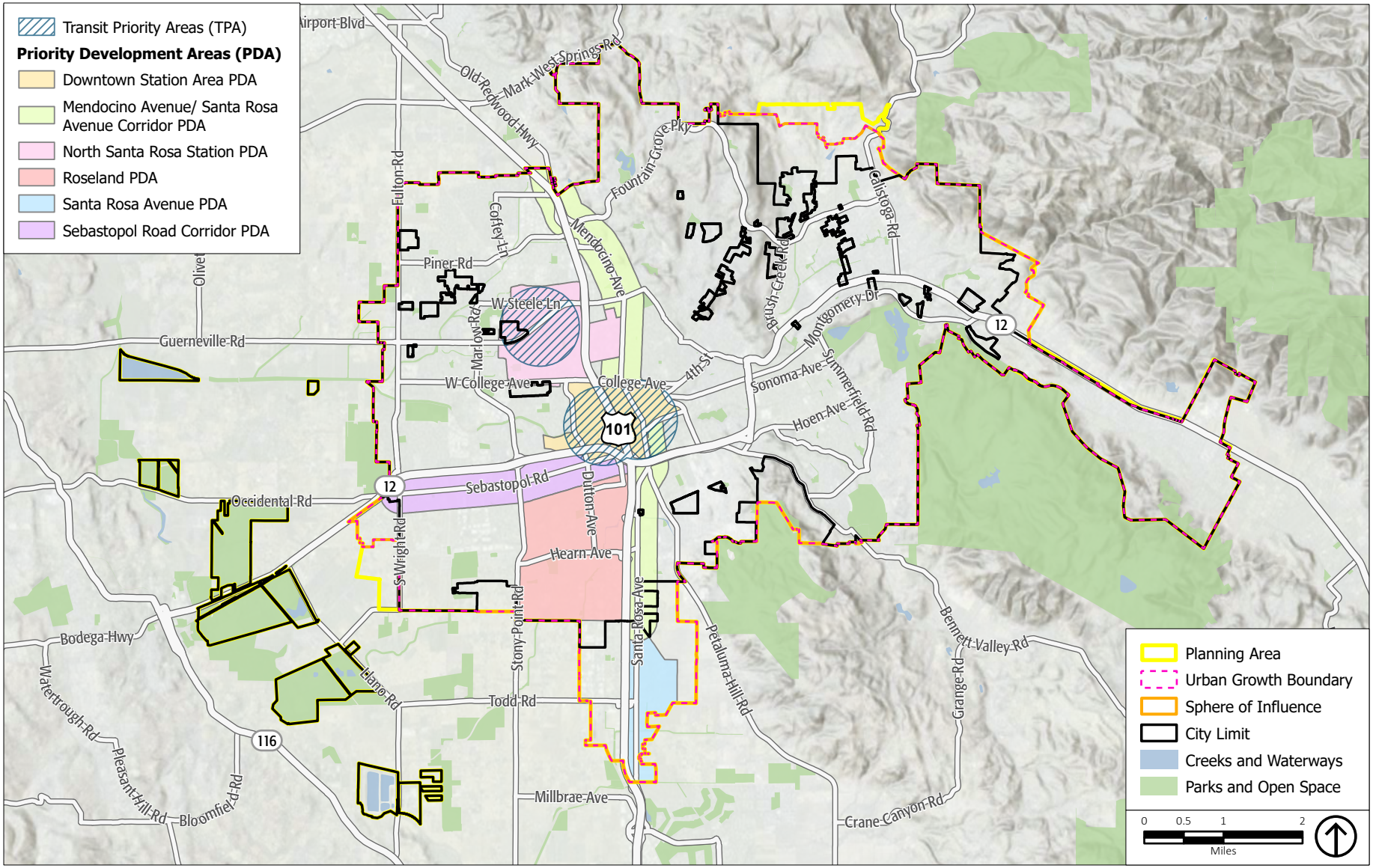
- Is located on an infill site that is defined as "a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from parcels that are developed with qualified urban uses."
- Is a residential, mixed-use residential, or an employment-center project.
- Is in a transit priority area, as defined above.

Accordingly, in compliance with SB 743, no significant aesthetic or parking impacts can be made in the environmental analysis for potential future qualifying development in the TPAs in the EIR Study Area as they exist today or are modified over the buildout horizon.

EIR STUDY AREA PRIORITY DEVELOPMENT AND TRANSIT PRIORITY AREAS

The EIR Study Area includes six PDAs and three TPAs, which are listed below and shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas.*

- Mendocino Avenue/Santa Rosa Avenue Corridor PDA. This PDA stretches north to south the length of the city along Mendocino Avenue south to Santa Rosa Avenue. It shares a border with all the other PDAs in the city. This PDA is designated as a "mixed-use corridor."
- North Santa Rosa Station PDA and TPA. This PDA/TPA surrounds the North Santa Rosa Sonoma-Marin Area Rail Transit (SMART) station in northwest Santa Rosa and the PDA shares a border with the Mendocino Avenue/Santa Rosa Avenue Corridor and Downtown Station Area PDAs. The North Santa Rosa State PDA is designated as a "suburban center."
- Downtown Station Area PDA and TPA. This PDA/TPA encompasses the Downtown SMART station in Downtown Santa Rosa. The PDA shares a border with the Mendocino Avenue/Santa Rosa Avenue Corridor, North Santa Rosa Station, and Sebastopol Road Corridor PDAs. The Downtown Station Area PDA is designated as a "city center." The Downtown Station TPA overlaps the Santa Rosa Transit Mall TPA.
- Sebastopol Road Corridor PDA. This PDA stretches east to west along Sebastopol Road in west Santa Rosa and shares a border with the Mendocino Avenue/Santa Rosa Avenue Corridor, Downtown Station Area, and Roseland PDAs. This PDA is designated as a "mixed-use corridor."
- Roseland PDA. This PDA is bordered by the Sebastopol Road Corridor PDA to the north, US Highway 101 to the east, Bellevue Avenue to the south, and Stony Point Road to the east. The Roseland PDA also shares a border with the Mendocino Avenue/Santa Rosa Avenue Corridor PDA. The Roseland PDA is designated as a "transit neighborhood."
- Santa Rosa Avenue PDA. This PDA stretches north to south along Santa Rosa Avenue, just south of the city limit and shares a border with the Mendocino Avenue/Santa Rosa Avenue Corridor PDA.



Source: City of Santa Rosa, 2020; MTC/ABAG, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4-1
Priority Development Areas and Transit Priority Areas

- Santa Rosa Transit Mall TPA. This TPA surrounds the Santa Rosa Transit Mall, which is a major transfer point for several bus routes serving the city.

AREAS OF CHANGE

The proposed General Plan 2050 identifies 21 Areas of Change where the City will focus on housing, services, connectivity, and/or infrastructure needed to make complete neighborhoods. Potential future development in the EIR Study Area is projected to occur primarily in the proposed General Plan 2050 Areas of Change in the form of infill/intensification on sites already developed or underutilized, and/or in close proximity to existing development and infrastructure. Complementing the Areas of Change are major improvements to the transportation network, which focus on bridging east and west and enhancing multimodal connectivity and safety citywide. Table 4-1, *Proposed General Plan 2050 Areas of Change by PDA/TPA*, shows the 11 Areas of Change that are within or directly adjacent to a PDA and/or TPA.

TABLE 4-1 PROPOSED GENERAL PLAN 2050 AREAS OF CHANGE BY PDA/TPA

Area of Change No. and Name	PDA/TPA
1. Fountaingrove/Mendocino Interchange	Mendocino Avenue/Santa Rosa Avenue Corridor PDA
4. Marlow Center and Lance Drive Annexation	North Santa Rosa Station PDA and TPA
5. Coddingtown	North Santa Rosa Station PDA and TPA
6. West College Neighborhood Center	North Santa Rosa Station PDA
7. Downtown Station Area	Downtown Station Area PDA and TPA
8. Mendocino Corridor	Mendocino Avenue/Santa Rosa Avenue Corridor PDA
9. 4th Street Corridor	Downtown Station Area PDA and TPA (adjacent to)
16. Santa Rosa Marketplace/South Park	Mendocino Avenue/Santa Rosa Avenue Corridor PDA
17. Hearn Corridor	Roseland PDA
18. Roseland	Sebastopol Road Corridor PDA
19. Stony Point Circle	Sebastopol Road Corridor PDA

Notes: PDA = Priority Development Area; TPA = Transit Priority Area. See Figure 3-6, *Proposed General Plan 2050 Areas of Change,* in Chapter 3, *Project Description*, of this Draft EIR and Figure 2-5, *Areas of Change*, in Chapter 2, *Land Use and Economic Development,* of the proposed General Plan 2050.
Sources: City of Santa Rosa, 2020; Metropolitan Transportation Commission/Association of Bay Area Government, 2021; PlaceWorks, 2023.

PARKING

Effective in 2010, parking inadequacy as a significant environmental impact was eliminated from the CEQA Guidelines by OPR, which is the entity charged with drafting guidelines to help agencies implement CEQA. Accordingly, parking adequacy in the EIR Study Area is not discussed further in this Draft EIR.

POTENTIAL EFFECTS OF THE ENVIRONMENT ON THE PROJECT

The California Supreme Court concluded in the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." The CBIA vs. BAAQMD ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted: (1) if the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried); (2) if the project qualifies for certain specific specified

exemptions (certain housing projects and transportation priority projects pursuant to PRC Sections 21159.21 (f) and (h), 21159.22 (a) and (b)(3), 21159.23 (a)(2)(A), 21159.24 (a)(1) and (3), or 21155.1 (a)(4) and (6)); (3) if the project is exposed to potential noise and safety impacts on projects due to proximity to an airport (pursuant to PRC Section 21096); and (4) school projects require specific assessment of certain environmental hazards (pursuant to PRC Section 21151.8). Therefore, the evaluation of the significance of project impacts under CEQA focuses on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Existing potential environmental hazards in Santa Rosa include seismic hazards, flooding, and wildfire. Therefore, while the effects of these hazards on the proposed project are not subject to CEQA review following the CBIA vs. BAAQMD case,[10] the City recognizes that seismic, flooding, and wildfire hazards are issues of local concern. Therefore, a discussion of the project's potential to exacerbate these hazardous conditions is provided in Chapter 4.7, *Geology and Soils*; Chapter 4.10, *Hydrology and Water Quality;* and Chapter 4.18, *Wildfire,* of this Draft EIR.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Used in this context, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. In the case of a long-range plan such as the General Plan 2050, cumulative effects occur when future development under the long-range plan is combined with development in the surrounding areas, or in some instances, in the entire region.

Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. The CEQA Guidelines state that a lead agency has discretion to determine if a project's contribution to a significant cumulative impact is cumulatively considerable.

The cumulative discussions in Chapters 4.1 through 4.18 of this Draft EIR explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends on the impact that is being analyzed. For example, in assessing macro-scale air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basinwide projections of emissions are the best tool for determining the cumulative impact. In assessing aesthetic impacts, on the other hand, only development within the local area of change would contribute to a cumulative visual effect since the area of change is only visible in its vicinity.

[10] *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.

CEQA Guidelines Section 15130 permits two different methodologies for the cumulative impact analysis:

- The "list" approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city.
- The "projections" approach allows the use of a summary of projections in an adopted plan or related planning document, such as an RTP, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

The cumulative impact analysis in this Draft EIR relies on a projections approach and takes into account growth from the proposed project in the EIR Study Area in combination with impacts from projected growth in the rest of Sonoma County and the surrounding region, as forecast by the *Plan Bay Area*. The following provides a summary of the cumulative impact setting for each impact area:

- Aesthetics: The cumulative setting for visual impacts includes potential future development under the proposed project combined with effects of development on lands adjacent to the city in unincorporated Sonoma County.
- Agricultural Resources: The geographic scope of the cumulative analysis for agricultural resources considers those agriculture resources deemed to be resources of statewide importance in the surrounding incorporated and unincorporated lands, the region, and the state.
- Air Quality: Cumulative air quality impacts could occur from a combination of the proposed project with regional growth in the San Francisco Bay Area Air Basin.
- Biological Resources: The geographic scope of the cumulative analysis for biological resources considers the surrounding incorporated and unincorporated lands and the region.
- Cultural Resources: Cumulative impacts to cultural resources could occur from projected growth in the surrounding region.
- Energy: Cumulative impacts to energy resources could occur from the estimated growth in the service area for the two energy providers, Sonoma Clean Power and Pacific Gas and Electric Company.
- Geology and Soils: Potential cumulative geological impacts could arise from future growth in the immediate vicinity of Sonoma County.
- Greenhouse Gas Emissions: The cumulative impact analyses for GHG emissions are related to the entire region. Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative impact analysis focuses on the global impacts and thus, is by its nature cumulative.
- Hazards and Hazardous Materials: The cumulative analysis considers the effects of growth in the rest of Sonoma County and surrounding region.
- Hydrology and Water Quality: The geographic context used for the cumulative assessment of hydrology and water quality impacts, including the potential to exacerbate the potential for flooding, considers the watersheds that encompass Santa Rosa.
- Land Use and Planning: The geographic context for the cumulative land use and planning effects considers impacts from projected growth in the rest of Sonoma County and the surrounding region, as forecast in the *Plan Bay Area*.

- Noise: The traffic noise levels are based on cumulative traffic conditions that take into account cumulative development in the Sonoma County region.
- Population and Housing: Impacts from cumulative growth are considered in the context of their consistency with regional planning efforts in the Sonoma County region.
- Public Services and Recreation: Cumulative impacts are considered in the context of projected growth in the rest of Sonoma County and the surrounding region, as forecast by the *Plan Bay Area*, and contiguous with the service area boundaries of the service providers evaluated in this section.
- Transportation: The analysis of the proposed project addresses cumulative impacts to the transportation network in the surrounding area.
- Tribal Cultural Resources: Cumulative impacts to tribal cultural resources could occur from projected growth in the surrounding region.
- Utilities and Service Systems: Cumulative impacts are considered in the context of the estimated growth in each utility's service area.
- Wildfire: The analysis of the proposed project includes a discussion of how cumulative development in the region may exacerbate wildfire risk in Santa Rosa and the surrounding area.

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4.1 AESTHETICS

This chapter of the Draft Environmental Impact Report (EIR) describes the potential aesthetics impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential aesthetics impacts, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

State Regulations

California State Scenic Highways Program

California's Scenic Highway Program was created by the State legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highways Program are found in the Streets and Highways Code, Sections 260 through 263.

When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. Scenic corridors consist of land that is visible from the highway right-of-way and is composed primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries. The city or county must also adopt ordinances, zoning, and/or planning policies to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances and/or policies make up the Corridor Protection Program. The status of a proposed State scenic highway changes from "eligible" to "officially designated" when the local governing body applies to the California Department of Transportation (Caltrans) for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

California Building Code

The State of California provides a minimum standard for building design through the California Code of Regulations, Title 24, Part 2, commonly referred to as the California Building Code (CBC). All of Title 24, including the CBC, is updated on a three-year cycle. The CBC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

California Building Code: CALGreen

The California Building Standards Commission adopted the California Green Building Standards Code as Part 11 of Title 24, also known as CALGreen. CALGreen establishes building standards aimed at enhancing the design and construction of buildings through the use of building concepts that reduce negative impacts and increase positive environmental impacts by encouraging sustainable construction practices. Specifically, Section 5.106.8, *Light Pollution Reduction*, establishes backlight, uplight, and glare ratings to minimize the effects of light pollution for nonresidential development. The local building permit process enforces the mandatory provisions of CALGreen.

Public Resources Code Section 21099

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, PRC Section 21099, commonly referred to as its legislative bill number Senate Bill 743, passed in 2013, made changes to the California Environmental Quality Act (CEQA) for projects located in transit-oriented development areas. Among these changes are that a project's aesthetics impacts are no longer considered significant impacts on the environment if the project is a residential, mixed-use residential, or employment center project and if the project is located on an infill site within a transit priority area (TPA).[1] This was implemented to help the State achieve greenhouse gas reductions while prioritizing jobs and housing. As described in Chapter 4.0, and shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, of this Draft EIR, portions of the EIR Study Area are located in three TPAs surrounding the North Santa Rosa Sonoma-Marin Area Rail Transit (SMART) station, the Downtown SMART station, and the Santa Rosa Transit Mall as identified in *Plan Bay Area*,[2] the guiding framework for transportation and land use planning throughout the San Francisco Bay Area, coordinated by the regional planning agencies, the Association of Bay Area Governments and the Metropolitan Transportation Commission. Therefore, within these areas where projects are infill and also a residential, mixed-use residential, or employment center project, pursuant to PRC Section 21099(d), aesthetics impacts shall not be considered significant environmental impacts.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to visual resources in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to aesthetics and visual resources are in Title 13, *Streets, Sidewalks, and Public Places*; Title 17, *Environmental Protection*; Title 18, *Buildings and Construction*; and Title 20, *Zoning*, as follows:

- Title 13, *Streets, Sidewalks, and Public Places.* Title 13 of the SRCC includes regulations that govern street encroachments, utilities, parks, and setback lines. Chapter 13-12, *Underground Utilities*, includes regulations related to aesthetics which prohibit the above-ground suspension of any wires or

[1] California Legislative Information, 2013, Senate Bill No. 743, Chapter 386, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743&search_keywords=, accessed July 9, 2020.

[2] Metropolitan Transportation Commission, 2021, Transit Priority Areas, https://www.arcgis.com/apps/mapviewer/index.html?layers=370de9dc4d65402d992a769bf6ac8ef5, accessed March 2, 2023.

any poles designed to carry telephone, telegraph, or electric conduit. Chapter 13-28, *Setback Lines*, includes development standards related to aesthetics which authorize the City Council to determine the minimum setback distance of the street line for the erection of buildings or structures along any portion of any street in the city.

- Chapter 17-22, *Historic and Cultural Preservation*. The City adopted the Historic and Cultural Preservation Ordinance in 1988. This chapter outlines the methods that items can be identified and protected as cultural and historical resources.
- Title 18, *Buildings and Construction.* As described under State Regulations, the California Building Code (Title 24, Part 2) and CALGreen (Title 24, Part 11), both include outdoor lighting standards to regulate light pollution. The City of Santa Rosa has adopted all sections of the CBC Title 24, Part 2, in Chapter 18-16, *California Building Code*, and Chapter 18-42, *Citation of California Green Building Standards Code*, of the SRCC.
- Title 20, *Zoning*. The Santa Rosa Zoning Code implements the goals and policies of the General Plan by classifying and regulating the uses of land and structures within the city. In addition, the Zoning Code is adopted to protect and to promote the public health, safety, and general welfare of residents, and preserve and enhance the aesthetic quality of the city. The following provisions of the Zoning Code help minimize the visual impacts of new development projects in Santa Rosa:
  - Section 20-28.050, *Scenic Road (-SR) Combining District*. This section of the Zoning Code aims to preserve the natural and constructed features that contribute to the character of scenic roads. This district may be combined with any primary zoning district, provided that the standards of Section 20-28.050 shall apply only to the portions of parcels within 125 feet or less from the edge of the pavement of the designated scenic road. Portions over 125 feet in length from the edge of the pavement of the designated scenic road shall be regulated by the standards of the primary zoning district. Proposed development and new land uses shall comply with the standards, as applicable. In the event of any conflict between the standards and those of the primary zoning district, the most restrictive shall apply. The standards in this section outline ten roads in Santa Rosa and their minimum setback distances, as well as more specific requirements for each road.
  - Chapter 20-30, *Standards for all Development and Land Uses*. This chapter of the Zoning Code sets forth standards to address the details of site planning and project design to ensure that all development within Santa Rosa creates an environment of desirable character, is compatible with existing and future development, and protects the use and enjoyment of neighboring properties consistent with the General Plan. Section 20-30.040, *Creekside development*, requires minimum setbacks from waterways for new structures and states that these developments are required to comply with Section 4.4, *Creeks, Riparian Corridors, and Storm Drainage*, of the City' Design Guidelines. Section 20-30.080, *Outdoor lighting*, establishes maximum height standards for outdoor lighting on private property and requires the use of energy-efficient fixtures. In addition, new development is required to shield and direct lighting fixtures downward and away from adjoining properties to reduce spill-over lighting and light pollution.
  - Chapter 20-32, *Hillside Development Standards*. This chapter of the Zoning Code aims to preserve and enhance Santa Rosa' scenic character, conserve open spaces and significant natural features, respect natural features in the design and construction of hillside development, and design hillside development to be sensitive to existing terrain, views, and significant landforms and

features. Section 20-32.050, *Site planning and development standards*, requires each structure shall be located in the most accessible, least visually prominent, most geologically stable, portion or portions of the site, and at the lowest feasible elevation. Structures shall also be aligned with the natural contours of the site to the maximum extent feasible. Section 20-32.060, *Hillside development permit*, outlines the review process for the City to consider the appropriateness of proposed development on hillside parcels, to ensure that a proposed project minimizes its visual and environmental impact.

- Chapter 20-34, *Landscaping Standards*. This chapter of the Zoning Code establishes landscape standards to mitigate the effects of urbanization on the environment and to provide for an aesthetically pleasing urban setting. This chapter is also intended to encourage optimum use of drought-tolerant plant materials in conjunction with water-conserving automatic irrigation systems. Section 20-34.050, *Landscape standards*, outlines the standards that landscaped areas are required to comply with, including height limits, landscape design, and plant materials. Section 20-34.070, *Post-installation requirements*, includes provisions for landscaping maintenance.
- Chapter 20-38, *Signs*. This chapter of the Zoning Code establishes regulations intended to appropriately limit the placement, type, size, and number of signs allowed within the City, and to require the proper maintenance of signs to, among others, preserve and enhance the aesthetic quality of the entire community. Section 20-38.030, *Sign Permit requirements*, requires a Sign permit prior to the installation, construction, or alteration of any sign. The review authority is required to find that the proposed sign is consistent with the Zoning Code standards, visually complementary and compatible with the scale, architectural style, and prominent natural features of its surroundings prior to approval of a Sign Permit. Section 20-38.050, *General requirements for all signs*, outlines the sign area measurement, height measurement, and locations requirements.
- Chapter 20-39, *Objective Design Standards for By-Right Housing*. This chapter of the Zoning Code establishes objective residential design standards that are sourced from the City's Design Guidelines. This chapter applies to all residential projects which, upon applicant request and demonstration of eligibility, qualify for streamlined and ministerial processing.
- Section 20-52.030, *Design Review*. This section of the Zoning Code establishes procedures for the City's review of the design aspects of proposed development in compliance with the adopted Santa Rosa Design Guidelines. Proposed development requiring a building permit and/or resulting in exterior physical changes to existing structures are subject to the City's design review process. The design review authority charged with reviewing proposed development projects varies depending on the scale of the project. Projects that involve minor improvements such as a new door or window are reviewed by the Director of Planning and Economic Development. Development projects with up to 10,000 square feet of total floor area that are not located within a historic district are reviewed by the Zoning Administrator. Development projects with 10,000 square feet or more of total floor area that are not located within a historic district or projects with 5,000 square feet or more that are located within a historic district are reviewed by the Design Review Board (DRB). The designated design review authority reviews project features such

as building design, landscaping, site planning, and signage. The criteria for design review are as follows:

1. The design and layout of the proposed development is of superior quality, and is consistent with the General Plan, any applicable specific plan, applicable Zoning Code standards and requirements, the City's Design Guidelines, architectural criteria for special areas, and other applicable City requirements (e.g., City policy statements and development plans);
2. The design is appropriate for the use and location of the proposed development and achieves the goals, review criteria, and findings for approval as set forth in the framework of Design Review (Design Guidelines, Introduction, subsection C);
3. The design and layout of the proposed development will not interfere with the use and enjoyment of neighboring existing or future developments;
4. The architectural design of the proposed development is compatible with the character of the surrounding neighborhood;
5. The design of the proposed development will provide a desirable environment for its occupants, visiting public, and its neighbors through the appropriate use of materials, texture, and color, and would remain aesthetically appealing and be appropriately maintained;
6. The proposed development will not be detrimental to the public health, safety, or welfare or materially injurious to the properties or improvements in the vicinity; and
7. The project has been reviewed in compliance with CEQA.

Santa Rosa Design Guidelines

The *Santa Rosa Design Guidelines* (Design Guidelines), adopted in 2002, supplement and enhance design concepts that promote "superior design" by exhibiting thoughtful relationships in the natural and built environment with respect to architecture, landscaping, placemaking and livability, and sustainability. The Design Guidelines provide a clear set of design policies to project sponsors such as developers, property owners, architects, designers, and public agencies and establish criteria for project review. The Design Guidelines apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements. The Design Guidelines represent the city's design and development pattern preferences and facilitate the city's transition to prioritize infill development and increased development in the urban core. The guidelines are organized into four sections:

- Neighborhood Design. Focuses on neighborhood-scale design issues.
- Downtown Station Area. Identifies key components to support a vibrant, pedestrian-oriented downtown and ways to encourage development.
- Residential, Commercial, and Industrial Beyond the Core Area. Provides goals, site planning guidelines, and building design guidelines for single-family residential, multifamily residential, retail centers and commercial districts, and business and light industrial parks and buildings.
- Special Design Considerations. Addresses considerations, including streetscape, historic factors, hillside development, and infill projects.

Processing Review Procedures for Owners of Historic Properties

Adopted in 2001, the Cultural Heritage Board created the *Processing Review Procedures for Owners of Historic Properties* to assist owners, designers, and citizens in the preservation of Santa Rosa's historic resources. These procedures are referenced in the Design Guidelines and apply to all historic properties in the city. The report includes background on design review including historic preservation and landmarks, the Cultural Heritage Board, CEQA compliance, and the step-by-step procedures applicants need to follow in preparing and submitting their applications for design review.[3] It also provides the design guidelines and review procedures for historic properties.

Citywide Creek Master Plan

The Citywide Creek Master Plan, adopted in 2007 and updated in 2013, provides guidelines for the care, management, restoration, and enhancement of the network of creeks and waterways that flow through Santa Rosa, which affect the visual setting.[4] The plan is organized into six chapters: Introduction; Goals, Objectives, and Policies; Plan Concepts; Watershed-Specific Recommendations; Implementation Strategy; and References. Each chapter provides guidelines to aid the City's decision-making when planning creek enhancement and restoration activities, coordinating and expanding creekside trail systems, making broader land use planning decisions concerning creeks, and in the development approval process for projects proposed adjacent to waterways.

Sebastopol Road Urban Vision and Corridor Plan

The *Sebastopol Road Urban Vision Plan*, adopted in 2007 after intensive community outreach, envisions development along the stretch of Sebastopol Road between Dutton Avenue and Stony Point Road in the Roseland community. The plan establishes guidelines for land use concepts, urban design criteria, streetscape elements, and a neighborhood center concept for Roseland Village Shopping Center and Dutton Plaza. It rearranges land uses to stimulate economic revitalization with additional opportunities for commercial and residential uses; provides more green spaces; facilitates pleasant and safer pedestrian connectivity; aims to decongest traffic with new alternative routes; and provides public spaces for socializing and a large community gathering space for special events.

Street Light Design Standards

Adopted in November 2011, the Street Light Design Standards establish uniform standards in accordance with City standards and policies for streetlights on public streets.[5] All street lighting projects are subject to approval by the City Engineer. The Street Light Design Standards includes requirements for lateral light distribution based on location.

[3] Santa Rosa Cultural Heritage Board, 2001, Processing Review Procedures, accessed on May 30, 2023, https://www.srcity.org/DocumentCenter/View/3259/Processing-Review-Procedures-for-Owners-of-Historic-Properties---PDF?bidId=.

[4] City of Santa Rosa, County of Sonoma, and Sonoma County Water Agency, August 2013, *Santa Rosa Citywide Creek Master Plan*, accessed April 5, 2023, https://www.srcity.org/DocumentCenter/View/13792/Santa-Rosa-Citywide-Creek-Master-Plan-PDF.

[5] City of Santa Rosa, November 15, 2011, *Street Light Design Standards*, https://www.srcity.org/DocumentCenter/View/9814/Street-Light-Standards, accessed April 7, 2023.

4.1.1.2 EXISTING CONDITIONS

Visual Character

The city of Santa Rosa is a visually and culturally rich community situated in central Sonoma County on the Santa Rosa Plain. The downtown area serves as the city's primary activity node and consists of mixed office and retail uses. Local attractions such as the Old Courthouse; Santa Rosa Plaza, an indoor mall; and Railroad Square, a retail and hotel hub, are in the downtown area. Surrounding the downtown area are several historic districts, whose structures lend a sense of historic character to the city. The city's residential neighborhoods are diverse, ranging from the traditional grid street patterns and moderately high densities to low density hillside neighborhoods.

Scenic Vistas, Corridors, and Roads

Scenic corridors are considered an enclosed area of landscape, viewed as a single entity that includes the total field of vision visible from a specific point, or series of points along a linear transportation route. Public view corridors are areas in which short-range, medium-range, and long-range views are available from publicly accessible viewpoints, such as from city streets. However, scenic vistas are generally interpreted as long-range views of a specific scenic feature (e.g., open space lands, mountain ridges, bay, or ocean views). The city is bounded by the foothills of the Sonoma Mountains to the east and Laguna de Santa Rosa to the west. Long-range views of the Sonoma Mountains are predominantly visible from locations in the flatland areas of the city. Views of the natural hillsides and natural ridgelines such as Taylor Mountain and Bennet Mountain are important scenic vistas in the EIR Study Area. While there are no officially designated scenic vistas in the EIR Study Area, the City has officially designated the listed roadways in Santa Rosa as scenic roads in the General Plan. A scenic road is defined as a highway, road, drive, or street that provides opportunities for the enjoyment of natural and human-made scenic resources, in addition to its transportation function. Scenic roads direct views to areas of exceptional beauty, natural resources or landmarks, or historic or cultural interest.

1. Melita Road
2. Los Alamos Road
3. Calistoga Road (north of Badger Road)
4. Highway 12 (from Highway 101 west to Fulton Road)
5. Highway 12 (from Farmers Lane to Calistoga Road)
6. Highway 12 (from Calistoga Road to Oakmont)
7. Montecito Avenue (north of Norte Way to Chanate)
8. Brush Creek and Wallace Roads
9. Fountaingrove Parkway
10. Bennett Valley Road (south of Farmers Lane)
11. Montgomery Drive (from Mission Boulevard to Melita Road)
12. Chanate Road (from Mendocino Avenue to Fountaingrove Parkway)
13. Petaluma Hill Road (from Colgan Avenue to the Urban Growth Boundary)
14. Highway 101 (contiguous from northern to southern city limit)
15. Los Olivos Road
16. Manzanita Avenue
17. Newanga Avenue
18. Francisco Avenue
19. Channel Drive
20. Wright Road South
21. Ludwig Avenue
22. Burbank Avenue (from the northerly boundary of Roseland Creek Community Park to Hearn Avenue)

State Scenic Highway

Caltrans has designated the section of State Route (SR) 12 within the EIR Study Area as "eligible" for a State Scenic Highway designation.[6] A portion of SR 12 has also been "officially designated" as a State Scenic Highway, starting from Danielli Avenue in eastern Santa Rosa, to London Way near Agua Caliente. Approximately 2.5 miles of the officially designated State Scenic Highway are within the EIR Study Area.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky around and above developed urban areas, including glare, light trespass, sky glow, and can also be visually disruptive to humans and nocturnal animal species, and often reflects an over lighting. Views of the night sky are an important part of the natural environment. Light pollution has the potential to become an issue of increasing concern as new development contributes additional outdoor lighting installed for safety and other reasons.

The EIR Study Area includes several urbanized areas with a variety of residential, commercial, and public uses. Existing sources of light and glare in the EIR Study Area are similar to those that would be found in any urbanized area, and include streetlamps, parking lot lighting, storefront and signage lighting, car headlamps, and interior lighting visible through windows. Light pollution is primarily limited to urban areas of the EIR Study Area and is restricted primarily to street lighting along major arterial streets, US Highway 101, SR 12, and to night-time illumination of commercial buildings, shopping centers, and industrial buildings. Light spillage from residential areas, particularly older neighborhoods, is mostly well screened by trees.

Transit Priority Areas

As described in Section 4.1.1.1, *Regulatory Framework*, the TPAs surrounding the North Santa Rosa SMART station, the Downtown SMART station, and the Santa Rosa Transit Mall are areas where no aesthetic impact findings can be made for future environmental analysis where projects are infill and also a residential, mixed-use residential, or employment center project, pursuant to PRC Section 21099(d).

4.1.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant aesthetic impact if it would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

[6] California State Scenic Highways Map, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed October 14, 2022.

3. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.
5. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to aesthetics.

With respect to standard number three, the complete question in the CEQA Guidelines is "In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?" PRC (CEQA) Section 21071, *Urbanized Area Definition*, has several metrics by which a city can be defined as an urban area. CEQA Section 21071(a)(1) states that a city can be classified as an urban area if the city has a population of at least 100,000 people. According to the State of California Department of Finance, the population of Santa Rosa in 2019 was 174,885.[7] Therefore, Santa Rosa is considered an urban area under CEQA Guidelines Section 21071, and impact discussion AES-3 as shown in the list of standards is based on the second part of the question.

4.1.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to aesthetics. The evaluation of aesthetics and aesthetic impacts is highly subjective. It requires the application of a process that objectively identifies the visual features of the environment and their importance. Aesthetic description involves identifying existing visual character, including visual resources and scenic vistas unique to Santa Rosa (see Section 4.1.1.2, *Existing Conditions*). Changes to aesthetic resources due to implementation of the proposed project are identified and qualitatively evaluated based on the proposed modifications to the existing setting and the viewer's sensitivity. Project-related aesthetic impacts are determined using the threshold criteria discussed in Section 4.1.2, *Standards of Significance*.

AES-1 Implementation of the proposed project would not have a substantial adverse effect on a scenic vista.

Future development under the proposed project would have the potential to affect scenic vistas/ corridors if new or intensified development blocked views of areas that provide or contribute to such visual resources. Potential effects could include blocking views of a scenic vista/corridor from specific, publicly accessible vantage points or the alteration of the overall scenic vista/corridor itself. Such alterations could be positive or negative, depending on the characteristics of individual future developments and the subjective perception of observers.

[7] State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State: 2011-2020 with 2010 Census Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/, accessed March 10, 2023.

For the purposes of this analysis, the scenic vistas and corridors are limited to those listed in Section 4.1.1.2, *Existing Conditions*, under the subheading "Scenic Vistas and Corridors" and considers the sections of SR 12 that are officially designated and eligible for listing as an official scenic highway. Long-range views of the scenic vistas are generally seen from the flatland areas of the city, and the vistas would be affected if views of these resources were blocked by potential future development. Another effect that could occur is if potential future development altered areas surrounding the officially designated scenic roads. Such alterations could be positive or negative, depending on the characteristics of individual future developments and the subjective perception of observers.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would be concentrated in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser impact on scenic vistas and corridors. The proposed General Plan 2050 reinforces existing uses, heights, and densities in most locations, with allowances for greater intensity at locations that support the goal of a more sustainable, less auto-oriented city. Specifically, areas of concentrated growth would occur in areas such as the Mendocino Avenue/Santa Rosa Avenue Corridor Priority Development Areas (PDA), North Santa Rosa SMART station PDA and TPA, Downtown Station Area PDA and TPA, Sebastopol Road Corridor PDA, Roseland PDA, and Santa Rosa Transit Mall TPA. As shown on Figure 3-3, *Proposed General Plan 2050 Land Use Map*, and Figure 3-6, *Proposed General Plan 2050 Areas of Change*, in Chapter 3 of this Draft EIR, land uses that could generate denser and potentially taller buildings are primarily limited to the existing built environment where buildings of a variety of heights partially obstruct views from the public viewing locations that are at the pedestrian-level. In addition, as described in Chapter 3 of the Draft EIR, nearly all of the land use designations would remain unchanged under the proposed project. Therefore, similar views would continue to be visible between elements of the built environment and over lower-intensity areas, and no new impacts to views of the existing scenic resources described in Section 4.1.1.1 under subheading "Scenic Vistas and Corridors" would occur under the proposed General Plan 2050.

All potential future development in Santa Rosa that is subject to discretionary approval within the city limits would be required to comply with SRCC regulations described in Section 4.1.1.1, *Regulatory Framework*. Specifically, the SRCC includes a Scenic Road Combining District to preserve the natural and constructed features that contribute to the character of scenic roads. The *Santa Rosa Design Guidelines* would also apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements. Potential future development in the city would also be subject to the various planning documents that govern scenic quality in the city, as described in Section 4.1.1.1. These include the *Citywide Creek Master Plan*, *Sebastopol Road Urban Vision and Corridor Plan,* and Street Light Design Standards. The environmental and design review process for project-specific development serves to preserve and enhance views from other buildings and public property, thereby reducing the risk of potential future development blocking public views of significant visual resources.

Furthermore, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, and Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and

development decisions to consider aesthetic impacts to scenic resources. The following goals, policies, and actions would serve to minimize impacts related to scenic vistas and/or corridors:

- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.4: Identify, preserve, and enhance City-designated scenic roads throughout Santa Rosa in both rural and developed areas, to encourage bicycle commuting and recreation.
    - Action 3-2.25: Provide bicycle lanes along scenic roads where right-of-way exists.
    - Action 3-2.26: Discourage on-street parking along scenic roads; bus stops or scenic overlooks may be provided at appropriate intervals
    - Action 3-2.27: Ensure that the size, amount, and placement of signage along scenic roads does not detract from the area's scenic character.
    - Action 3-2.28: Update the Zoning Code to develop standards for scenic roadways identified in the General Plan that do not have corresponding development standards in the Zoning Code, including:
      - Highway 12 (from Highway 101 west to Fulton Road)
      - Highway 12 (from Farmers Lane to Calistoga Road)
      - Fountaingrove Parkway
      - Bennett Valley Road (south of Farmers Lane)
      - Montgomery Drive (from Mission Boulevard to Melita Road)
      - Chanate Road (from Mendocino Avenue to Fountaingrove Parkway)
      - Petaluma Hill Road (from Colgan Avenue to the Urban Growth Boundary [UGB])
      - Highway 101 (contiguous from northern to southern city limit)
      - Newanga Avenue
      - Channel Drive
      - Wright Road South
      - Ludwig Avenue
      - Burbank Avenue
- Goal 4-1: Preserve and enhance Santa Rosa's community character through attractive urban and environmental design and intentional development.
  - Policy 4-1.1: Preserve and enhance the visual beauty and value of the city's natural waterways, hillsides, historic districts, buildings, structures, and landscapes.
    - Action 4-1.1: Maintain view corridors from public vantage points to natural ridgelines and natural landmarks, such as Taylor Mountain and Bennett Mountain.
  - Policy 4-1.2: Strengthen and emphasize community focal points, visual landmarks, and features that contribute to the identity of Santa Rosa by applying the design concepts and standards of the Zoning Code, Design Guidelines, Historic Combining Districts, Bicycle and Pedestrian Plan, and the Citywide Creek Master Plan.

- Action 4-1.3: Update the City's Design Guidelines, Objective Design Standards, and/or Zoning Code, as appropriate, to:
  - Expand and refine objective design standards for residential development in compliance with State requirements and to create objective measures that relate to site context and promote livable environments.
  - Require landscape design to relate to the natural setting. Minimize grading for new development and revegetate graded areas around structures with native plants, as fire resistance allows.
  - Require structures in new developments to step with the slope of the site and its topography through use of split-level designs.

- Policy 4-1.3: Enhance and strengthen the visual quality of major entry routes into the city and major corridors that link neighborhoods with downtown.
  - Action 4-1.4: Develop and implement a strategy for gateways, depicted in Figure 4-2, that enhances their visual quality and supports placemaking, economic development, active transportation, and other, complementary City goals.
  - Action 4-1.7: Require landscape screening for all development, redevelopment, and rehabilitation of properties along Highway 101 to create a visual buffer between the highway and other uses.

Proposed General Plan 2050 Action 3-2.28 requires the City to update the Zoning Code to develop standards for scenic roadways identified in the General Plan that do not have corresponding development standards in the Zoning Code, and Action 4-1.3 requires the City to update the City's Design Guidelines, Objective Design Standards, and/or Zoning Code to ensure that design standards relate to site context and the natural setting, including the slope, which would ensure scenic vistas and/or corridors would not be adversely impacted by potential future development over the course of the General Plan 2050.

In summary, the location of more intense development combined with the established design review procedures for potential future development would limit the significant adverse impact that potential future development could have on a scenic vista or corridor. Implementation of the proposed General Plan 2050 goals, policies, and actions identified above would further ensure views of scenic vistas and/or corridors would be protected. Therefore, impacts to scenic vistas from implementation of the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-2 Implementation of the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

As described in Section 4.1.1.2, *Existing Conditions*, Caltrans has designated the section of SR 12 within the EIR Study Area as "eligible" for a State Scenic Highway designation and a portion of SR 12 has been "officially designated" as a State Scenic Highway, starting from Danielli Avenue, in eastern Santa Rosa, to London Way, near Agua Caliente. Approximately 2.5 miles of the officially designated State Scenic Highway

are within the EIR Study Area. Implementation of the proposed project would damage scenic resources along these sections of SR 12 if views of the scenic resources were blocked by development from the proposed project.

Impacts to state scenic highway SR 12 in the EIR Study Area are described under impact discussion AES-1 along with the City's locally designated scenic roadways. Because scenic roads, including SR 12, carry vehicles through areas of notable beauty and/or with natural resources, landmarks, historic features, or cultural interest points, the City has regulations in place to protect and enhance the aesthetic values of scenic routes by governing the development of property and placement of outdoor advertising. As described under impact discussion AES-1, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* and Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider aesthetic impacts to scenic resources along the sections of SR 12 that are officially designated and eligible to be designated as a state scenic highway. Specifically, proposed Action 3-2.28 requires the City to update the Zoning Code to include development standards for scenic roadways identified in the General Plan that do not have corresponding development standards in the Zoning Code, which includes a section of SR 12 from Farmers Lane to Calistoga Road that is designated as an "eligible" state scenic highway. Accordingly, compliance with SRCC regulations and Design Review requirements along with implementation of the proposed General Plan 2050 goals, policies, and actions, would ensure any impacts to scenic roads and/or state designated scenic highways would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-3 Implementation of the proposed project would not conflict with applicable zoning and other regulations governing scenic quality.

The proposed General Plan 2050 is the primary planning document for the City of Santa Rosa. The proposed update is intended to ensure consistency between the General Plan, Zoning Code, and State law. Because the proposed General Plan 2050 is the overriding planning document for the City, and because the proposed General Plan 2050 involves amending the General Plan 2035 and the Zoning Code to improve consistency, adoption and implementation of the proposed project would have no impact with respect to being inconsistent with policies or regulations governing scenic quality.

As described under impact discussion AES-1, potential future development that is subject to design review would be required to adhere to the standards and guidelines of the Design Guidelines, which apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements.

Furthermore, as described under impact discussion AES-1, Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, of the proposed General Plan 2050 includes a goal, policies, and actions that require local planning and development decisions to consider impacts to aesthetic impacts, including consistency with applicable zoning and other regulations governing scenic quality. Specifically, proposed Action 3-2.28 and Action 4-1.3 direct the City to update the Zoning Code,

City's Design Guidelines, and/or Objective Design Standards, as appropriate, to be consistent with the goals and policies of the proposed General Plan 2050.

While development resulting from implementation of the proposed project could potentially impact visual character or quality of public views in the EIR Study Area, such development would be required to adhere to existing regulations, along with the proposed General Plan 2050 goals, policies, and actions. Accordingly, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-4 Implementation of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Nighttime illumination and glare impacts are the effects of a development's exterior lighting on adjoining uses and areas. Nighttime uses associated with potential future development may increase light intensity levels and may have the potential to affect existing and future nearby sensitive receptors. If lighting in new development is not designed to reduce upwardly directed light, nighttime lighting could obscure views of the night sky or intrude into neighboring properties. Potential future development would also incrementally increase glare due to exterior glazing (e.g., windows and doors) of new building surfaces, parked cars, and solar photovoltaic panels and site planning (i.e., landscaping and solar photovoltaic panel placement) are not carefully considered. Light and glare impacts are determined through a comparison of the existing light sources with the lighting plans or policies incorporated in development proposals.

Currently, the EIR Study Area contains many existing sources of nighttime illumination. These include street and parking area lights, building-mounted lights, illuminated signage, security lighting, and interior and exterior lighting on existing residential, commercial, and institutional buildings. Glare is primarily from building materials, solar photovoltaic panels, and parked cars. Additional on-site light and glare is caused by surrounding land uses and traffic on SR 12 and US Highway 101.

Future development and activities under the proposed project could intensify lighting sources throughout the EIR Study Area. Future lighting would involve uses similar to the existing land uses in the EIR Study Area and sources of light and glare associated with these uses would be similar in intensity and nature to the existing source of light and glare. In addition to new lighting for buildings, security, and parking areas, the proposed General Plan 2050 encourages the use of solar photovoltaic panels through proposed Action 3-7.13 and Action 3-7.16 in Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*. The potential for glare impacts as a result of solar photovoltaic panels would depend on the placement and angle of the panels, and the materials with which the panels are composed.

Nighttime uses associated with potential future development may increase light intensity levels in development areas and may have the potential to affect existing and future nearby sensitive receptors. If lighting from new development is not designed to reduce upwardly directed light, nighttime lighting could obscure views of the night sky or intrude into neighboring properties. Potential future development would

also incrementally increase glare from new building surfaces, parked cars, and solar panel if exterior glazing (i.e., windows and doors), and site planning (i.e., landscaping and solar panel placement) are not carefully considered.

As described in Section 4.1.1.1, *Regulatory Framework,* in addition to general best management practices that require lighting that is context sensitive in style and intensity required under CALGreen, potential future development, including the installation of solar photovoltaic panels, would have to comply with the City's lighting standards as outlined in the SRCC, Street Light Design Standards, and other adopted plans (e.g., Citywide Creek Master Plan, Sebastopol Road Urban Vision and Corridor Plan). Potential future development would be reviewed for consistency with the lighting standards regarding the appropriate use of lighting and avoidance of glare from lighting and other sources.

Compliance with these standards to reduce light spill and glare would ensure potential future development does not generate excessive light levels or glare. Therefore, the lighting and glare from implementation of the proposed project would not substantially increase nighttime light or glare within the EIR Study Area or its surroundings. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-5	**Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in less-than-significant cumulative impacts with respect to aesthetics.**

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, the cumulative setting includes growth within the EIR Study Area in combination with projected growth in the rest of Sonoma County and the surrounding region. The cumulative setting for visual impacts includes potential future development under the proposed project, combined with effects of development on lands adjacent to the EIR Study Area. Significant impacts, including those associated with scenic resources, visual character, and increased light and glare, would generally be site specific and would not contribute to cumulative impacts after implementation of the General Plan 2050 goals, policies, and actions.

Compliance with the SRCC regulations, *Santa Rosa Design Guidelines*, along with implementation of the proposed General Plan 2050 goals, policies, and actions, would ensure any impacts to scenic vistas and/or corridors would be less than significant. Potential future development within 125 feet or less from the edge of the pavement of a designated scenic road would be required to comply with the regulations of the Scenic Road Combining District as outlined in the SRCC as well as the Sonoma County General Plan and Design Review requirements. The proposed project is intended to ensure consistency between the General Plan, Zoning Code, and State law; therefore, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality. Light and glare from potential future development under the proposed project would be regulated through the City's lighting standards in the SRCC, the *Santa Rosa Design Guidelines*, and other adopted plans.

With adherence to existing local and regional regulations, potential future development under the proposed project would not create substantial impacts to visual resources in Santa Rosa or the surrounding communities. Therefore, the proposed project would not result in a cumulatively considerable impact to aesthetic resources and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.2 AGRICULTURAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to agricultural resources associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to agricultural resources, and identifies proposed General Plan 2050 goals, actions, and policies, as well as feasible mitigation measures, that would minimize any potentially significant impacts. As described in Section 4.2.2, *Standards of Significance*, there is no qualifying forest land or timberland production in the EIR Study Area, and therefore, no evaluation of forestry resources is required.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 REGULATORY FRAMEWORK

State Regulations

Farmland Mapping and Monitoring Program

Within the California Natural Resources Agency, the State Department of Conservation provides technical services and information to promote informed land use decisions and sound management of the state's natural resources. As part of this duty, the Department of Conservation manages the Farmland Mapping and Monitoring Program (FMMP), which supports agriculture throughout California by developing maps and statistical data for analyzing land use impacts to farmland. The FMMP publishes a field report for each county about every two years. The FMMP categorizes land by agricultural production potential according to the following classifications:[1]

- Prime Farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the four years prior to the mapping date.
- Farmland of Statewide Importance is similar to Prime Farmland, but with minor shortcomings, such as steeper slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Unique Farmland consists of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been farmed at some time during the four years prior to the mapping date.

[1] State of California Department of Conservation, 2022, Important Farmland Categories, https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx, accessed April 5, 2022.

- Farmland of Local Importance consists of all farmable land not meeting the definitions of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. This includes land that is or has been used for irrigated pasture, dryland farming, confined livestock or dairy facilities, aquaculture, poultry facilities, and dry grazing. It also includes soils previously designated by soil characteristics as prime farmland, farmland of statewide importance, and unique farmland that has since become idle.
- Grazing Land is the land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act

The California Land Conservation Act of 1965, better known as the Williamson Act, conserves agricultural and open space lands through property tax incentives and voluntary restrictive land use contracts administered by local governments under State regulations. Private landowners voluntarily restrict their land to agricultural and compatible open space uses under minimum 10-year rolling term contracts, with counties and cities also acting voluntarily. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use rather than potential market value.

Regional Regulations

Sonoma County General Plan

Sonoma County has a significant agricultural economy and upbringing, with agriculture as one of its leading sectors, boasting a total production value of over 8 million dollars in 2021.[2] The 2020 Sonoma County General Plan, adopted in 2008, is a comprehensive long-range guide for land in the unincorporated portions of the county, including land directly in the surrounding periphery of the Santa Rosa city limit. While the land within the Santa Rosa city limit is regulated by the City's General Plan, the unincorporated areas outside of the city limit are governed by the County's General Plan. While there are no agricultural land use designations in the Sphere of Influence (SOI), the southern portion of the EIR Study Area outside the SOI and within the Urban Growth Boundary has a diverse agriculture land use designation. The following are relevant goals from the Sonoma County General Plan Agricultural Resources (AR) Element regarding agricultural resources:[3]

- Goal AR-2: Maintain for the timeframe of this plan agricultural production on farmlands at the edges but beyond the Urban Service Areas, to minimize the influence of speculative land transactions on the price of farmland and to provide incentives for long term agricultural use.
- Goal AG-3: Maintain the maximum amount of land in parcel sizes that a farmer would be willing to lease or buy for agricultural purposes.

[2] Sonoma County Department of Agriculture/Weights & Measurements, 2022, *2021 Sonoma County Crop Report*, https://sonomacounty.ca.gov/Main%20County%20Site/Natural%20Resources/Agricultural%2C%20Weights%20%26%20Measures/Documents/Crop%20Reports/2021-Sonoma-County-Crop-Report.pdf, accessed November 9, 2022.

[3] Sonoma County, amended August 2, 2016, Sonoma County General Plan 2020, Agricultural Resources Element, https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Archive/Department%20Information/Cannabis%20Program/_Documents/General-Plan-Agricultural-Resources-Element.pdf, accessed October 18, 2022.

Sonoma LAFCO Agricultural Policies

The Sonoma Local Agency Formation Commission (LAFCO) is an independent agency created by the State to promote the wise use of land resources while providing for the present and future needs of a community. As part of this charge, Sonoma LAFCO establishes agricultural policies and provides guidance to property owners with LAFCO applications who propose the conversion of prime agricultural lands (as defined by LAFCO) into non-agricultural uses. Sonoma LAFCO's main objectives are: (1) To encourage the orderly formation of local government agencies and promote the efficient provision of public services; (2) To preserve agricultural land and open-space resources; and (3) To promote orderly growth and discourage urban sprawl.

Ultimately, Sonoma LAFCO is responsible for determining any changes to a city's boundaries and or a city's SOI. Objective I.A of the Sonoma LAFCO policies is that prime agricultural land is protected and conserved while ensuring there are adequate areas for efficient and orderly growth. Policies under this objective include the following:

- Agricultural Lands. In addition to considering the policies and priorities set forth in Government Code Section 56377, Sonoma LAFCO shall conform to the following policies in reviewing and approving or disapproving proposals that may result in the conversion of agricultural land to non-agricultural uses:[4]

    1. Agricultural significance of the subject territory and adjacent areas relative to other agricultural lands in the region.
    2. Use of the subject territory and adjacent areas.
    3. Whether public facilities for proposed development would be a) sized or situated so as to facilitate conversion of adjacent or nearby agricultural land, or b) extended through agricultural lands that lie between the project site and existing facilities.
    4. Whether uses incompatible with adjacent agricultural uses are expected to result from the proposal and whether natural or man-made barriers would buffer adjacent or nearby agricultural lands from the effects of proposed development or other incompatible uses.
    5. Whether the subject territory is located within the sphere of influence of a city or district providing sewer and/or water service or within an "Urban Service Boundary" designation of the Sonoma County General Plan.
    6. Provisions of applicable general plan open space and land use elements, growth management policies, or other statutory provisions designed to protect agriculture.

    The Sonoma LAFCO shall discourage proposals which would likely convert to urban uses those lands identified by the County General Plan as suitable for long-term agricultural or open space use or identified by the Sonoma County Agricultural Preservation and Open Space District Acquisition Plan as a priority for acquisition or protection in cooperation with willing landowners.

[4] Sonoma Local Agency Formation Commission, amended June 5, 2013, Policy: Agricultural Lands, https://sonomalafco.org/about-the-commission/procedures-and-guidelines/policies-and-guidelines/policy-agricultural-lands, accessed on October 18, 2022.

- Territory Subject to Williamson Act Agricultural Preserve Contract. Proposals establishing or amending spheres of influence and/or annexations for territory to a or city or district providing sewers or nonagricultural water or cities, with an existing Williamson Act Agricultural Preserve Contract shall be prohibited, unless these facilities or services benefit land uses that are allowed under the contract and the landowner consents.[5]

  Pursuant to Government Code Section 56426.5, Sonoma LAFCO may approve the inclusion of territory subject to the Agricultural Preserve Contract within the sphere of influence of a city or special district able to provide sewers or nonagricultural water if it complies with all of the following criteria:

  1. Territory that is subject to a contract for which a notice of nonrenewal has been served pursuant to Section 51245 and has less than five (5) years remaining in the term of the contract.
  2. Territory that is subject to a contract for which a tentative cancellation has been approved pursuant to Section 51282 and has less than five (5) years remaining in the term of the contract.

  Territory for which the governing body of the county or city administering the contract has given its written approval to the change and the landowner consents to the change and has less than five (5) years remaining in the term of the contract.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to agricultural resources in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to agricultural resources are in Title 20, *Zoning*, as follows:

- Chapter 20-26, *Special Purpose Zoning Districts*. This chapter of the Zoning Code lists the land uses that may be allowed within the Special Purpose zoning districts. Special Purpose Zoning Districts include Open Space–Recreation (OSR), Open Space–Conservation (OSC), Public and Institutional (PI), and Planned Development (PD) districts. The OSC zoning district is applied to important open space areas of the City including agricultural land. Section 20-26.030, *Special purpose district land uses and permit requirements*, allows for agricultural-based uses in the OSR and OSC zoning districts through conditional use permits.

4.2.1.2 EXISTING CONDITIONS

Regional Agriculture

Agricultural commodities in Sonoma County grossed over $800 million in 2021, a 19 percent increase from 2020. Wine grapes has been the top-valued agricultural commodity in the county for many years, with a 2021 value of over $540 million. Other top-valued crops in Sonoma County, in order of value, are

[5] Sonoma Local Agency Formation Commission, amended May 2013, Policy: Territory Subject to Williamson Act Agricultural Preserve Contract, https://sonomalafco.org/about-the-commission/procedures-and-guidelines/policies-and-guidelines/policy-territory-subject-to-williamson-act-agricultural-preserve-contract, accessed on October 18, 2022.

milk, nursey plants, miscellaneous livestock and poultry products, cattle and calves, vegetables, cut flowers, bedding plants, and sheep and lambs.[6] The growing population in the EIR Study Area and in greater Sonoma County has increased the rate of agricultural land conversion since the 1980s. As indicated in Table 4.2-1, *Sonoma County Agricultural Land Conversion 1984 to 2018*, the acreages for Prime Farmland and Farmland of Local Importance have decreased by 11 and 29 percent, respectively.

TABLE 4.2-1 SONOMA COUNTY AGRICULTURAL LAND CONVERSION 1984 TO 2018

Land Use Category	1984 Acreage	2018 Acreage	1984 to 2020 Net Acreage Changed	Percentage Change
Prime Farmland	33,930	30,339	-3,591	-11%
Farmland of Statewide Importance	11,318	17,782	6,464	57%
Unique Farmland	15,797	34,455	18,658	118%
Farmland of Local Importance	112,094	79,226	-32,869	-29%
Grazing Land	454,851	414,992	-39,859	9%

Source: California Department of Conservation, 2023, Historic Land Use Conversion, https://www.conservation.ca.gov/dlrp/fmmp/Pages/Sonoma.aspx, accessed May 15, 2023.

Important Farmland

While the majority of land within the city limit is urban and built-up land, land use for agricultural purposes is in the EIR Study Area. The EIR Study Area includes a variety of California Important Farmland, including Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland, as classified by the Department of Conservation and shown on Figure 4.2-1, *Important Farmlands and Williamson Act Contracts*. Table 4.2-2, *Important Farmland by Acreage in the EIR Study Area*, lists the number of acres associated with each farmland classification. Most of the Important Farmlands in the EIR Study Area are Grazing Land and Farmland of Local Importance.

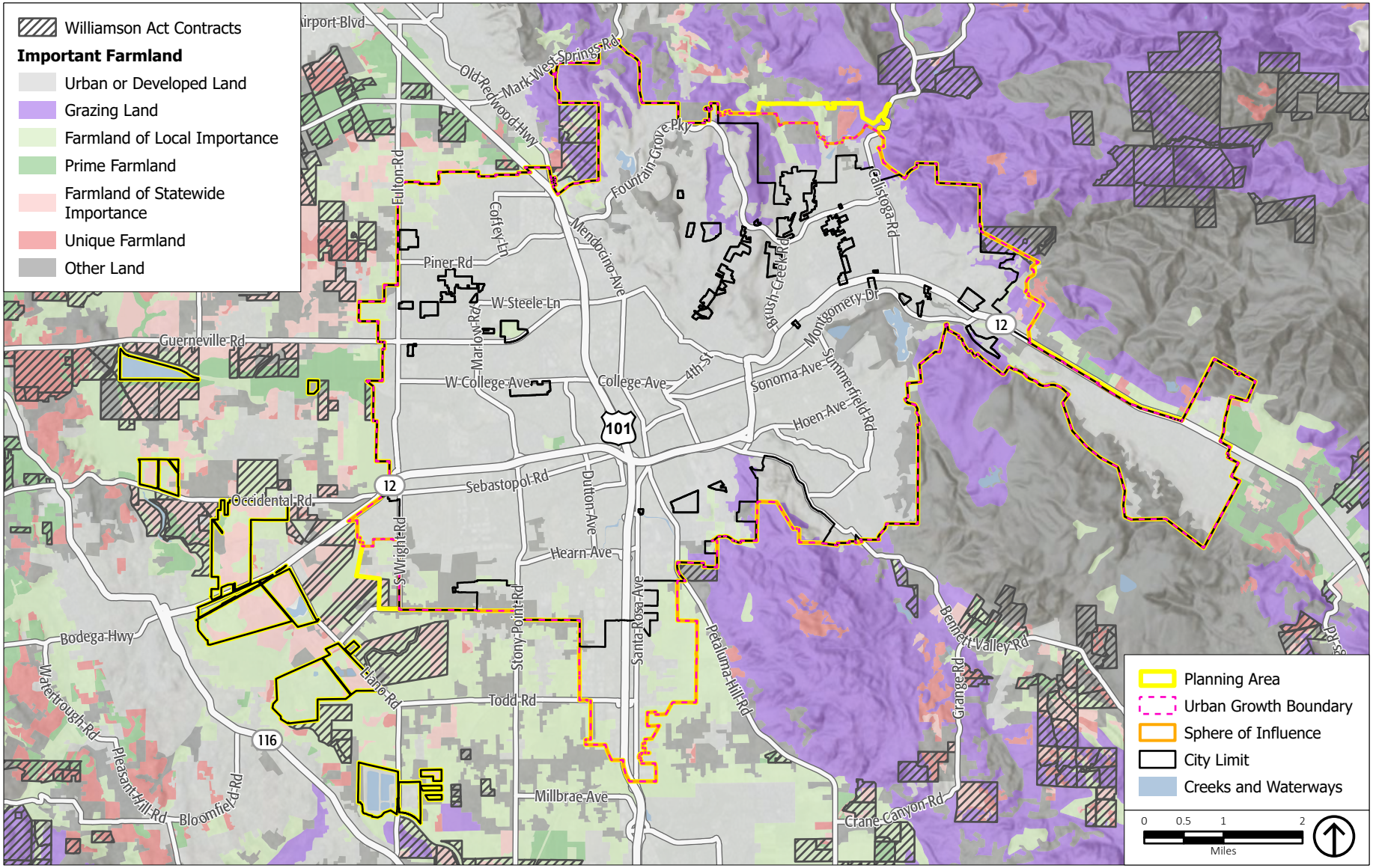
TABLE 4.2-2 IMPORTANT FARMLAND BY ACREAGE IN THE EIR STUDY AREA

	Acres		
	City Limit	Sphere of Influence/Urban Growth Boundary	EIR Study Area Total [a]
Prime Farmland	41	0	43
Farmland of Statewide Importance	627	8	660
Farmland of Local Importance	1,455	613	2,194
Unique Farmland	2	5	54
Grazing Land	1,421	500	2,051
Total Acres	**3,587**	**1,070**	**5,002**

Source: Department of Conservation, Farmland Mapping and Monitoring Program GIS data, 2018.
a. Totals may not match City Limit + Sphere of Influence as the EIR Study Area includes the Planning Area, which is not entirely encompassed by the City Limit and Sphere of Influence.

[6] Sonoma County Department of Agriculture/Weights & Measurements, *2021 Sonoma County Crop Report*, https://sonomacounty.ca.gov/Main%20County%20Site/Natural%20Resources/Agricultural%2C%20Weights%20%26%20Measures/Documents/Crop%20Reports/2021-Sonoma-County-Crop-Report.pdf, accessed November 9, 2022.

AGRICULTURAL RESOURCES



Source: DOC, 2018; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.2-1
Important Farmland and Williamson Act Contracts

Sonoma County Agricultural Preservation and Open Space District

Sonoma County Agricultural Preservation and Open Space District (District) is a community-created, taxpayer-funded agency that works to permanently protect Sonoma County's diverse agricultural lands, natural resources, and scenic open space for future generations.[7] The District's primary tool is the conservation easement, a legal agreement between a willing landowner and the agency that permanently limits uses of the land to protect its conservation values. Approximately 1,558 acres of land in the EIR Study Area is protected by the District. The District will consider a proposal for a mitigation-related activity on lands protected with a District-held easement according to the permitted use request review process as described in the Board-adopted District Stewardship Manual.[8] The District is also eligible to receive funding through public agency grant programs for planning, acquisition, and stewardship of easement or District-owned properties, or other District projects.

Williamson Act Contracts

A Williamson Act contract is an agreement between the property owner and the county that provides the property owner with reduced property taxes in exchange for maintaining the land in commercial agricultural use for a period of 10 years.[9] There are two types of Williamson Act contracts: Type I for prime agricultural land planted in permanent crops such as grapes, apples, olives, or pears; and Type II for nonprime grazing or open-space lands. The contract is binding on all subsequent property owners. As shown on Figure 4.2-1, there are no active Williamson Act contracts within the city limit but there are a few within the SOI. These are Type II contracts for prime agricultural or open space lands that are primarily used for grazing, hay farming, horse breeding, timber production, open space, or any combination of agricultural and open space uses, including permanent crops. The land under Williamson Act contract in the southeastern portion of the EIR Study Area has a Phase-Out Status. There is a total of 97 acres of land that are under Williamson Act contracts within the EIR Study Area.

Forestry Resources

There are no portions of the EIR Study Area that contain forest or timber resources or are zoned as such. No further discussion of this topic is required.

[7] Sonoma County Agricultural Preservation and Open Space District, 2023, Land for Life, https://www.sonomaopenspace.org/wp-content/uploads/Brochure_PDF_For_Web.pdf, accessed May 15, 2023.

[8] Sonoma County Agricultural Preservation and Open Space District, July 18, 2017, Mitigation Policy for District-Protected Lands, https://www.sonomaopenspace.org/wp-content/uploads/Final-District-Mitigation-Policy_20170718.pdf, accessed May 15, 2023.

[9] Sonoma County, updated May 20, 2018, Frequently Asked Questions (FAQs) Agricultural Preserves Phase Out of Substandard Parcels, https://permitsonoma.org/regulationsandinitiatives/agriculturaluses/faqsagriculturalpreservesphaseout, accessed March 3, 2023.

4.2.2 STANDARDS OF SIGNIFICANCE

The Santa Rosa Zoning Code does not contain a zoning district for forest land or timberland production. Further, there are no State or national forest lands in the EIR Study Area. Consequently, there would be no impacts to forestry resources, and the following standards are not discussed further in this Draft EIR:

- The project would conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).
- The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

Implementation of the proposed project would result in a significant impact to agricultural resources if it would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
3. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.
4. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to agricultural resources.

4.2.3 IMPACT DISCUSSION

AG-1	**Implementation of the proposed project could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.**

As shown in Table 4.2-2, the EIR Study Area contains 43 acres of Prime Farmland, 660 acres of Farmland of Statewide Importance, and 54 acres of Unique Farmland. As shown in Table 4.2-3, *Qualifying Farmland Potentially Converted to Other Uses at General Plan Buildout,* with buildout of the proposed project, there could be a reduction of 94 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.

TABLE 4.2-3 QUALIFYING FARMLAND POTENTIALLY CONVERTED TO OTHER USES AT GENERAL PLAN BUILDOUT

	Existing Acres	Future Acres	
Farmland Classification	EIR Study Area	Potential to be Converted	Total Acres Remaining at Buildout
Prime Farmland	43	23	20
Farmland of Statewide Importance	660	19	641
Unique Farmland	54	52	2
Total	**757**	**94**	**663**

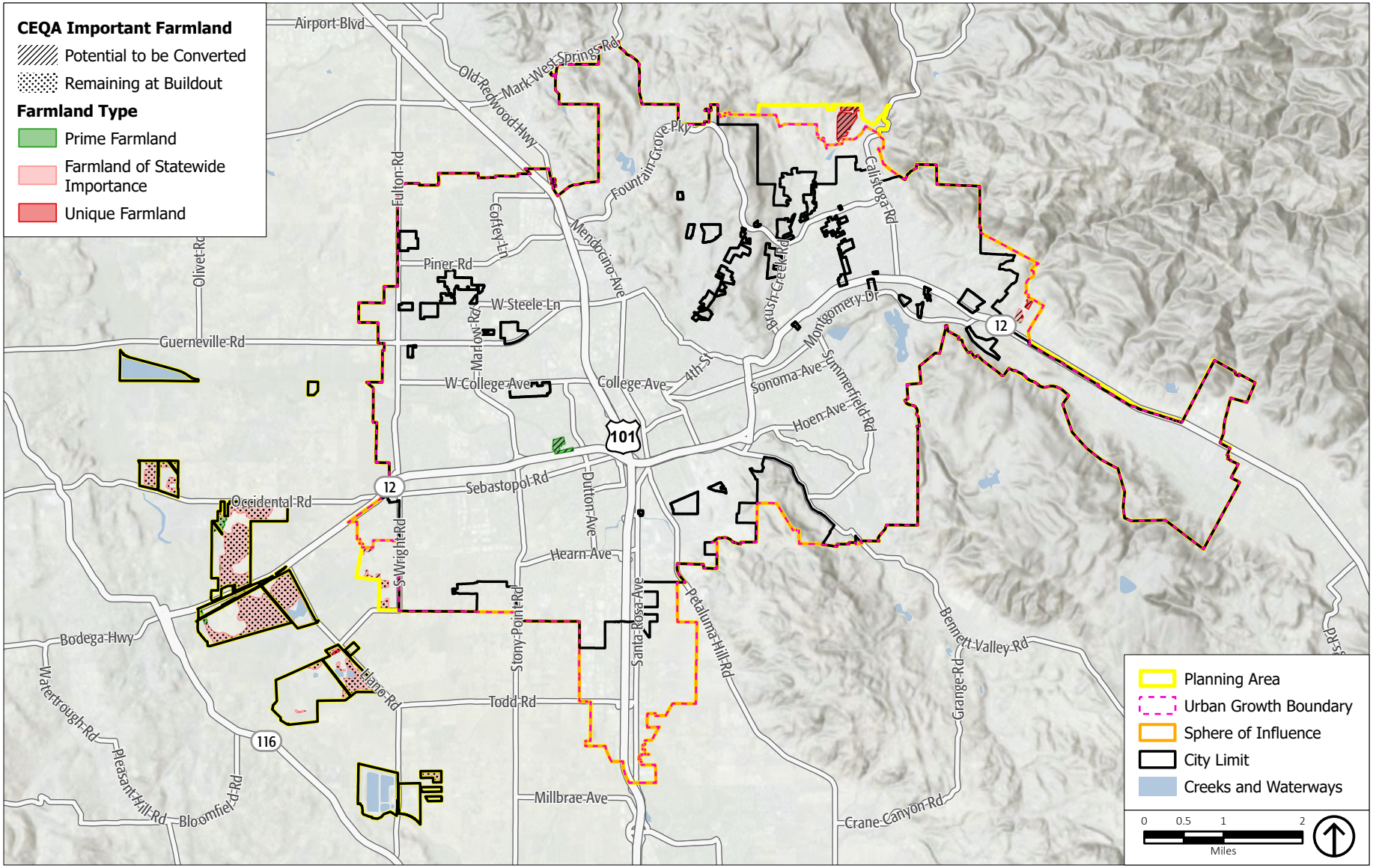
Source: Department of Conservation, Farmland Mapping and Monitoring Program GIS data, 2018.

The proposed General Plan 2050 would retain approximately 1,520 acres of land designated for agricultural use within the EIR Study Area, as well as 245 acres of land designated for open space. This land consists of approximately 20 acres of Prime Farmland, 641 acres of Farmland of Statewide Importance, and 2 acres of Unique Farmland that would not be developed over the buildout horizon of the proposed project. Therefore, for the purposes of this analysis, it is assumed that the remaining 94 acres of qualified farmland within the EIR Study Area could be converted to nonagricultural uses by 2050, as shown in Table 4.2-3. Because the standard of significance is the loss of any qualifying farmlands (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance), any conversion of the 94 acres or qualifying farmlands to non-agricultural lands would constitute a significant impact under the California Environmental Quality Act (CEQA). Figure 4.2-2, *CEQA Important Farmland*, depicts areas where qualifying farmlands would have the potential to be converted under the proposed projects and areas of remaining qualifying farmlands would at buildout.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to agricultural resources. The following goal, policies, and actions would serve to minimize impacts related to the loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland:

- Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits.
  - Policy 3-6.6: Conserve agricultural land and soils.
    - Action 3-6.16: Discourage the conversion of agricultural land to non-agricultural uses.
    - Action 3-6.17: Promote restorative agricultural and landscaping techniques that incorporate cover crops, mulching, compost application, field borders, alley cropping, conservation crop rotation, prescribed grazing, and reduced tillage to promote healthy soils and soil conservation.
    - Action 3-6.19: Partner with the Sonoma County Agricultural Preservation and Open Space District and Sonoma Resource Conservation District to identify opportunities for conserving agricultural lands and preserving soil quality in Santa Rosa.

AGRICULTURAL RESOURCES



Source: DOC, 2018; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.2-2
CEQA Important Farmland

- Policy 3-6.7: Support Sonoma County efforts to preserve unincorporated lands adjacent to and near the Santa Rosa UGB as viable agricultural resources and to support the agriculture economy and environmental quality, scenic resources, and a buffer providing greater resilience against hazards.
- Policy 3-6.8: Capture and sequester more carbon in soils and plants citywide.
    - Action 3-6.28: Ensure that agricultural easements have standards for best management practices and prioritize conservation of agricultural properties that use or agree to implement regenerative agriculture practices.

While the proposed General Plan 2050 goal, policies, and actions identified above would reduce potential impacts related to the conversion of farmland, they would not reduce the amount of acreage converted under buildout of the proposed project since it would designate 94 acres of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to nonagricultural uses; therefore, a *significant* impact would result.

Impact AG-1: Implementation of the proposed project could result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland land (together referred to as "CEQA Important Farmland") to non-agricultural land uses.

Mitigation Measures Considered. In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of the project it carries out or approves whenever it is feasible to do so."[10] The term "feasible" is defined in CEQA to mean, "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."[11] CEQA Guidelines Section 15370 defines "mitigation" as: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments. The following is a brief discussion of the mitigation measures considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses and their infeasibility. However, as shown, no feasible mitigation measures are available that would reduce the agricultural resource impact to less-than-significant levels.

- Replacement of Agricultural Resources. This measure would replace the existing agricultural use with the same use on other property that is not currently used for agriculture. From a statewide perspective, the replacement of farmland means that there will be no net loss of farmland in the state. However, CEQA Important Farmland would still be developed. There is limited undeveloped land in the EIR Study Area that is not currently designated as agricultural, restricting the amount of agricultural land that would be able to be replaced elsewhere in the area, and thus conversion of these lands would be insufficient to achieve no net loss. Moreover, even if adequate land could

[10] Public Resources Code, Section 21002.1(b).
[11] Public Resources Code, Section 21061.1

be identified to achieve no net loss, the challenges of creating the soil, irrigation, climatic, and economic conditions that are required for productive farmland (i.e., that achieve the same CEQA Important Farmland status) are significant, and there would be no guarantee that replacement land could be successfully farmed. In addition, replacing existing undeveloped areas with active agriculture could trigger a range of negative environmental impacts, including increased groundwater consumption, habitat destruction, erosion, air quality impacts, and herbicide and pesticide application. As such, the replacement of the existing agricultural uses on other properties within the Sphere of Influence is infeasible.

- Transfer of Development Rights. Transferring development rights would involve the purchasing of the right to develop land from a currently undeveloped piece of land and transferring those rights to farmland within the city. Thus, this option is also infeasible because there would still be a net loss of farmland (i.e., the farmland preserved would still likely be preserved anyhow). Even if farmland would be preserved elsewhere in Sonoma County, the CEQA Important Farmland in the city would be developed, resulting in a net loss of CEQA Important Farmland. Therefore, for the reasons outlined previously, and in this paragraph, it would not prevent significant impacts from occurring in the city and it would not be an effective CEQA mitigation measure; nor is this mitigation measure feasible from an economic perspective within this region.
- Relocation of Prime Farmland Topsoil. This measure would remove the top 12 to 18 inches of topsoil from affected areas and haul this soil to a farm site or several farm sites that have lower-quality soils. The Prime Farmland soils may assist in increasing crop yield at the relocated site. This measure would have its own environmental impacts, including increased truck traffic on local roadways from both hauling soil off-site and replacement of soil on-site, increased diesel truck emissions, construction noise, and increased duration of construction. The relocation of prime farmland soils to another active farm would increase other environmental impacts and is therefore considered infeasible.

As described, these measures were considered and found to be infeasible for mitigating or avoiding the impact of the conversion of agricultural lands to other uses pursuant to the definition of CEQA in that there is no guarantee that measures would result in successfully establishing CEQA Important Farmland, if doing so could happen within a reasonable period of time, that their implementation would not potentially cause greater environmental impacts, and that acquiring additional lands to be established as CEQA Important Farmland would be economically possible.

Significance without Mitigation: Significant and unavoidable. As discussed previously, implementation of the proposed General Plan 2050 would designate CEQA Important Farmland land to non-agricultural land uses. Through the proposed General Plan 2050 goals, policies, and actions, impacts related to the conversion of qualifying agricultural lands would be reduced, but not to a less-than-significant level. The proposed General Plan 2050 contains policies and actions to reduce the conversion of qualifying agricultural lands. Specifically, proposed Policy 3-6.6 and Policy 3-6.7 to conserve and preserve agricultural land and soils, and Action 3-6.28 to prioritize conservation of agricultural properties. Proposed Action 3-6.16 discourages the conversion of agricultural land to non-agricultural use, Action 3-6.17 promotes restorative agricultural and landscaping techniques, and Action 3-6.19 requires the City to partner with the Sonoma County Agricultural Preservation and Open Space District and Sonoma Resource Conservation District to identify opportunities for

conserving agricultural lands and preserving soil quality. These proposed General Plan 2050 policies and actions would not reduce the amount of acreage converted through implementation of the proposed project; however, they would forestall development of the best agricultural land within the EIR Study Area.

While these efforts and other mitigation measures were considered, such as preserving agricultural uses in the EIR Study Area, replacement of agricultural resources by replacing lost agricultural uses to other areas of the city, and relocation of Prime Farmland topsoil to other areas, these mitigations are not feasible. Additionally, other mitigating efforts, such as conservation easements, one-to-one preservation, and right-to-farm ordinances all work to mitigate impacts; however, the only way to fully avoid the agricultural impact from implementation of the proposed project is to not allow development on state-designated CEQA Important Farmland, thereby eliminating the agricultural impact. However, doing so is not feasible or practical as the City has a responsibility to meet other conflicting obligations, including to increase the number and types of jobs available in Santa Rosa and to reduce the need for residents to commute to high-quality jobs. These measures are critical to reducing single-occupant vehicle travel to and from Santa Rosa and meeting State targets for greenhouse gas reduction. The City needs to promote both economic development and corresponding residential development, as required by State housing law, within its adopted growth boundary. While possible forms of mitigation for, or avoidance of, conservation of agricultural lands in the EIR Study Area would be implemented by the City through its proposed General Plan 2050 policies and actions, doing so to reduce impacts to a less-than-significant level would be infeasible and inconsistent with City planning goals and objectives. Therefore, impacts would remain *significant and unavoidable.*

AG-2 Implementation of the proposed project could conflict with existing zoning for agricultural use, or a Williamson Act contract.

There are a total of 97 acres of land that are under ongoing Williamson Act contracts in the EIR Study Area. As described in impact discussion AG-1, conversion of agricultural land uses through implementation of the proposed project would affect the majority of agricultural lands within the EIR Study Area. The proposed project would potentially convert approximately 68 acres of the Williamson Act lands in the northeastern portion of the EIR Study Area to non-agricultural uses. As described under impact discussion AG-1, Chapter 3, *Circulation, Open Space Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to agricultural resources. While the proposed General Plan 2050 goal, policies, and actions listed in impact discussion AG-1 would reduce potential impacts related to the conversion of land under the Williamson Act, since the proposed General Plan 2050 would designate a majority of these lands to nonagricultural uses, a *significant* impact would result.

Impact AG-2: Implementation of the proposed project could result in the loss of agricultural land under the Williamson Act.

Mitigation Measures Considered. As described in impact discussion AG-1, pursuant to CEQA, the City has considered mitigation to reduce impacts from implementation of the proposed project that could conflict with lands under a Williamson Act contract. However, as shown, no feasible mitigation measures are available that would reduce the agricultural resource impact to less-than-significant levels. Specifically, the City considered a measure that would result in the replacement of Williamson Act contract farmland that would place other farmland under Williamson Act contract. Even if feasible, the placing of alternative farmland under Williamson Act contract would establish a commitment to retain that alternative farmland for agricultural use. The length of time that the alternative land will remain in agricultural use would depend on the terms of the Williamson Act contract. However, the Williamson Act contract will only reduce the potential that the alternative land will convert to non-agricultural use. The individual and cumulative loss of agricultural land caused by the proposed project would still occur. Therefore, this mitigation measure will not reduce the proposed project's impacts on agriculture to below the level of significance. For these reasons, placing alternative privately held land under permanent restriction through Williamson Act contracts is considered infeasible.

Significance without Mitigation: Significant and unavoidable. As described in impact discussion AG-1, the proposed General Plan 2050 includes goals, policies, and actions to minimize impacts to agricultural lands. Those same proposed General Plan 2050 goals, policies, and actions would also minimize impacts from conflicts with Williamson Act lands and reduce the likelihood of premature contract cancellations by the property owners of the Williamson Act parcels in the EIR Study Area. Mitigation for this impact was considered, including the placement of other farmland under Williamson Act contract. However, the individual and cumulative loss of agricultural land under the Williamson Act caused by the proposed project would still occur. Given that CEQA does not require that the project be changed to avoid an impact, and no additional mitigation is available, this would result in a *significant and unavoidable* impact.

AG-3 Implementation of the proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

Implementation of the proposed project could result in potentially incompatible urban uses next to farms or ranches, creating circumstances that impair the productivity and profitability of agricultural operation, and could eventually lead farmers to take their land out of production. For example, this could manifest as complaints from new residents about noise, dust, and chemical use from agricultural operations. Concerns of farmers and ranchers about increased vandalism, traffic, access difficulties, and the introduction of domestic animals can lower productivity. Adjacent urban development may also increase land values, increasing the property tax burden for farmland not protected by Williamson Act contracts or permanent agricultural conservation easements.

The proposed project recognizes that the agricultural history of Santa Rosa contributes to its sense of place and seeks to preserve active agricultural lands. As described under impact discussion AG-1, Chapter 3, *Circulation, Open Space Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 contains a goal, policies, and actions that require local planning and development decisions to consider impacts that development could have on agricultural resources. The same proposed General Plan 2050 goal, policies, and actions listed under impact discussion AG-1 would serve to minimize potential adverse impacts of adjacent land uses on farmland. Thus, a *less-than-significant* impact would result.

Significance without Mitigation: Less than significant.

AG-4 Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative impacts with respect to agricultural resources.

As described in Chapter 3, *Project Description*, and throughout this Draft EIR, the proposed General Plan 2050 includes a buildout projection and population growth that would increase the urbanization of the city. To accommodate anticipated growth and achieve City goals, the proposed project plans for the conversion of agricultural land to various types of residential and job-generating development. With implementation of the proposed project in combination with agricultural impacts identified throughout Sonoma County, the proposed project would contribute to cumulative impacts to agricultural resources.

As described in impact discussions AG-1 and AG-2, implementation of the proposed project would result in significant impacts related to the conversion of farmland of concern under CEQA and of farmland under Williamson Act contracts. As such, the proposed project would contribute to the cumulative impacts of overall conversion of these lands in the region. Although the policies and actions in the proposed General Plan 2050 would reduce and partially offset regional agricultural impacts, the proposed project would contribute to cumulatively significant agricultural impacts in the region and a cumulative *significant* impact would occur.

Impact AG-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact with respect to the conversion of CEQA Important Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) and Williamson Act properties to non-agricultural uses.

Significance without Mitigation: Significant and unavoidable. As described previously, implementation of the proposed project would result in significant and unavoidable impacts related to the conversion of CEQA Important Farmland and Williamson Act properties to non-agricultural uses. Although the proposed General Plan 2050 goals, policies, and actions would reduce and partially offset regional agricultural impacts, as well as consideration of mitigation measures to preserve agricultural lands, the only way to fully avoid the agricultural impact of the proposed project is to not allow development on state-designated CEQA Important Farmland, thereby eliminating the agricultural impact. However, this would be infeasible and inconsistent with City planning goals and objectives. Further, the amount of growth foreseen in the region and the decisions of Sonoma County and other surrounding counties

regarding conversion of agricultural land are outside the control of the City of Santa Rosa. Therefore, this cumulative impact would be *significant and unavoidable.*

4.3 AIR QUALITY

This chapter of the Draft Environmental Impact Report (EIR) describes the potential air quality impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential air quality impacts, and identifies proposed General Plan 2050 goals, policies, and actions, as well as feasible mitigation measures, that would minimize any potentially significant impacts. This evaluation is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling is included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR. Transportation-sector impacts are based on trip generation and vehicle miles traveled (VMT) provided W-Trans. Cumulative impacts related to air quality are based on the regional boundaries of the San Francisco Bay Area Air Basin (SFBAAB).

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 TERMINOLOGY

The following are definitions for terms used throughout this section:

- AAQS: Ambient Air Quality Standards.
- CES: CalEnviroScreen is a mapping tool that helps identify the California communities most affected by sources of pollution and where people are often especially vulnerable to pollution's effects.
- Concentrations: Refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).
- Criteria Air Pollutants: Those air pollutants specifically identified for control under the federal Clean Air Act (currently seven—carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone, and coarse and fine particulates).
- DPM: Diesel particulate matter.
- Emissions: Refers to the actual quantity of pollutant, measured in tons per year.
- Overburdened Community: As defined by BAAQMD, an area located within a census tract identified by CES, Version 4, having an overall CES score at or above the 70th percentile, or located within 1,000 feet of any such census tract.
- ppm: Parts per million.
- Sensitive receptor: Land uses that are considered more sensitive to air pollution than others due to the types of population groups or activities involved. These land uses include residential, retirement facilities, hospitals, and schools.
- TAC: Toxic air contaminant.
- VMT: Vehicle miles traveled.

4.3.1.2 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC) or reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, nitrogen dioxide (NO_2), coarse inhalable particulate matter (PM_{10}), and fine inhalable particulate matter ($PM_{2.5}$) are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. Table 4.3-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

TABLE 4.3-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	▪ Chest pain in heart patients ▪ Headaches, nausea ▪ Reduced mental alertness ▪ Death at very high levels	▪ Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O_3)	▪ Cough, chest tightness ▪ Difficulty taking a deep breath ▪ Worsened asthma symptoms ▪ Lung inflammation	▪ Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO_2)	▪ Increased response to allergens ▪ Aggravation of respiratory illness	▪ Same as carbon monoxide sources
Particulate Matter (PM_{10} and $PM_{2.5}$)	▪ Hospitalizations for worsened heart diseases ▪ Emergency room visits for asthma ▪ Premature death	▪ Cars and trucks (particularly diesels) ▪ Fireplaces and woodstoves ▪ Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO_2)	▪ Aggravation of respiratory disease (e.g., asthma and emphysema) ▪ Reduced lung function	▪ Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	▪ Behavioral and learning disabilities in children ▪ Nervous system impairment	▪ Contaminated soil

Sources: California Air Resources Board, 2023, Common Air Pollutants: Air Pollution and Health, https://ww2.arb.ca.gov/resources/common-air-pollutants, accessed July 21, 2023; South Coast Air Quality Management District, 2005, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf, accessed July 21, 2023.

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented herein.

- Carbon Monoxide (CO) is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.[1]
- Volatile Organic Compounds (VOCs) / Reactive Organic Gases (ROGs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O_3. There are no AAQS established for ROGs. However, because they contribute to the formation of O_3, BAAQMD has established a significance threshold for this pollutant.[2]
- Nitrogen Oxides (NO_x) are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_x produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 ppm.[3]

[1] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[2] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[3] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

- **Sulfur Dioxide (SO_2)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue.[4]
- **Suspended Particulate Matter (PM_{10})** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. In the SFBAAB, most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less.

  Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.[5]
- **Suspended Particulate Matter ($PM_{2.5}$)** is another form of fine particulate matter that has an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch). Fine particulate matter originates from a variety of sources, including fossil fuel combustion, residential wood burning and cooking, and natural sources, such as wildfires and dust. As mentioned above, extended exposure to particulate matter can cause negative effects on the respiratory system, such as triggering asthma attacks, aggravating bronchitis, and diminishing lung function. $PM_{2.5}$ studies have also found harm to the cardiovascular system and impacts on the brain, such as reduced cognitive function.

  Local jurisdictions have the option of developing community risk reduction plans (CRRPs) to cumulatively reduce community wide $PM_{2.5}$ concentrations by following a comprehensive plan. Stationary source screening maps contain all the facilities in the Bay Area where a permit has been issued and that emit one or more TACs. These stationary source screening maps can be used as a basis for community baseline conditions and to evaluate screening-level health risk impacts using the

[4] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[5] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

cavity effects equation. An alternative screening methodology is to use the California Air Resources Board's (CARB) gas station screening tool to estimate cancer risk and chronic/acute hazards from gas station emissions.[6]

- **Ozone (O_3)** is a key ingredient of "smog" and is a gas that is formed when ROGs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma; reduce lung function; and inflame the linings of the lungs. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O_3 can also damage plants and trees and materials such as rubber and fabrics.[7]
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed project.[8]

Toxic Air Contaminants

People exposed to toxic air contaminants (TAC) at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems.[9] At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.[10] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be

[6] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[7] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[8] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[9] United States Environmental Protection Agency, last updated 2023, Health and Environmental Effects of Hazardous Air Pollutants. https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants, accessed August 30, 2023.

[10] California Air Resources Board, 1999, *Final Staff Report: Update to the Toxic Air Contaminant List*.

attributed to relatively few compounds, the most relevant to the proposed project being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory symptoms and may exacerbate existing allergies and asthma symptoms.[11]

Placement of New Sensitive Receptors

Because placement of sensitive land uses falls outside CARB's jurisdiction, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* in 2005 to address the compatibility and associated health risks of siting sensitive land uses f in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities.

CARB's recommendations on the siting of new sensitive land uses, identified in Table 4.3-2, *CARB Recommendations for Siting New Sensitive Land Uses*, were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources.

TABLE 4.3-2 CARB RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES

Source/Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.

[11] United States Environmental Protection Agency, May 2002, Health Assessment Document for Diesel Engine Exhaust, EPA/600/8-90/057F, prepared by the National Center for Environmental Assessment, Washington, DC, for the Office of Transportation and Air Quality.

TABLE 4.3-2 CARB RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES

Source/Category	Advisory Recommendations
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Source: California Air Resources Board, May 2005, *Air Quality and Land Use Handbook: A Community Health Perspective,* http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf, accessed August 30, 2023.

The key observation in these studies is that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. There are three carcinogenic TACs that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks and benzene and 1,3-butadiene from passenger vehicles.

In 2017, CARB provided a supplemental technical advisory to the handbook for near-roadway air pollution exposure, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways.* Strategies include practices and technologies that reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air.[12]

4.3.1.3 REGULATORY FRAMEWORK

Federal, state, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the city is subject to the rules and regulations imposed by BAAQMD, CARB, and the United States Environmental Protection Agency (USEPA). The regulatory framework that is potentially applicable to the proposed project is also summarized below.

Federal and State Regulations

AAQS have been adopted at federal and state levels for criteria air pollutants. In addition, both the federal and state governments regulate the release of TACs. Santa Rosa in the SFBAAB and is subject to the rules and regulations imposed by BAAQMD, the National AAQS adopted by the USEPA, and the California AAQS adopted by CARB. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

[12] California Air Resources Board, April 2017, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways*, https://ww2.arb.ca.gov/sites/default/files/2017-10/rd_technical_advisory_final.pdf, accessed August 30, 2023.

Ambient Air Quality Standards for Criteria Air Pollutants

The Clean Air Act (CAA) was passed in 1963 by the United States Congress and has been amended several times. The 1970 CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollutants. The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, as shown in Table 4.3-3, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). Additionally, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

TABLE 4.3-3 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard [a]	Federal Primary Standard [b]	Major Pollutant Sources
Ozone (O_3) [c]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20.0 ppm	35.0 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	

TABLE 4.3-3 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard [a]	Federal Primary Standard [b]	Major Pollutant Sources
Respirable Particulate Matter (PM_{10}) [d]	Annual Arithmetic Mean	20.0 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50.0 µg/m^3	150.0 µg/m^3	
Respirable Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12.0 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35.0 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4) [e]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo[f] =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
a. California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
b. National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 4.3-3 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard [a]	Federal Primary Standard [b]	Major Pollutant Sources

c. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
d. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
e. On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual arithmetic mean standards were revoked.
Source: California Air Resources Board, 2016, *Ambient Air Quality Standards*, https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards-0, accessed July 21, 2023.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards
- Heavy-Duty (Tractor-Trailer) Greenhouse Gas (GHG) Regulation
- Advanced Clean Cars Regulation
- Advanced Clean Fleets Regulation
- Senate Bill (SB) 1078 and SB 107: Renewables Portfolio Standards
- California Code of Regulations (CCR) Title 20: Appliance Energy Efficiency Standards
- 24 CCR Part 6: Building Energy Efficiency Standards
- 24 CCR Part 11: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics "Hot Spot" Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal CAA (42 US Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health. California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10 Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. This generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- 13 CCR Chapter 10 Section 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools. This generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- 13 CCR Section 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate. Regulations established to control emissions associated with diesel-powered TRUs.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. Air quality conditions in the SFBAAB have improved significantly since BAAQMD was created in 1955. BAAQMD prepares air quality management plans (AQMP) to attain AAQS in the SFBAAB. BAAQMD prepares ozone attainment plans for the National O_3 standard and clean air plans for the California O_3 standard. BAAQMD prepares these AQMPs in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to ensure consistent assumptions about regional growth.

BAAQMD 2017 Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2017, making it the most recently adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues to provide the framework for SFBAAB to achieve attainment of the National and California AAQS. The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California CAA. It sets a goal of reducing health risk impacts to local communities by 20 percent between 2015 and 2020 and lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHGs from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; 8) super-GHG pollutants; and 9) buildings.

Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.[13]

BAAQMD Community Air Risk Evaluation Program

The BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions, and benzene contributed 3 percent. Collectively, five compounds—diesel PM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for State diesel regulations and other reductions.

The major contributor to acute and chronic non-cancer health effects in the SFBBAB is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports.[14] Currently, CARB does not have certified emission factors or an analytical test method

[13] Bay Area Air Quality Management District, April 19, 2017, *Final 2018 Clean Air Plan, Spare the Air Cool the Climate, A Blueprint for Clean Air And Climate Protection in the Bay Area*, http://www.baaqmd.gov/research-and-https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf, accessed August 30, 2023.

[14] Bay Area Air Quality Management District, 2006, Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area, https://www.baaqmd.gov/Divisions/Planning-and-Research/Planning-Programs-and-Initiatives/~/media/54D434A0EB8348B78A71C4DE32831544.ashx, accessed August 30, 2023.

for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.[15]

Assembly Bill 617 Community Action Plans

AB 617 (Chapter 136, Statues of 2017) was signed into law in July 2017 to develop a new community-focused program to reduce exposure more effectively to air pollution and preserve public health in environmental justice communities. AB 617 directs CARB and all local air districts to take measures to protect communities disproportionally impacted by air pollution through monitoring and implementing air pollution control strategies.

On September 27, 2018, CARB approved BAAQMD's recommended communities for monitoring and emission reduction planning. The State approved communities for year 1 of the program as well as communities that would move forward over the next five years. Bay Area recommendations included all the Community Air Risk Evaluation areas, areas with large sources of air pollution (e.g., refineries, seaports, and airports), areas identified via statewide screening tools as having pollution and/or health burden vulnerability, and areas with low life expectancy.[16]

- Year 1 Communities:
  - *West Oakland.* The West Oakland community was selected for BAAQMD's first Community Action Plan. In 2017, cancer risk from sources in West Oakland (local sources) was 204 in a million. The primary sources of air pollution in West Oakland include heavy trucks and cars, port and rail sources, large industries, and to a lesser extent other sources such as residential sources (i.e., wood burning). The majority (over 90 percent) of cancer risk is from DPM.[17]
  - *Richmond.* Richmond was selected for a community monitoring plan in year 1 of the AB 617 program. The Richmond area is in western Contra Costa County and includes most of Richmond and portions of El Cerrito. It also includes communities just north and east of Richmond, such as San Pablo and several unincorporated communities, including North Richmond. The primary goals of the Richmond monitoring effort are to leverage historical and current monitoring studies, better characterize the area's mix of sources, and more fully understand the associated air quality and pollution impact.[18]

[15] Bay Area Air Quality Management District, 2016, *Air Toxics NSR Program, Health Risk Screening Analysis Guidelines*, https://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, accessed August 30, 2023.

[16] Bay Area Air Quality Management District, April 19, 2019, AB 617 Fact Sheet: San Francisco Bay Area Community Health Protection Program, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en&rev=9f6dcd6de8854fd9853ff0498c6bbdff, accessed August 30, 2023.

[17] Bay Area Air Quality Management District, October 2, 2019, West Oakland Community Action Plan, https://www.baaqmd.gov/community-health/community-health-protection-program/west-oakland-community-action-plan, accessed August 30, 2023.

[18] Bay Area Air Quality Management District, April 19, 2019, AB 617 Fact Sheet: San Francisco Bay Area Community Health Protection Program, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en&rev=9f6dcd6de8854fd9853ff0498c6bbdff, accessed August 30, 2023.

- Year 2 to 5 Communities: East Oakland/San Leandro, Eastern San Francisco, the Pittsburg-Bay Point area, San Jose, Tri-Valley, and Vallejo are slated for action in years 2 to 5 of the AB 617 program.[19]

Planning Healthy Places

BAAQMD adopted *Planning Healthy Places* in 2016 to provide a list of best practices that should be applied when placing sensitive uses in areas with high levels of air pollution or in close proximity to local sources of air pollution. The goal of *Planning Healthy Places* is to support and encourage infill development while promoting clean, healthy air for residents. The key observation in BAAQMD's *Planning Healthy Places* is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic TACs that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. *Planning Healthy Places* provides a list of "Best Practices to Reduce Exposure to Local Air Pollution" that BAAQMD recommends lead agencies require for projects that introduce new receptors in specific screening distances. These include practices that reduce local traffic emissions, increase site buffering between receptors and emission sources, or alter the design of proposed projects to remove receptors from locations expected to experience the highest pollutant concentrations.[20]

BAAQMD Rules and Regulations

Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the City. BAAQMD's Regulation 7, *Odorous Substances*, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property." Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

Other BAAQMD Regulations

In addition to the plans and programs described above, BAAQMD administers a number of specific regulations on various sources of pollutant emissions that would apply to individual development projects in the EIR Study Area, including:

[19] Bay Area Air Quality Management District, April 19, 2019, AB 617 Fact Sheet: San Francisco Bay Area Community Health Protection Program, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en&rev=9f6dcd6de8854fd9853ff0498c6bbdff, accessed August 30, 2023.

[20] Bay Area Air Quality Management District, May 2016, *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning*, https://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en, accessed May 25, 2023.

- BAAQMD, Regulation 2, Rule 2, *New Source Review*
- BAAQMD, Regulation 2, Rule 5, *New Source Review of Toxic Air Contaminants*
- BAAQMD Regulation 6, Rule 1, *General Requirements*
- BAAQMD Regulation 6, Rule 2, *Commercial Cooking Equipment*
- BAAQMD Regulation 8, Rule 3, *Architectural Coatings*
- BAAQMD Regulation 8, Rule 4, *General Solvent and Surface Coatings Operations*
- BAAQMD Regulation 8, Rule 7, *Gasoline Dispensing Facilities*
- BAAQMD Regulation 11, Rule 2, *Asbestos, Demolition, Renovation and Manufacturing*

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA) is the congestion management agency for Sonoma County. SCTA is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. SCTA's latest congestion management program is the 2016 Comprehensive Transportation Plan (CTP). SCTA's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the congestion management program system. In addition, SCTA's updated CTP includes multi-modal performance standards and trip reduction and transportation demand management (TDM) strategies consistent with the goals of reducing regional VMT in accordance with the Sustainable Communities and Climate Protection Act, commonly known by its legislative bill number SB 375.

As part of the implementing framework for the CTP, communities in Sonoma County have identified Priority Development Areas (PDA) to focus future population and employment growth. Increased density in PDAs is intended to locate more people near jobs and services in an effort to reduce travel and transportation related GHG emissions.[21] Furthermore, shifting travel to active transportation modes (such as walking, biking, or riding transit) would help improve neighborhood air quality conditions and overall community health.

Plan Bay Area

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, MTC and ABAG adopted *Plan Bay Area* 2050 on October 21, 2021.[22] *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of the Sustainable Communities and Climate Protection Act (SB 375). Strategies to reduce GHG emissions include focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes.

[21] Sonoma County Transportation Authority, September 2016, *Moving Forward 2040: Sonoma County's Comprehensive Transportation Plan*, https://scta.ca.gov/wp-content/uploads/2016/09/CTP16_090616.pdf, accessed August 30, 2023.

[22] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 21, 2023.

Similar to the County's CTP, local governments have identified PDAs[23] and Transit Priority Areas (TPAs)[24] to focus growth within the Bay Area region. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR, the EIR Study Area has six PDAs and three TPAs—the Mendocino Avenue/Santa Rosa Avenue Corridor PDA, North Santa Rosa Station PDA and TPA, Downtown Station Area PDA and TPA, Sebastopol Road Corridor PDA, Roseland PDA, Santa Rosa Avenue PDA, and Santa Rosa Transit Mall TPA.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes directives to minimize adverse impacts to air quality in Santa Rosa. The SRCC is organized by title, chapter, and section and in some cases, articles. Most provisions related to air quality are in Title 9, *Health and Safety*, and Title 17, *Environmental Protection*, as follows:

- Chapter 9-20, *Smoking Regulations*. This chapter provides regulations to protect the public health, safety, and general welfare by providing a smoke-free and vapor-free environment in public and private places where nonsmokers may be exposed to secondhand smoke and vapor.
- Chapter 17-30, *Trip Reduction Program*. The purpose of this chapter is to reduce traffic and improve air quality within the City of Santa Rosa by promoting the development of trip reduction programs at existing and future work sites. Average vehicle ridership is established to measure progress toward achieving an increase in the use of commute alternatives and reducing peak hour vehicle trips. Section 17-30.060, *Employer responsibilities*, list the provisions for employers to implement and Section 17-30.070, *City participation*, outlines the City's roles in the trip reduction program.
- Chapter 17-35, *Installation of Wood Burning Appliances, Removal, and Operation of Noncertified Wood Heaters*. This chapter aims to improve air quality by educating the public with regard to the impacts of burning wood and the various types of wood burning appliances, regulating the type of wood burning appliances that may be installed and maintained within the city, and banning the use of noncertified wood burning appliances after June 1, 2004.

4.3.1.4 EXISTING CONDITIONS

San Francisco Bay Area Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is divided into 15 air basins. As previously stated, Santa Rosa is in the SFBAAB. The discussion below identifies the natural factors in the SFBAAB that affect air pollution. Air pollutants of concern are criteria air pollutants and TACs. Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality. BAAQMD is the regional air quality agency for the SFBAAB, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa

[23] PDAs are transit-oriented, infill development opportunity areas within existing communities.
[24] TPAs are half-mile buffers surrounding major transit stops or terminals.

Clara Counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions:[25]

- Meteorology: The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range[26] splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.
- Wind Patterns: During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3:00 to 4:00 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands. The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed or inverted. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result. In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from

[25] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed August 30, 2023.

[26] The Coast Ranges traverse California's west coast from Humboldt County to Santa Barbara County.

the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

- Temperature: Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.
- Precipitation: The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.
- Wind Circulation: Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.
- Inversions: As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB. Elevation inversions are when the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley. These are more common in the summer and fall. Radiation inversions occur during the night when the ground cools off, radiating the heat to the sky, and are more common during the winter. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

SFBAAB Area Designations

The AQMP provides the framework for air quality basins to achieve attainment of National and California AAQS through the State Implementation Plan. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O_3 range from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SFBBAB is shown in Table 4.3-4, *Attainment Status of Criteria Air Pollutants in the San Francisco Bay Area Basin.* The SFBBAB is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS.

TABLE 4.3-4 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) [a]
PM_{10}	Nonattainment	Unclassified/Attainment [b]
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
CO	Attainment	Attainment
NO_2	Attainment	Unclassified
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

Notes:
a. Severity classification current as of February 13, 2017.
b. In December 2014, USEPA issued final area designations for the 2012 primary annual $PM_{2.5}$ national AAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
Source: California Air Resources Board, 2023, Maps of State and Federal Area Designations, https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations, accessed July 21, 2023.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of Santa Rosa have been documented and measured by BAAQMD. BAAQMD has 24 permanent monitoring stations located around the Bay Area, and data from the nearest station, Sebastopol-103 Morris Street in Sebastopol was used. The station closest to the EIR Study Area with data for PM_{10} was the Napa-Valley College Monitoring

Station. Data from these stations are summarized in Table 4.3-5, *Ambient Air Quality Monitoring Summary*. The data show occasional violations of the federal $PM_{2.5}$ and state PM_{10} standards.

TABLE 4.3-5 AMBIENT AIR QUALITY MONITORING SUMMARY

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations		
Pollutant/Standard	**2019**	**2020**	**2021**
Ozone (O_3) [a]			
State 1-Hour ≥ 0.09 ppm	0	0	0
State & Federal 8-hour ≥ 0.07 ppm	0	0	0
Maximum 1-Hour Conc. (ppm)	0.070	0.068	0.071
Maximum 8-Hour Conc. (ppm)	0.060	0.059	0.063
Nitrogen Dioxide (NO_2)			
State 1-Hour ≥ 0.18 (ppm)	0	0	0
Maximum 1-Hour Conc. (ppb)	0.0319	0.0363	0.0263
Coarse Particulates (PM_{10}) [a]			
State 24-Hour > 50 µg/m^3	0	2	0
Federal 24-Hour > 150 µg/m^3	0	0	0
Maximum 24-Hour Conc. (µg/ m^3)	37.5	122.9	22.9
Fine Particulates ($PM_{2.5}$)			
Federal 24-Hour > 35 µg/m^3	0	7	0
Maximum 24-Hour Conc. (µg/m^3)	28.0	124.3	29.5

Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; * = insufficient data/not available
a. Data obtained from the Napa-Valley College Monitoring Station for PM_{10}.
Source: California Air Resources Board, 2023, Air Pollution Data Monitoring Cards (2019, 2020, and 2021), https://www.arb.ca.gov/adam/topfour/topfour1.php, accessed July 21, 2023.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Disadvantaged communities (i.e., environmental justice communities) identified by CalEnviroScreen 4.0 (CES4) may be disproportionately affected by and vulnerable to poor air quality.[27, 28] The CES cumulative score is a cumulative measure of overall environmental justice burden based on 24 indicators, including pollution, social, and health indicators, four of which are specifically related to air quality or air pollution.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial,

[27] Under SB 535, disadvantaged communities are defined as the top 25 percent scoring areas from CES along with other areas with high amounts of pollution and low populations.

[28] CES4 Indicator Maps can be found at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.

commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Environmental Justice Communities

Disadvantaged communities identified by CES (i.e., environmental justice communities) may be disproportionately affected by and vulnerable to poor air quality.[29, 30] The CES cumulative score is a cumulative measure of overall environmental justice burden based on 24 indicators, including pollution, social, and health indicators, four of which specifically relate to air quality or air pollution (see Figure 4.3-1, *CES4 Indicator: Cumulative Score by Percentile*).

Within Sonoma County, there are the following identified sensitive community types, which are areas that are disproportionately burdened by pollution, both of which are based on CES4:

- BAAQMD's Overburdened Communities. Figure 4.3-2, *BAAQMD Overburdened Communities*, shows the areas that, according to BAAQMD, are disproportionately burdened by pollution. These Overburdened Communities were mapped using the CES4, a tool advocated for by community groups and developed by the State Office of Environmental Health Hazard Assessment (OEHHA) on behalf of the CalEPA.
- Santa Rosa Equity Priority Areas (EPAs).[31] The City's proposed General Plan 2050 identifies communities that suffer most from economic, health, and environmental burdens based on SB 1000 "disadvantaged communities" definition. These communities disproportionately burdened by pollution and health impacts in Santa Rosa are called Equity Priority Areas (see Figure 4.3-3, *Santa Rosa Equity Priority Areas*). EPAs were identified using the CES4 tool, which applies a formula to each census tract in the state to generate a score that ranks the level of cumulative impacts in each area relative to the rest of the census tracts in the state. In general, the higher the score, the more impacted a community is. Census tracts in the highest quartile of scores (i.e., 75 to 100 percent [75 percentile]) are considered EPAs. Additional EPAs were also identified pursuant to SB 535, which encourages cities to work with community members and stakeholders to refine the boundaries of these communities and identify additional communities.

CalEnviroScreen Air Quality Indicators

CES identifies California communities most affected by sources of pollution and where people are vulnerable to pollution's effects. People in environmental justice areas identified by CES4 by BAAQMD's Overburdened Communities, may be disproportionately affected by and vulnerable to poor air quality. CES's "pollution burden" map identifies communities exposed to pollution from human activities, such as air pollution (ozone, $PM_{2.5}$, DPM), water pollution (drinking water contaminants), and hazardous materials (pesticide use, children's lead exposure, toxic releases), and traffic density. Figure 4.3-4, *CES4 Indicator:*

[29] Under SB 535, disadvantaged communities are defined as the top 25 percent scoring areas from CES along with other areas with high amounts of pollution and low populations.

[30] CES4 Indicator maps can be found at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.

[31] Synonymous with Disadvantaged Communities under SB 1000.

Pollution Burden by Percentile, shows the pollution burden in the EIR Study Area relative to the rest of the state. In CES, the pollution burden score considers the disproportionate effect of pollution on environmental justice communities, because the score weighs socioeconomic factors (e.g., educational attainment and poverty) and sensitivity of the population (e.g., asthma rates and cardiovascular disease). Though the causes of asthma are poorly understood, it is established that exposure to traffic and outdoor air pollutants can trigger asthma attacks. Previous research has shown that children, the elderly, racial and ethnic minorities, and low-income Californians suffer disproportionately from asthma attacks and asthma-like symptoms.[32] Figure 4.3-5, *CES4 Indicator: Asthma by Percentile*, maps the percentile of spatially modeled, age-adjusted rate of emergency department visits for asthma per 10,000 (averaged over 2015 to 2017) relative to the rest of the state.[33]

Placement of New Sensitive Receptors

As previously described in Section 4.3.1.3, *Regulatory Framework*, BAAQMD adopted *Planning Healthy Places* to provide a list of best practices that should be applied when placing sensitive uses in areas with high levels of air pollution or in close proximity to local sources of air pollution. Figure 4.3-6, *BAAQMD Siting Recommendations*, identifies stationary sources (BAAQMD-permitted) in the EIR Study Area and major roadways where BAAQMD recommends either implementation of best practices to reduce risk or preparation of site-specific analysis (e.g., health risk assessments) to ensure air quality compatibility. [34]

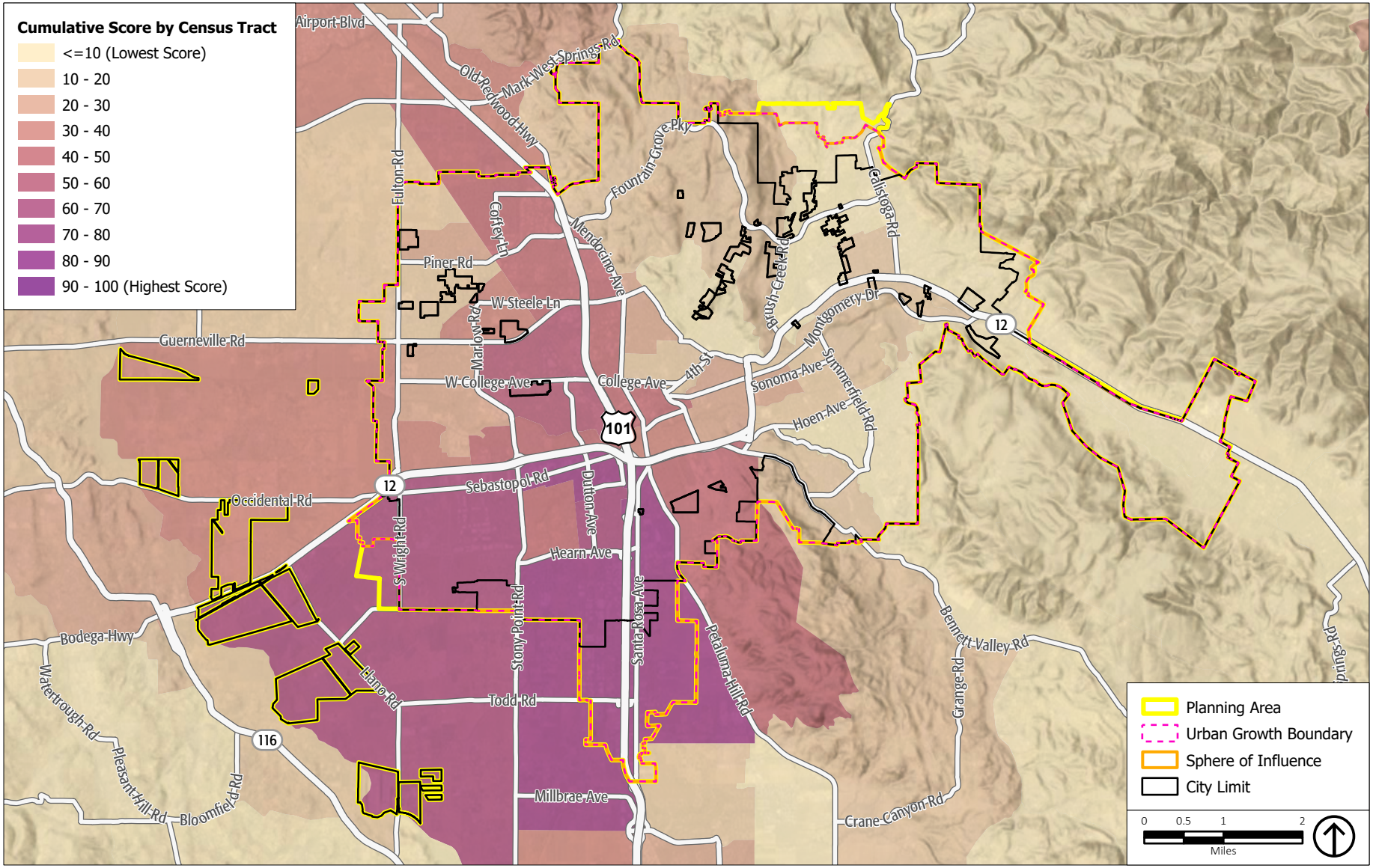
Existing Emissions

Table 4.3-6, *Existing EIR Study Area Regional Criteria Air Pollutant Emissions Inventory*, identifies the existing criteria air pollutant emissions inventory using emission rates for year 2019 (baseline conditions). The inventories are based on existing land uses in the EIR Study Area. The Year 2019 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2019 emission factors for on-road vehicles.

[32] California Air Resources Board, October 2013, "Higher 'asthma burden' among minorities, low-income groups tied to increased exposure to air pollution," https://ww2.arb.ca.gov/news/higher-asthma-burden-among-minorities-low-income-groups-tied-increased-exposure-air-pollution, accessed May 25, 2023.

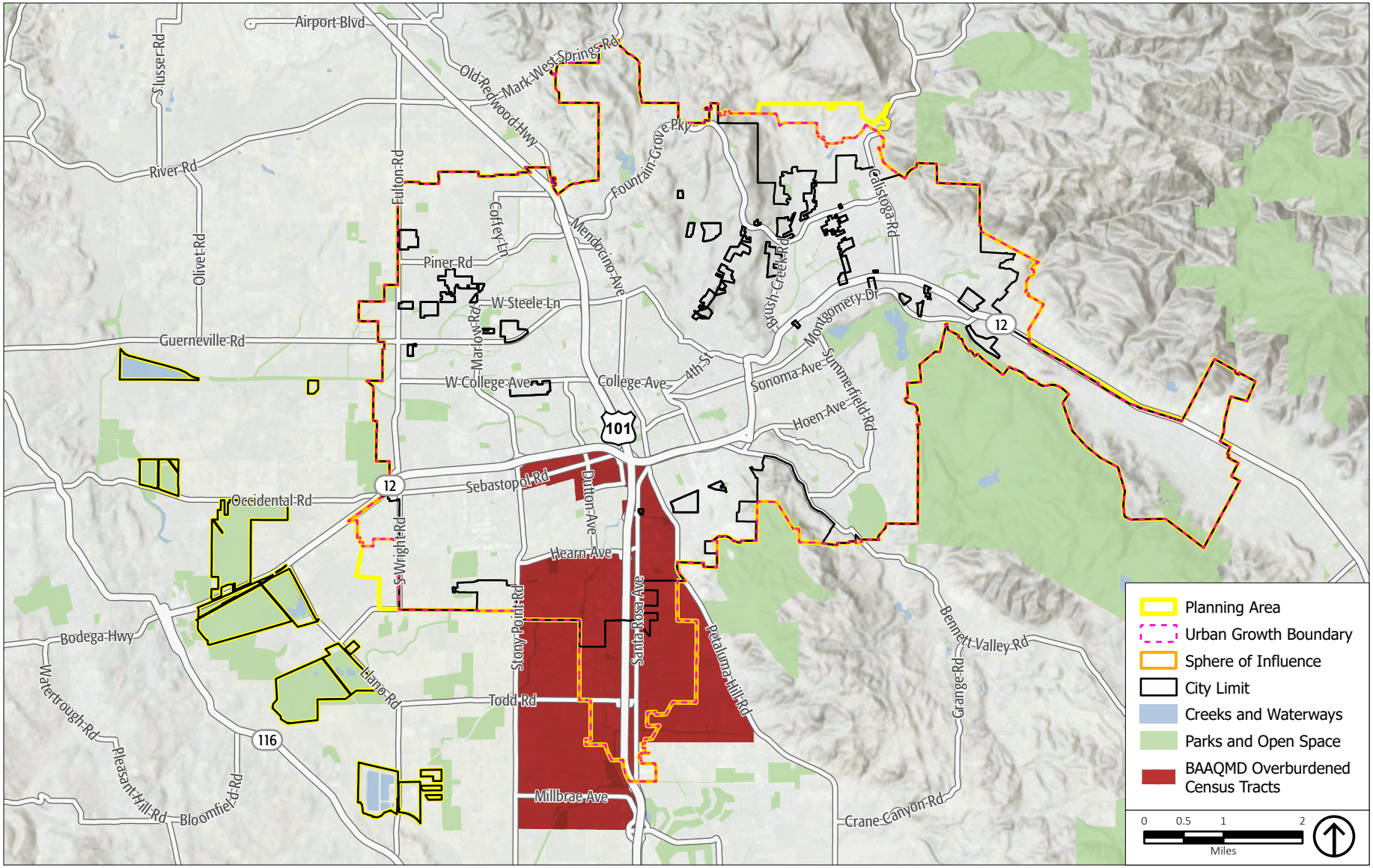
[33] Office of Environmental Health Hazard Assessment, May 1, 2023, CalEnviroScreen (CES) 4.0 Indicator Map, https://experience.arcgis.com/experience/ed5953d89038431dbf4f22ab9abfe40d/, accessed August 30, 2023.

[34] Bay Area Air Quality Management District, May 2016, *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning*, https://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en, accessed May 25, 2023.



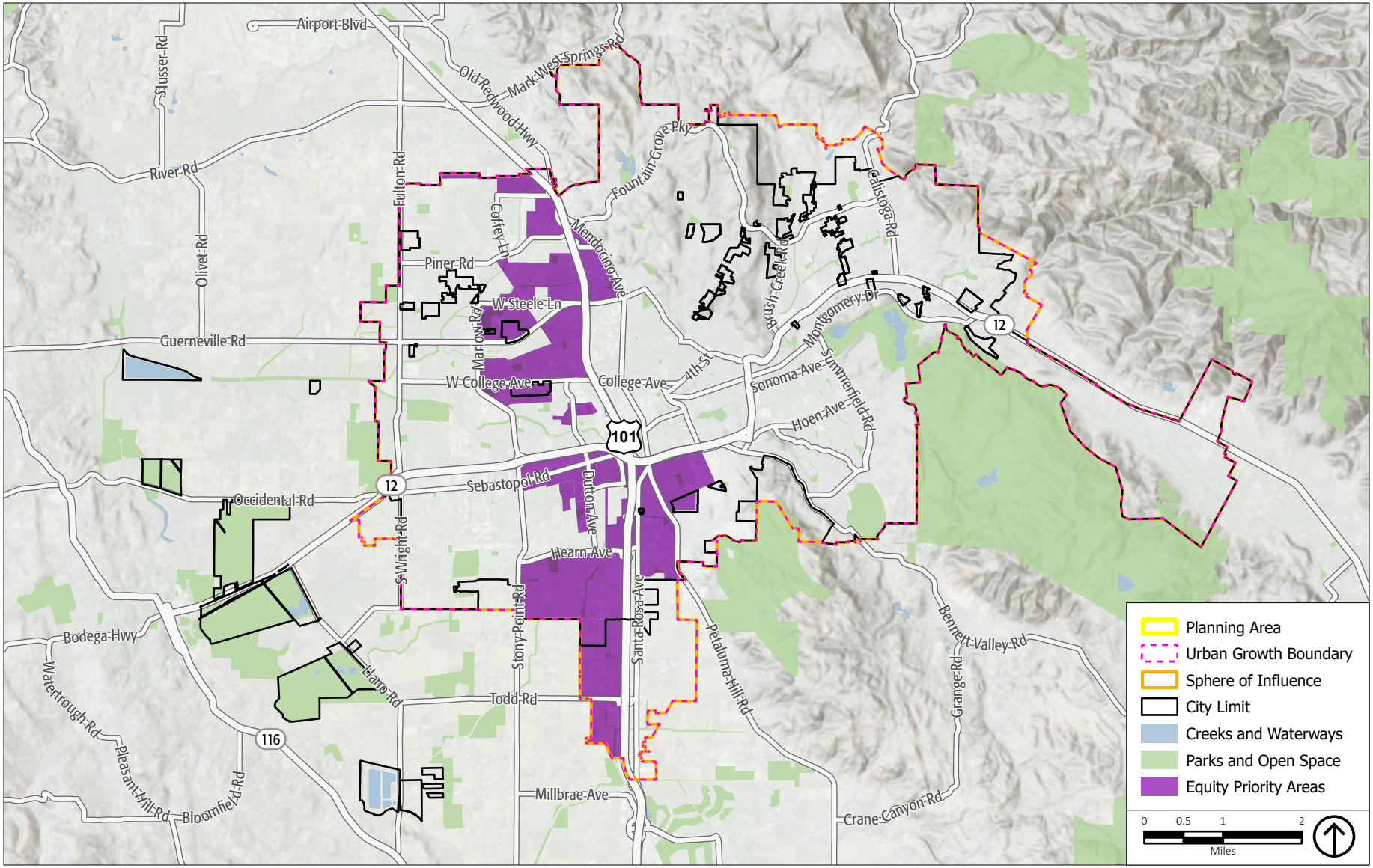
Source: OEHHA, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.3-1
CES4 Indicator - Cumulative Score by Percentile



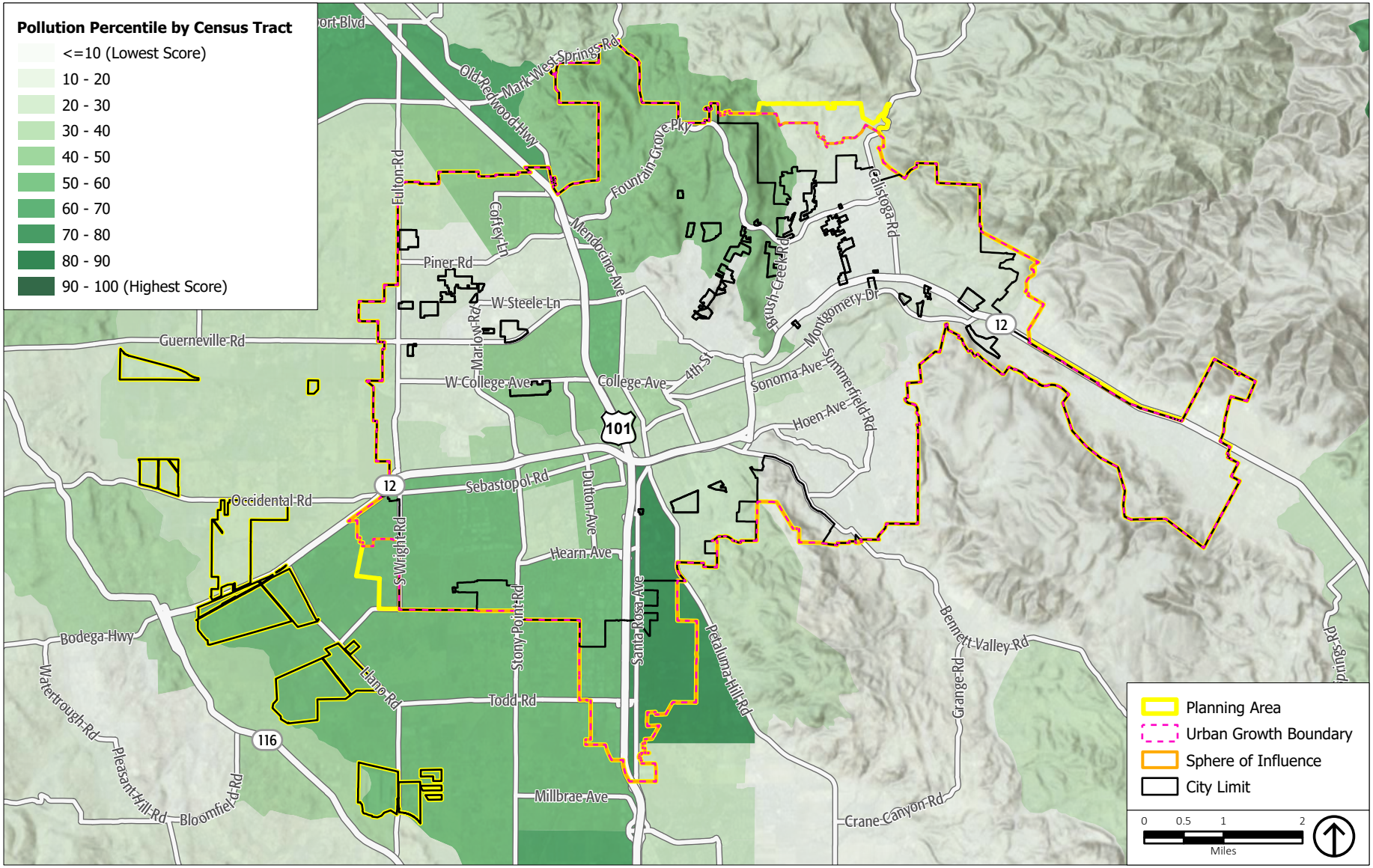
Source: ESRI, 2022; BAAQMD, 2023; PlaceWorks, 2024.

Figure 4.3-2
BAAQMD Overburdened Communities



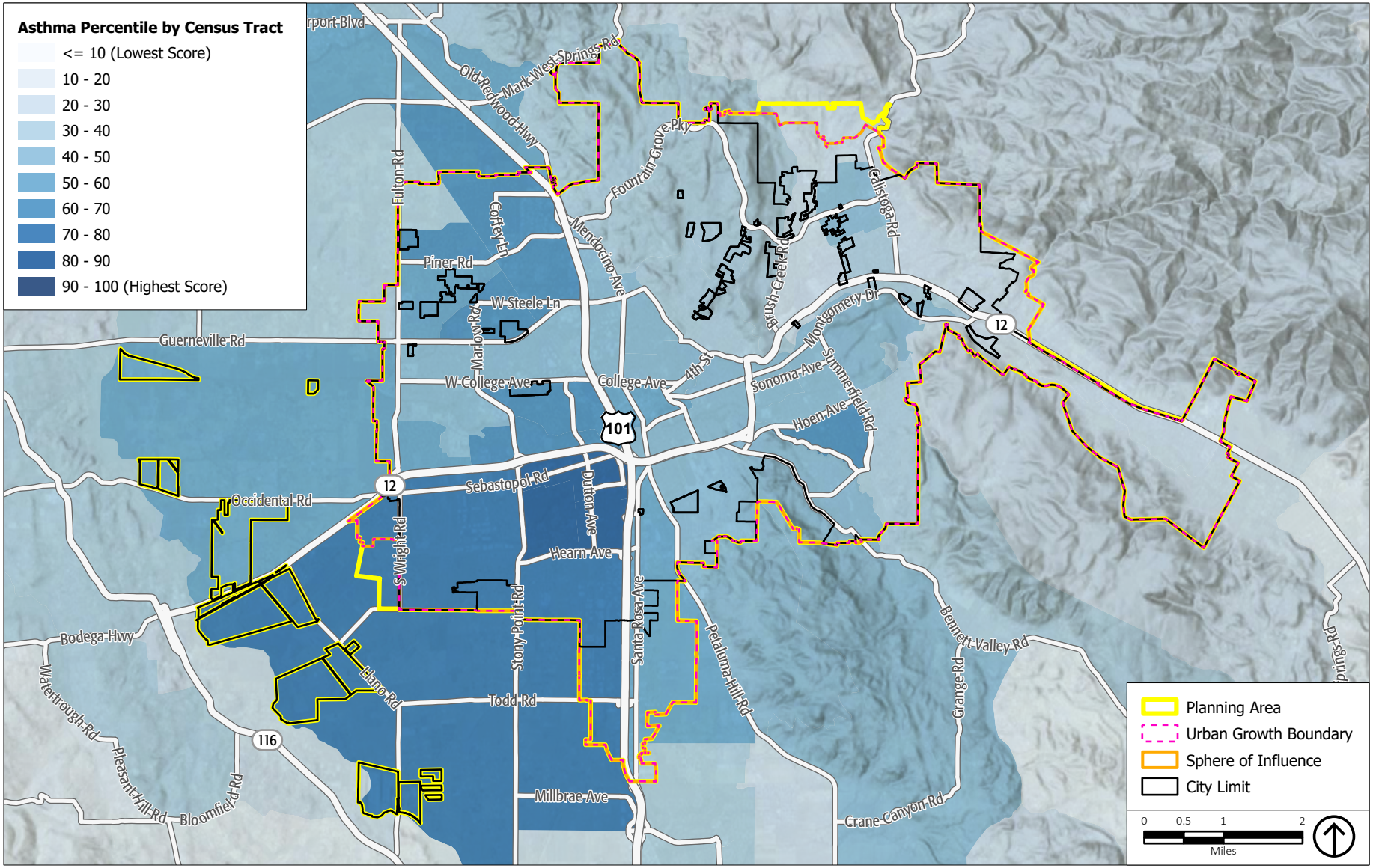
Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 4.3-3
Santa Rosa Equity Priority Areas



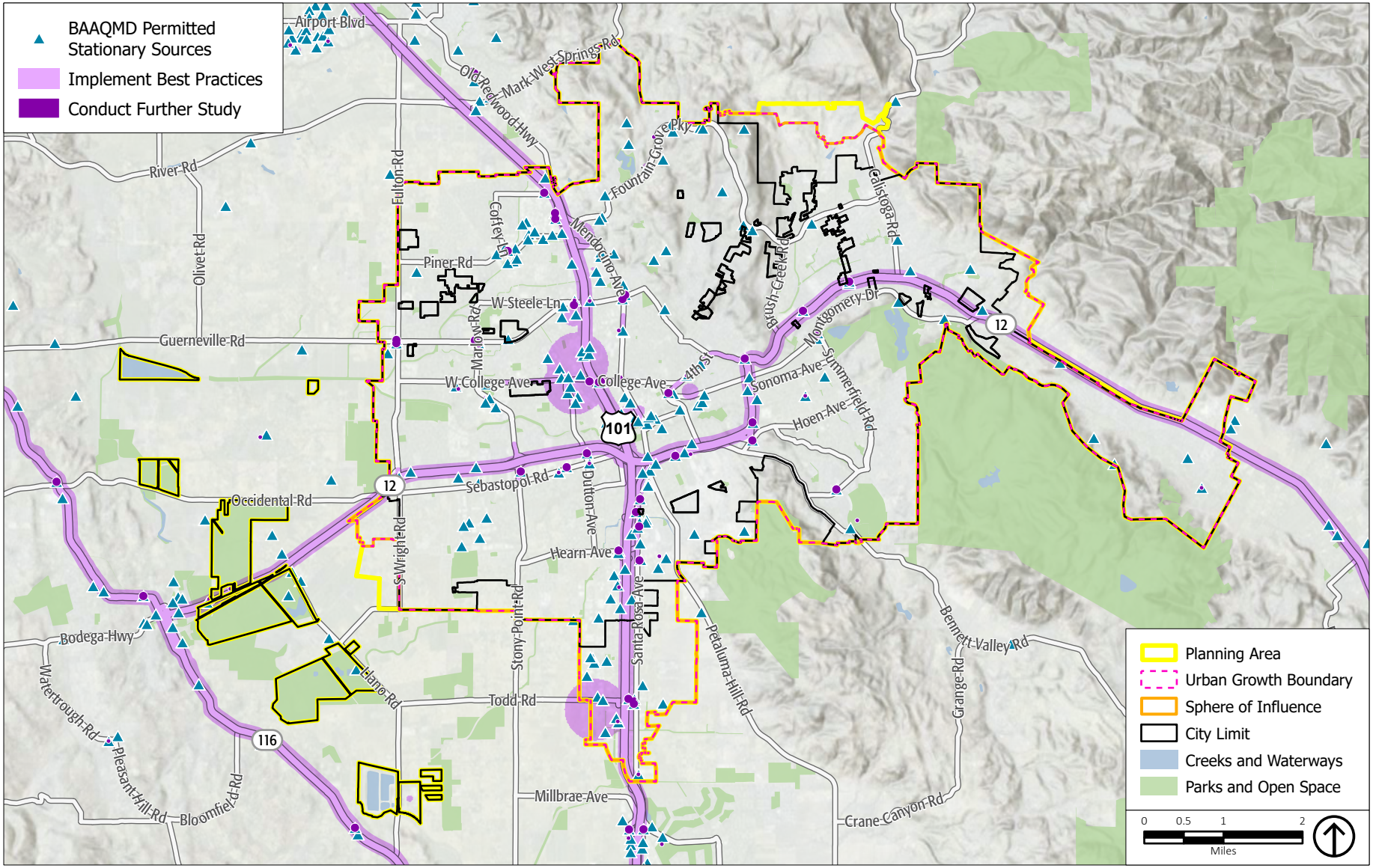
Source: OEHHA, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.3-4
CES4 Indicator - Pollution Burden by Percentile



Source: OEHHA, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.3-5
CES4 Indicator - Asthma by Percentile



Source: ESRI, 2022; BAAQMD, 2023; PlaceWorks, 2024.

Figure 4.3-6
BAAQMD Siting Recommendations

TABLE 4.3-6 EXISTING EIR STUDY AREA REGIONAL CRITERIA AIR POLLUTANT EMISSIONS INVENTORY

	Tons per year			
Pollutant/Standard	ROG	NO_X	PM_{10}	$PM_{2.5}$
Transportation [a]	46	376	22	7
Energy [b]	11	209	16	16
Off-road Equipment [c]	143	173	9	8
Consumer Products [d]	529	—	—	—
Total	**729**	**758**	**47**	**30**

Notes:
a. On-road transportation VMT is provided by VMT and modeled with EMFAC2021. VMT for the proposed project is based on the "project's effect" of VMT in the EIR Study Area.
b. Building electricity and natural gas are based on data provided by the City for the GHG emissions inventory conducted for their GHG Reduction Strategy from PG&E, SCP, and CalEEMod User's Guide for natural gas criteria air pollutant emissions. The electricity rates were adjusted to reflect the increase in housing units and employment within the EIR Study Area.
c. On-road vehicles and equipment are based on the OFFROAD2021 emissions inventory and include construction equipment and commercial equipment.
d. Based on CalEEMod User's Guide methodology to calculate ROG emissions from use of household consumer cleaning products.
Source: PlaceWorks, 2023.

Stationary Sources

Stationary sources of air pollution—including complex sources such as metal smelting, wastewater treatment plants, and refineries as well as smaller facilities such as diesel generators, gasoline dispensing facilities (GDFs or gas stations), and boilers—are regulated and subject to permit conditions established by BAAQMD.[35] Stationary sources in the EIR Study Area are shown on Figure 4.3-2.

Odors

Santa Rosa has a wastewater treatment plant that has the potential to generate odors. Odors are also associated with certain manufacturing processes and with some commercial operations (restaurants, etc.) that may be located near residential uses. Nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, and Regulation 1, Rule 1-301, *Public Nuisance*. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

4.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.

[35] Permitted facilities are mapped by BAAQMD and can be found at: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65.

4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
5. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to air quality.

4.3.2.1 BAAQMD PLAN-LEVEL THRESHOLDS

The BAAQMD *CEQA Air Quality Guidelines* (BAAQMD CEQA Guidelines) were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The BAAQMD CEQA Guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with California Environmental Quality Act (CEQA) requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. The BAAQMD CEQA Guidelines also include recommended assessment methodologies for air toxics, odors, GHG emissions, and environmental justice.

In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the BAAQMD CEQA Guidelines. These thresholds are designed to establish the level at which the BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. BAAQMD published a new version of the BAAQMD CEQA Guidelines in April 2023, which was the version used to prepare the analysis in this EIR.[36]

Clean Air Plan Consistency

Under its plan-level review criteria, which apply to long-range plans such as the proposed project, BAAQMD recommends a consistency evaluation of the plan with its current AQMP control measures. BAAQMD considers a plan to be consistent with the applicable AQMP, which is currently the 2017 Clean Air Plan, if it is consistent with below considerations:

- Does the plan support the primary goals of the AQMP?
- Does the plan include applicable control measures from the AQMP?
- Does the plan disrupt or hinder implementation of any AQMP control measure?
- Does the plan result in VMT growth that is equal to or less than the projected population growth?

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

BAAQMD's regional significance criteria for projects that exceed the screening thresholds are shown in Table 4.3-7, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*. Criteria for both the construction and operational phases of the proposed project are shown.

[36] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

TABLE 4.3-7 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

	Construction Phase	Operational Phase	
Air Pollutant	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
Project-Level			
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
PM_{10} and $PM_{2.5}$ Fugitive Dust	Best Management Practices	None	None
Plan-Level			
All Criteria Air Pollutants	No Net Increase		

Source: Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

While the proposed General Plan 2050 is a local long-range plan, the land use pattern it envisions has regional implications, such as interjurisdictional transportation behavior and jobs-to-housing ratios; therefore, it would have a less-than-significant impact related to air quality if it demonstrates "no net increase" in criteria air pollutants and risks and hazards. To demonstrate no net increase, BAAQMD's Guidelines require two comparative analyses for the projected future emissions:

- Scenario 1: Project to Existing Conditions (base-to-future-year comparison). Compare the existing (base year) emissions with projected future year emissions plus the regional plan's emissions (base year/regional plan comparison).
- Scenario 2: Project to Future No Project Conditions (future baseline comparison). Compare projected future year emissions with projected future year emissions plus the regional plan's emissions (no regional plan/regional plan comparison). This scenario isolates changes in emissions due solely to the project since both the scenarios consider emissions reductions from federal and state regulations.

If both comparative analyses demonstrate no net increase in emissions, the air quality impacts of the proposed General Plan 2050 would be less than significant.

Health Effects of Criteria Air Pollutants

If projects exceed the emissions in Table 4.3-7, emissions would cumulatively contribute to the nonattainment status and would contribute to elevating health effects associated with these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

However, for projects that exceed the emissions in Table 4.3-7, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in

the SFBAAB would be affected by the health effects cited above. BAAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SFBAAB; at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S21978 (Friant Ranch).

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, if a project within the EIR Study Area exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the SFBAAB.

Receptor Exposure to Pollutant Concentrations

Local Carbon Monoxide Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). Under a plan-level review, BAAQMD does not require an evaluation of CO hotspots. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the National and California AAQS for CO emissions, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, BAAQMD does not require a CO hotspot analysis if the following criteria are met:[37]

- A project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- A project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- A project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

[37] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

Community Risk and Hazards

BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. The proposed project would generate TACs and $PM_{2.5}$ during construction activities that could elevate concentrations of air pollutants at the nearby receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. BAAQMD has adopted screening tables for air toxics evaluation during construction. Construction-related TAC and $PM_{2.5}$ impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site and on-site receptors, as applicable.[38, 39]

Community Risk and Hazards: Project

Project-level emissions of TACs or $PM_{2.5}$ from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk in the absence of a qualified community risk reduction plan:

- An excess (i.e., increased) cancer risk level of more than 10 in one million.
- Noncancer (i.e., chronic or acute) hazard index greater than 1.0.
- An incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$.[40]

Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following in the absence of a qualified community risk reduction plan:[41]

- An excess cancer risk level of more than 100 in one million (from all sources).
- Chronic noncancer hazard index (from all local sources) greater than 10.0.
- 0.8 $\mu g/m^3$ annual average $PM_{2.5}$ (from all local sources).

[38] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

[39] Bay Area Air Quality Management District, January 5, 2017, Air Quality Standards and Attainment Status, http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status#thirteen, accessed July 21, 2023.

[40] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

[41] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

In February 2015, OEHHA adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer-causing chemicals, and age-specific breathing rates.[42]

Odor Impacts

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, *Odorous Substances*. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.[43]

For a plan-level analysis, BAAQMD requires:

- Potential existing and planned locations of odor sources to be identified.
- Policies to reduce odors.

4.3.2.2 METHODOLOGY

Emissions Quantification

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. BAAQMD has published CEQA Guidelines that provide local governments with guidance for analyzing and mitigating air quality impacts and were used in this analysis. The EIR Study Area's criteria air pollutant emissions inventory includes the following sectors:

- Transportation: Transportation emissions forecasts were modeled using emission rates from CARB's EMFAC2021, version 1.0.2 web database. Model runs were based on Origin Destination (OD) Method using VMT data provided by W-Trans, calendar year 2019, and 2050 emission rates (see Chapter 4.15, *Transportation*, of this Draft EIR). VMT that have an origin or destination in the EIR Study Area use a transportation origin-destination methodology. Accounting of VMT is based on the recommendations

[42] California Office of Environmental Health Hazard Assessment, February 2015, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, accessed July 21, 2023.

[43] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

of CARB's Regional Targets Advisory Committee (RTAC) created under SB 375. For accounting purposes, there are three types of trips:

- Internal-Internal. Vehicle trips that originated and terminated within the EIR Study Area (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips and their emissions are attributed to the EIR Study Area.
- Internal-External/External-Internal. Vehicle trips that either originated or terminated (but not both) in the EIR Study Area (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the EIR Study Area.
- External-External. Vehicle trips that neither originated nor terminated in the EIR Study Area. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted toward the EIR Study Area's VMT or emissions.

- Energy: Energy use for residential and nonresidential land uses in the EIR Study Area were modeled using natural gas data provided by PG&E and Sonoma Clean Power as part of the GHG Reduction Strategy (Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050). Residential energy and non-residential energy forecasts are adjusted for increases in population and based on State actions energy forecasts conducted for the GHG Reduction Strategy.
- Off-Road Equipment: Emission rates from CARB's OFFROAD2021, version 1.0.4, web database were used to estimate criteria air pollutant emissions from light commercial and construction equipment in the EIR Study Area. OFFROAD2021 is a database of equipment use and associated emissions for each county compiled by CARB. Emissions were compiled using OFFROAD2021 for the County of Sonoma for year 2019 and forecast based on the increase in agricultural acreage, housing permits, employment, and housing units as a percentage of Sonoma County.
- Area Sources: Area sources are based on the emission factors from the CalEEMod Users Guide for emissions generated from use of household consumer products and cleaning supplies.

4.3.2.3 IMPACTS OF THE ENVIRONMENT ON A PROJECT

BAAQMD's CEQA Guidelines include methodology for jurisdictions wanting to evaluate the potential quantitative impacts from placing sensitive receptors proximate to major air pollutant sources as part of individual projects. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways, large distribution centers, and permitted sources. For plan-level impact determination such as this EIR, the analysis is limited to whether the plan has policies or overlay zones to reduce impacts.[44]

[44] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed July 21, 2023.

Buildout under the proposed project could result in siting sensitive uses (e.g., residential) near sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose people to potential air quality-related impacts. However, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project, as determined by the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478). Thus, CEQA does not require analysis of the potential environmental effects from siting sensitive receptors near existing sources, and this type of analysis is not provided in the impact discussion below.

While it is generally not within the purview of CEQA to analyze impacts of the environment on a project, the proposed General Plan 2050 includes policy guidance which would ensure priority of the health of the city's residents through enforcement of the municipal code and incorporation of design features to minimize air quality impacts and to achieve appropriate health standards. Chapter 2, *Land Use and Economic Development*, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, and Chapter 6, *Health, Equity, Environmental Justice, and Parks*, of the proposed General Plan 2050 include the following goals, policies, and actions that would serve to protect sensitive receptors from poor air quality in the EIR Study Area:

- Goal 2-1: Ensure that growth and change serve community needs, protect the environment, improve the City's fiscal stability, and enhance quality of life for all members of the community.
  - Policy 2-1.1: Ensure that growth and change serve community needs, protect the environment, improve the City's fiscal stability, and enhance quality of life for all members of the community.
    - Action 2-1.2: Work with developers to ensure new development respects the integrity and character of surrounding uses, especially when nonresidential uses are proposed adjacent to residential areas. Consider use of buffers, landscaping, and other types of screening to minimize noise, light, glare, and odor.
- Goal 2-5: Create a business-friendly, diverse, and sustainable economy through the attraction of new business, and the expansion, retention, and support of existing business.
  - Policy 2-5.1: Create a business-friendly, diverse, and sustainable economy through the attraction of new business, and the expansion, retention, and support of existing business.
    - Action 2-5.6: Maintain and expand industrial zoned land close to established transportation corridors, including Highway 101, State Route 12, and the SMART rail line, focusing on areas away from sensitive receptors.
- Goal 2-9: Create a business-friendly, diverse, and sustainable economy through the attraction of new business, and the expansion, retention, and support of existing business.
  - Policy 2-9.3: Protect industrial land supply and ensure compatibility between industrial development and surrounding neighborhoods.
    - Action 2-9.4: Require industrial development adjacent to residential areas to provide buffers and institute setback, landscaping, and screening requirements intended to minimize noise, light, glare, and other impacts.

- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.6: Identify and work with partners to address impacts from groundwater threats and solid waste.
    - Action 5-9.41: Identify solid waste and hazardous waste facilities that do not comply with standards for preventing contamination of air, water, and soil with hazardous waste, and work with owners to upgrade those facilities to meet those standards, prioritizing facilities in Equity Priority Areas.
- Goal 6-1: Improve health and well-being for all community members by emphasizing community health in all City policies, programs, actions, and activities.
  - Policy 6-1.1: Promote efforts to improve community health outcomes and ensure that City investments support community health goals.
    - Action 6-1.3: Collaborate with health service organizations, including Sonoma County Health and Human Services, to identify environmental risk factors for asthma, especially in Equity Priority Areas and areas where more than 10 percent of adults have asthma.
    - *Action 6-1.5: As recommended by the California Air Resources Board, require projects that would result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants (e.g., hospitals, nursing homes, day care centers), as measured from the property line of the project, to prepare a construction health risk assessment in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the BAAQMD threshold.

      *Action 6-1.6: Require an operational health risk assessment for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use or Overburdened Community, as defined by BAAQMD. The operational HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and BAAQMD. If the operational HRA shows that the incremental cancer risk exceeds 10 in a million, the noncancer hazard index of 1.0, or the thresholds as determined by BAAQMD, require the project applicant to identify and demonstrate measures, such as those listed in the General Plan Environmental Impact Report, that can reduce potential cancer and noncancer risks to acceptable levels.
    - Action 6-1.7: Require applicants for residential and/or other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) to implement the best practices identified in the BAAQMD Planning Healthy Places Guidebook (Guidebook) where the site is located within the recommended screening distance of the Guidebook.

    - Action 6-1.11: Update the Zoning Code to require health impact assessments for nonresidential projects of 100,000 square feet or more in Equity Priority Areas to identify and address any potential negative health implications of the project.
- Goal 6-2: Advance health equity by understanding and addressing key social determinants of health.
    - Policy 6-2.4: Address conditions contributing to risk of asthma and adverse air quality.
        - Action 6-2.11: Consult with Sonoma County Public Health Division as appropriate to reduce risk of asthma through land use planning and community programs.

4.3.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

AIR-1	**Implementation of the proposed project would not conflict with or obstruct implementation of the BAAQMD Clean Air Plan.**

BAAQMD 2017 Clean Air Plan

The proposed project plays an important role in local agency project review by linking local planning and individual projects to the 2017 Clean Air Plan. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at an early enough stage to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the Bay Area. As discussed in Section 4.3.2.1, *BAAQMD Plan-Level Thresholds*, BAAQMD requires a consistency evaluation of a proposed plan with the current AQMP control measures. In addition, proposed long-range plans must demonstrate if the project VMT or vehicle trip increase is less than or equal to the projected population increase.

The primary goals of the 2017 Clean Air Plan are to attain the National and California AAQS, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate. Furthermore, the 2017 Clean Air Plan lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and the long-term GHG reduction goals.

Attain Air Quality Standards

BAAQMD's 2017 Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG, which are based in part on cities' general plan land use designations. These demographic projections are incorporated into *Plan Bay Area*. Demographic trends incorporated into *Plan Bay Area* determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality

trends. The 2017 Clean Air Plan is based on data used in *Plan Bay Area* 2050. The SFBAAB is currently designated a nonattainment area for O_3, $PM_{2.5}$, and PM_{10} (California AAQS only).

As discussed in Chapter 4.13, *Population and Housing*, of this Draft EIR, the expected buildout under the proposed project would be able to accommodate the next three Regional Housing Needs Allocation (or RHNA) cycles and would not induce a substantial amount of unplanned population growth or growth for which inadequate planning has occurred. Additionally, the proposed project would result in an overall decrease in total VMT per service population compared to existing conditions (see Table 4.15-4, *Daily VMT Performance Metrics for the EIR Study Area*, in Chapter 4.15, *Transportation*, of this Draft EIR). Chapter 2, *Land Use and Economic Development,* of the proposed General Plan 2050 also provides goals, policies, and actions that would serve to minimize potential adverse impacts related to growth in the EIR Study Area (see impact discussion POP-1 in Chapter 4.13 of this Draft EIR). Therefore, implementation of the proposed project would not introduce a substantial unplanned growth in population in the EIR Study Area and all potential future development would be required to comply with any required site-specific infrastructure improvements and to pay any project-specific impact fees.

As discussed in greater detail under impact discussion AIR-2, potential future development projects from implementation of the proposed project would be required to undergo their own project-specific CEQA environmental review. In determining whether an individual development project would be considered a project under CEQA that would have potentially significant impacts on local and regional air quality, including consideration of an individual development project's contribution to an existing or forecasted air quality violation, BAAQMD recommends project-level significance thresholds for criteria pollutants and ozone precursors. Therefore, the population projections of the proposed project would be consistent with regional projections. The emissions resulting from potential future development associated with the proposed project are included in the BAAQMD projections, and future development accommodated under the proposed project would not hinder BAAQMD's ability to attain the National or California AAQS. Accordingly, this impact would be *less than significant*.

Reduce Population Exposure and Protect Public Health

Potential future development and activities from implementation of the proposed project could result in new sources of TACs and $PM_{2.5}$. Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Furthermore, individual development projects would be required to achieve the project-level risk thresholds established by BAAQMD to ensure the sensitive receptor impact resulting from the subject development project would be *less than significant*.

Reduce GHG Emissions and Protect the Climate

Consistency of the proposed project with State, regional, and local plans adopted for the purpose of reducing GHG emissions are discussed in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR. Potential future development under the proposed project would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of SB 32 and AB 1279, as outlined in the GHG Reduction Strategy (see Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050), which updates the City's Climate Action Plan. The proposed project is consistent with regional strategies for infill development identified in *Plan Bay Area*. Moreover, as discussed under impact discussion GHG-1 in Chapter 4.8 of this Draft EIR, the proposed project would meet legislative GHG emission reduction targets established under SB 32 and AB 1279 with implementation of the proposed GHG Reduction Strategy. Therefore, the proposed project is consistent with the goal of the 2017 Clean Air Plan to reduce GHG emissions and protect the climate, and the impact would be *less than significant*.

2017 Clean Air Plan Control Measures

Table 4.3-8, *Control Measures from the BAAQMD 2017 Clean Air Plan*, identifies the control measures included in the *2017 Clean Air Plan* that are required by BAAQMD to reduce emissions for a wide range of both stationary and mobile sources.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
Stationary Source Control Measures	▪ SS 1 – Fluid Catalytic Cracking in Refineries ▪ SS 2 – Equipment Leaks ▪ SS 3 – Cooling Towers ▪ SS 4 – Refinery Flares ▪ SS 5 – Sulfur Recovery Units ▪ SS 6 – Refinery Fuel Gas ▪ SS 7 – Sulfuric Acid Plants ▪ SS 8 – Sulfur Dioxide from Coke Calcining ▪ SS 9 – Enhanced NSR Enforcement for Changes in Crude Slate ▪ SS 10 – Petroleum Refining Emissions Tracking ▪ SS 11 – Petroleum Refining Facility-Wide Emission Limits ▪ SS 12 – Petroleum Refining Climate Impacts Limit ▪ SS 13 – Oil and Gas Production, Processing and Storage ▪ SS 14 – Methane from Capped Wells ▪ SS 15 – Natural Gas Processing and Distribution ▪ SS 16 – Basin-Wide Methane Strategy ▪ SS 17 – GHG BACT Threshold ▪ SS 18 – Basin-Wide Combustion Strategy	Stationary and area sources are regulated directly by BAAQMD; therefore, as the implementing agency, new stationary and area sources in the EIR Study Area would be required to comply with BAAQMD regulations. BAAQMD routinely adopts/revises rules or regulations to implement the stationary source (SS) control measures to reduce stationary source emissions. Based on the new development under the proposed project, implementation of the proposed project would not hinder the ability of BAAQMD to implement these SS control measures. Major stationary sources are more commonly associated with industrial manufacturing or warehousing. However, BAAQMD and the City have existing regulations in place to ensure potential future development under the proposed project would not conflict with the applicable SS control measures. Nonresidential land uses may generate small quantities of stationary source emissions during project operation (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities); however, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure consistency with the 2017 Clean Air Plan. The proposed project involves residential and commercial uses that would not include major stationary sources of emissions. Boilers and emergency generators for multifamily residential products would be required to follow BAAQMD's permitting requirements.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
	▪ SS 19 – Portland Cement ▪ SS 20 – Air Toxics Risk Cap and Reduction from Existing Facilities ▪ SS 21 – New Source Review for Toxics ▪ SS 22 – Stationary Gas Turbines ▪ SS 23 – Biogas Flares ▪ SS 24 – Sulfur Content Limits of Liquid Fuels ▪ SS 25 – Coatings, Solvents, Lubricants, Sealants and Adhesives ▪ SS 26 – Surface Prep and Cleaning Solvent ▪ SS 27 – Digital Printing ▪ SS 28 – LPG, Propane, Butane ▪ SS 29 – Asphaltic Concrete ▪ SS 30 – Residential Fan Type Furnaces ▪ SS 31 – General Particulate Matter Emission Limitation ▪ SS 32 – Emergency Backup Generators ▪ SS 33 – Commercial Cooking Equipment ▪ SS 34 – Wood Smoke ▪ SS 35 – PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal ▪ SS 36 – PM from Trackout ▪ SS 37 – PM from Asphalt Operations ▪ SS 38 – Fugitive Dust ▪ SS 39 – Enhanced Air Quality Monitoring ▪ SS 40 – Odors	
Transportation Control Measures	▪ TR 1 – Clean Air Teleworking Initiative ▪ TR 2 – Trip Reduction Programs ▪ TR 3 – Local and Regional Bus Service ▪ TR 4 – Local and Regional Rail Service ▪ TR 5 – Transit Efficiency and Use ▪ TR 6 – Freeway and Arterial Operations ▪ TR 7 – Safe Routes to Schools and Safe Routes to Transit ▪ TR 8 – Ridesharing, Last-Mile Connection ▪ TR 9 – Bicycle and Pedestrian Access and Facilities ▪ TR 10 – Land Use Strategies ▪ TR 11 – Value Pricing ▪ TR 12 – Smart Driving	Transportation (TR) control measures are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion for the purpose of reducing motor vehicle emissions. Although most of the TR control measures are implemented at the regional level—that is, by MTC or Caltrans—the 2017 Clean Air Plan relies on local communities to assist with implementation of some measures. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan 2050. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* contains the following goals, policies, and actions to expand the pedestrian and bicycle network: ▪ **Goal 3-1:** Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
	▪ TR 13 – Parking Policies ▪ TR 14 – Cars and Light Trucks ▪ TR 15 – Public Outreach and Education ▪ TR 16 – Indirect Source Review ▪ TR 17 – Planes ▪ TR 18 – Goods Movement ▪ TR 19 – Medium and Heavy-Duty Trucks ▪ TR 20 – Ocean Going Vessels ▪ TR 21 – Commercial Harbor Craft ▪ TR 22 – Construction, Freight and Farming Equipment ▪ TR 23 – Lawn and Garden Equipment	▪ **Policy 3-1.2:** Promote a citywide mode shift away from single-occupancy vehicles to support ambitious VMT and GHG reduction goals. ▪ **Action 3-1.5:** Develop a process that invests in and prioritizes non-automobile modes of transportation in capital improvement projects to reduce VMT and GHGs, prioritizing, in order: 1. Active transportation modes, including walking, bicycling, and rolling. 2. Public transportation, including inter-city and regional systems. 3. Other shared vehicles such as carpool, vanpool, and rideshare/transportation network companies. ▪ **Action 3-1.11:** Update the Zoning Code to discourage cul-de-sac design and require any new developments with cul-de-sacs or other limited street connectivity layouts to provide enhanced connectivity for pedestrians and bicyclists to sites adjacent to or behind the new developments. ▪ **Action 3-1.13:** Work with developers in the beginning phases of project conception to install Class I and Class IV bicycle lanes, wherever feasible. ▪ **Goal 3-2:** Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change. ▪ **Policy 3-2.1:** Ensure that the active transportation network remains in good condition by maintaining facilities, tracking the state of infrastructure, and managing the network in a way that serves all users. ▪ **Action 3-2.2:** Use mapping to identify gaps in the active transportation network, and complete those gaps, except where it may be infeasible due to lack of City right-of way. ▪ **Action 3-2.4:** Improve connections in the active transportation network to ensure that all who choose to walk, roll, or ride have adequate access to public transportation amenities, especially in Equity Priority Areas and Areas of Change. ▪ **Action 3-2.6:** Ensure that major arterials have active transportation infrastructure that accommodates all road users and does not present a barrier to regional travel for any mode. ▪ **Action 3-2.7:** Improve active transportation crossings of major transportation barriers, such as the SMART rail lines, Highway 101, and Highway 12. ▪ **Policy 3-2.2:** Continue to expand and improve the active transportation network toward completing a safe, continuous, convenient, and attractive network of designated routes that connect all neighborhoods and that is equitably accessible for all ages and abilities.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ **Action 3-2.12:** Identify and analyze arterial corridors and improve them by preparing and implementing corridor plans to address all transportation modes, specifically active transportation, focusing on separated or protected facilities for all ages and abilities. ▪ **Action 3-2.13:** Ensure that there are no physical barriers to bicyclists or pedestrians as they cross high traffic roadways at intersections of Class I or Class IV facilities through improvements such as crosswalks and beacon lights. ▪ **Action 3-2.18:** Prioritize addressing active transportation deficiencies in Equity Priority Areas.
Energy and Climate Control Measures	▪ EN 1 – Decarbonize Electricity Production ▪ EN 2 – Renewable Energy Decrease Electricity Demand	The energy and climate (EN) control measures are intended to reduce energy use as a means to reducing adverse air quality emissions. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan 2050. The proposed Chapter 2, *Land Use and Economic Development*, and Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* contain the following goal, policies, and actions that align with the City's goals to reduce energy use: ▪ **Goal 3-7:** Strive to achieve net carbon neutrality no later than 2045. ▪ **Policy 3-7.2:** Reduce energy use and increase energy efficiency in existing and new residential, commercial, industrial, and public structures. ▪ **Action 3-7.11:** Use education and incentives to promote and sustain energy-conserving design and practices. ▪ **Policy 3-7.3:** Increase the use of renewable, carbon-free, and distributed energy resources throughout the city. ▪ **Action 3-7.14:** Participate in State and local efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation. ▪ **Action 3-7.15:** Continue to participate in utility-sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources. ▪ **Action 3-7.16:** Seek and identify resources to assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings. ▪ **Action 3-7.17:** Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		Furthermore, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Therefore, implementation of the proposed project would not conflict with these EN control measures.
Buildings Control Measures	▪ BL 1 – Green Buildings ▪ BL 2 – Decarbonize Buildings ▪ BL 3 – Market-Based Solutions ▪ BL 4 – Urban Heat Island Mitigation	The buildings (BL) control measures focus on working with local governments to facilitate adoption of best GHG emissions control practices and policies. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan 2050. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* contain the following goals, policies, and actions to promote energy efficiency and sustainability: ▪ **Goal 3-7:** Strive to achieve net carbon neutrality no later than 2045. ▪ **Policy 3-7.2:** Reduce energy use and increase energy efficiency in existing and new residential, commercial, industrial, and public structures. ▪ **Action 3-7.5:** Require regular energy audits of existing City-owned and operated structures, identifying levels of existing energy use and potential conservation and efficiency measures. ▪ **Action 3-7.7:** Provide information on the cost-savings potential and other benefits of energy audits and energy-efficient retrofits to encourage their preparation for buildings throughout the city. ▪ **Action 3-7.8:** Guide project applicants toward site planning, solar orientation, cool roofs, and landscaping that decrease summer cooling and winter heating needs. ▪ **Action 3-7.9:** Identify incentives to encourage new buildings to exceed State energy efficiency requirements and/or meet or exceed the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program or equivalent standards. ▪ **Policy 3-7.3:** Reduce the use of fossil fuels as an energy source in new and existing buildings. ▪ **Action 3-7.18:** Encourage the establishment of neighborhood renewable energy microgrids to support resilience. ▪ **Action 3-7.19:** Support State and utility efforts to improve grid resilience and capacity. ▪ **Policy 3-7.4:** Reduce the use of fossil fuels as an energy source in new and existing buildings. ▪ **Action 3-7.21:** Evaluate and adopt changes to the building code or other municipal codes and policies to decarbonize the building stock while also maximizing energy efficiency.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ **Action 3-7.22:** Amend the building or energy code to incentivize building owners to upgrade residential appliances, including water and space heaters, to increase energy efficiency and reduce GHG emissions. ▪ **Action 3-7.23:** Develop new and retrofit existing City facilities to be zero net energy. ▪ **Action 3-7.24:** Continue to update the Building Code, consistent with State law, to increase the use of low-carbon construction materials. ▪ **Policy 3.7-5:** Continue the City's role as a leader in sustainability and climate action. ▪ **Action 3-7.27:** Continue using 100 percent renewable electricity for all City buildings. ▪ **Goal 5-6:** Ensure Santa Rosa is a resilient city able to adapt to, recover from, and thrive under changing climate conditions. ▪ **Policy 5-6.4:** Encourage collaboration among City departments and with nonprofit organizations to create a network of equitably located resilience centers throughout the city. ▪ **Action 5-6.10:** Seek funding to upgrade existing warming and cooling centers to offer refuge from extreme heat events and poor air quality due to regional wildfire smoke and be equipped with renewable energy generation and backup power supplies. ▪ **Action 5-6.11:** Continue to provide backup power and emergency supplies at critical City facilities, emergency shelters, community resilience centers, and cooling centers in case of power and water outages. Transition to carbon-free backup power sources as available and appropriate. In addition, as stated, potential development over the buildout horizon of the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Thus, the proposed project would not conflict with these BL control measures.
Agriculture Control Measures	▪ AG 1 – Agricultural Guidance and Leadership ▪ AG 2 – Dairy Digesters ▪ AG 3 – Enteric Fermentation ▪ AG 4 – Livestock Waste	Agricultural practices in the Bay Area account for a small portion, roughly 1.5 percent, of the Bay Area GHG emissions inventory. The GHGs from agriculture include methane and nitrous oxide, in addition to carbon dioxide. While the Agriculture (AG) control measures target larger scale farming practices that are not included in the proposed project, the potential development under the proposed project does not constitute any sites that currently host commercial agricultural operations. Therefore, implementation of the proposed project would not conflict with these AG control measures.
Natural and Working Lands Control Measures	▪ NW 1 – Carbon Sequestration in Rangelands ▪ NW 2 – Urban Tree Planting ▪ NW 3 – Carbon Sequestration in Wetlands	The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		2050. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* contain the following goals, policies, and actions to promote carbon sequestration: ▪ Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land. ▪ Policy 3-5.1: Maximize the benefits of open space, including by supporting passive recreation and conservation. ▪ Action 3-5.1: Give priority to multi-benefit recreational projects that maximize pollution reduction and adaptation, carbon sequestration, heat-island reduction, stormwater capture that increases infiltration, habitat protection and biodiversity, and/or community health improvements. ▪ Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development. ▪ Action 3-4.5: Explore options that help to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special- status species, such as: ▪ Avoidance of sensitive habitat. ▪ Clustered development. ▪ Transfer of development rights. ▪ Compensatory mitigation, such as restoration or creation. ▪ Action 3-5.6: Protect high-quality wetlands and vernal pools from development and other activities. ▪ Action 3-5.8: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration). ▪ *Action 3-5.10: Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species ▪ Policy 3-5.4: Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including, but not limited to, aquatic or terrestrial vegetated open space, systems that provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ *Action 3-5.11: Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat. ▪ Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits. ▪ Policy 3-6.8: Capture and sequester more carbon in soils and plants citywide. ▪ Action 3-6.21: Conduct a carbon sequestration feasibility study of City-owned open space, parks, agricultural lands, and conservation lands, and implement the recommendations as feasible. ▪ Action 3-6.22: Conduct carbon sequestration farming pilot projects and research as part of ongoing ecological restoration of degraded habitats. ▪ Action 3-6.23: Work with the County to support the implementation of forest management practices that protect existing carbon stocks by reducing the risk of catastrophic wildfire. At the same time, support activities such as mulching in place, prescribed fire, conservation burns, and off-site uses, including compost and mulch production. ▪ Action 3-6.24: Work with regional partners on strategic land protection and stewardship actions that increase carbon sequestration, minimize conversion to land uses that have a lower capacity to sequester carbon, and preserve contiguous open space areas to better protect ecosystems that are under pressure from a changing climate, allowing greater mobility of species. ▪ Action 3-6.27: Coordinate with the County and private landowners to support local agricultural producers to plan, implement, and scale natural carbon sequestration. ▪ Action 3-6.29: Amend the composting ordinance to advance compost infrastructure and support soil carbon sequestration activities. ▪ Goal 5-6: Ensure Santa Rosa is a resilient city able to adapt to, recover from, and thrive under changing climate conditions. ▪ Policy 5-6.5: Support the preservation and restoration of natural landscapes to reduce the heat island effect, improve air quality, and improve community health. ▪ Action 5-6.15: Increase the city's urban tree canopy, starting with Equity Priority Areas, and expand urban greening throughout the city to reduce the heat Island effect.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ **Action 5-6.16:** Seek resources to conduct a community-wide tree canopy assessment to quantify how much of the City's land area is covered by trees, including streets with street tree canopy cover; identify the location of those trees; and identify opportunities to plant trees. ▪ **Action 5-6.18:** Work with the Water Team and Master Gardeners to refine guidelines on specific tree species and management procedures that integrate carbon sequestration, ecosystems services, and biodiversity. ▪ **Action 5-6.23:** Seek resources to create and regularly update an Urban Greening Plan to increase the urban tree canopy, open spaces, and green roofs to reduce the heat island effect, giving priority to areas of the city with vulnerable populations. ▪ **Action 5-6.24:** Explore incentives for shading features, such as large eaves and cantilevers on south- and west-facing walls to reduce air conditioning requirements and heat island effects that contribute to the entire community's reduced quality of life, but especially those living in high-density, low-income neighborhoods.
Water Control Measures	▪ WR 1 – Limit GHGs from publicly owned treatment works (POTWs) ▪ WR 2 – Support Water Conservation	The 2017 Clean Air Plan includes measures to reduce water use. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan 2050. Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* contains the following goal, policies, and actions to increase plumbing water efficiency and reduce landscape water use: ▪ **Goal 5-9:** Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste. ▪ **Policy 5-9.1:** Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents. ▪ **Action 5-8.3:** Maintain water, wastewater, and recycled water system integrity and capacity by continuing to prioritize maintenance and preserve funding for maintenance, rehabilitation, and replacement of existing infrastructure. ▪ **Action 5-8.4:** Evaluate cost and other implications of new initiatives to avoid impacting funding and resources needed for proper management of existing infrastructure. ▪ **Action 5-8.5:** Ensure that new programs and infrastructure do not impact funding of existing infrastructure maintenance, rehabilitation, and replacement. ▪ **Policy 5-9.2:** Maintain water quality and encourage Santa Rosa Water customers to save water.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ **Action 5-9.13:** Require new development projects to provide water-efficient landscaping in accordance with the City's Water Efficient Landscape Ordinance. ▪ **Action 5-9.14:** Continue to comply with statewide regulations for long- term urban water use efficiency. ▪ **Action 5-9.15:** Promote water efficiency through public education, incentives, rebates, technical assistance, customer programs, and information about indoor and outdoor water use efficiency measures. ▪ **Action 5-9.16:** Provide information and explore incentive opportunities to encourage property owners to install catchment, graywater systems, and other water recycling systems; remove paving; and install low-impact development features, such as permeable pavers, bioswales, and other green infrastructure components.
Super-GHG Control Measures	▪ SL 1 – Short-Lived Climate Pollutants ▪ SL 2 – Guidance for Local Planners ▪ SL 3 – GHG Monitoring and Emissions Measurements Network	Super-GHGs include methane, black carbon, and fluorinated gases. The compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan. Through ongoing implementation of the City's GHG Reduction Strategy, the City will continue to reduce local GHG emissions and meet State, regional, and local reduction targets, which would ensure implementation of the proposed project would not conflict with these SL control measures. Potential future development over the buildout horizon of the proposed project would be reviewed based on the goals, policies, and actions of the proposed General Plan 2050. Chapter 2, *Land Use and Economic Development*, and Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* contains the following goals, policies, and actions for encouraging use of renewable energy: ▪ **Goal 2-3:** Create dense and varied housing types near transit to reduce greenhouse gas emissions and promote livability. ▪ **Goal 3-7:** Strive to achieve net carbon neutrality no later than 2045. ▪ **Policy 3-7.1:** Significantly reduce community- wide and municipal GHG emissions, achieving at least an 85 percent reduction of GHG emissions from community sources below 1990 levels by no later than 2045 with a commitment to accelerate reductions, as feasible, in support of the City's and State's carbon neutrality goals. ▪ **Action 3-7.2:** Implement the actions in the GHG Reduction Strategy to achieve the City's GHG reduction goals. ▪ **Action 3-7.3**: Continue regular inventories of community-wide and municipal GHG emissions, at least every five years, consistent with the GHG Reduction Strategy and this General Plan.

TABLE 4.3-8 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		▪ **Action 3-7.4:** Provide public information to educate residents and businesses on the GHG Reduction Strategy and to support individual changes in energy and water use, transportation mode choices, material use, and waste reduction. ▪ **Policy 3.7-5:** Continue the City's role as a leader in sustainability and climate action. ▪ **Action 3-7.25:** Continue to enhance the City's ability to optimize energy use, minimize energy costs, prepare for emergencies, and power provider outages, protect public health, sustain natural resources, and reduce municipal GHG emissions ▪ **Action 3-7.26:** Enhance efforts to reduce GHG emissions in municipal operations after understanding the scope, effectiveness, and resource commitments of existing GHG reduction initiatives. ▪ **Action 3-7.28:** Integrate GHG emissions reduction and climate resilience into all municipal projects, policies, and procedures as applicable.
Further Study Control Measures	▪ FSM SS 1 – Internal Combustion Engines ▪ FSM SS 2 – Boilers, Steam Generator and Process Heaters ▪ FSM SS 3 – GHG Reductions from Non Cap-and Trade Sources ▪ FSM SS 4 – Methane Exemptions from Wastewater Regulation ▪ FSM SS 5 – Controlling start-up, shutdown, maintenance, and malfunction (SSMM) Emissions ▪ FSM SS 6 – Carbon Pollution Fee ▪ FSM SS 7 – Vanishing Oils and Rust Inhibitors ▪ FSM SS 8 – Dryers, Ovens and Kilns ▪ FSM SS 9 – Omnibus Rulemaking to Achieve Continuous Improvement ▪ FSM BL 1 – Space Heating ▪ FSM AG 1 – Wineries	The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the EIR Study Area would be required to comply with these additional further study control measures in the 2017 Clean Air Plan.

Source: Bay Area Air Quality Management District, April 19, 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed July 21, 2023.

As shown in Table 4.3-8, the proposed project would not conflict with the 2017 Clean Air Plan and would not hinder BAAQMD from implementing the control measures in the 2017 Clean Air Plan. Accordingly, this impact would be *less than significant*.

Regional Growth Projections for VMT and Population

As previously discussed, one of the criteria for determining consistent with the current AQMP is comparing the proposed project's VMT growth with its population growth over the same planning horizon. Consistency with BAAQMD's AQMP requires that the VMT increase by less than or equal to the projected population increase from the proposed project (e.g., generate the same or less VMT per population). However, because the proposed project accommodates both residential and nonresidential growth, a better indicator of how efficiently the city is growing can be made by comparing the increase in VMT to the increase in service population (e.g., generate the same or less VMT per service population). This approach is similar to the efficiency metrics for GHG emissions, which consider the total service population when calculating project efficiency.

VMT for the proposed project was evaluated to estimate the weekday citywide VMT generation for the proposed project in the Baseline Year (2019) No Project and Cumulative Year (2050) with Project scenarios (see Chapter 4.15, *Transportation*, of this Draft EIR for a more detailed VMT discussion). Table 4.3-9, *Comparison of the Change in Population and Daily VMT in the EIR Study Area*, displays the Baseline Year (2019) No Project and Cumulative Year (2050) with Project estimates.

TABLE 4.3-9 COMPARISON OF THE CHANGE IN POPULATION AND DAILY VMT IN THE EIR STUDY AREA

Category	Base Year (2019)	Cumulative Year (2050)	Change from Existing	
			Change	Percent
Service Population [a]	275,569	355,425	79,856	29%
Daily VMT [b]	2,229,977	2,745,678	515,701	23%
VMT/Service Population [c]	8.1	7.7	-0.4	-5%

Notes:
a. Service Population accounts for total population and jobs. See Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR.
b. W-Trans, 2023. VMT modeled by W-Trans is conservative because it assumed slightly higher population and employees. VMT identified in this table is consistent with the accounting recommendations of CARB's RTAC created under SB 375 (see Methodology above) and is not the same as accounting for VMT under SB 74.
c. Daily per Capita VMT estimates are identified by dividing the Daily VMT estimates by the City Population for the corresponding year. It should be noted that the Daily per capita VMT estimates above do not necessarily reflect VMT by each resident as the total Daily VMT estimates include nonresidential VMT.
Source: W-Trans, 2023; PlaceWorks, 2023.

VMT estimates based on data provided by W-Trans were calculated for the EIR Study Area. As shown in Table 4.3-9, implementation of the proposed project would result in an increase for daily VMT by 515,701 vehicle miles per day[45] in the EIR Study Area (about 23 percent increase) but lead to a lower VMT per service population than existing conditions (approximately 5 percent decrease). Thus, the proposed project would be consistent with the goals of the 2017 *Clean Air Plan* and this impact would be *less than significant*.

[45] VMT identified in this table is consistent with the accounting recommendations of CARB's RTAC created under SB 375 (see Methodology above) and is not the same as accounting for VMT under SB 743.

Environmental Justice

BAAQMD's CEQA Air Quality Guidelines also require an analysis of consistency of the proposed project with applicable Community Emission Reduction Plans and local environmental justice policies. Environmentally overburdened, underserved, and economically distressed communities may be subject to a higher risk of pollutant-related health effects than the general population because they may be exposed to higher pollutant concentrations; they may experience a larger health impact at a given pollutant concentration; or they may be adversely affected by lower pollutant concentrations than the general population. The most critical air pollutant affecting health in the SFBAAB is $PM_{2.5}$, which includes DPM. The burden of breathing unhealthy air is often disproportionately borne by low-income communities and communities of color, many of which are situated closer to busy highways, ports, factories, and other pollution sources.[46]

Chapter 6, *Health, Equity, Environmental Justice, and Parks*, of the proposed General Plan 2050 integrates goals, policies, and actions to lessen the environmental burden on disadvantaged populations. The process to develop environmental justice policy guidance involved extensive discussions and many meetings with community members and other stakeholders who live in, work in, or engage with communities that are most impacted by environmental justice issues to ensure the plan directly responds to the specific needs of EPAs. Furthermore, the City has launched work with an equity and organizational development consulting team (Seed Collaborative) that will collaborate directly with City staff to develop a comprehensive work plan to establish a lasting culture of equity and belonging.[47]

The proposed General Plan 2050 Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, and Chapter 6, *Health, Equity, Environmental Justice, and Parks*, include broad policy guidance for environmental justice that require local planning and development decisions to help address vulnerabilities in EPAs. In addition to the proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, the following proposed goals, policies, and actions would serve to reduce and/or avoid environmental effects on vulnerable populations:

- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.1: Ensure that the active transportation network remains in good condition by maintaining facilities, tracking the state of infrastructure, and managing the network in a way that serves all users.
    - Action 3-2.4: Improve connections in the active transportation network to ensure that all who choose to walk, roll, or ride have adequate access to public transportation amenities, especially in Equity Priority Areas and Areas of Change.

[46] Bay Area Air Quality Management District, 2022, *Best Practices for Centering Environmental Justice, Health, and Equity*, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-2-environmental-justicefinal-pdf.pdf?la=en, accessed June 1, 2023.

[47] City of Santa Rosa, Equity SR, https://www.srcity.org/3610/Equity-SR, accessed July 27, 2023.

- Policy 3-2.2: Continue to expand and improve the active transportation network toward completing a safe, continuous, convenient, and attractive network of designated routes that connect all neighborhoods and that is equitably accessible for all ages and abilities.
    - Action 3-2.18: Prioritize addressing active transportation deficiencies in Equity Priority Area.
- Goal 3-3: Transition away from single-occupancy vehicles.
    - Policy 3-3.6: Ensure that the transit system serves all members of the community equitably, especially in Equity Priority Areas.
- Goal 4-1: Preserve and enhance Santa Rosa's community character through attractive urban and environmental design and intentional development.
    - Policy 4-1.5: Create public/civic spaces at the neighborhood, city, and regional scale to serve residents of all areas of the city, and particularly Equity Priority Areas where these spaces provide vital resources for vulnerable populations.
- Goal 6-1: Improve health and well-being for all community members by emphasizing community health in all City policies, programs, actions, and activities.
    - Policy 6-1.1: Promote efforts to improve community health outcomes and ensure that City investments support community health goals.
        - Action 6-1.9: Provide training for City staff and officials about how the built environment and transportation choices affect health equity, economic opportunity, well-being, and quality of life.
        - Action 6-1.10: Create healthy development guidelines or checklists to track and monitor how new developments are incorporating health-promoting features such as opportunities for physical activity, healthy food, drinking water, urban farming, affordable housing, and sustainable design.
- Goal 6-2: Advance health equity by understanding and addressing key social determinants of health.
    - Policy 6-2.1: Promote awareness of the role of social determinants of health and health inequities, and ensure that City policies, services, and programs can improve the lives and well-being of everyone in the community, especially in Equity Priority Areas and among Equity Priority Populations at a higher risk for health inequities.

The proposed project includes measures to reduce emissions and improve community health within Overburdened Communities consistent with BAAQMD's environmental justice goals. Thus, the proposed project would be consistent with BAAQMD's environmental justice goals, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

AIR-2 Implementation of the proposed project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.

The proposed General Plan 2050 guides growth within the EIR Study Area by designating land uses and implementing goals, policies, and actions. New development would increase air pollutant emissions in the EIR Study Area and contribute to the overall emissions inventory in the SFBAAB. A discussion of health effects associated with air pollutant emissions generated by operational activities is included in Section 4.3.1.2, *Air Pollutants of Concern*.

Construction

The proposed project would not directly result in construction of any development or infrastructure; however, future development under the proposed project would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Short-term criteria pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with individual development projects. ROG and NO_X emissions are primarily associated with gasoline and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical construction equipment associated with development and redevelopment projects includes dozers, graders, excavators, loaders, and trucks.

Although the exact coverage, location, or duration of future construction projects is unknown at the time of preparation of this program-level EIR, future development activities would generally entail demolition, site preparation, grading, building construction, paving, and painting. As discussed in Chapter 3, *Project Description,* of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would be concentrated in the form of infill/intensification on sites either already developed and/or underutilized and/or in close proximity to existing development. Accordingly, many new projects in the EIR Study Area will likely require the demolition of existing structures to make room for newer ones. Fugitive dust emissions would typically be greatest during building demolition, site preparation, and grading activities due to the disturbance of soils and transport of material. NO_X emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty vehicles and equipment (e.g., backhoes, bulldozers, excavators). The types and quantities of equipment as well as duration of construction activities would be dependent on project-specific conditions. Larger developments would require more equipment over a longer time frame than that required for redevelopment of a single, residential home.

BAAQMD does not recommend plan-level thresholds of significance for construction emissions; however, BAAQMD does maintain and recommend project-level thresholds of significance for construction emissions that future development projects facilitated by the proposed project would be subject to. In addition, BAAQMD's CEQA Air Quality Guidelines identify and recommend a series of "Basic" measures to

control and reduce construction-related fugitive dust emissions. For all project, BAAQMD recommends implementation of Basic Construction Measures to reduce construction fugitive dust and determines a project's fugitive dust impacts during construction to be less than significant if the Basic Construction Measures are incorporated into project construction. BAAQMD Basic Control Measures for fugitive dust control[48] include:

- Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas, and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply nontoxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit vehicle traffic speeds on unpaved roads to 15 miles per hour.
- Replant vegetation in disturbed areas as quickly as possible.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 includes goals, policies, and actions that require local planning and development decisions to consider impacts from emissions and to reduce those emissions. The following goal, policy, and actions would ensure compliance with BAAQMD requirements:

- Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits.
  - Policy 3-6.9: Achieve and maintain ambient air quality standards.
    - *Action 3-6.31: Require projects that exceed the Bay Area Air Quality Management District (BAAQMD) screening sizes to evaluate project-specific operation and construction emissions in conformance with the BAAQMD methodology and if operation or construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, require the project applicant to mitigate the impacts to an acceptable level.

[48] BAAQMD's current CEQA Guidelines can be found on their website: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa

- *Action 3-6.32: Continue to implement the Bay Area Air Quality Management District (BAAQMD) Basic Control Measures included in the latest version of BAAQMD's CEQA Air Quality Guidelines to control fugitive dust (i.e., particulate matter $PM_{2.5}$ and PM_{10}) during demolition, ground-disturbing activities, and/or construction.

As the SFBAAB is currently designated a nonattainment area for PM (fugitive dust emissions (PM_{10} and $PM_{2.5}$), mitigation would be required to ensure that individual development projects facilitated by the proposed project would minimize construction fugitive dust impacts. Therefore, construction-related regional air quality impacts associated with implementation of the proposed project are considered potentially *significant.*

Impact AIR-2a: Construction activities that could occur over the buildout horizon of the proposed General Plan 2050 could potentially violate an air quality standard or cumulatively contribute to an existing or projected air quality violation.

Significance with Mitigation. Less than significant. Because the Bay Area Air Quality Management District (BAAQMD) considers all impacts related to fugitive dust emissions ($PM_{2.5}$ and PM_{10}) from construction from all development in their jurisdiction to be less than significant with implementation of BAAQMD's best management practices (see Table 4.3-7, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*), the ongoing implementation of BAAQMD's requirements by the City pursuant to proposed General Plan 2050 *Action 3-6.31 and *Action 3-6.32 would ensure impacts would be *less than significant*.

Operation

Operational activities associated with potential future development over the buildout horizon of the proposed project could generate a substantial increase in long-term criteria air pollutant emissions from existing conditions that could exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB.

Implementation of the proposed project would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment). Mobile-source criteria air pollutant emissions are based on the traffic analysis conducted by W-Trans for this EIR. The emissions forecast for the EIR Study Area under the proposed project compared to existing conditions (with 2050 emissions rates) is shown in Table 4.3-10, *Proposed Project Criteria Air Pollutant Emissions Forecast (Scenario 1, Comparison to Existing Conditions)*. This is "Scenario 1" as required by BAAQMD and explained under the "BAAQMD Significance Criteria" subheading in Section 4.3.2, *Standards of Significance*.

TABLE 4.3-10 PROPOSED PROJECT CRITERIA AIR POLLUTANT EMISSIONS FORECAST (SCENARIO 1, COMPARISON TO EXISTING CONDITIONS)

	Criteria Air Pollutants (Tons/Year)			
Year	ROG	NO_X	PM_{10}	$PM_{2.5}$
Existing Land Uses – Year 2050				
On-Road Transportation	6	42	19	6
Energy	11	209	16	16
Off-road Equipment	143	173	9	8
Consumer Products	529	–	–	–
Total Existing Land Uses (tons/year)	**689**	**424**	**44**	**29**
Proposed Land Use Plan – Year 2050 Total Buildout				
On-Road Transportation	7	52	23	7
Energy	12	230	17	17
Off-road Equipment	178	181	10	8
Consumer Products	745	–	–	–
Proposed Land Uses Total (tons/year)	**942**	**463**	**50**	**32**
Change in Emissions from Existing Land Uses (Year 2050)				
On-Road Transportation	1	10	4	1
Energy	1	21	2	2
Off-road Equipment	35	8	<1	<1
Consumer Products	216	–	–	–
Net Change from Existing Land Uses (Year 2050)	**253**	**39**	**6**	**3**
BAAQMD Threshold (Tons/Year)	0	0	0	0
Exceeds BAAQMD Threshold?	**Yes**	**Yes**	**Yes**	**Yes**

Note: Numbers may not sum due to rounding.
Source: PlaceWorks, 2023. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.3-11, *Net Change in Regional Criteria Air Pollutant Emissions Forecast (Scenario 2, Comparison to Future No Project Conditions)*, compared to existing baseline year conditions, emissions of NO_X are projected to decrease from current levels despite growth associated with the proposed project. However, operational (long-term) emissions associated with the future no project conditions would also remain above the BAAQMD significance thresholds.

TABLE 4.3-11 NET CHANGE IN REGIONAL CRITERIA AIR POLLUTANT EMISSIONS FORECAST (SCENARIO 2, COMPARISON TO FUTURE NO PROJECT CONDITIONS)

	Criteria Air Pollutants (Tons/Year)			
Year	ROG	NO_X	PM_{10}	$PM_{2.5}$
Existing Land Uses – Existing Baseline				
On-Road Transportation	46	376	22	7
Energy	11	209	16	16
Off-road Equipment	143	173	9	8
Consumer Products	529	–	–	–
Existing Baseline Land Uses Total	**729**	**758**	**47**	**30**
Proposed Land Use Plan – Year 2050 Total Buildout				
On-Road Transportation	7	52	23	7
Energy	12	230	17	17
Off-road Equipment	178	181	10	8
Consumer Products	745	–	–	–
Proposed Land Uses Total	**942**	**463**	**50**	**32**
Change in Emissions from Existing Baseline				
On-Road Transportation	-39	-324	1	<1
Energy	1	21	2	2
Off-road Equipment	35	8	<1	<1
Consumer Products	216	–	–	–
Net Change from Existing Baseline	**213**	**-295**	**3**	**2**
BAAQMD Threshold (Tons/Year)	0	0	0	0
Exceeds BAAQMD Threshold?	**Yes**	No	**Yes**	**Yes**

Note: Numbers may not add up due to rounding.
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

Compliance with applicable policies and programs would contribute to minimizing long-term emissions. However, implementation of the proposed project would still exceed the BAAQMD significance threshold for operation. Therefore, implementation of the proposed project could result in *significant* long-term regional air quality impacts.

Consistency with AQMP Control Measures

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that one method used for determining plan-level impact significance is to analyze the proposed plan's consistency with the current AQMP control measures. As discussed in Table 4.3-8, the proposed project would be consistent with the applicable 2017 Clean Air Plan control measures. As such, the proposed project would be consistent with the current AQMP control measures, and this impact would be *less than significant*.

Proposed Plan VMT and Population Growth

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that the second method for determining plan-level impact significance is to analyze the proposed plan's projected VMT growth versus its projected population growth from existing conditions through its planning horizon year (2050). A significant impact could occur if a proposed plan's projected VMT growth outpaces its projected population growth resulting in a cumulatively considerable net increase in criteria pollutants.

As discussed under impact discussion AIR-1, the daily VMT per service population would decrease from the city's current levels. However, there would be an increase in the total magnitude at buildout. The reduction in citywide VMT per service population below existing levels is a positive indicator that the land use and circulation changes associated with the proposed project will, overall, reduce the amount of VMT generated by each person living or working in Santa Rosa. Therefore, the forecasted VMT growth would not outpace the forecasted population growth facilitated by the proposed project. As such, this impact would be *less than significant*.

While growth within the EIR Study Area would cumulatively contribute to operational (long-term) regional criteria air pollutant emissions, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 includes goals, policies, and actions that require local planning and development decisions to consider impacts from emissions and to reduce those emissions. In addition to the proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, the following goals, policies, and actions would serve to minimize potential adverse impacts related associated with buildout of the proposed project:

- Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.
  - Policy 3-1.1: Work with partner agencies to reduce VMT using existing techniques and explore feasibility of new techniques as they arise.
    - Action 3-1.3: Continue to participate in discussions addressing regional through-traffic with SCTA, the County of Sonoma, MTC, and other municipalities, prioritizing investments that will reduce VMT and GHG emissions.
  - Policy 3-1.2: Promote a citywide mode shift away from single-occupancy vehicles to support ambitious VMT and GHG reduction goals.
    - Action 3-1.5: Develop a process that invests in and prioritizes non-automobile modes of transportation in capital improvement projects to reduce VMT and GHGs, prioritizing, in order:
      1. Active transportation modes, including walking, bicycling, and rolling.
      2. Public transportation, including inter-city and regional systems.
      3. Other shared vehicles such as carpool, vanpool, and rideshare/transportation network companies.

- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.5: Address traffic volumes and speeds in neighborhoods to reduce cut-through traffic and promote use of existing low-stress streets for active transportation travel.
    - Action 3-2.33: Construct or require roundabouts in lieu of stop/signal-controlled intersections, where appropriate, to improve safety, reduce delay and idling time, and lower vehicle emissions.
- Goal 3-3: Transition away from single-occupancy vehicles.
  - Policy 3-3.1: Continue to offer and improve TDM programs that incentivize a shift away from single-occupancy vehicles.
    - Action 3-3.1: Work with local employers and existing residential and commercial development to expand TDM and related efforts to help meet employee transportation needs through modes that reduce VMT from single-occupancy automobile trips less than five miles, such as:
      - Unlimited free access to transit service (CityBus, Sonoma County Transit, and SMART).
      - Funding for increased transit frequency.
      - Paid incentives to active transportation and micromobility users, including a transportation allowance and secure on-site bicycle parking, lockers, showers and other facilities that support bicycling commuting to and from work.
      - Programs and incentives to expand carpooling, vanpooling, and car sharing.
      - Staggered work shifts, flex time (e.g., 9/80 work schedule), and telecommuting.
      - Paid-parking disincentives for single-occupant vehicles and/or parking cash-out incentives.
    - Action 3-3.2: Implement a TDM program for City employees—potentially in partnership with other local governments, public agencies, and transit providers—and promote the program as a model for larger local employers.
  - Policy 3-3.3: Encourage transit ridership to reduce GHG emissions and provide convenient and efficient public transportation to workplaces, shopping, and other destinations.
    - Action 3-3.12: Continue to require transit-supportive TDM measures for new development, including CityBus/Sonoma County Transit/SMART pass products.
- Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits.
  - Policy 3-6.9: Achieve and maintain ambient air quality standards.
    - Action 3-6.33: Require all new development to be electric vehicle charging ready at a minimum. Explore opportunities to amend the City's municipal codes to require new development to install electric vehicle charging infrastructure beyond the minimum State requirements.
    - Action 3-6.35: Review and amend the City's Building Code and Zoning Code to facilitate the installation of electric vehicle charging infrastructure.

- Action 3-6.37: Expand installation and operation of electric vehicle charging stations on City properties, including curbside in areas of the community where other options are limited.
- Action 3-6.38: Budget for clean fuel and zero-emission vehicles in the City's long-range capital expenditure plans to transition the existing fleet of gasoline- and diesel- powered vehicles, and work to make the City's fleet among the cleanest in the North Bay by:
  - Purchasing zero-emission vehicles whenever possible that meet or exceed requirements under the California Advanced Clean Fleets Regulation. If zero- emission vehicles are not available, purchase plug-in hybrids, or other vehicle types to minimize emissions.
  - Using biodiesel and pollution- reducing fuel additives in the City's diesel fuel vehicles.
- Action 3-6.39: Continue to implement the City's Wood Burning Appliance Ordinance to reduce particulate matter emissions from wood-burning appliances.

While BAAQMD rules and the proposed General Plan 2050 goals, policies, and actions identified above may reduce operation-related regional air quality impacts of individual projects accommodated under the proposed project to a less-than-significant level, due to the magnitude of development allowed, the projected cumulative emissions associated with future development projects would exceed the threshold. Therefore, implementation of the proposed project would significantly contribute to the nonattainment designations of the SFBAAB, resulting in a *significant* impact.

Impact AIR-2b: Buildout of the proposed project could generate operational emissions that could exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$ and PM_{10}).

Significance with Mitigation: Significant and unavoidable. Buildout in accordance with the proposed project would generate long-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin (SFBAAB). The proposed General Plan 2050 goals, policies, and actions would reduce air pollutant emissions to the extent practicable. Additionally, the proposed General Plan 2050 goals, policies, and actions covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the EIR Study Area. Specifically, proposed *Action 3-6.31 requires potential future development in Santa Rosa that exceeds the BAAQMD screening sizes to evaluate project-specific operation emissions in conformance with the BAAQMD methodology. Where the technical assessment determines the BAAQMD-adopted thresholds are exceeded, the applicants for new development projects would be required to incorporate mitigation measures to reduce air pollutant emissions during operational activities. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- Implementing commute trip reduction programs.
- Unbundling residential parking costs from property costs.
- Expanding bikeway networks.
- Expanding transit network coverage or hours.
- Using cleaner-fueled vehicles.
- Exceeding the current Title 24 Building Envelope Energy Efficiency Standards.

- Establishing on-site renewable energy generation systems.
- Implementing all-electric buildings.
- Replacing gas-powered landscaping equipment with zero-emission alternatives.
- Implementing organics diversion programs.
- Expanding urban tree planting.

This EIR quantifies the increase in criteria air pollutants emissions in the EIR Study Area. However, at the programmatic level, it is not feasible to quantify the increase in toxic air contaminants (TAC) from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above BAAQMD's significance thresholds correlate with basin wide health impacts.

To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper prepared by the Association of Environmental Professionals' Climate Change Committee, *We Can Model Regional Emissions, But Are the Results Meaningful for CEQA,* describes several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the Friant Ranch case describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan. The white paper and amicus briefs are provided in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

To achieve and maintain air quality standards, BAAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The numerical emission indicators are based on the recognition that the air basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards (AAQS) have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing the plan's emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels.

BAAQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BAAQMD has not provided methodology to assess the specific correlation between mass emissions generated and their effect on health (note Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR provides the San Joaquin Valley Air

Pollution Control District's amicus brief, and South Coast Air Quality Management District's amicus brief).

Ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of particulate matter and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region.

The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a general plan level because the location of emissions sources and quantity of emissions are not known. However, because cumulative development within the EIR Study Area would exceed the regional significance thresholds, this EIR finds that the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SFBAAB.

In summary, as described above, implementation of the proposed project would generate emissions that would exceed BAAQMD's regional significance thresholds (no net increase). The proposed General Plan 2050 includes goals, policies, and actions to reduce these long-term regional criteria air pollutant emissions. However, due to the programmatic nature of the proposed project, no additional mitigating measures are available, and the impact is considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent individual projects that meet applicable project-level thresholds of significance.

AIR-3 Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations.

Implementation of the proposed project would cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Community Risk and Hazards

Future construction over the buildout horizon of the proposed project would temporarily elevate concentrations of TACs and DPM in the vicinity of sensitive land uses during construction activities. Since the details regarding future construction activities are not known at this time due to this analysis being conducted at a program level—including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment—construction emissions are evaluated qualitatively in accordance with BAAQMD's plan-level guidance. Subsequent environmental review of future development projects would be required to assess potential impacts under BAAQMD's project-level thresholds. However, construction emissions associated with the proposed project could exceed BAAQMD's project level and cumulative significance thresholds for community risk and hazards. As recommended by CARB, applicants for construction within 1,000 feet of residential and other sensitive land uses (e.g., hospitals, nursing homes, and day care centers), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, are required to prepare construction HRAs in accordance with policies and procedures of the OEHHA and BAAQMD to identify and mitigate health risk impacts from construction. The latest OEHHA guidelines are required to be applied for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the construction HRA shows that the incremental cancer risk exceeds the respective threshold established by BAAQMD—project-level risk of 10 in a million in all other areas, $PM_{2.5}$ emissions that exceed 0.3 $\mu g/m^3$, or the appropriate noncancer hazard index exceeds 1.0—the applicant would be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks below the respective threshold, including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:

- Use of construction equipment rated as United States Environmental Protection Agency Tier 4 Interim or higher for equipment of 50 horsepower or more.
- Use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.

However, construction emissions associated with the proposed General Plan 2050 could exceed BAAQMD's project level and cumulative significance thresholds for community risk and hazards. Therefore, construction-related health risk impacts associated with the proposed General Plan 2050 are considered potentially *significant*.

Impact AIR-3a: Construction activities associated with potential future development could expose nearby receptors to substantial concentrations of toxic air contaminants.

Significance with Mitigation. Less than significant. The same proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, would serve to protect sensitive receptors from poor air quality in the EIR Study Area. Specifically, proposed *Action 6-1.5 would require projects that result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants to prepare a construction health risk assessment that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the Bay Area Air Quality Management District threshold. Therefore, with implementation of the proposed General Plan 2050 goals, policies, and actions, construction-related health risk impacts associated with the proposed project are considered *less than significant*.

Operation

Implementation of the proposed project could result in individual development projects that cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. Types of land uses that typically generate substantial quantities of TACs and $PM_{2.5}$ include industrial and manufacturing (stationary sources) and warehousing land uses that have the potential to generate DPM from onsite equipment and mobile sources (trucks). While these types of land uses are not prevalent in the EIR Study Area, nor are they anticipated to be introduced as part of the planned land uses envisioned in the proposed General Plan 2050, commercial and retail uses that generate small- and medium-sized truck trips for deliveries could similarly generate localized substantial concentrations of TACs and $PM_{2.5}$. Additionally, operation of new land uses consistent with the proposed project could generate new sources of criteria air pollutants and TACs in the EIR Study Area associated with CO hotspots. The following describes potential localized operational air quality impacts from implementation of the proposed project.

Operational CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Since CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

An overarching goal of *Plan Bay Area* 2050 is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions. As described under impact discussion GHG-2 in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would be consistent with the overall

goals of *Plan Bay Area* 2050. Additionally, the proposed project would not hinder the capital improvements outlined in *Plan Bay Area* 2050. Thus, the proposed project would not conflict with *Plan Bay Area* 2050.

Pursuant to BAAQMD, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—to generate a significant CO impact.[49] Implementation of the proposed project would not increase traffic volumes at affected intersections to more than BAAQMD screening criteria of 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. The highest intersection volumes in the city are:[50]

- Farmers Lane at Fourth Street-Highway 12: approximately 4,800 vehicles per hour
- Guerneville Road at US Highway 101 South Offramp: approximately 4,400 vehicles per hour
- Highway 12 at Fulton Road-Wright Road: approx. 4,300 vehicles per hour

Moreover, the proposed General Plan 2050 includes land use designations, goals, policies, and actions that will help reduce VMT and therefore reduce emissions from automobiles (see Chapter 4.15, *Transportation*, of this Draft EIR for a complete list of these goals, policies, and actions). Therefore, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the EIR Study Area and vicinity. Overall, these components of the proposed project would contribute to reducing congestion and associated emissions. Localized air quality impacts related to mobile-source emissions would be *less than significant*.

Operational Community Risk and Hazards

Common sources of TAC emissions are stationary sources (e.g., dry cleaners, diesel backup generators, and gasoline stations), which are subject to the BAAQMD permit requirements. Future development and activities under the proposed project could result in new sources of TACs and $PM_{2.5}$. Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Permitted stationary sources and nonpermitted sources are discussed in greater detail below.

[49] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed May 8, 2023.

[50] W-Trans, 2023.

Stationary (Permitted) Sources

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) in the EIR Study Area from implementation of the proposed project would be expected to release TACs. TAC emissions generated by stationary and point sources of emissions within the SFBAAB are regulated and controlled by BAAQMD. Land uses that would require a permit from BAAQMD for emissions of TACs include chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. Emissions of TACs from stationary sources would be controlled by BAAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under Regulation 2, *New Source Review*, as well as Regulation 11, Rule 18, *Reduction of Risk from Air Toxic Emissions at Existing Facilities*.

Review under New Source Review ensures that stationary source emissions (permitted sources) would be reduced or mitigated below the BAAQMD community risk and hazards thresholds. Though these sources would incrementally contribute to emissions in the EIR Study Area individually, they would be mitigated to the BAAQMD standards. Moreover, the proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, would serve to minimize potential adverse impacts on air quality by requiring new development to follow standards to reduce health risks from stationary sources.

Though the proposed General Plan 2050 includes goals, policies, and actions to reduce exposure of sensitive receptors to pollution, and BAAQMD would ensure that emission achieve their permit thresholds on a project-by-project basis, emissions cannot be determined or modeled until specific development projects are proposed. Therefore, implementation of the proposed project may result in projects that emit TACs and $PM_{2.5}$ throughout the EIR Study Area and result in potentially *significant* localized air quality impacts.

Nonpermitted Sources

TACs and $PM_{2.5}$ from mobile sources when operating at a property (e.g., truck idling) are regulated by statewide rules and regulations, not by BAAQMD, and have the potential to generate substantial concentrations of air pollutants. The primary mobile source of TACs within the EIR Study Area includes truck idling and use of off-road equipment.

New warehousing operations present the potential to generate substantial DPM and $PM_{2.5}$ emissions from off-road cargo-handling equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRU) for cold storage. New land uses in the EIR Study Area that would be permitted under the proposed project that use trucks and TRUs could generate an increase in DPM that would contribute to cancer and noncancer health risk in the SFBAAB. Additionally, these types of facilities could also generate particulate matter (PM_{10} and $PM_{2.5}$) that may cause an exceedance or contribute to the continuing exceedance of the National and California AAQS. These new land uses could be near existing sensitive receptors. In addition, trucks would travel on regional transportation routes through the Bay Area, contributing to near-roadway DPM concentrations.

The proposed project would result in an increase of up to 1,415,095 square feet of industrial and warehouse land use. The proposed project could result in specific development projects that could emit localized concentrations of TACs and $PM_{2.5}$. The emissions associated with these facilities cannot be determined or modeled until specific development projects are proposed. Therefore, implementation of the proposed project may result in projects that emit TACs and $PM_{2.5}$ in the vicinity of EPAs and result in potentially *significant* localized air quality impacts without project-specific analysis of operational health risk impacts from nonpermitted sources associated with development of industrial and commercial land uses.

Impact AIR-3b: Large industrial or warehouse development projects under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminants (TAC) and particulate matter ($PM_{2.5}$) concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.

Significance with Mitigation: Significant and unavoidable. Potential future development over the buildout horizon of the proposed project could result in new sources of TACs or $PM_{2.5}$ near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gas stations) in addition to proposed General Plan 2050 goals, policies, and actions would ensure that health risks are minimized. Specifically, the implementation of project-specific operational health risk assessments (HRA) as required by proposed General Plan 2050 *Action 6-1.6 would identify any impacts and mitigation measures to reduce the operational health risks for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes) or an "Overburdened Community," as measured from the property line of the project to the property line of the nearest sensitive use. Operational HRAs would be required to be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and BAAQMD. If the operational HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or $PM_{2.5}$ exceeds the respective threshold as established by BAAQMD and project-level risk of 10 in one million at the time a project is considered, the project applicant would be required to identify "best available control technologies for toxics" and appropriate enforcement mechanisms, and demonstrate that they are capable of reducing potential cancer, noncancer risks, and $PM_{2.5}$ to an acceptable level. Best available control technologies for toxics may include but are not limited to:

- Restricting idling on-site beyond air toxic control measures idling restrictions
- Electrifying warehousing docks
- Requiring use of newer equipment
- Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year
- Truck electric vehicle (EV) capable trailer spaces
- Restricting off-site truck travel through the creation of truck routes

The same proposed General Plan 2050 goals, policies, and actions listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, would serve to protect sensitive receptors from poor air quality in the EIR Study Area. Specifically, proposed Action 6-1.11 would require the City to update the Zoning Code to require health impact assessments for nonresidential and developments of 100,000 square feet or more in Equity Priority Areas (EPA) to identify and address any potential negative health implications of the project. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TAC and $PM_{2.5}$ project-level impacts would be less than significant. However, these projects could contribute to significant cumulative risk in the Bay Area that could affect sensitive populations and EPAs. As a result, the proposed project's contribution to cumulative health risk is considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent individual projects that meet applicable project-level thresholds of significance.

AIR-4 Implementation of the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Construction

While odors could be generated during future construction activities associated with development and activities under the proposed project, the proposed project would not directly result in construction of any development project. Identification of potential impacts to odor receptors resulting from construction-generated odors, such as equipment exhaust, would require project-specific information for future individual land use development projects that is not currently known. Nonetheless, odors are regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with BAAQMD Regulation 1 would ensure that odor impacts associated with the proposed project are minimized. As previously discussed, consistent with BAAQMD's CEQA Air Quality Guidelines, a plan-level analysis must acknowledge odor sources within the EIR Study Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be l*ess than significant*.

Operation

According to BAAQMD's 2022 *CEQA Air Quality Guidelines*, land uses associated with odor complaints typically include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations such as chemical and other manufacturing. While odors do not themselves present a health risk, they are often considered a nuisance by people who live, work, or otherwise are located near outdoor odor sources. Future environmental review could be required for industrial projects listed in BAAQMD's CEQA Guidelines Table 4, *Project Screening Trigger Levels for Potential Odor Sources,* to ensure that sensitive land uses are not exposed to nuisance odors. Consequently, review of projects using BAAQMD's odor screening distances is necessary to ensure that odor impacts are minimized.

Increase in residential uses would not generate odors that would affect a substantial number of people. During operation, residences could generate odors from cooking. However, odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people.

The proposed General Plan 2050 provides guidance for the development, management, and preservation of Santa Rosa's natural, open space, and agricultural lands, including air quality. Specifically, proposed General Plan 2050 Policy 2-1.1, Action 2-1.2, Policy 5-9.6, and Action 5-9.41 listed in Section 4.3.2.3, *Impacts of the Environment on a Project*, would serve to minimize impacts related to potential adverse impacts related to odors. Therefore, compliance with proposed General Plan 2050 goals, policies, and actions, as well applicable BAAQMD rules and regulations, would prevent odor emissions from adversely affecting a substantial number of people in the EIR Study Area.

Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, which requires abatement of any nuisance generating an odor complaint, and BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with BAAQMD Regulations would ensure that odor impacts associated with the proposed project are minimized. This impact would be *less than significant*.

Significance without Mitigation: Less than significant.

AIR-5 Implementation of the proposed project could, in combination with past, present, and reasonably foreseeable projects, result in cumulative air quality impacts in the area.

The cumulative area of analysis is the SFBAAB which is currently designated a nonattainment area for O_3 and particulate matter (PM_{10} and $PM_{2.5}$). As identified in Section 4.3.1*, Environmental Setting*, California is divided into air basins for the purpose of managing the air resources of the state on a regional basis based on meteorological and geographic conditions. Similar to GHG emissions impacts, air quality impacts are regional in nature as no single project generates enough emissions that would cause an air basin to be designated as a nonattainment area. Therefore, the impacts previously discussed are evaluated in the cumulative context and no additional cumulative analysis is needed.

Buildout of the proposed project would generate new sources of TAC near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Implementation of proposed General Plan 2050 goals, policies, and actions would ensure that mobile sources of TACs not covered by BAAQMD permits are considered during subsequent project-level environmental review by the City. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD. However, implementation of the proposed project would generate TACs that could contribute to elevated levels in the SFBAAB. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of cancer risk in the SFBAAB. Therefore, the cumulative contribution to health risk resulting from implementation of the proposed project is *significant*.

Impact AIR-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative air quality impacts with respect to generation of criteria pollutant and exposure of substantial pollutant concentrations to sensitive receptors.

Significance with Mitigation: Significant and unavoidable. Criteria air pollutant emissions generated by land uses within the proposed project could exceed the Bay Area Air Quality Management District's regional thresholds. Air quality impacts identified in Impacts AIR-2a, AIR-2b, AIR-3a, and AIR-3b constitute the proposed project's contribution to cumulative air quality impacts in the San Francisco Bay Area Air Basin. Proposed General Plan 2050 goals, policies, and actions would help reduce project-related emissions to the extent feasible. Specifically, proposed *Action 3-6.31, *Action 3-6.32, *Action 6-1.5, and *Action 6-1.6 would reduce impacts at the project level. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available. Air pollutant emissions associated with the proposed project would result in a cumulatively considerable contribution to air quality impacts and remain *significant and unavoidable* at the program level.

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4.4 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the Draft Environmental Impact Report (EIR) Study Area and evaluates the potential environmental consequences of future development that could occur by adopting and implementing the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by an impact discussion of the proposed project and cumulative impacts.

This chapter is based on a review of available background information for the Santa Rosa vicinity, preparation of detailed mapping of known resources, and an assessment of potential impacts of the proposed project based on anticipated future development. Available background information included: the Santa Rosa General Plan 2035[1] and EIR;[2] the *Santa Rosa Citywide Creek Master Plan*;[3] the occurrence data of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW); the 2005 *Santa Rosa Plain Conservation Strategy* (SRPCS) overseen by the United States Fish and Wildlife Service (USFWS);[4] wetlands mapped as part of the National Wetlands Inventory maintained by the USFWS; and mapping of critical habitat for federally-listed species maintained by the USFWS. No detailed field surveys were conducted as part of this assessment or are considered necessary given the nature of the proposed project as a broad, long-term planning-level document rather than a site-specific development proposal.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, *Wildlife and Fisheries*, Part 17, *Endangered and Threatened Wildlife and Plants*, Section 17.3, *Definitions,* of the Code of Federal Regulations, defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering. Furthermore, Section 17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation

[1] City of Santa Rosa, updated October 2020, *Santa Rosa General Plan 2035*.
[2] Environmental Science Associates, March 2009, *Draft Santa Rosa General Plan 2035 Environmental Impact Report*.
[3] City of Santa Rosa, May 2013, *Santa Rosa Citywide Creek Master Plan*.
[4] Santa Rosa Plain Conservation Strategy Team, December 1, 2005, *Santa Rosa Plain Conservation Strategy (Final)*.

that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 10(a) of the FESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by FESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Preparation of a habitat conservation plan (HCP) is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the FESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance of permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (FESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act (CESA).

Clean Water Act

The United States Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the United States. These waters and their lateral limit include streams that are tributaries to navigable waters and their adjacent wetlands.[5] The lateral limits of jurisdiction for a nontidal stream are measured at the line of the ordinary high-water mark[6] or the limit of adjacent wetlands.[7] Any permanent extension of the limits of an existing water of the U.S., whether natural or human-made, results in a similar extension of USACE jurisdiction.

Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover, such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended

[5] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).
[6] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(e).
[7] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(b).

seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated water bodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the U.S.

Waters and wetlands that cannot trace a continuous hydrologic connection to a navigable water of the U.S. are not tributary to waters of the U.S. These are termed "isolated wetlands." Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.[8] The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or other waters of the U.S. Prior to issuing the permit, the USACE is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species.

All USACE permits require water quality certification under Section 401 of the Clean Water Act. In the Santa Rosa area, this regulatory program is administered by the North Coast Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the U.S. must apply for water quality certification from the North Coast RWQCB. The North Coast RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act. The MBTA prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

State Regulations

California Endangered Species Act

The CDFW has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under CESA.[9] CESA is similar to the FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

[8] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).
[9] California Fish and Game Code Section 2050 *et seq.*

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of the CEQA Guidelines, a species not included on any formal list "shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria" for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a "de facto" rare or endangered species.

California Fish and Game Code

The CDFW is responsible for enforcing the California Fish and Game Code (CFGC), which contains several protections from "take" for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the CFGC. The CFGC stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

The CFGC also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully protected species are listed in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish), while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42, respectively.

Several provisions in the CFGC provide for the protection of birds and bird nests in active use. Unless the CFGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian.
- Take, possess, or needlessly destroy the nest or eggs of any bird.
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird.
- Take or possess any of the thirteen fully protected bird species listed in CFGC Section 3511.
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the Department of the Interior under the MBTA.
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW.

Non-native species, including European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columba livia*), are not afforded any protection under the MBTA or CFGC.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act,[10] the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the USACE. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, "take" of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a non-governmental conservation organization that has developed a list of plants of special concern in California. The following explains the designations for each plant species:[11]

- **Rank 1A.** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B.** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A.** Plants presumed extirpated in California, but common elsewhere
- **Rank 2B.** Plants rare, threatened, or endangered in California, but more common elsewhere
- **Rank 3.** Plants about which more information is needed; a review list
- **Rank 4.** Plants of limited distribution; a watch list

California Natural Communities

Sensitive natural communities are natural community types considered to be rare or of a "high inventory priority" by the CDFW. Although sensitive natural communities have no legal protective status under FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the CEQA Guidelines identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this

[10] California Water Code Sections 13000 through 14920.

[11] California Native Plant Society, 2020, CNPS Rare Plant Ranks, https://www.cnps.org/rare-plants/cnps-rare-plant-ranks, accessed November 25, 2020.

criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project's impact on any particular sensitive natural community will depend on that natural community's relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type.

Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act[12] of 2001 acknowledges the importance of private land stewardship to the conservation of the state's valued oak woodlands. This act established the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state's working landscapes by providing education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to biological resources in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to biological resources are in Title 17, *Environmental Protection*, and Title 20, *Zoning*, as follows:

- Chapter 17-24, *Trees*. Santa Rosa adopted a Tree Ordinance in 1990 to ensure proper tree removal and preservation. Article 2, *Definitions*, requires a permit to remove or alter "heritage trees", "protected trees," and "street trees" in all zoning districts. Each of these are defined in the Tree Ordinance as follows:
  - Heritage Tree. The City defines a "heritage tree" as, "a tree or grove of trees so designated by a resolution of the Planning Commission and after the holding of a noticed public hearing, having a specific historical or cultural association or value due to its age, species, character, location, height and/or the circumstances of its planting or origin." Heritage trees also include native species with trunk diameters that exceed those specified in the Tree Ordinance for: California bay (*Umbellularia californica*), big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), California buckeye (Aesculus californica), canyon oak (*Quercus chrysolepis*), douglas fir (*Pseudotsuga menziesii*), interior live oak (*Quercus wislizeni*), California live oak (*Quercus agrifolia*), madrone (*Arbutus menziesii*), Oregon white oak (*Quercus garryana*),

[12] California Fish and Game Code Section 1360 et seq.

red alder (*Alnus oregona*), redwood (*Sequoia sempervirens*), valley oak (*Quercus lobata*), and white alder (*Alnus rhombifolia*).

- Protected Tree. "Protected trees" are defined as, "any tree, including a heritage tree, designated to be preserved on an approved development plan or as a condition of a tentative map, a tentative parcel map, or other development approval issued by the City."
- Street Tree. The City defines a "street tree" as, "any tree having a single trunk circumference greater than six and one-quarter inches or a diameter greater than two inches, a height of more than six feet, and one half or more of its trunk is within a public right-of-way or within five feet of the paved portion of a City street or a public sidewalk."

- Section 20-30.040, *Creekside Development*. This section defines minimum setbacks from designated creeks to provide reasonable protection from bank failures and flooding. It provides creek setback criteria for any new structures, specifying the distance new development must be set back from creeks and defined banks. For example, new structures must be a minimum of 50 feet from the top of the highest natural bank. Limited exceptions are permitted for any defined channel that is owned by Sonoma Water, for developments in compliance with setback requirements prior to September 3, 2004, for new developments that are surrounded by existing structures that were developed in compliance with setback requirements prior to September 3, 2004, and for bridges and utilities.

Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan

The Santa Rosa Plan Vernal Pool Ecosystem Preservation Plan was prepared in 1995 and was intended to provide regional protection for the vernal pool ecosystem in the Santa Rosa Plain, while allowing for planned urban development and land use changes.[13] The Plan identifies vernal pool ecosystem habitat, targets potential preserves, and outlines a streamlined regulatory process to allow faster authorizations for development on low-quality vernal pool ecosystem wetlands. The Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan was superseded by the Santa Rosa Plain Conservation Strategy in 2005.

Santa Rosa Plain Conservation Strategy

The SRPCS seeks to create a long-term program to mitigate potential adverse effects on listed species due to future development on the Santa Rosa Plain, bordered on the south and west by the Laguna de Santa Rosa, on the east by the foothills, and on the north by the Russian River. The Plain and adjacent areas are characterized by vernal pools, seasonal wetlands, and associated grassland habitat, which supports several species of plants and animals that are listed by the FESA as threatened or endangered, including the federally threatened California tiger salamander (CTS) and four federally endangered plant species-Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, and many-flowered navarretia.

The SRPCS was developed to (1) provide a plan for local agencies, developers, and community groups that would preserve and enhance populations and habitat of the listed species; (2) support the issuance of a USFWS authorization for incidental take of CTS and listed plants that may occur in the course of carrying out a broad range of activities on the Plain; and (3) protect stakeholders' (public and private) interests.

[13] CH2M Hill, June 30, 1995, *Phase I, Final Report, Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan.*

The SRPCS addresses various aspects of urban and rural growth and its effects on the above-listed species, mitigation for impacts to these listed species and wetlands, and the conservation and recovery of the listed species and their habitat. The SRPCS identified the Southwest Santa Rosa Preserve System (discussed below) and nine "Conservation Areas" through the Plain, where mitigation for project-related impacts to listed species and vernal pools should be directed. The designation of Conservation Areas was based on the following factors: (1) known distribution of CTS; (2) presence of suitable CTS habitat; (3) presence of large blocks of natural or restorable land; (4) adjacency to existing preserves; and (5) known location of the federally listed plants. A critical component of the Conservation Strategy is that 350 to 900 acres of actual preserved land ultimately will be established within each Conservation Area. The Southwest Santa Rosa Preserve System does not meet this Conservation Area size requirement, but nevertheless is critically important because of its proximity to near-term development in southwest Santa Rosa.

Southwest Santa Rosa Preserve System

The Southwest Santa Rosa Preserve System is part of the SRPCS, located in the southwest corner of Santa Rosa. This is an area that contains considerable existing development and is subject to future development under the City's General Plan. This area contains an abandoned military air center with some of the runways still present. There are currently 101 acres of preserves and 52 acres of pending preserves in this Preserve System, with numerous wetlands, CTS breeding sites, and federally listed plant occurrences. The focus of the SRPCS is to interconnect these preserves with each other and neighboring Conservation Areas (in particular, the Llano Conservation Area to the south), and ensure their viability as future development occurs in southwest Santa Rosa. Until there are adequate viable preserves throughout the Conservation Areas, the SRPCS's population of CTS is critical to the persistence of the species on the Santa Rosa Plain.

The *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California* (PBO) was originally issued by the USFWS in 2007.[14] The PBO was amended by the USFWS in 2009 and reissued in 2020.[15] The PBO provides a framework for the USACE to meet its FESA requirements for permitting projects that adversely affect CTS, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam.[16] The PBO provides guidance to the USACE on projects that may affect these listed species, by defining "Conservation Areas" and "preserves" in the Santa Rosa Plain, describing mitigation and minimization requirements and procedures as they apply to projects that impact the four target species, and providing a comprehensive status report for these species, which includes species descriptions, historical and current distribution, habitat and life history, threats to survival, and environmental baseline information. In 2016, the USFWS adopted a *Recovery Plan for the Santa Rosa Plain* (Recovery Plan) which was

[14] USFWS, 2007, *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California,* File Number 1-1-98-F-0053.

[15] USFWS, June 11, 2020, *Reinitiation of Formal Consultation on Issuance of Clean Water Act, Section 404 Permits by the U.S. Army Corps of Engineers (Corps) on the Santa Rosa Plain, Sonoma County, California*. File Number 81420-2008-F-0261-R002.

[16] The PBO does not include the many-flowered navarretia, which was part of the Santa Rosa Conservation Strategy, possibly because this species occurs mostly outside the Santa Rosa Plain and there is only one known site for this species in the Plain.

considered as part of the latest PBO. The Recovery Plan identified actions to reduce the threats to these four species and ensure their long-term viability.[17]

Although the SRPCS has not been formally adopted, the USFWS PBO can still be invoked for projects that have suitable habitat for CTS, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam, and that impact regulated wetlands in the Santa Rosa Plain requiring permit authorization by the USACE.

Santa Rosa Citywide Creek Master Plan

The City of Santa Rosa has specific goals related to waterways within its jurisdiction as defined in the *Santa Rosa Citywide Creek Master Plan*. The *Santa Rosa Citywide Creek Master Plan* includes the portions of the Laguna de Santa Rosa watershed that are within the urban growth boundary surrounding the city of Santa Rosa, which includes nearly 100 miles of creeks. One of the Plan's goals is to preserve, enhance, and restore habitat for fish, birds, mammals, and other wildlife in local creeks and riparian corridors. The following goals and objectives from the *Santa Rosa Citywide Creek Master Plan* are related to biological resources and apply to the off-site infrastructure improvements of the proposed project:

- Habitat (HA): Local creeks and riparian corridors are preserved, enhanced, and restored as habitat for fish, birds, mammals, and other wildlife.
- Objective HA-1: Preserve healthy and/or environmentally sensitive creek areas.
  - Policy HA-1-1: Avoid channelization of additional creeks to preserve remaining wildlife habitat.
  - Policy HA-1-2: Meet or exceed the required creek setback to provide ecological buffers recognize the 100 year floodplain and allow for stream corridor restoration. Development shall locate outside the creek setback, as defined within the Santa Rosa Zoning Code.
- Objective HA-5: Focus preservation, enhancement, and restoration efforts on habitat that supports one or more special-status species, including those species that are state or federally listed as threatened or endangered, or as a Species of Special Concern.
  - Policy HA-5-1: Protect habitat for endangered species, through preservation, enhancement, and restoration of riparian corridors (as discussed above) and prevention of storm water pollution.
  - Policy HA-5-2: Reestablish populations of special-status species as ecologically appropriate.
- Objective HA-6: Obtain and comply with all necessary regulatory agency permits.
  - Policy HA-6-1: Coordinate, as appropriate, with regulatory agencies on Master Plan projects.
  - Policy HA-6-2: Consistent with federal, state, and local regulations, impacts to existing habitat will be avoided if possible. Minimization and mitigation of any unavoidable impacts will be required.

[17] USFWS, 2016, Recovery Plan for the Santa Rosa Plain: *Blennosperma bakeri* (Sonoma sunshine); *Lasthenia burkei* (Burke's goldfields); *Limnanthes vinculans* (Sebastopol meadowfoam); California Tiger Salamander Sonoma County Distinct Population Segment (*Ambystoma californiense*). Pacific Southwest Region, Sacramento, California.

- Objective HA-7: Use the "best available science" when planning and implementing a creek project.
  - Policy HA-7-1: Consult with knowledgeable experts as appropriate, including natural resources agency staff and other jurisdictions or organizations that have successfully completed similar projects.

4.4.1.2 EXISTING CONDITIONS

This section provides a summary of the existing biological conditions in the EIR Study Area, which includes habitat types, special-status plant and animal species, sensitive habitats, and wildlife corridors.

Habitat Types

The EIR Study Area occupies the broad Santa Rosa Plain (also called Llano de Santa Rosa), bordered by the Laguna de Santa Rosa to the southwest and the foothills of the Mayacamas Mountains to the east. The Santa Rosa Plain is bisected by Santa Rosa Creek, which originates in the Mayacamas Mountains and runs from east to west through the city, draining into the Laguna de Santa Rosa and then the Russian River. Tributaries of Santa Rosa Creek that also run through or near the city limits include Piner Creek, Brush Creek, and Matanzas Creek, among others.

Most of the EIR Study Area has been extensively altered by past agricultural production and urbanization and now consists of a mixture of residential, commercial, industrial, and agricultural uses. Beginning in the mid-nineteenth century and continuing to today, activities such as livestock grazing, timber operations, clearing and disking for agricultural production, road building, and urban and suburban development have markedly altered the remaining natural communities in the EIR Study Area. Native vegetation has typically been converted to structures, pavement, ornamental landscaping, and ruderal (weedy) cover in urbanized areas, but the riparian corridors that bisect the EIR Study Area and scattered areas of natural habitat continue to support native plants and wildlife, including populations of special-status species in some locations. This includes the vernal pools and surrounding grasslands west and southwest of the city, which are particularly important to a number of special-status species such as CTS; the riparian corridors that traverse urbanized areas; and the eastern upland woodlands and forests in the foothills of the Sonoma Mountains, which also support a number of special-status species and have high habitat value to native wildlife.

Vegetative cover types in the vicinity of the EIR Study Area were mapped as part of the Sonoma County Vegetation Mapping & LIDAR Program, the results of which are shown on Figure 4.4-1, *Vegetation Cover*. Table 4.4-1, *Estimated Vegetation Cover in the EIR Study Area*, lists the various cover types, acreages, and their respective percentage of the 31,555 acres comprising the EIR Study Area. As indicated on Figure 4.4-1 and Table 4.4-1, development occupies an estimated 64.3 percent of the EIR Study Area. Grasslands and herbaceous cover occupy an estimated 15.41 percent, forests and woodlands occupy an estimated 13.51 percent, and agricultural crops an estimated 2.7 percent of the EIR Study Area. Sensitive habitat types such as wetlands, open water, and riparian cover occupy much smaller percentages of the total EIR Study Area, but are of high value because of the available surface water, protective cover, and other characteristics that make them critically important to native plants, fish, and wildlife. The following

paragraphs provide a summary of the various cover types in the EIR Study Area and the plant and animal species typically associated with them.

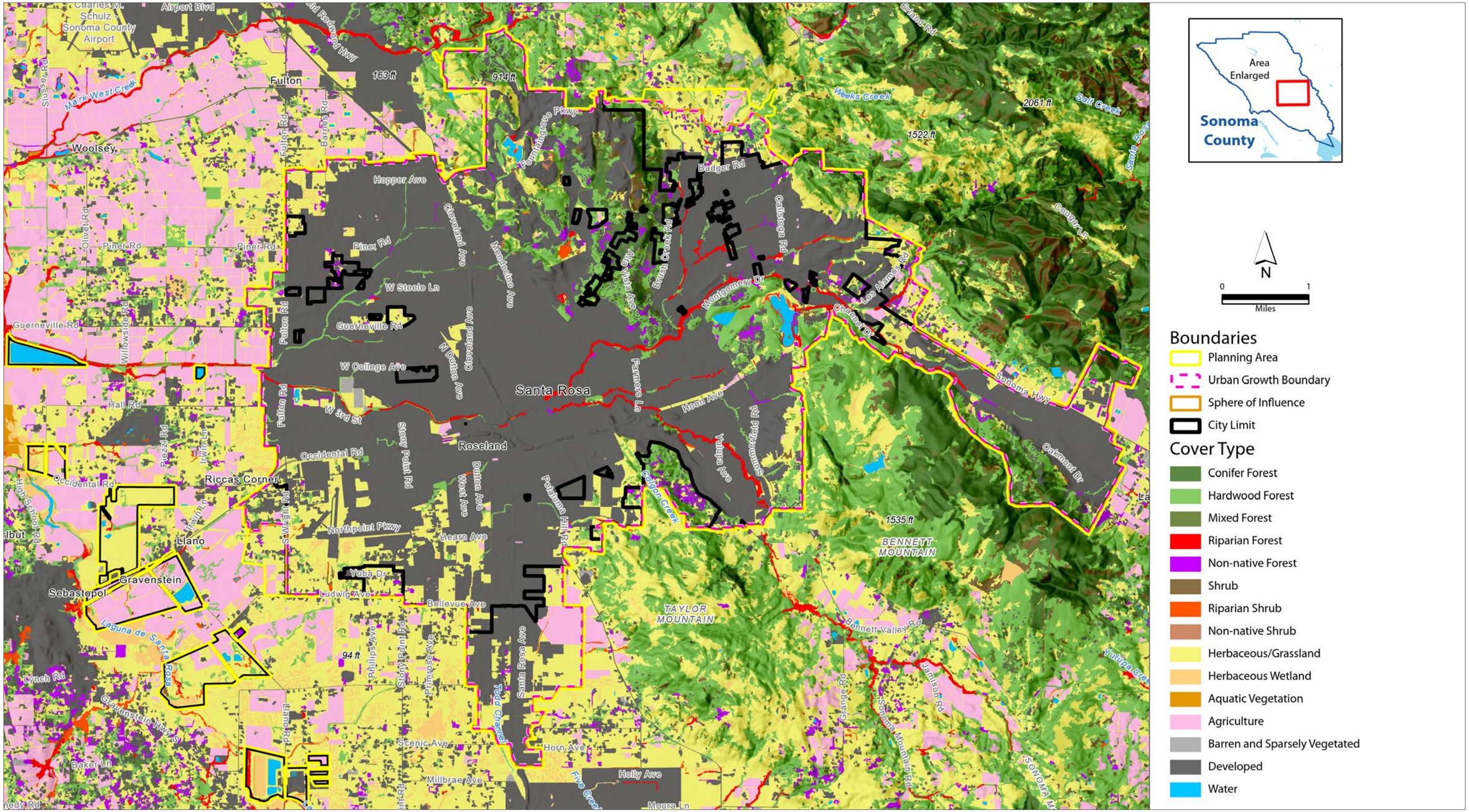
TABLE 4.4-1 ESTIMATED VEGETATION COVER IN THE EIR STUDY AREA

Vegetation Cover	EIR Study Area (Acres)	EIR Study Areas (Percent of Total)
Urban Development and Ornamental Landscaping	***20,286***	***64.30%***
Developed	19,810	62.79%
Urban/Barren	46	0.15%
Nonnative forest	394	1.25%
Nonnative scrub	36	0.11%
Agriculture	***853***	***2.70%***
Forest and Woodlands	***4,263***	***13.51%***
Hardwood forest and woodland	3,228	10.23%
Conifer forest	659	2.09%
Mixed forest	376	1.19%
Herbaceous/Grasslands	***4,865***	***15.41%***
Scrub	***146***	***0.46%***
Riparian Forest and Scrub	***557***	***1.77%***
Riparian scrub	95	0.30%
Riparian forest	462	1.47%
Aquatic Vegetation/Herbaceous Wetland	***307***	***0.97%***
Herbaceous wetland	304	0.96%
Aquatic vegetation	3	0.01%
Open Water	***278***	***0.88%***
Combined Total	**31,555**	

Source: Sonoma Vegetation Map, 2017.

Urban Development/Ornamental Landscaping

Urban development, ornamental landscaping, and barren areas occupy most of the valley floors and lower eastern foothills in the EIR Study Area. As indicated on Figure 4.4-1, an estimated 20,286 acres or roughly 64 percent of the land cover types in the EIR Study Area are mapped as urban development or barren, which includes impervious surfaces, structures, ornamental landscaping and areas of remnant native vegetation, and locations with no vegetative cover. Most plant species used in landscaping are nonnative ornamentals, consisting of a wide variety of tree, shrub, ground cover, and turf species. Native trees are scattered throughout the established residential neighborhoods and urbanized areas, including specimen coast live oaks (*Quercus agrifolia*), valley oaks (*Q. lobata*), California bay laurel (*Umbellularia californica*), California buckeye (*Aesculus californica*), coast redwood (*Sequoia sempervirens*), madrone (*Arbutus menziesii*), and black oak (*Quercus kelloggii*), among others. Larger ornamental and nonindigenous native species include: Monterey pine (*Pinus radiata*), Monterey cypress (*Cupressus macrocarpa*), incense cedar (*Calocedrus decurrens*), deodar cedar (*Cedrus deodara*), American elm (*Ulmus americana*), Mexican fan palm (*Washingtonia robusta*), and Tasmanian blue gum (*Eucalyptus globulus*), among many others.



Source: Sonoma Veg Map release date 9/21/2017 accessed on 4/5/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

0 2
Scale (Miles)

Figure 4.4-1
Vegetation Cover

Some nonnative ornamental species are considered highly invasive because of their ability to spread and eventually dominate natural areas if unmanaged. Many of these are common in the EIR Study Area in urbanized areas, along riparian corridors, and in hillside open space and remaining undeveloped private lands. These include silver wattle (*Acacia dealbata*), blackwood acacia (*Acacia melanoxylon*), several species of broom (*Genista monspessulana*; *G. juncea*; and *Cytisus scoparius*), pampas grass (*Cortaderia selloana*), cotoneaster (*Cotoneaster* spp.), Bermuda grass (*Cynodon dactylon*), Germany ivy (*Delairea odorata*), English ivy (*Hedera helix*), Bermuda buttercup (*Oxalis pes-caprae*), Himalaya blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), and Tasmanian blue gum. The California Invasive Plant Council (Cal-IPC) has developed a comprehensive database, the *Invasive Plant Inventory*, which ranks invasive species based on the threat they pose to natural habitat. All of the above species and others known to exist in the vicinity of Santa Rosa are considered to have a high to moderate ranking by Cal-IPC because of their invasive properties and the threat they pose to natural areas.

In general, urbanized areas tend to have low to poor wildlife habitat values due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Typical native bird species include mourning dove, scrub jay, northern mockingbird, American robin, northern flicker, California towhee, and American kestrel. Introduced species include rock dove, European starling, house finch, and house sparrow. Urban areas also provide habitat for several species of native mammals such as black-tailed deer, California ground squirrel, raccoon, gray fox, striped skunk, and coyote, as well as the introduced eastern fox squirrel and eastern red fox. Introduced pest species such as Norway rat, house mouse, and Virginia opossum are also abundant in developed areas.

Agricultural Cover

Agricultural lands, including vineyards, orchards, hayfields, and croplands, are fairly abundant in the Santa Rosa Plain west of urban core as indicated on Figure 4.4-1, occupying about 853 acres of the EIR Study Area. Fields, vineyards and orchards tend to be managed to maximize crop production, typically forming monotypic cover bordered by ruderal (weedy) grasslands and scattered shrubs and trees in some locations. Weedy species often grow between rows and along field margins and irrigation ditches. These include field knotweed (*Polygonum aviculare*), bull mallow (*Malva nicaeensis*), cheeseweed (*M. parviflora*), field bindweed (*Convolvulus arvensis*), rabbitsfoot grass (*Polypogon monspelliensis*), and Farmer's foxtail (*Hordeum leporinum*). The drainage ditches that are physically part of the agricultural fields and orchards support hydrophytic (i.e., water loving) plants, such as cattail (*Typha* spp.), Baltic rush (*Juncus balticus*), alkali bulrush (*Bolboschoenus maritimus*), and tall umbrella plant (*Cyperus eragrostis*). The upper banks of these ditches tend to be covered with nonnative weedy species.

The value of agricultural crops to wildlife depends on a number of factors, including intensity and frequency of maintenance activities, available cover, and proximity to surface water. While intensive management tends to limit the diversity of wildlife species, agricultural areas may provide valuable habitat linkages for transient mammals, reptiles, and amphibians. Numerous species of small mammals and birds frequent many of the crop types, especially where field margins and drainage ditches provide retreat habitat. These include ring-necked pheasant, red-winged blackbird, American crow, European starling,

house finch, California ground squirrel, Botta pocket gopher, meadow voles, black-tailed jackrabbit, and racoon. The abundant insect populations attract several species of bat, including the California myotis, Mexican free-tailed bat, big brown bat, and western red bat. The abundant prey attracts predatory birds and mammals such as northern harrier, American kestrel, red-tailed hawk, red-shouldered hawk, foxes, feral cats, and coyote.

Forest and Woodlands

Forest and woodlands occupy an estimated 4,263 acres or roughly 14 percent of the land cover types in the EIR Study Area. As summarized in Table 4.4-1, this includes areas of oak woodland dominated by coast live oak and other oak species, coniferous forest dominated by conifers, and mixed forest dominated by a mixture of hardwoods and conifers. As indicated on Figure 4.4-1, oak woodlands form the dominant native cover on the undeveloped hillsides around Taylor Mountain, Bennett Mountain, and the Fountaingrove area, with forest cover extending over higher elevations with steep slopes and drainages. Dominant tree species vary and include: coast live oak, valley oak, canyon oak (*Quercus chrysolepis*), interior oak (*Q. wislizenii*) blue oak (*Q. douglasii*), Oregon white oak (*Q. garryana*), black oak, California bay laurel, and Douglas fir (*Pseudotsuga menziesii*). Other tree and shrub species found in the forest and woodland habitats include: madrone, California buckeye, toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and hazelnut (*Corylus cornuta* ssp. *californica*), among others. Understory cover varies depending on the amount of available sunlight and other factors. Where dense canopy is present, understory species in areas of forest cover are generally sparse, but do include sword fern (*Polystichum munitum*), redwood sorrel (*Oxalis oregano*), and creeping snowberry (*Symphoricarpos mollis*). In areas with higher light levels, the understory consists of nonnative grassland species, miner's lettuce (*Claytonia perfoliata*), bedstraw (*Galium aparine*) and other herbaceous species. Highly invasive broom has spread through much of the understory of the forest and woodlands in the EIR Study Area, inhibiting foraging opportunities for wildlife and displacing native shrub and groundcover plant species. Much of the areas mapped as forest and woodland in the EIR Study Area have been developed with residential uses, preserving a broken canopy of mature trees interspersed with structures and ornamental landscaping, much of which was severely affected during the Tubbs Fire in the fall of 2017.

The existing mature forests and woodlands provide important habitat for wildlife, even where affected by past fires, invasive species, and other factors. They provide nesting and foraging opportunities for numerous species of birds, including raptors. They also provide essential food resources for eastern fox squirrels, native grey squirrels, acorn woodpeckers, scrub jay, and other birds. Wildlife commonly associated with well-developed forest and woodland habitats include: dusky-footed woodrat, deer mouse, western flycatcher, chestnut-backed chickadee, plain titmouse, Hutton vireo, orange-crowned kinglet, rufous-sided towhee, fox sparrow, bushtit, ringneck snake, California newt, California slender salamander, and several species of native bats. Predatory species such as gray fox, coyote, bobcat, and mountain lion utilize these habitats, together with adjacent areas of remaining grassland, scrub, and even developed yards where prey is available and access is possible. Wildlife in the understory of the remaining forest and woodland varies depending on cover type and extent of development. In areas of mature woodland and coniferous forests the northern spotted owl (*Strix occidentalis caurina*), a federally threatened species, has been reported from some locations at the eastern edges of the EIR Study Area.

While most forests and woodlands are not considered to have a high priority for mapping and protection as a sensitive natural community type by the CNDDB, they should be recognized as an important habitat type due to their relatively high wildlife habitat value, continued threats due to further tree removal associated with development, and their vulnerability to the effects of fire and Sudden Oak Death (SOD). Tanoaks (*Notholithocarpus densiflorus*) and coast live oaks are dying in large numbers in Sonoma County, and other species are suspected hosts or potential carriers of the fungus suspected to cause oak mortality. This fungus, a species of *Phytophthora*, and several beetle species are consistently associated with the dying oaks. SOD is contributing to significant changes in vegetative cover over large parts of Sonoma County, altering habitat for woodland-dependent species and exacerbating hazardous fire conditions where wildlands interface with developed areas.

Grasslands

Grasslands occupy an estimated 4,865 acres or about 15 percent of the cover in the EIR Study Area, primarily on the lower slopes of Taylor Mountain and in the open fields in the southwest along the fringe of the Laguna de Santa Rosa. The grasslands are generally composed of introduced grasses and broadleaf species, although some remnant stands of native grasslands remain in the EIR Study Area and are considered a sensitive natural community type by the CNDDB. Intensive grazing and other disturbance factors have eliminated most of the native grasslands throughout California over the past 150 years, including the historic rangelands of the Santa Rosa vicinity. Common species in the grasslands today include: wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus mollis*), and foxtail barley (*Hordeum leporinum*), In locations where the ground surface has been disturbed, ruderal species, which quickly recolonize disturbed areas, tend to dominate, including field mustard (*Brassica campestris*), wild radish (*Rhaphanus sativus*), bindweed (*Convolvulus arvensis*), cheeseweed (*Malva parviflora*), bur clover (*Medicago polymorpha*), and yellow-star thistle (*Centaurea solstitialis*). The remaining native species are common perennials, such as California poppy (*Eschscholzia californica*), Douglas' lupine (*Lupinus nanus*), and soap plant (*Chlorogalum pomeridianum*).

Remnant native grasslands have been reported by the CNDDB from Taylor Mountain and may occur in other locations mapped as annual grassland, forming stands of needlegrass grasslands. This natural community is characterized by several species of native grasses such as purple needlegrass (*Stipa pulchra*), California melic (*Melica californica*), blue wildrye (*Elymus glaucus*), and beardless wildrye (*Elymus triticoides*), together with common wildflowers such as California poppy, lupines, soap plant, wild hyacinth (*Dichelostemma pulchellum*), and other native forbs. Most of the native grasslands throughout the state have been eliminated, which has led the CNDDB to now recognize native grasslands as a sensitive resource with a high inventory priority. The CNDDB typically considers grasslands containing 10 percent or greater cover by native grass species to represent a natural grassland community. This 10 percent threshold is a loosely applied standard that has been used by the state for many years. As most of the remaining native grassland communities have been highly modified by past and ongoing disturbance, the remaining native grassland communities generally form a mosaic of different cover classes, sometimes interspersed with areas dominated by nonnative species.

Nonnative and native grasslands support a variety of mammals, birds, and reptiles and provide foraging habitat for raptors. Many species use the grassland for only part of their habitat requirements, foraging in the grassland and seeking cover in the limited tree and scrub cover. Grassland cover provides foraging,

nesting, and denning opportunities for resident species such as western fence lizard, northern alligator lizard, gopher snake, western meadowlark, goldfinch, ring-necked pheasant, red-winged blackbird, California ground squirrel, California vole, Botta pocket gopher, black-tailed jackrabbit, and black-tailed deer. The rodent, bird, and reptile populations offer foraging opportunities for avian predators such as black-shouldered kite, northern harrier, American kestrel, red-tailed hawk, golden eagle, barn owl, and great horned owl, as well as mammalian predators such as striped skunk, grey fox, and coyote.

Riparian Woodland and Scrub

Riparian vegetation occurs along Santa Rosa Creek and tributary drainages that pass through the EIR Study Area, with trees and shrubs often forming stands characteristic of riparian forest and willow scrub natural communities, occupying an estimated 557 acres, as indicated in Table 4.4-1. Santa Rosa Creek drains approximately 78.6 square miles and is a 22-mile-long tributary to the Laguna de Santa Rosa. Major tributaries to Santa Rosa Creek include Brush Creek, Matanzas Creek, and Piner Creek, and smaller tributaries include Paulin Creek, Spring Creek, Ducker Creek and Austin Creek. Dominant cover in locations with well-developed riparian cover includes willows (*Salix* spp.), valley oak, coast live oak, California bay laurel, and California buckeye, together with shrub and vine species such as California blackberry (*Rubus ursinus*), wild grape (*Vitis californica*), and wild rose (*Rosa californica*). Stands of highly invasive nonnative species such as Himalaya blackberry, ivy, arundo (*Arundo donax*), periwinkle, and broom have become particularly problematic in some reaches of the riparian corridors in the EIR Study Area, outcompeting and replacing native shrub and groundcover species, and severely limiting wildlife habitat values.

Surface water along riparian corridors is available for aquatic-dependent organisms and as a source of drinking water for terrestrial mammals and birds. The creek channels serve as movement corridors for aquatic and terrestrial species which use the protective cover found along the creeks. Animal species associated with stream habitat include river otter, great blue heron, snowy egret, belted kingfisher, dark-eyed junco, and black phoebe. Channelized reaches of streams that lack shade canopy, habitat diversity, and water depth encourage warm water species such as California roach, Sacramento sucker, bluegill, green sunfish, mosquitofish, flathead minnow, common carp, and three-spined stickleback.

More natural creek reaches typically have increased shade canopies, pool habitat, cover, water velocity, channel slope, and cooler temperatures. These conditions make the creeks more hospitable for special-status aquatic species such as steelhead trout (*Oncoryhynchus mykiss*), Chinook salmon (*O. tshawytscha*), coho salmon (*O. kisutch*), Russian River tule perch (*Hysterocarpus traskii*), foothill yellow-legged frog (*Rana boylii*), California freshwater shrimp (*Syncaris pacifica*), and northwestern pond turtle (*Actinemys marmorata marmorata*). Steelhead are known from Santa Rosa Creek, Rincon Creek, and the south fork of Santa Rosa Creek. Chinook salmon have been observed in Santa Rosa Creek. Several streams in the EIR Study Area could support salmonids if fish passage impediments are removed, including Matanzas, Austin, Rincon, Brush, Ducker, Piner, Paulin, and the upper reaches of Santa Rosa Creek. Wildlife dependent on the cover provided by the riparian woodland and scrub include black-tailed deer, black-tailed jackrabbit, brush rabbit, red and grey fox, rufous-sided towhee, scrub jay, flycatchers, and warblers. Mammals and birds typically found in the remaining adjacent grasslands most likely use areas of dense riparian growth as protective cover and refuge from summer heat and drought.

Freshwater Marsh and Seasonal Wetlands

Freshwater marsh habitat is also associated with the creeks and drainage channels, ponds and other waterbodies, and in grasslands on the valley floor where seasonal wetlands and vernal pools remain, collectively occupying an estimated 307 acres of the EIR Study Area. Perennial marshlands occur around the margins of ponds, reservoirs, and in some locations along perennial drainages, and are typically dominated by emergent monocots such as narrow-leaf cattail (*Typha angustifolia*). Seasonal wetlands occur along small drainages, localized depressions, and the lower banks and in sediments that accumulate within creek channels. Where soils do not absorb water readily or are underlain by bedrock or hardpan soils, winter and spring rainfall ponds in shallow depressions known as vernal pools or swales. Much of this seasonal wetland habitat in the EIR Study Area has been converted to agricultural cover and urban uses, and intact vernal pools are considered sensitive habitat by the CDFW because of their rarity. Vegetation in relatively undisturbed vernal pools and swales is typically characterized by native annual species that are capable of completing their life cycles and producing viable seed in an extremely variable habitat that is ponded at times and dry at others. Common vernal pool and swale plant species in the Santa Rosa Plain include fringed downingia (*Downingia concolor*), spiny coyote thistle (*Eryngium armatum*), sedge species (*Eleocharis* spp.), toad rush (*Juncus bufonius*), California goldfields (*Lasthenia californica*), and Douglas' meadowfoam (*Limnanthes douglasii* ssp*. douglasii*). Special-status plant species found in vernal pools in the Santa Rosa Plain include Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*), and Sebastopol meadowfoam (*Limnanthes vinculans*), among others.

Freshwater aquatic habitats and the associated marsh vegetation are of high value to wildlife, providing a source of drinking water, protective cover, and nesting substrate. Species found in freshwater marsh habitats include: Wilson's snipe, marsh wren, Samuel's song sparrow, and red-winged blackbird, Pacific chorus frog, western toad, western pond turtle, western mosquito fish, green sunfish, bluegill, and largemouth bass. Vernal pools and swales provide seasonal aquatic habitat for invertebrates and tree frogs and are temporary water sources for birds and terrestrial wildlife. They serve as breeding habitat for the threatened California tiger salamander (*Ambystoma californiense*), which is known from southwestern and western portions of the EIR Study Area. Northern Hardpan Vernal Pools and Northern Vernal Pools are two vernal pool habitats found in the vicinity of the EIR Study Area, both which are considered sensitive communities by the CDFW.

Scrub Cover Types

A number of native and nonnative vegetative cover types occur along the margins or just outside the Planning Area, such as mixed chaparral and coastal scrub. Areas of chaparral and scrub are dominated by woody shrubs such as coyote brush (*Baccharis pilularis*), yerba santa (*Eriodictyon californicum*), toyon, chamise (*Adonostoma fasciculatum*), poison oak, manzanita (*Arctostaphylos* spp.), ceanothus (*Ceanothus* sp.), interior live oak (*Quercus wislizenii*), and California sagebrush (*Artemisia californica*). Coyote brush and other indicator species of scrub cover occupy an estimated 146 acres within the EIR Study Area, as indicated in Table 4.4-1.

Chaparral and scrub cover provides habitat for a wide variety of wildlife adapted to shrub-dominated communities. Numerous rodent species inhabit chaparral, and deer and other herbivores make extensive use of it for browse and protective cover. Some small herbivores use chaparral species in fall and winter when grass is not abundant. Brush rabbits eat twigs, evergreen leaves, and bark from chaparral plants. Shrubs are important to many other mammals such as bobcat and gray fox as shade during hot weather. Reptiles frequently observed in chaparral include western rattlesnake, western fence lizard, alligator lizard, and gopher snake. Representative bird species include: California quail, common poorwill, Anna's hummingbird, western scrub-jay, bushtit, Bewick's wren, California thrasher, rufous-crowned sparrow, and sage sparrow.

Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or by areas of human disturbance or urban development. Topography and other natural factors in combination with urbanization can fragment or separate large open-space areas. The fragmentation of natural habitat creates isolated "islands" that may not provide sufficient area to accommodate sustainable populations of animals or plants and can adversely impact genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

As described above, much of the EIR Study Area has been developed with agricultural crops and urban uses, which disrupt opportunities for wildlife movement. However, natural linkages remain along riparian corridors; in the largely undeveloped lands of the forest and woodland habitats of the Mayacamas Mountains to the east; and the remaining riparian, marshland, and grasslands along the Laguna de Santa Rosa to the southwest.

Special-Status Species

Special-status species are defined as plants and animals legally protected under the State and/or federal Endangered Species Acts (FESA and CESA) or other regulations, as discussed in Section 4.4.1.1, *Regulatory Framework*. Special-status species also include species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. Species with legal protection under FESA and CESA often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species. For the purposes of this EIR, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal FESA.
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under CESA.
- Plant species with a Rank of 1A, 1B and 2 in the CNPS Inventory of Rare and Endangered Plants.
- Animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFW.

- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines.
- Species considered to be a taxon of special concern by the relevant local agencies.

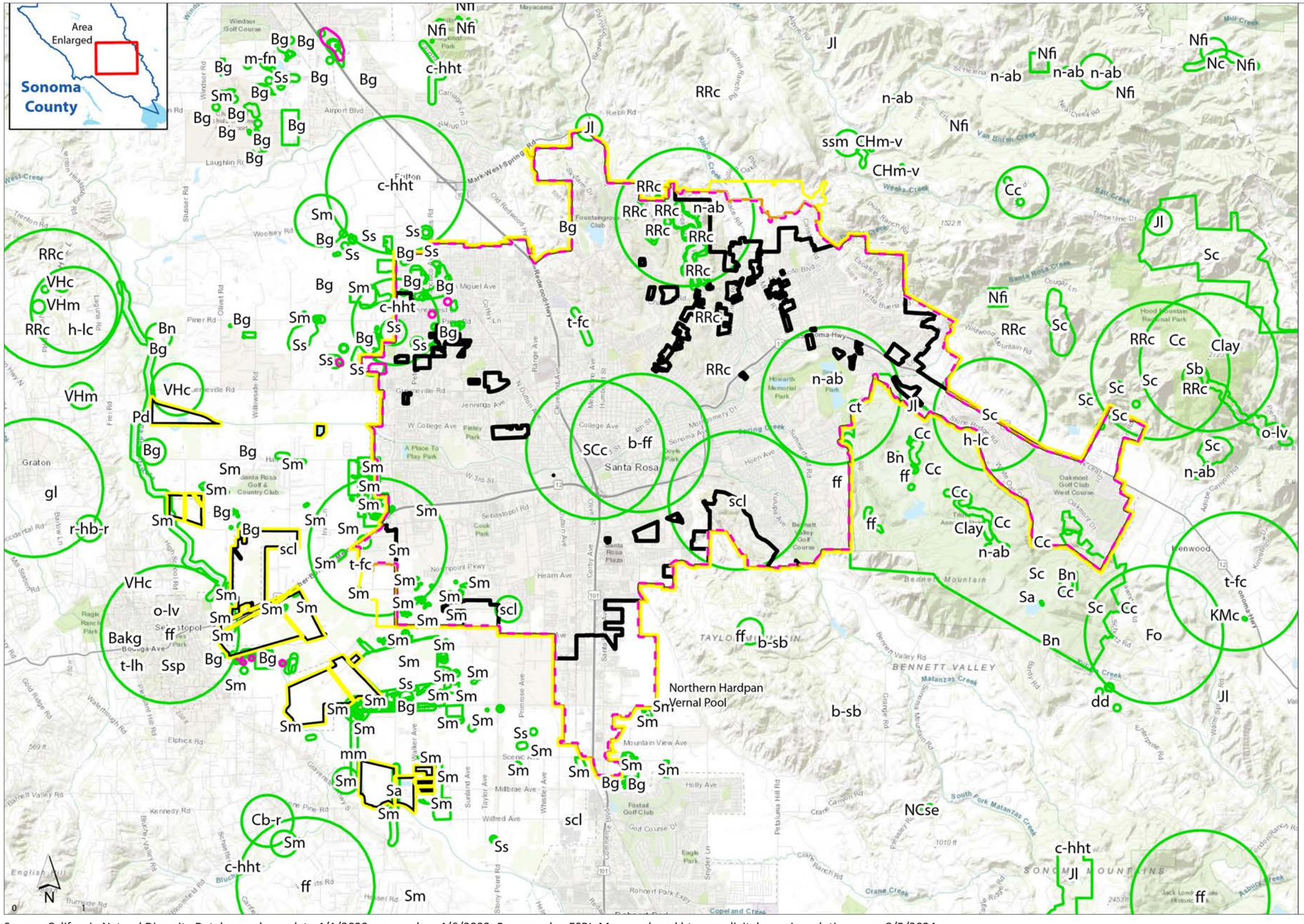
The CNDDB is California's primary inventory on the distribution of special-status species and is maintained by the Biogeographic Data Branch of the CDFW. The CNDDB inventory provides the most comprehensive statewide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data is obtained from a variety of scientific, academic, and professional organizations and private consulting firms and is entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, it only indicates that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location, where there is evidence of potential occurrence.

Special-Status Plants

Review of the CNDDB and CNPS occurrence records indicates a total of 69 special-status plant species reported within or in the vicinity of the EIR Study Area. Of these, occurrence records of 19 special-status plant species actually extend over the EIR Study Area, as indicated on Figure 4.4-2, *Special-Status Plants and Sensitive Natural Communities*. Table 4.4-2, *Special-Status Plant Species in the EIR Study Area*, lists each of these 69 special-status plant species and summarizes their typical habitat characteristics, normal flowering season, and potential for occurrence in the EIR Study Area.

Of the special-status plant species known from the EIR Study Area, most are associated with the vernal pools and seasonal wetland habitat of the Santa Rosa Plain. Four of them—Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam, and many-flowered navarretia—are federally and state-listed as endangered with occurrences throughout the western portion of the EIR Study Area, as indicated on Figure 4.4-2. Sonoma alopecurus (*Alopecurus aequalis*) and two-fork or showy Indian clover (*Trifolium amoenum*) are both federally listed endangered. Several others are believed to have been extirpated from the Santa Rosa Plain or have no legal protective status under the ESAs but have a CNPS Rank of 1B (rare and endangered in California and elsewhere) or 2 (plants rare and endangered in California but more common elsewhere). These include dwarf downingia (*Downingia pusilla*), Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*), saline clover (*Trifolium hydrophilum*), and the state-listed rare North Coast semaphore grass.

Many of the other occurrences of special-status plant species known from the EIR Study Area are populations of ceanothus, a perennial shrub which occurs in scrub, chaparral, and forest habitat to the north and southeast. These include: Rincon Ridge ceanothus (*Ceanothus confusius*), Sonoma ceanothus (*Ceanothus sonomensis*), and Calistoga ceanothus (*Ceanothus divergens*). None of these species has any legal protective status under the ESAs, but all have a CNPS Rank of 1B, which warrants consideration as part of any environmental review when a proposed project may impact their populations.



Boundaries
- City Limit
- Planning Area
- Sphere of Influence
- Urban Growth Boundary

Special-Status Plants/Sensitive Communities
- Northern Hardpan Vernal Pool Sensitive Natural Community
- CNDDB Plant Occurrences

Species Names and Acronyms

Baker's goldfields (Bakg)
Baker's navarretia (Bn)
bent-flowered fiddleneck (b-ff)
big-scale balsamroot (b-sb)
brownish beaked-rush (bb-r)
Burke's goldfields (Bg)
California beaked-rush (Cb-r)
Calistoga ceanothus (Cc)
Clara Hunt's milk-vetch (CHm-v)
coastal triquetrella (ct)
Colusa layia (Clay)
congested-headed hayfield tarplant (c-hht)
Cunningham Marsh cinquefoil (CMc)
dwarf downingia (dd)
fragrant fritillary (ff)
Franciscan onion (Fo)
golden larkspur (gl)
holly-leaved ceanothus (h-lc)
Jepson's leptosiphon (Jl)
Kenwood Marsh checkerbloom (KMc)
legenere (leg)
many-flowered navarretia (m-fn)
marsh microseris (mm)
Napa checkerbloom (Nc)
Napa false indigo (Nfi)
narrow-anthered brodiaea (n-ab)
North Coast semaphore grass (NCse)
oval-leaved viburnum (o-lv)
pappose tarplant (pt)
Peruvian dodder (Pd)
Rincon Ridge ceanothus (RRc)
round-headed beaked-rush (r-hb-r)
saline clover (scl)
Santa Cruz clover (SCc)
Sebastopol meadowfoam (Sm)
slender silver moss (ssm)
Sonoma alopecurus (Sa)
Sonoma beardtongue (Sb)
Sonoma ceanothus (Sc)
Sonoma spineflower (Ssp)
Sonoma sunshine (Ss)
swamp harebell (sh)
thin-lobed horkelia (t-lh)
two-fork clover (t-fc)
Vine Hill ceanothus (VHc)
Vine Hill clarkia (VHcl)
Vine Hill manzanita (VHm)

Source: California Natural Diversity Database release date 4/1/2023 accessed on 4/6/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

0 2
Scale (Miles)

Figure 4.4-2
Special-Status Plants and Sensitive Natural Communities

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Allium peninsulare var. *franciscanum*	Franciscan onion	None	None	1B.2	Dry valley grasslands and foothill woodlands	May - June	Low. Historic occurrence from Kenwood area outside EIR Study Area.
Alopecurus aequalis	Sonoma alopecurus	Endangered	None	1B.1	Marshes and swamps (freshwater), riparian scrub	May - July	Moderate. Known occurrences from vicinity of EIR Study Area.
Amorpha californica var. *napensis*	Napa false indigo	None	None	1B.2	Openings in broadleafed upland forest, chaparral, cismontane woodland	April - July	Moderate. Known occurrences from forests and woodlands in eastern vicinity of EIR Study Area.
Amsinckia lunaris	Bent-flowered fiddleneck	None	None	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland	March - June	Low. Historic occurrence from Oakmont vicinity of EIR Study Area.
Anomobryum julaceum	Slender silver moss	None	None	4.2	Damp rock and soil on outcrops in broad-leafed upland and coniferous forest	Year round	Low. Occurrence record from vicinity of Porter Creek outside EIR Study Area.
Arctostaphylos canescens ssp. *sonomensis*	Sonoma canescent manzanita	None	None	None	Chaparral, lower montane coniferous forest (sometimes serpentinite)	January - June	High. Known from Rincon Ridge in EIR Study Area.
Arctostaphylos densiflora	Vine hill manzanita	None	Endangered	1B.1	Chaparral (acid marine sand)	February - April	Moderate. Historic occurrences from vicinity of EIR Study Area.
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	None	None	1B.1	Chaparral, cismontane woodland	February - March	High. Known from Rincon Ridge in EIR Study Area.
Astragalus claranus	Clara Hunt's milk vetch	Endangered	Endangered	1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland	March - May	Moderate. Known from recent and historic occurrences in vicinity of EIR Study Area.
Balsamorhiza macrolepis	Big-scale balsamroot	None	None	1B.2	Foothill woodland and valley grassland	March - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	1B.1	Valley and foothill grassland (mesic), vernal pools	March - May	High. Known from vernal pools and seasonal wetlands in western portion of EIR Study Area
Brodiaea californica var. *leptandra*	Narrow-anthered California brodiaea	None	None	1B.2	Openings in broad-leafed forest, chaparral, lower montane coniferous forest, valley and foothill grassland	May - July	High. Recent records from foothills in eastern part of EIR Study Area.
Calamagrostis crassiglumis	Thurber's reed grass	None	None	2B.1	Coastal scrub (mesic); marshes and swamps (freshwater)	May - August	Low. Historic occurrence from Pitkin Marsh but no other records reported by CNDDB in vicinity of EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Calystegia collina ssp. Oxyphylla	Mt. Saint Helena morning-glory	None	None	4.2	Chaparral on serpentinite	April - June	Moderate. Known from occurrences to north of EIR Study Area.
Carex albida	Sonoma white sedge	Endangered	Endangered	1B	Freshwater marsh, bogs and fens, meadows and seeps	March - July	Moderate. Known from Pitkin Marsh and suitable habitat present in EIR Study Area.
Campanula californica	Swamp harebell	None	None	1B.2	Bogs and marshes in a variety of habitats, including coastal prairie, meadows, and coniferous forests.	June - October	Moderate. Known from Pitkin Marsh and suitable habitat present in EIR Study Area.
Castilleja uliginosa	Pitkin Marsh Indian paintbrush	None	Endangered	1A	Freshwater Wetlands, wetland-riparian	June - July	Low. Presumed extinct but previously known from Pitkin Marsh.
Ceanothus confusius	Rincon Ridge ceanothus	None	None	1B.1	Chaparral, woodland, closed-cone pine forest	February - June	High. Numerous occurrences reported by CNDDB in EIR Study Area.
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2	Chaparral (serpentinite or volcanic, rocky)	February - April	High. Occurrences reported by CNDDB from Annadel State Park and elsewhere in EIR Study Area.
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	None	None	1B.1	Chaparral, endemic to Sonoma and Mendocino counties	March - May	Moderate. Known from occurrences at Vine Hill to west of EIR Study Area.
Ceanothus purpureus	Holly-leaved ceanothus	None	None	1B.2	Chaparral, cismontane woodland/volcanic, rocky	March - May	Moderate. Numerous historic occurrences reported by CNDDB from vicinity of EIR Study Area.
Ceanothus sonomensis	Sonoma ceanothus	None	None	1B.2	Chaparral, in serpentine, sandy or volcanic soils	February - April	Moderate. Numerous historic occurrences reported by CNDDB from vicinity of EIR Study Area.
Centromadia parryi ssp. *parryi*	Pappose tarplant	None	None	1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps, valley and foothill grassland (often alkaline)	April - November	Low. Known from scattered historic occurrences reported by CNDDB in Sonoma County.
Chorizanthe valida	Sonoma spineflower	Endangered	Endangered	1B.1	Coastal prairie (sandy)	June - August	Low. Historic occurrences from Sebastopol vicinity.
Clarkia imbricata	Vine Hill clarkia	Endangered	Endangered	1B.1	Chaparral, valley and foothill grassland	June - August	Moderate. Known from occurrences at Vine Hill to west of EIR Study Area.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None	None	2B.2	Marshes and swamps (freshwater)	July - October	Low. Historic occurrence from Sebastopol vicinity.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Delphinium luteum	Golden larkspur	Endangered	Rare	1B.1	Chaparral, Coastal prairie, Coastal scrub	March - May	Low. Historic occurrences from Sebastopol vicinity.
Downingia pusilla	Dwarf downingia	None	None	2B.2	Mesic grasslands, vernal pools	March - May	High. Known occurrences reported by CNDDB in EIR Study Area.
Erigeron biolettii	Streamside daisy	None	None	3	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest	June - October	Moderate. Numerous occurrences reported by CNDDB from Mount Hood and Sugarloaf Ridge southeast of EIR Study Area.
Erigeron serpentinus	Serpentine daisy	None	None	1B.3	Chaparral (serpentinite, seeps)	May - August	Low. No occurrences reported by CNDDB in vicinity of EIR Study Area.
Eryngium constancei	Loch Lomond button-celery	Endangered	Endangered	1B.1	Vernal pools	April - June	Low. Known from Calistoga vicinity.
Eryngium pinnatisectum	Tuolumne button-celery	None	None	1B.2	vernal-pools in forest and woodlands, wetland-riparian	May - August	Low. Historic occurrence from Calistoga vicinity.
Fritillaria liliacea	Fragrant fritillary	None	None	1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub; valley and foothill grassland	February - April	High. Numerous occurrences reported by CNDDB from Annadel State Park and elsewhere in vicinity of EIR Study Area.
Gilia capitata ssp. *tomentosa*	Wooly-headed gilia	None	None	1B.1	Coastal bluff scrub and valley grasslands (rocky outcrops and serpentine)	May - July	Low. No known occurrences reported by CNDDB in EIR Study Area.
Hemizonia congesta ssp. *congesta*	Congested-headed hayfield tarplant	None	None	1B.2	Valley and foothill grassland, sometimes roadsides	April - November	High. Numerous historic and recent occurrences reported by CNDDB in EIR Study Area.
Horkelia tenuiloba	Thin-lobed horkelia	None	None	1B.2	Broadleafed upland forest, chaparral, grasslands on sandy soils, mesic openings	May - July	Moderate. Numerous historic occurrences reported by CNDDB in EIR Study Area.
Lasthenia californica ssp. bakeri	Baker's goldfields	None	None	1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps	April - October	Moderate. Historic occurrence reported from the Sebastopol vicinity.
Lasthenia burkei	Burke's goldfields	Endangered	Endangered	1B.1	Vernal pools and swales	April - June	High. Known from vernal pools and seasonal wetlands in western portion of EIR Study Area.
Lasthenia conjugens	Contra Costa goldfield	Endangered	None	1B.1	Freshwater wetlands, valley grassland, wetland-riparian	March - June	Low. Reported from Petaluma vicinity.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Layia septentrionalis	Colusa layia	None	None	1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sandy serpentinite	April - May	High. Recent occurrence reported by CNDDB from EIR Study Area in Fountaingrove area.
Legenere limosa	Legenere	None	None	1B.1	Vernal pools in valley grassland, wetland-riparian	April - June	Moderate. Historic occurrences reported from Santa Rosa vicinity in EIR Study Area.
Leptosiphon jepsonii= Linanthus jepsonii	Jepson's leptosiphon = Jepson's linanthus	None	None	1B.2	Openings in chaparral, cismontane woodland (usually volcanic or periphery of serpentinite)	March - May	High. Historic and recent occurrences reported from Santa Rosa vicinity in EIR Study Area.
Lessingia hololeuca	Wooly-headed lessingia	None	None	3	Broad-leafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland	June - October	Moderate. Historic occurrences reported by CNDDB in EIR Study Area.
Lilium pardalinum ssp. pitkinense	Pitkin Marsh lily	Endangered	Endangered	1B.1	Freshwater wetlands, ffoothill woodland, wetland-riparian	June - July	Low. Known from Pitkin Marsh to west of EIR Study Area.
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools	April - May	High. Known from vernal pools in EIR Study Area.
Lupinus sericatus	Cobb Mountain lupine	None	None	1B.2	Openings in forest, woodland, and chaparral	March - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Micropus amphibolus	Mt. Diablo cottonweed	None	None	3.2	Broad-leafed upland forest, chaparral, cismontane woodland, and valley and foothill grassland	March - May	High. Numerous recent occurrences reported by CNDDB in EIR Study Area from Fountaingrove and Annadel State Park.
Microseris paludosa	Marsh microseris	None	None	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland	April - June	Moderate. Numerous historic occurrences reported by CNDDB in EIR Study Area.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	None	None	1B.1	Vernal pools and swales in grassland, woodland, wetland-riparian	April - July	High. Numerous historic and recent occurrences reported by CNDDB in EIR Study Area.
Navarretia leucocephala ssp. plieantha	Many-flowered navarretia	Endangered	Endangered	1B.2	Freshwater wetlands, yellow pine forest, wetland-riparian	April - June	Moderate. Known from vernal pools along Laguna de Santa Rosa just west of EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	None	None	1B.3	Chaparral	April - August	Low. Several occurrences reported by CNDDB from Hood Mountain area to the southwest of EIR Study Area.
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	None	None	4.2	Moist places in grasslands and woodlands	June - October	Moderate. Historic and recent occurrences from Annadel State Park and wetlands to the west of the EIR Study Area.
Plagiobothrys strictus	Calistoga popcorn-flower	Endangered	Threatened	1B.1	Meadows and seeps, valley and foothill grasslands, and vernal pools/alkaline areas near thermal springs	March - June	Low. Known from Calistoga vicinity.
Pleuropogon hooverianus	North Coast semaphore grass	None	Threatened	1B.1	Wet grassy, usually shady areas, sometimes in freshwater marsh, associated with forest environments	April - June	Moderate. Reported by CNDDB from vernal pools along Laguna de Santa Rosa and Sonoma Mountain.
Poa napensis	Napa blue grass	Endangered	Endangered	1B.1	Occurs in wetlands in valley grassland, wetland-riparian	May - August	Low. Known from Calistoga vicinity.
Potentilla uliginosa	Cunningham Marsh cinquefoil	None	None	1A	Marshes and swamps (freshwater)	May - August	Low. Presumed extinct. Type locality from Cunningham Marsh.
Ranunculus lobbii	Lobb's aquatic buttercup	None	None	4.2	Shallow vernal ponds at low elevations in grasslands, woodlands and forests	February - May	High. Numerous occurrences reported by CNDDB in EIR Study Area.
Rhynchospora alba	White beaked-rush	None	None	2B.2	Bogs and fens, meadows and seeps, marshes and swamps	July - August	Moderate. Known from Pitkin Marsh to west of EIR Study Area.
Rhynchospora californica	California beaked-rush	None	None	1B.1	Bogs, ferns, marshes, swamps, meadows and seeps, lower montane conifer forest	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Rhynchospora capitellata	Brownish beaked-rush	None	None	2.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Rhynchospora globularis	Round-headed beaked-rush	None	None	2.B1	Marshes and swamps	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Sidalcea hickmanii ssp. *napensis*	Napa checkerbloom	None	None	1B.1	Chaparral on rocky rhyolitic volcanic soil	April - June	Low. No known occurrences reported by CNDDB in EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Sidalcea hickmanii ssp. *Viridis*	Marin checkerbloom	None	None	1B.1	Chaparral, cismontane woodland; lower montane coniferous forest	May - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Sidalcea oregana ssp. *valida*	Kenwood marsh checkerbloom	Endangered	Endangered	1B.1	Freshwater wetlands, wetland-riparian	June - September	Moderate. Known from Kenwood Marsh just southeast of EIR Study Area.
Trifolium amoenum	Two-fork clover	Endangered	None	1B.1	Coastal bluff scrub, valley and foothill grassland, sometimes on serpentinite	April - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Trifolium buckwestiorum	Santa Cruz clover	None	None	1B.1	Broadleafed upland forest, cismontane woodland. coastal prairie	April - October	Low. Vague occurrence reported by CNDDB from Santa Rosa area, but no known occurrences in EIR Study Area.
Trifolium hydrophilum	Saline clover	None	None	1B.2	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools	April - June	High. Known occurrences reported by CNDDB in the southern portion of EIR Study Area.
Triquetrella californica	Coastal triquetrella	None	None	1B.2	Coastal bluff scrub, coastal scrub	Year round	High. Known occurrences reported by CNDDB in the southeastern portion of EIR Study Area at Howarth Park.
Viburnum ellipticum	Oval-leaved viburnum	None	None	2B.3	Openings in chaparral, cismontane woodland, lower montane coniferous forest	May - June	Low. Several occurrences reported by CNDDB from Hood Mountain area to the southwest of EIR Study Area.

Notes:
Agencies
USFWS = U.S. Fish and Wildlife Service
CDFW = California Department of Fish and Wildlife
CNPS = California Native Plant Society

CNPS California Rare Plant Rank
1A: Plants presumed extinct in California.
1B: Plants rare, threatened, or endangered in California and elsewhere.
2: Plants rare and endangered in California but more common elsewhere.
3: Plants about which additional data are needed – a review list.
4: Plants of limited distribution – a watch list

Sources: California Native Plant Society, *Inventory of Rare and Endangered Plants,* https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants; Calflora, on-line inventory at https://www.calflora.org; and California Natural Diversity Database Inventory, accessed June 13, 2023.

Existing development limits the likelihood of continued occurrences of populations of special-status plant species in urbanized parts of the EIR Study Area. Many of the special-status plant species occurrences in the protected preserves, open space areas and undeveloped lands at the fringe of the EIR Study Area shown on Figure 4.4-2 most like remain today but are vulnerable to changes such as competition with invasive species, vegetation management, fires and other threats. There remains a possibility that additional populations of one or more species occurs on the remaining undeveloped lands in the EIR Study Area, and detailed systematic surveys would be necessary to confirm presence or absence as part of the environmental review of proposed development applications where suitable habitat is present.

Special-Status Animals

A total of 55 special-status animal species have been recorded or are considered to potentially occur in the vicinity of the EIR Study Area, as listed in Table 4.4-3, *Special-Status Animal Species in the EIR Study Area*, which includes animal species that may occur within or adjacent to the EIR Study Area, along with their listed status, general habitat characteristics, and their likelihood of occurrence in the EIR Study Area. A total of 15 of these occurrences of special-status animal species have actually been reported by the CNDDB within the EIR Study Area. These include: CTS, California red-legged frog (*Rana draytonii*), California giant salamander (*Dicampton ensatus*),western pond turtle (*Actinemys marmorata*), northern spotted owl (*Strix occidentalis caurina*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), tricolored blackbird (*Agelaius tricolor*), yellow rail (*Coturnicops noveboracensis*), steelhead, coho salmon, Chinook salmon, obscure bumble bee (*Bombus caliginosus*), Blemnosperma vernal pool andrenid bee (*Andrena blennospermatis*), and American badger (*Taxidea taxus*). Most of the species listed in Table 4.4-3 that are not State and/or federally listed species are not closely monitored by the CNDDB and therefore occurrence records are not generally included in the database. These include species identified as "Species of Special Concern" by the CDFW.

Federally designated critical habitat for five special-status animal species occurs within or near the EIR Study Area, as shown on Figure 4.4-3, *Special-Status Animals and Critical Habitats*. This consists of designated critical habitat for CTS, California red-legged frog, northern spotted owl, steelhead, and coho salmon. Critical habitat is a specific term and designation under FESA. It serves to identify habitat considered essential to the conservation of a listed species, though the area need not actually be occupied by the species at the time it is designated. Designating an area as critical habitat does not preclude that area from possible future development. It affects federal agency actions such as federally funded programs or applications requiring a federal permit such as permit authorization from the USACE under the Clean Water Act.

For many of the special-status animal species known from Sonoma County, habitat suitability is severely limited by the direct and indirect effects of development. These include the direct loss of habitat as a result of conversion to urban uses, effects of ongoing habitat modifications due to vegetation management and agricultural practices, and indirect effects such as non-point discharge into aquatic habitat and recreational activities on open space lands. Habitat fragmentation is an important consideration in evaluating the recovery of listed species and the viability of natural communities as a whole. Identification and protection of essential habitat for special-status species must be recognized during the environmental review of proposed development applications and in planning future open

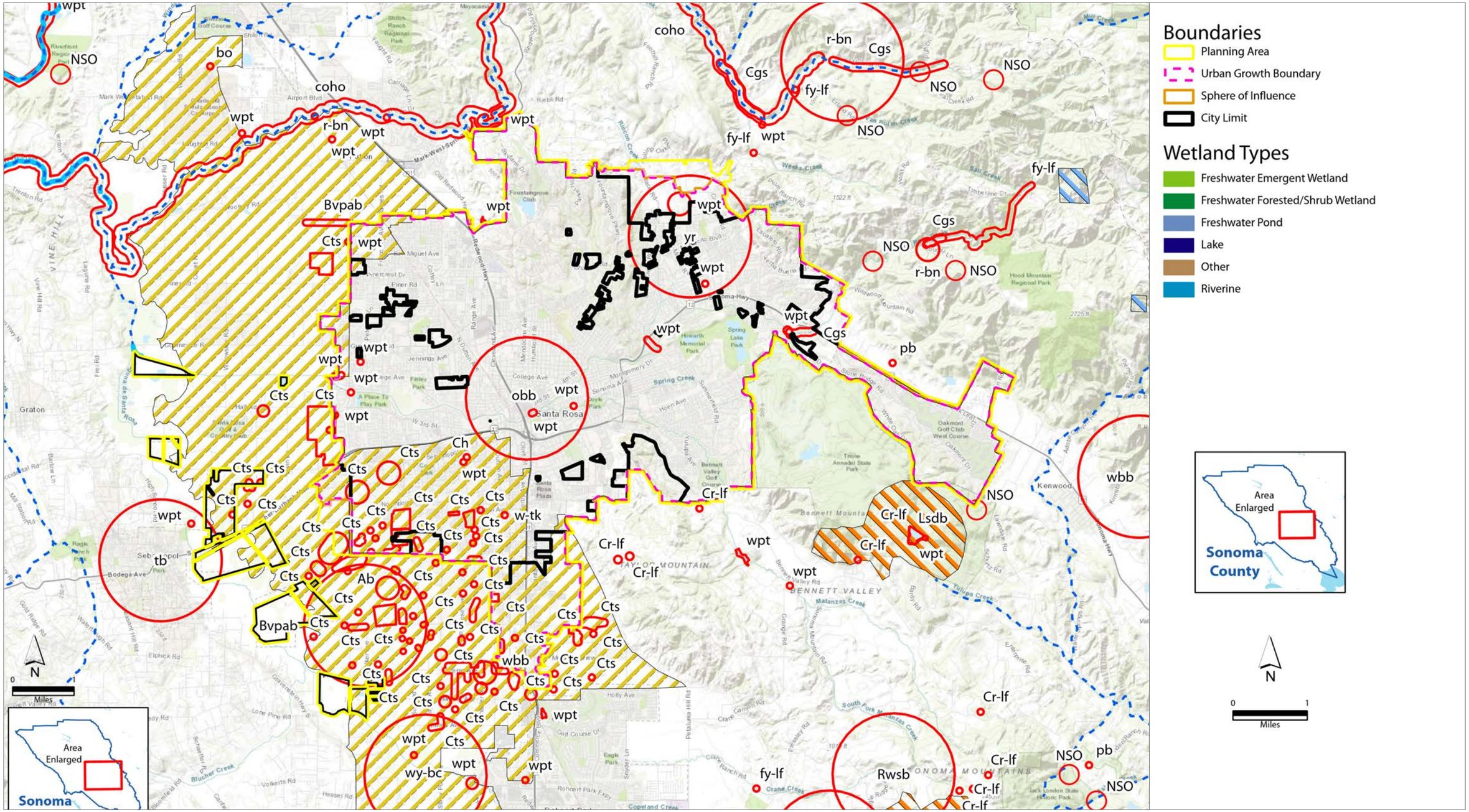
space acquisitions. Detailed surveys should be conducted for sites where there is a potential for occurrence of special-status animal species.

A number of special-status species known from Sonoma County and the Santa Rosa vicinity are wide ranging and are the focus of management efforts by trustee agencies. Listed species of particular concern include: CTS, California red-legged frog, coho salmon, steelhead trout, Chinook salmon, and northern spotted owl. Western pond turtle has no legal protective status under the ESAs, but has been reported throughout the EIR Study Area, as indicated on Figure 4.4-3. The following provides a summary of relevant management issues for each of these species.

Coho Salmon, Steelhead Trout, and Chinook Salmon

Coho salmon, steelhead trout, and Chinook salmon are all listed as threatened under the federal ESA, and all are anadromous, spawning in coastal streams and rivers and then migrating to and maturing in the ocean. Timber harvest activities, overgrazing, gravel mining operations, channel modifications and removal of riparian vegetation, flood control facilities, hydroelectric facilities, and secondary water quality degradation have all contributed to a decline of these species. Coho and steelhead are native species of the county, which is part of the Central California Coast Evolutionarily Significant Unit (ESU) defined as part of species listings. The Russian River and some tributary drainages such as the lower reach of Mark West Creek are part of the California Coastal ESU for Chinook salmon. As indicated on Figure 4.4-3, a number of creeks in or near the EIR Study Area have been designated critical habitat for steelhead and Chinook salmon. Where a record of Chinook or steelhead has been reported from a stream, the entire drainage has been indicated by the CNDDB as supporting the species, although habitat conditions have sometimes not been confirmed in the field.

Sonoma County participated in the FishNet 4C program, which is a county-based, regional salmonid protection and restoration program created under a Memorandum of Agreement between six central California coastal counties: Marin, Mendocino, Monterey, San Mateo, Santa Cruz, and Sonoma. FishNet 4C recognizes the need for these counties to meet the requirements of the ESA in protecting anadromous salmonids and their habitats. Given these requirements, a prime objective of the FishNet 4C program was to evaluate the land management practices of each county and any written policies related to protecting salmonid populations, and to make recommendations for improving these practices and policies. Subsequent programs for salmonid restoration included the work of Russian River Coho Water Resources Partnership (Coho Partnership). The Coho Partnership prioritized water management planning and water storage projects with the goal of allowing people to meet water needs in ways that improve stream conditions for coho salmon. Key conservation strategies also included augmenting, monitoring, and evaluating coho populations, some of which continues today as part of the work Sonoma Water is undertaking as restoration on Dry Creek and monitoring at Mirabel Dam on the Russian River.



Source: California Natural Diversity Database release date 4/1/2023 accessed on 4/6/2023; USFWS critical hatitat data release dare 3/23/2023 accessed on 4/6/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

Figure 4.4-3
Special-Status Animals and Critical Habitats

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Fish						
Hysterocarpus traskii pomo	Russian River tule perch	None	None	Species of Special Concern	Subspecies confined to Russian River drainage. Requires clear, flowing water and abundant cover	Low. Known from Russian River and tributary drainages, possibly including Santa Rosa Creek and possibly lower reach of Mark West Creek.
Lampetra ayresi	River lamprey	None	None	None	Clean gravelly riffle necessary for spawning; ammocoetes require sandy stream edges or backwaters	Low. Presumably occupies lower reach of Russian River.
Hesperoleucus venustus navarroensis [a]	Northern Coastal roach	None	None	Species of Special Concern	Slow, warm reaches of streams, in Russian River and Navarro River drainages	Low. Prefers estuarian conditions near mouth of Russian River.
Oncorhynchus kisutch	Coho salmon (Central California Coast ESU)	Endangered	Endangered	None	Coastal streams from Punta Gorda in northern California down to and including the San Lorenzo River in central California, as well as some tributaries to San Francisco Bay	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Oncorhynchus tshawytscha pop. 17	Chinook salmon (California Coastal ESU)	Threatened	None	None	Requires clear, cool streams with pools and riffles, with coarse gravel beds for spawning. Sacramento River and its tributaries	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Oncorhynchus mykiss irideus pop. 8	Steelhead (Central California Coast ESU)	Threatened	None	None	Coastal streams from Russian River south to Aptos Creek (Santa Cruz Co.), including streams tributary to San Francisco and San Pablo Bays	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Amphibians and Reptiles						
Ambystoma californiense pop. 3	California tiger salamander - Sonoma County DPS	Endangered	Threatened	None	Breed in stock ponds, vernal pools, and slow-moving streams Retreats to aestivations habitat in summer and winter, occupying mammal burrows and other refugia	Moderate. Known throughout the western and southern portions of EIR Study Area where breeding and aestivation habitat remains and designated critical habitat is present.
Rana boylii pop. 1	Foothill yellow-legged frog - north coast DPS	None	None	Species of Special Concern	Perennial streams and drainages with cobble substrate	Moderate. CNDDB occurrences to the north and south of EIR Study Area.
Rana draytonii	California red-legged frog	Threatened	None	Species of Special Concern	Ponds, streams, drainages and associated uplands; requires areas of deep, still, and/or slow-moving water for breeding	Moderate. CNDDB occurrences from Annadel State Park, Taylor Mountain and other locations just outside EIR Study Area with designated critical habitat extending over a portion of Annadel State Park and Sonoma Mountains to the south.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Taricha rivularis	Red-bellied newt	None	None	Species of Special Concern	Found along coast from Bodega in Sonoma County, inland to Lower Lake, and north to Honeydew, Humboldt County in coastal woodlands, especially in redwood forests	Moderate. Observed in Sonoma County where suitable habitat is present. CNDDB occurrences from drainages in Mayacamas Mountains to east of EIR Study Area.
Dicampton ensatus	California giant salamander	None	None	Species of Special Concern	Ponds, streams, drainages and associated uplands; prefers fast moving water in coastal forests and valley-foothill riparian habitats with cover	Moderate. CNDDB occurrence from drainages along Hood Mountain and upper Mark West Creek watershed to east and north of EIR Study Area.
Actinemys marmorata	Western pond turtle	None	None	Species of Special Concern	Ponds, streams with deep pools, drainages and associated uplands for egg laying	High. Numerous CNDDB occurrences throughout EIR Study Area.
Invertebrates						
Andrena blennospermatis	Vernal pool andrenid bee	None	None	None	Upland areas near vernal pools	High. CNDDB occurrences from vernal pools at western edge of EIR Study Area.
Bombus caliginosus	Obscure bumble bee	None	None	None	Coastal areas from Santa Barbara County to Washington	Low. Historic occurrence reported by CNDDB from EIR Study Area but most occurrences now reported from coastal areas.
Bombus crotchii	Crotch bumble bee	None	Candidate	None	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease	Low. Substantial decline in the northern part of its range and is now believed to be possibly extirpated from Santa Rosa vicinity.
Bombus occidentalis	Western bumble bee	None	Candidate	None	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease	Low. Considerable range contraction and now considered confined to higher elevations of Sierra Nevada and portions of North Coast of California.
Caecidotea tomalensis	Tomales isopod	None	None	None	Prefers practically still to slow-moving, vegetated water, such as from springfed ponds	Low. Known from scattered occurrences in Sonoma County, including along the coast and south of Santa Rosa vicinity.
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	None	None	None	Found in freshwater ponds, shallow water of streams marshes and lakes	Moderate. General occurrence reported by CNDDB from Sonoma Mountain and may occur where suitable habitat is present.
Hydroporus leechi	Leech's skyline diving beetle	None	None	None	Shallow water in vernal pools and ponds	Moderate. Known occurrence reported by CNDDB from Annadel State Park and may occur where suitable habitat is present.
Linderiella occidentalis	California linderiella	None	None	None	Vernal pools, seasonal wetlands	Moderate. No occurrences reported by CNDDB in Santa Rosa vicinity, but suitable habitat is present in Santa Rosa Plain.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Syncaris pacifica	California freshwater shrimp	Endangered	Endangered	None	Found in low-elevation, low gradient perennial freshwater streams where banks are structurally diverse with undercut banks, exposed roots, or overhanging woody debris or vegetation	Low. No known occurrences reported by the CNDDB in EIR Study Area but reported from Laguna de Santa Rosa, Blucher Creek and Sonoma Creek.
Birds						
Pelecanus erythrorhynchos	American white pelican	None	None	Species of Special Concern	Forages over shallow inland waters and coastal marine habitats, nests on isolated islands or peninsulas	Moderate. May forage and roost in the open water habitat of larger water bodies but does not breed in San Francisco Bay Area.
Ardea alba	Great egret (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Ardea herodias	Great blue heron (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Egretta thula	Snowy egret (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Nycticorax nycticorax	Black-crowned night heron (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Accipiter cooperii	Cooper's hawk	None	None	None	Found in range of wooded habitats, including openings in woodlands, forests, parklands and riparian areas	High. Observed in Sonoma County where suitable habitat is present.
Accipiter striatus	Sharp-shinned hawk	None	None	None	Heavily wooded areas along streams or near springs; forages in seasonal wetlands	High. Observed in Sonoma County where suitable habitat is present.
Elanus leucurus	White-tailed kite	None	None	Fully Protected Species	Open grasslands, meadows, or marshes; require dense- topped trees or shrubs for nesting and perching	High. Observed in Sonoma County where suitable habitat is present.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Haliaeetus leucocephalus	Bald eagle	Delisted	Endangered	Fully Protected Species	Ocean shorelines, lake margins, and rivers for both nesting and wintering; nests in large trees with open branches	Moderate. Known to occasionally forage along lower reaches of major drainages and shoreline of larger water bodies, but not likely to remain for long periods or breed in EIR Study Area.
Pandion haliaetus	Osprey	None	None	Species of Special Concern	Rivers, lakes, where fish can be obtained from food	Moderate. Observed in Sonoma County where suitable habitat is present.
Circus cyaneus	Northern harrier	None	None	Species of Special Concern	Nests in wet meadows and marshes, forages over open grasslands and agricultural fields	High. Observed in Sonoma County where suitable habitat is present.
Aquila chrysaetos	Golden eagle	None	None	Fully Protected Species	Rolling foothills and mountain areas. Nests in cliff- walled canyons or large trees in open areas	Moderate. Observed in Sonoma County where suitable habitat is present.
Falco peregrinus	American peregrine falcon	Delisted	Delisted	Fully Protected Species	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings	Moderate. May occasionally forage in EIR Study Area, but not likely to breed due to the lack of suitable nesting habitat.
Coturnicops noveboracensis	Yellow rail	None	None	Species of Special Concern	Shallow marshes with fairly short vegetation	Moderate. Historic occurrence reported by CNDDB from EIR Study Area.
Athene cunicularia	Burrowing owl	None	None	Species of Special Concern	Open, dry grasslands that contain abundant ground squirrel burrows	Moderate. Observed in Sonoma County where suitable habitat is present, with CNDDB records to the south of EIR Study Area.
Asio flammeus	Short-eared owl	None	None	Species of Special Concern	Found in open country and grasslands	Moderate. Observed in Sonoma County where suitable habitat is present.
Asio otus	Long-eared owl	None	None	Species of Special Concern	Conifer, oak, riparian, pinyon-juniper, and desert woodlands adjacent to grasslands, meadows, or shrublands	Moderate. Observed in Sonoma County where suitable habitat is present.
Strix occidentalis caurina	Northern spotted owl	Threatened	Candidate	Species of Special Concern	Dense forest and woodland, with suitable prey	Moderate. CNDDB occurrences from Bennett Mountain and western slopes of Mayacamas Mountains, with designated critical habitat at edge of EIR Study Area.
Contopus cooperi	Olive-sided flycatcher	None	None	Species of Special Concern	Coniferous forests with open canopies	Moderate. Observed in Sonoma County where suitable habitat is present.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Lanius ludovicianus	Loggerhead shrike	None	None	Species of Special Concern	Open grasslands and woodlands with scattered shrubs, fence posts, utility lines, or other perches; nests in dense shrubs and lower branches of trees	Moderate. Observed in Sonoma County where suitable habitat is present.
Progne subis	Purple martin	None	None	Species of Special Concern	Woodlands; nests in tree snags and abandoned woodpecker cavities and human-made structures	Moderate. Observed in Sonoma County where suitable habitat is present.
Phalacrocorax auritus	Double-crested cormorant (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including open water and shorelines, including lakes and reservoirs. Colonial roosting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Ammodramus savannarum	Grasshopper sparrow	None	None	Species of Special Concern	Grasslands with scattered shrubs	Moderate. Observed in Sonoma County where suitable habitat is present.
Agelaius tricolor	Tricolored blackbird	None	None	Species of Special Concern	Nests in dense vegetation near open water; forages in grasslands and agricultural fields	Moderate. Historic occurrence reported by CNDDB from the Sebastopol vicinity west of the EIR Study Area.
Mammals						
Antrozous pallidus	Pallid bat	None	None	Species of Special Concern	A variety of open arid habitats (e.g., chaparral, open woodland, deserts); primary roost sites include bridges, old buildings, and in tree hollows and/or bark; sometimes roost in caves and rock crevices	Moderate. Suitable habitat present and occurrences reported by CNDDB from Kenwood vicinity southeast of EIR Study Area.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	Species of Special Concern	Roots in the open in a variety of habitats, including tree cavities, caves and old buildings. Extremely sensitive to human disturbance	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Lasiurus blossevillii	Western red bat	None	None	Species of Special Concern	Forested canyons and riparian woodlands for roosting, a variety of open habitats for foraging; typically roosts in snags and trees with moderately dense canopies	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Lasiurus cinereus	Hoary bat	None	None	None	Prefers open habitats with access to trees for cover, roosting in dense foliage	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Myotis evotis	Long-eared myotis	None	None	None	Occurs in semiarid shrublands, sage, chaparral, agricultural areas, and most frequently in coniferous forests. Roost under exfoliating tree bark, hollow trees, caves, mines, cliff crevices, sink holes, rocky outcrops	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis thysanodes	Fringed myotis	None	None	None	Inhabits a variety of habitats including pinyon-juniper woodland, valley foothill hardwood, hardwood-conifer forests, and desert scrub	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis volans	Long-legged myotis	None	None	None	Inhabits forests and woodland habitats, primarily oak and juniper woodlands	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis yumanensis	Yuma myotis	None	None	None	Occurs in riparian, arid scrublands and deserts, and forests. Roosts in bridges, buildings, cliff crevices, caves, mines, and trees. Forages over open water	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Puma concolor	Mountain lion	None	None	None	Found in nearly all habitats, except croplands in the Central Valley. Most abundant in riparian areas, chaparral and scrub, and brushy stages of most habitats	High. Known from EIR Study Area where suitable habitat and movement corridors are present.
Taxidea taxus	American badger	None	None	Species of Special Concern	Open habitats with friable soils and small mammal prey base.	Moderate. Suitable habitat present and CNDDB occurrence reported just southwester of EIR Study Area.

Notes:
a. As of 2021, CDFW classifies roach in the Russian River watershed as "Northern Coastal", *Hesperoleucus venustus navarroensis.* Prior to 2021, the roach in the Russian River was known as *Lavinia symmetricus navarroensis.*
Agencies
USFWS = U.S. Fish and Wildlife Service
CDFW = California Department of Fish and Wildlife
ESU = Evolutionary Significant Unit
DPS = Distinct Population Segment
Sources: California Native Plant Society, *Inventory of Rare and Endangered Plants,* https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants; California Department of Fish and Wildlife, 2019; and California Natural Diversity Database, accessed June 13, 2023.

California Tiger Salamander

The Sonoma County population of CTS is listed as endangered by the USFWS and threatened by the CDFW. This species occurs in grassland and savanna habitat, breeding in vernal pools and swales, seasonal drainages, and man-made ponds, and spending most of the year in subterranean refugia such as rodent burrows, cracks, and under rocks and logs. Adults migrate to suitable breeding locations with the onset of sustained rainfall, and have been reported to move considerable distances. Most of the occurrences of CTS in Sonoma County are from the complex of vernal pools and drainages of the Santa Rosa Plain along the Laguna de Santa Rosa watershed, generally between Sebastopol, Santa Rosa, and Cotati. Extensive habitat conversion and fragmentation of breeding habitat has eliminated this species from much of its former range and is considered a serious threat to the Sonoma County population. As indicated on Figure 4.4-3, numerous occurrences of this species have been reported by the CNDDB in western and southwestern Santa Rosa, and designated critical habitat extends over or borders the western edge of the EIR Study Area.

California Red-Legged Frog

This species is listed as threatened by the USFWS and is recognized as a CSC by the CDFW. It typically occurs in aquatic habitat of streams and ponds but can disperse considerable distances in search of breeding and aestivation sites. Scattered occurrences of California red-legged frog are known from the Taylor Mountain and Bennett Mountain vicinities. As indicated on Figure 4.4-3, designated critical habitat extends over part of Trione-Annadel State Park and the Sonoma Mountains further south. Continued loss of upland dispersal habitat, fragmentation of remaining breeding locations, competition and predation by bullfrog, and degradation of aquatic habitat are primary concerns regarding protection and recovery of this species.

Western Pond Turtle

This species has no State or federal listing but is recognized as a CSC by the CDFW. Western pond turtles occur in a wide variety of aquatic habitats, including ponds, lakes, marshes, rivers, streams, and canals that typically have a rocky or muddy bottom and contain stands of aquatic vegetation. The presence or absence of pond turtles at a given aquatic site is largely dependent on the availability of suitable basking sites and adjacent upland habitat for egg-laying (e.g., sandy banks or grassy open fields) and over-wintering. Nests are typically dug in dry substrate with a high clay or silt fraction since the female moistens the site where she will excavate the nest prior to egg-laying. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage. Western pond turtles have been reported from scattered locations throughout the EIR Study Area where suitable habitat is present, as indicated on Figure 4.4-3. Other freshwater bodies and drainages with deep pools may provide suitable habitat for this species.

Northern Spotted Owl

The USFWS listed the northern spotted owl as a threatened species in 1990. The southern limit of their range extends across the coastal and inland forests and woodlands of Sonoma County southward into Marin County. Occurrences of this species extend along the entire coast of the county, the Mayacamas Mountains, and Sonoma Mountain. Ongoing studies have been conducted to monitor population health and further define essential habitat. The southern population of spotted owl is subject to several threats, including: habitat loss and disturbance due to timber harvest, agricultural conversion, and development at the fringe of existing forest and woodland habitat; severe fires and hazardous fuel management; potential for catastrophic wildfire along the urban/wildland interface; and continued range expansion of the barred owl. Of particular concern is the continuing die-off of tanbark and coast live oaks throughout spotted owl habitat due to SOD, and the long-term impacts this may have on prey populations and owl nesting and foraging habitat.

Sensitive Habitats

Sensitive Natural Communities

The CDFW tracks the occurrences of "special" plant communities that are either known or believed to be of high priority for inventory in the CNDDB. These plant communities are listed in the CDFW *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* publication, which is updated periodically and available online on CDFW's website.[18] These communities are sometimes addressed by lead or trustee agencies, but generally are not afforded the same protection as CNPS Rank 1B and 2 plant species. Many sensitive natural community types support special-status plants and animals and are addressed under CEQA as essential habitat for those species.

Sensitive natural community types in the EIR Study Area vicinity include vernal pools and swales, native riparian woodland and scrub, freshwater marsh, and remnant native grasslands, among other community types. Figure 4.4-2 shows the location of a number of larger vernal pools in the western portion of the EIR Study Area, and most of the features identified as riparian and aquatic wetlands on Figure 4.4-1 likely qualify as sensitive natural communities where they haven't been compromised by past disturbance. However, most of these sensitive natural community types have not been mapped and are not monitored by the CNDDB.

In addition, other sensitive natural community types are known from the EIR Study Area. Based on the *Manual of California Vegetation* classification system and latest list of terrestrial natural communities prepared by CDFW, these sensitive natural communities include Black Oak Forests and Woodlands, Coastal and Montane Redwood Forests, Douglas Fir Forests, California Bay Forests and Woodlands, California Buckeye Woodlands, Coyote Brush Scrub, freshwater marsh, freshwater seeps and springs, and native grasslands.[19] Occurrences of these sensitive natural community types are most likely present within

[18] California Department of Fish and Game, 2003, *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database,* Wildlife and Habitat Data Analysis Branch, Vegetation Classification and Mapping Program, California Department of Fish and Game, Sacramento.

[19] John Sawyer and Todd Keeler-Wolf, 1995, *A Manual of California Vegetation*, California Native Plant Society, Sacramento.

the remaining undeveloped woodland, forest, and grasslands in the EIR Study Area, but they have not been mapped as part of the CNDDB mapping program. Detailed surveys would be required to provide confirmation of presence or absence from undeveloped portions of the EIR Study Area where thorough studies have not been conducted.

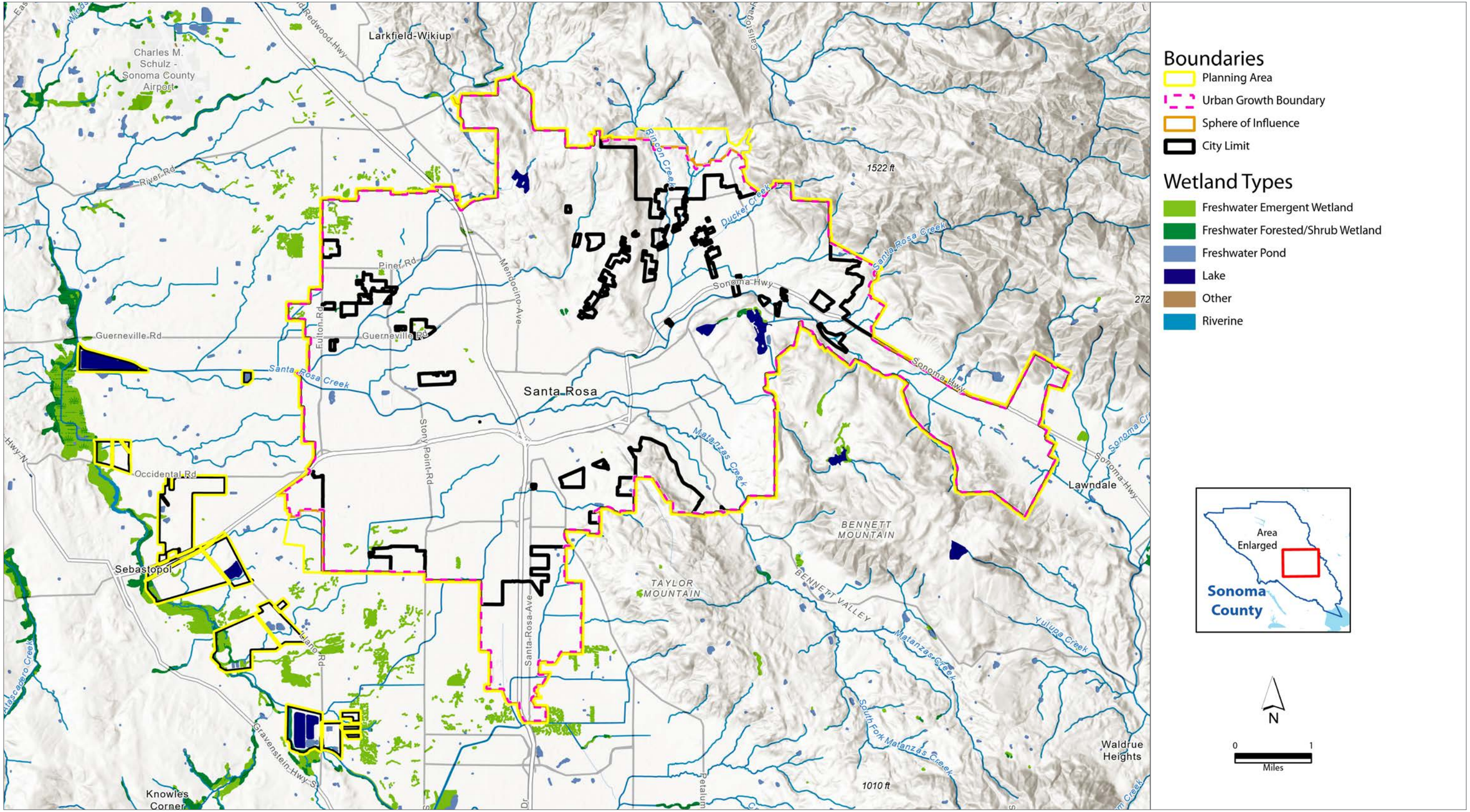
Wetlands and Jurisdictional Waters

As defined by the USACE, wetlands are areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted for life in saturated soil. Wetlands include swamps, marshes, bogs and similar areas. As a significant natural resource, wetlands serve important functions relating to fish and wildlife. Such functions include food chain production, habitat, nesting spawning, rearing and resting sites for aquatic and land species. They also provide protection of other areas from wave action and erosion; storage areas for storm and flood waters; natural recharge areas where ground and surface water are interconnected; and natural water filtration and purification functions.[20]

A formal jurisdictional delineation of wetlands and other waters of the U.S. and State was not conducted for the EIR Study Area. However, based on information available from the National Wetlands Inventory shown on Figure 4.4-4, *Wetlands*, numerous features within the EIR Study Area can be assumed to fall under jurisdiction of the USACE, RWQCB and CDFW, as discussed in Section 4.4.1.1, R*egulatory Framework*. Features within the EIR Study Area likely to be regulated waters include Santa Rosa Creek and the extensive network of tributary drainages mapped as riverine habitat on Figure 4.4-4, smaller tributaries to the Laguna de Santa Rosa in the southwestern part of the EIR Study Area such as Roseland Creek and Colgan Creek, scattered freshwater waterbodies (i.e. pond or lakes), and areas of freshwater marsh and seasonal wetlands present throughout the western undeveloped lands and periphery of the Laguna de Santa Rosa. Additional jurisdictional wetlands and other waters of the U.S. may be present elsewhere in the EIR Study Area, but detailed site-specific assessments would be required to confirm presence or absence from undeveloped lands.

Federally regulated waters along the numerous drainages in the EIR Study Area are defined by the "ordinary high-water mark" rather than the band of adjacent riparian vegetation, limiting USACE jurisdiction where riparian scrub and forest extend a considerable distance from the channel bank. However, the limits of State waters regulated by CDFW and North Coast RWQCB encompass both the bed and bank of drainageways, as well as the limits of the associated riparian vegetation where it extends beyond the top of bank. Both agencies typically request that an adequate setback be provided to avoid both direct and indirect impacts on riparian corridors as part of environmental review for specific development plans.

[20] US Army Corps of Engineers, Headquarters Website, Regulatory Program and Permits, https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Frequently-Asked-Questions, accessed August 18, 2023.



Source: US Fish and Wildlife Service (https://www.fws.gov/node/264847). Downloaded on 4/27/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

Figure 4.4-4
Wetlands

4.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impact to biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan.
7. Result in significant cumulative impact related to biological resources.

4.4.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

BIO-1 Implementation of the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Local, regional, State, and federal regulations provide varying levels of protection for special-status species, depending on a number of factors, including legal protective status, rarity and distribution, the magnitude of the potential impact on essential habitat, specific occurrence and overall population levels, and take of individual plants or animals. Activities requiring discretionary approvals by local, regional, State, and federal agencies provide for the greatest oversight because each potential future development that could occur from implementation of the proposed project must be evaluated for their potential impact on special-status species and other sensitive biological resources.

As indicated in Table 4.4-2, 69 special-status plant species are considered to have some potential for occurrence within or in the vicinity of the EIR Study Area, with a total of 19 of these special-status plant species having been reported by the CNDDB that occur within the EIR Study Area. Most of the special-status plant species occurrences in the EIR Study Area are associated with the vernal pools and seasonal wetland habitat of the Santa Rosa Plain, including Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam, many-flowered navarretia, Sonoma Alopecurus, dwarf downingia, Baker's navarretia, and saline clover. Other special-status plant species reported by the CNDDB from the EIR Study Area include several species of ceanothus found in scrub and chaparral habitats, and forb species found in grassland habitats such as big-scale balsamroot (*Balsamorhiza macrolepis*), narrow-anthered California brodiaea (*Brodiaea californica* var. *leptandra*), and fragrant fritillary (*Fritillaria liliacea*). Further detailed investigation is typically necessary to determine whether any occurrences of special-status plant species are present on undeveloped sites with natural habitat and appropriate habitat conditions.

As indicated in Table 4.4-3, 55 special-status animal species have some potential to occur in or frequent the EIR Study Area. Of these, a total of 15 have been reported from or are considered to have a high potential to occur in or frequent the EIR Study Area. Many of these are also associated with the vernal pool, seasonal wetlands, and riparian corridors that provide essential habitat for these species, including: CTS, California red-legged frog, western pond turtle, steelhead, coho salmon, Chinook salmon, yellow rail, and California giant salamander, among others. As shown in Table 4.4-3, these have varied legal status or are considered Species of Special Concern by the CDFW. A few have no special status but are monitored by the CDFW because of recent declines and abundance such as Cooper's hawk and other birds. Further detailed investigation is typically necessary to determine whether any occurrences of special-status animal species are present on undeveloped sites with natural habitat and appropriate habitat conditions.

As discussed in Chapter 3, *Project Description,* of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would be concentrated in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where special-status species have a lower likelihood to be present. The potential for occurrence of special-status species in developed areas is typically remote in comparison to undeveloped lands with natural habitat that contain essential habitat

characteristics for the range of species known in the EIR Study Area vicinity. While the potential for adverse impacts on special-status species is relatively low, there remains a varying potential for loss or disruption due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance. Grading and other construction disturbance to existing natural habitat could eliminate occurrences of special-status plants and individuals or occurrences of special-status animal species, or further isolate them from other occurrences where urbanization creates barriers between the remaining areas of natural habitat. This includes possible loss or disturbance to bird nests in active use, conflicting with both the MBTA and CFGC. Of particular concern is the possible impact on CTS as a result of anticipated future development in the western and southern parts of the EIR Study Area given the importance of the Santa Rosa Plain to the Sonoma County population, where further fragmentation could isolate individuals from suitable aestivation and breeding habitat or increase the potential for take from intensified human activity.

As part of the permitting project with the USACE, projects affecting federally regulated waters must demonstrate that they would not have an adverse effect on federally listed species or would be required to provide adequate compensatory mitigation where avoidance is infeasible. For those projects within the boundaries of the SRPCS, including western and southern Santa Rosa, they must comply with the rigorous conditions of the Biological Opinion issued by the USFWS in addressing potential effects on CTS, Burke's goldfields, Sebastopol meadowfoam, and Sonoma sunshine.

Furthermore, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including special-status species, on a project-by-project basis. The following goal, policies, and actions would serve to minimize impacts related to sensitive habitats and species in the EIR Study Area:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
    - Action 3-5.5: Explore options that help to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special- status species, such as:
      - Avoidance of sensitive habitat.
      - Clustered development.
      - Transfer of development rights.
      - Compensatory mitigation, such as habitat restoration or creation.
    - *Action 3-5.7: Continue to consult with the California Department of Fish and Wildlife to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the populations of plants and animals currently found in the UGB.
    - Action 3-5.9: Explore using mitigation fees to protect environmentally sensitive resource lands and/or endangered species habitat areas that are subject to development.

- *Action 3-5.10: Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species.

- Policy 3-5.4: Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including, but not limited to, aquatic or terrestrial vegetated open space, systems that provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.
  - *Action 3-5.11: Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat.
  - *Action 3-5.12: Require that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. Compliance guidelines are detailed in the General Plan Environmental Impact Report.
  - *Action 3-5.13: Develop and adopt a bird-safe design ordinance to provide specific criteria and refined guidelines as part of design review of new buildings and taller structures to protect birds from injury and mortality from collisions with buildings, towers, and other human-made structures.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is habitat for special-status species and sensitive natural communities, including wetlands and nesting areas, impacts from the proposed project are potentially *significant*.

Impact BIO-1: Impacts to special-status species or the inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), could occur as a result of implementation of the proposed project.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including special-status species and active bird nests, on a project-by-project basis. Proposed General Plan 2050 *Action 3-5.7 requires the City to consult with CDFW to identify significant environments and develop a strategy for maintaining areas that will preserve special-status species; *Action 3-5.10 requires the City to continue to implement existing regulations to conserve habitat for special-status species; and *Action 3-5.11 requires the City to have biological resource assessments prepared that identify potential impacts and mitigation measures for protecting the resources for proposed development on sites that may support special-status species. In addition, proposed *Action 3-5.12 and *Action 3-5.13 require the protection of bird habitat, including the possible loss or disturbance to bird nests in active use, which conflicts with both the MBTA and CFGC. Implementation of the proposed General Plan 2050 goal, policies, and actions listed above, in

conjunction with adherence to State and federal regulations related to the protection of special-status species, including the *Santa Rosa Plain Conservation Strategy* where applicable, would address potential impacts of anticipated future development under the proposed project. Future development would continue to be reviewed through the City's entitlement process and CEQA, when applicable, to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources. Ultimately, potential future development in Santa Rosa over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 goal, policies, and actions discussed above, which would ensure that potential impacts on special-status species would be *less than significant*.

BIO-2 Implementation of the proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Without adequate avoidance and thorough construction controls, potential impacts on riparian habitats and other sensitive natural communities may occur as both direct and indirect impacts associated with implementation of the proposed project. Direct impacts occur as a result of converting areas of a sensitive natural community to new development. Direct impacts may also be temporary in nature if they disturb a habitat that is subsequently restored after construction. Indirect impacts could be caused by changes in hydrology and water quality or through increases in sedimentation as a result of grading, and the introduction of urban pollutants could also have indirect impacts on aquatic habitat and contribute to a reduction in the value of downgradient waters.

As discussed in Section 4.4.1.2, *Existing Conditions*, sensitive natural communities in the EIR Study Area include riparian habitat along the numerous creeks, areas of freshwater marsh, vernal pools and swales, and remnant stands of native grasslands. Figure 4.4-1 shows the known location of well-developed riparian habitat, freshwater marsh, and vernal pools. Most of these features are also identified as wetlands under the National Wetlands Inventory, as shown on Figure 4.4-4 and discussed further under impact discussion BIO-3. Other sensitive natural community types in the EIR Study Area, not mapped in the CNDDB inventory and as part of the National Wetland Inventory, include Black Oak Forests and Woodlands, Coastal and Montane Redwood Forests, Douglas Fir Forests, California Bay Forests and Woodlands, California Buckeye Woodlands, Coyote Brush Scrub, smaller locations of freshwater marsh, freshwater seeps and springs, and native grasslands. Additional occurrences of these sensitive natural community types are most likely present within the remaining woodland, forest, and grasslands in the EIR Study Area, but they have not been mapped as part of the CNDDB or other mapping programs. Further detailed investigation is typically necessary to determine whether any sensitive natural communities are present on undeveloped sites with natural habitat and appropriate setbacks to ensure their protection.

Potential future development that occurs from implementation of the proposed project would be required to comply with SRCC Section 20-30.040 related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*. Furthermore, Chapter 3, *Circulation,*

Open Space, Conservation, and Greenhouse Gas Reduction, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including riparian habitats and other sensitive natural community types, on a project-by-project basis. In addition to the goal, policies, and actions identified under impact discussion BIO-1, the following General Plan goal, policies, and actions would serve to minimize impacts on riparian, wetlands and other sensitive natural communities in the EIR Study Area:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
    - Action 3-5.6: Protect high-quality wetlands and vernal pools from development and other activities.
    - Action 3-5.8: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).
  - Policy 3-5.5: Maintain, restore, and protect the city's waterways.
    - Action 3-5.14: Implement the Citywide Creek Master Plan and promote a "one water" approach that teaches preservation and stewardship of local creeks and water resources.
    - Action 3-5.15: Periodically review the status of local creeks and plan for ongoing restoration, planning, and stewardship, as identified in the Citywide Creek Master Plan.
    - Action 3-5.16: Seek funding to maintain and restore citywide creeks, including for recreational opportunities linked to creeks as well as for flood control.
    - Action 3-5.17: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.
  - Policy 3-5.6: Restore channelized waterways and avoid creating additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.
    - Action 3-5.18: Restore and enhance the ecological function of channelized waterways, consistent with the Citywide Creek Master Plan, and avoid channelizing additional segments of the waterways system.
  - Policy 3-5.7: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.
    - *Action 3-5.19: Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for shared use paths and recreation.

- *Action 3-5.20: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

- Policy 3-5.8: Encourage multiple use of waterways, including:
  - Flood mitigation and storage;
  - Groundwater recharge;
  - Opportunities for restoration and stewardship;
  - Climate adaptation;
  - Wildlife habitats;
  - Passive recreational open space uses;
  - Nature study;
  - Pedestrian and bicycle circulation; and
  - Other compatible outdoor uses.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFW or USFWS, impacts from the proposed project are potentially *significant*.

Impact BIO-2: Impacts to riparian areas, drainages, and sensitive natural communities could occur from potential future development under the proposed General Plan 2050 where natural habitat remains.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including riparian areas, drainages, and sensitive natural communities, on a project-by-project basis. Proposed *Action 3-5.19 requires that new development along channelized waterways establish an ecological buffer zone between the waterway and development and *Action 3-5.20 requires new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the zoning code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals. Also, as described under impact discussion BIO-1, proposed *Action 3-5.7, *Action 3-5.10, and *Action 3-5.11 require agency consultation, implementation of existing regulations, and preparation of technical reports that identify and mitigate project-specific impacts. Implementation of the proposed General Plan 2050 goals, policies, and actions listed above would serve to ensure that occurrences of sensitive natural communities are identified, avoided, or adequately mitigated. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including sensitive natural communities. Potential future development over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 policies and actions discussed above, which would ensure that potential impacts on sensitive natural communities would be *less than significant*.

BIO-3 Implementation of the proposed project could have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Development and land use activities associated with implementation of the proposed project could result in direct loss or modification to existing wetlands and unvegetated other waters, as well as indirect impacts due to water quality degradation. Affected wetlands could include both the wetland-related sensitive natural community types described under impact discussion BIO-2, as well as areas of open water, degraded and modified streams and channels, unvegetated waters, and isolated seasonal wetlands or freshwater seeps. Indirect impacts to wetlands and other jurisdictional waters include an increase in the potential for sedimentation due to construction grading and ground disturbance, an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and an increase in the potential for water quality degradation due to increased levels in nonpoint pollutants.

Water quality degradation may occur even when wetlands and unvegetated channels are avoided by proposed development if setbacks are inadequate to provide critical vegetation filtration functions. Indirect water quality-related issues are discussed further in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR; as discussed under impact discussion HYD-1, water quality impacts were determined to be less than significant. Refer to Chapter 4.10 of this Draft EIR for a list of proposed General Plan 2050 goals, policies, and actions that would serve to preserve water quality of all water resources in the EIR Study Area, including wetlands.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there are state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means, impacts from the proposed project are potentially *significant*.

Impact BIO-3: Potential future development from implementation of the proposed General Plan 2050 could result in direct and indirect impacts to wetland habitat.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wetlands, on a project-by-project basis. The same proposed General Plan 2050 goals, policies, and actions listed under impact discussions BIO-1 and BIO-2 would serve to mitigate potential adverse impacts on wetlands in the EIR Study Area. Many of these proposed General Plan 2050 actions call for identifying and protecting creeks, wetlands and other regulated waters. Site-specific assessments would be required as called for in proposed *Action 3-5.11 for developments proposed on or near sensitive habitats, such as wetlands. This project-specific assessment would serve to identify the presence or absence of any jurisdictional waters and would ensure adequate protection or appropriate compensatory mitigation is provided as part of new development. Proposed Action 3-5.5 and proposed *Action 3-5.10 call for avoidance of wetlands and other sensitive resources during the environmental review process, compliance with applicable regulations and standards, and adequate compensatory mitigation where potential impacts are unavoidable. Where regulated waters

are present, federal and State authorizations and adequate compensatory mitigation would be required where regulated waters would be affected. Potential future development that occurs from implementation of the proposed project would also be required to comply with Santa Rosa City Code Section 20-30.040 related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including wetlands. Potential future development over the buildout horizon of the proposed project would be performed in accordance with the proposed General Plan 2050 policies and actions discussed above, which would ensure that potential impacts on wetlands would be *less than significant*.

BIO-4 Implementation of the proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Development and land use activities associated with implementation of the proposed project would generally be in urbanized areas with few wildlife corridors or locations where wildlife is already acclimated to human activity. However, the EIR Study Area does contain some habitat areas that could be adversely affected by new development, particularly along creeks and other drainages, or adjacent to open space and undeveloped lands.

Additionally, new buildings associated with the future development under the proposed project would alter existing physical characteristics of the EIR Study Area and could contribute to an increased risk of bird collisions and mortalities. Avian injury and mortality resulting from collisions with buildings, towers, and other human-made structures is a common occurrence in city and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Night-time lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in any particular area is dependent on numerous factors, including characteristics of building height, fenestration, and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants; time of year; prevailing winds; weather conditions; and other variables. The application of bird-safe design standards would reduce the potential for avian injury and mortality from collisions with buildings, towers, and other human-made structures. Common bird-safe design standards include the following design considerations and management strategies: (1) avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds, (2) limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments, (3) use low-reflectivity glass or other glazing treatments for the entirety of the building's glass surface, not just the lower levels, (4) for commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system, (5) exterior lighting should be directed downward and screened to minimize illuminating

the exterior of the building at night, except as needed for safety and security, (6) glass skyways or walkways, freestanding glass walls, and transparent building corners should not be allowed, (7) transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs, and (8) all roof mechanical equipment should be covered by low-profile angled roofing so that obstacles to bird flight are minimized. Implementation of bird-safe design standards would minimize impacts from bird strike.

As discussed under impact discussions BIO-1 and BIO-2, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wildlife movement and nursery sites. The same proposed General Plan 2050 goals, policies, and actions identified under impact discussions BIO-1 and BIO-2 would serve to minimize impacts wildlife movement and nursery sites in the EIR Study Area.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is habitat for wildlife movement, impacts from the proposed project are potentially *significant*.

Impact BIO-4: Potential future development in the EIR Study Area could result in impacts on the movement of wildlife and potential for increased risk of bird collisions.

Significance with Mitigation: Less than significant. As described under impact discussions BIO-1, BIO-2, and BIO-3, the proposed General Plan 2050 includes goals, policies, and actions that would mitigate impacts to important wildlife habitats, such as essential habitat for special-status species, occurrences of sensitive natural communities, and regulated wetlands and waters are preserved and protected. Specifically, proposed General Plan 2050 *Action 3-5.7, *Action 3-5.10, *Action 3-5.11, *Action 3-5.19, and *Action 3-5.20 would all mitigate impacts to areas where there is the potential for migratory wildlife to use. These require agency consultation, implementation of existing regulations, the preparation of technical reports that identify and mitigate project-specific impacts, provide ecological buffer zones between waterways and development, and that new development maintain adequate setbacks from channelized waterways. The site-specific biological resource assessments on sites with natural habitat would also be required under proposed *Action 3-5.11, which would determine whether any important wildlife movement corridors are present on undeveloped lands where potential future development is proposed. This project-specific assessment would serve to identify the presence of any sensitive wildlife movement corridors and would ensure sensitive resources are adequately protected or appropriate compensatory mitigation is provided as part of new development. Furthermore, proposed *Action 3-5.13 regarding a bird-safe design ordinance would reduce the risk of bird collisions and ensure that opportunities for wildlife movement are adequately identified and protected. In addition to these proposed General Plan 2050 goals, policies, and actions, potential future development would continue to be reviewed through the City's entitlement process and CEQA, when applicable, to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including wildlife corridors and nursery sites. Potential future development over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 policies

and actions discussed above, which would ensure that potential impacts on sensitive natural communities would be *less than significant*.

BIO-5 Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The City of Santa Rosa General Plan is the primary planning document for the City of Santa Rosa. The proposed revisions to the General Plan goals, policies, and actions are intended to ensure consistency between the General Plan and Zoning Ordinance and provide for an update to the relevant provisions in the current General Plan. Because the General Plan is the overriding planning document for Santa Rosa and because the proposed project involves updating the General Plan and Zoning Ordinance for internal consistency, implementation of the proposed project would not conflict with local policies and ordinances protecting biological resources. As described under impact discussion BIO-2, potential future development that occurs from implementation of the proposed project would be required to comply with Section 20-30.040 of the SRCC related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*, which contain provisions to protect wetlands, marshlands, and tidal areas within the EIR Study Area. Future development would also be required to comply with the City's Tree Ordinance, related to the protection of regulated trees.

Potential future development within the EIR Study Area would be required to comply with applicable SRCC regulations and the proposed General Plan 2050 goals, policies, and actions would reduce potential impacts on sensitive biological resources as a result of implementation of the proposed project. With adherence to these regulations, no conflicts with local plans and policies are anticipated, and impacts would be considered *less than significant*.

Significance without Mitigation: Less than significant.

BIO-6 Implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan.

The EIR Study Area is not in any local, regional, or State HCP areas. Therefore, the proposed General Plan 2050 would not conflict with the conservation strategy in any HCP or Natural Community Conservation Plan. Furthermore, several goals, policies, and actions in the proposed General Plan 2050, listed under impact discussions BIO-1, BIO-2, and BIO-4 along with SRCC regulations, would serve to protect and enhance the sensitive natural communities and special-status species within the EIR Study Area. Implementation of the proposed General Plan 2050 goals, policies, and actions, in conjunction with adherence to State and federal regulations related to the protection of special-status species and sensitive natural communities, including the SRPCS where applicable, would address potential impacts of anticipated future development under the proposed Project. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and

federal regulations and all General Plan policies and actions intended to protect sensitive biological resources. As part of the permitting project with the USACE, projects affecting federally regulated waters must demonstrate that they would not have an adverse effect on federally listed species or would be required to provide adequate compensatory mitigation where avoidance is infeasible. Projects within the boundaries of the SRPCS, including western and southern Santa Rosa, must comply with the rigorous conditions of the Biological Opinion issued by the USFWS in addressing potential effects on CTS, Burke's goldfields, Sebastopol meadowfoam, and Sonoma sunshine. Therefore, *no impact* would occur.

Significance without Mitigation: No impact.

BIO-7 Implementation of the proposed project in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to biological resources.

The impacts of potential future development on biological resources tend to be site-specific, and the overall cumulative effects would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. This includes preservation of well-developed native vegetation (e.g., native grasslands, oak woodlands, and riparian woodland, among others), populations of special-status plant or animal species, and wetland features (e.g., freshwater marsh and seeps, vernal pools and seasonal wetlands, riparian corridors, and drainages). Further, biological resource assessments would be required for future projects proposed on or near sensitive habitats to mitigate project-specific impacts (proposed *Action 3-5.11). These biological resource assessments would serve to ensure that important biological resources are identified, protected, and properly managed and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the EIR Study Area and surrounding incorporated and unincorporated lands.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing natural wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, public and private open space, and undeveloped properties. New cumulative development in the region could result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, and obstruction of important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in the creeks throughout the region, including the EIR Study Area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality.

However, increased development potential in the EIR Study Area is anticipated to occur primarily in existing urbanized areas. Potential future development that could occur elsewhere in the region, outside of the EIR Study Area, is also anticipated to occur largely in urbanized areas. In the event that potential future development in the region is proposed in an undeveloped area, the project would likely undergo

independent environmental review as required by the jurisdiction in which the project is proposed. Further, the goals, policies, and actions of the proposed General Plan 2050 described under impact discussions BIO-1 through BIO-6 would serve to address any contributions to cumulative impacts on sensitive biological and wetland resources, as discussed above. Therefore, the proposed project would result in a *less-than-significant* cumulative impact to biological resources with implementation of the proposed General Plan 2050 goals, policies and actions and other controls related to sensitive biological resources.

Significance without Mitigation: Less than significant.

4.5 CULTURAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to cultural resources associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to cultural resources, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts. See Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, for a discussion of tribal cultural resources.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 TERMINOLOGY

The following terms are recurring and referenced throughout this chapter.

- Cultural Resource. This term is used to describe several different types of properties: pre-contact (prehistoric) and historic archaeological sites, buildings, objects, structures, and districts or any other physical evidence associated with human activity considered important to a culture or a community for scientific, traditional, or religious reasons.
- Historic Property. Federal regulations (36 Code of Federal Regulations 800) define a historic property as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register). This term includes artifacts, records, and remains that are related to and located within such properties. The term also includes properties of traditional religious and cultural importance to Native American tribes or Native Hawaiian organizations and that meet National Register criteria.
- Historical Resource. The California Environmental Quality Act (CEQA) Guidelines Section 15064.5(a) define a historical resource as a resource listed in the California Register of Historical Resources (California Register) or determined to be eligible for listing in the California Register by the State Historical Resources Commission, a resource included in a local register of Historical Resources, or identified as significant in a Historical Resource survey meeting the requirements of Public Resources Code (PRC) Section 5024.1(g), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
- Unique Archaeological Resource. CEQA defines this term as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
  - Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
  - Has a special and particular quality such as being the oldest of its type or the best available example of its type.
  - Is directly associated with a scientifically recognized important prehistoric or historic event or person.

4.5.1.2 REGULATORY FRAMEWORK

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 defines the responsibilities of federal agencies to protect and preserve historic properties and established the National Register of Historic Places (National Register) as the official designation of historical resources, including districts, sites, buildings, structures, and objects. Sites less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Listing in the National Register does not entail specific protection for a property, but project effects on properties listed or eligible for listing in the National Register must be evaluated under CEQA. For a property to be eligible for listing in the National Register, it must be significant and possess integrity. According to the National Register criteria for evaluation,[1] a property is significant in American history, architecture, archaeology, engineering, or culture if it:

- Is associated with events that have made a significant contribution to the broad patterns of our history;
- Is associated with the lives of persons significant in our past;
- Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (United States Code [USC], Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Native American lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 (USC, Title 25, Sections 3001 et seq.) protects Native American remains, including Native American graves on federal and tribal lands, and recognizes tribal authority over the treatment of unmarked graves. This act prohibits the selling of Native American remains and provides guidelines for the return of Native American human remains and cultural objects from any collection receiving federal funding, such as museums, universities, or governments. Noncompliance with this act can result in civil and criminal penalties.

[1] Title 36, Code of Federal Regulations (CFR), Part 60.4.

State Regulations

California Environmental Quality Act

CEQA Guidelines Section 15064.5 states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The CEQA Guidelines define four ways that a property can qualify as a historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in PRC Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource, as defined in PRC Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5), which means, in part, that it may be eligible for the California Register.

In addition, CEQA Section 21083.2 and CEQA Guidelines Section 15126.4 specify lead agency responsibilities in determining whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered during a project or activity, and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native American descendants, if any, as identified by the NAHC. Under certain circumstances, the lead agency (or applicant), is required to develop an agreement with the Native American descendants for the treatment and disposition of the remains. In addition to the mitigating provisions pertaining to accidental discovery of human remains, CEQA Guidelines Section 15064.5(f) also requires that a lead agency make provisions for the accidental discovery of historical or archaeological resources. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a Historical Resource or Unique Archaeological Resource, avoidance measures should be implemented, or appropriate mitigation should be available.

California Register of Historical Resources

The California Register of Historic Resources (California Register) establishes a list of properties to be protected from substantial adverse change (PRC Section 5024.1). A historical resource may be listed in the California Register if it is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California, and meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California's past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- It has yielded, or is likely to yield, information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other potential resources require nomination for inclusion in the California Register.

For a property to be eligible for listing in the California Register, it must possess integrity as well as be significant. Integrity is the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period. Loss of integrity, if sufficiently great, will render a resource ineligible for the California Register. Integrity is determined through application of seven factors:

- Location is the place where the historic property was constructed or the place where the historic event occurred.
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting is the physical environment of the historic property.
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration form a historic property.
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
- Association is the direct link between an important historic event or person and a historic property.

Health and Safety Code Sections 7052 and 7050.5

Health and Safety Code Section 7052 states that the disturbance of Native American cemeteries is a felony. Section 7050.5(b) of the Health and Safety Code specifies protocol when human remains are discovered during activities involving ground disturbance. If human remains are discovered or identified in any location other than a dedicated cemetery, there should be no further disturbance or excavation nearby until the county coroner has determined the area is not a crime scene that warrants further investigation into the cause of death and made recommendations to the persons responsible for the work in the manner provided in PRC Section 5097.98 (the California Native American Historical, Cultural, and

Sacred Sites Act). This section, which applies to both State and private lands, provides guidance for proceeding when human remains associated with Native American burials and associated items are encountered. This act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resources Code Section 5097

PRC Section 5097.5(a) specifies that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, or archaeological sites, which can include fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof. County and city lands are exempt from this provision, except for parklands larger than 100 acres.

California Code of Regulations

Archaeological resources, on lands administered by the California Department of Parks and Recreation, are addressed in California Code of Regulations (CCR) Title 14, Division 3, Chapter 1. Section 4308 of this chapter addresses archaeological features and states that no person shall remove, injure, disfigure, deface, or destroy any object of archaeological or historical interest or value.

Historical Building Code

The California Historical Building Code (CCR Title 24, Part 8) provides regulations for permitting repairs, alterations, and additions for the preservation, rehabilitation, relocation, reconstruction, change of use, or continued use of historical buildings, structures, and properties determined by any level of government as qualifying as a historical resource. A historical resource is defined in Sections 18950 to 18961 of Division 13, Part 2.7 of the Health and Safety Code, and subject to rules and regulations in the California Historical Building Code.

Government Code Section 65352.3-5 (Senate Bill 18)

California Government Code Section 65352.3-5, commonly known by its legislative bill number, Senate Bill (SB) 18, states that prior to the adoption or amendment of a city or county's general plan, or specific plans, the city or county shall consult with California Native American tribes that are on the contact list maintained by the NAHC. The intent of this legislation is to preserve or mitigate impacts on places, features, and objects, as defined in PRC Section 5097.9 and PRC Section 5097.993, that are within the city or county's jurisdiction. Government Code Section 65362.3-5 also states that the city or county shall protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects identified by Native American consultation. Government Code Section 65362.3-5 applies to all general and specific plans and amendments proposed after March 1, 2005.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to cultural resources in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to cultural resources are in Title 17, *Environmental Protection*; Title 18, *Buildings and Construction*; and Title 20, *Zoning*, as follows:

- Chapter 20-58, *Historic and Cultural Preservation*. This chapter provides procedures for the identification, protection, alteration and construction of buildings, structures, signs, neighborhoods, and districts that have special historical, archaeological, cultural, or architectural value in the city. The purpose of this chapter is to allow development to proceed while maintaining historic resources.
- Chapter 18-04, *General Provisions*. The City's building regulations describe specific building standards in the city and prescribe the development standards and specifications that apply to each building in its given district, such as permit fees and improvement standards. The City has adopted the 2019 version of the California Historical Building Code, which provides regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of qualified historical buildings or properties.
- Chapter 20-28, *Combining District*. Subsequent to the adoption of the Historic and Cultural Preservation Ordinance, the City adopted the Historic (-H) combining district into the City's Zoning Code. The purpose of this code is to recognize, preserve, and enhance the city's locally recognized built environment. The-H combining district applies to all properties in a historical district and outlines the standards for the planning and development of sites in these districts.

Santa Rosa Design Guidelines

The *Santa Rosa Design Guidelines* (Design Guidelines), adopted in 2002, supplement and enhance design concepts that promote "superior design" by exhibiting thoughtful relationships in the natural and built environment with respect to architecture, landscaping, placemaking and livability, and sustainability. The Design Guidelines provide a clear set of design policies to project sponsors such as developers, property owners, architects, designers, and public agencies and establish criteria for project review. The Design Guidelines apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements.

Chapter 4.7, *Historic Districts,* provides general design guidelines that apply to all historic structures and neighborhoods that have been adopted by the City. The goals of this chapter of the Design Guidelines are to preserve Santa Rosa's historic heritage, encourage maintenance and retention of historic structures and districts, ensure that alterations to historic buildings are compatible with the character of the structure and the neighborhood, discourage the demolition of significant historic structures, and assist property owners and designers in developing plans for historic properties and to encourage the compatibility of new structures in historic districts, and having those plans approved by the City.

Processing Review Procedures for Owners of Historic Properties

Adopted in 2001, the *Processing Review Procedures for Owners of Historic Properties* assists owners, designers, and citizens in the preservation of Santa Rosa's historic resources. These procedures are referenced in the Design Guidelines and apply to all historic properties in the city. The report includes background on design review, including historic preservation and landmarks, CEQA compliance, and the step-by-step procedures applicants need to follow in preparing and submitting their applications for design review.[2] It also provides the design guidelines and review procedures for historic properties.

4.5.1.3 EXISTING CONDITIONS

Information in this section was obtained from the California Historical Resources Information System's Northwest Information Center in Rohnert Park and the files of the City of Santa Rosa by Tom Origer and Associates for the preparation of this Draft EIR. Significant cultural resources include structures that may be eligible for the National Register, the California Register, or otherwise identified in the City of Santa Rosa's Preservation Districts and inventory of landmark properties. Please see Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, for additional information on Native American resources and consultation pursuant to the Native American Historic Resource Protection Act.[3]

Ethnographic Setting

Linguists and ethnographers tracing the evolution of languages have found that most of the indigenous languages of the California region belong to one of five widespread North American language groups (the Hokan and Penutian phyla, and the Uto-Aztecan, Algic, and Athabaskan language families). The distribution and internal diversity of four of these groups suggest that their original centers of dispersal were outside, or peripheral to, the core territory of California, that is, the Central Valley, the Sierra Nevada, the Coast Range from Cape Mendocino to Point Conception, and the Southern California coast and islands. Only languages of the Hokan phylum can plausibly be traced back to populations inhabiting parts of this core region during the Archaic period, and there are hints of connections between certain branches of Hokan, such as that between Salinan and Seri, that suggest that at least some of the Hokan languages could have been brought into California by later immigrants, primarily from the Southwest and northwestern Mexico.[4]

At the time of Euroamerican settlement, people inhabiting this area spoke Southern Pomo, one of seven mutually unintelligible Pomoan languages belonging to the Hokan language stock. The Southern Pomo's aboriginal territory falls within present-day Sonoma County. To the north, it reaches the divide between Rock Pile Creek and the Gualala River, and to the south it extends to near the town of Cotati. The eastern

[2] Santa Rosa Cultural Heritage Board, 2001, Processing Review Procedures, https://www.srcity.org/DocumentCenter/View/3259/Processing-Review-Procedures-for-Owners-of-Historic-Properties---PDF?bidId=, accessed on May 30, 2023.

[3] The Native American Historic Resource Protection Act, commonly referred to as it's legislative bill number Assembly Bill (AB) 52, passed in 2014 and amended CEQA to address California Native American tribal concerns regarding how cultural resources of importance to tribes are treated under CEQA and created a new tribal cultural resources (TCR) category.

[4] V. Golla, 2011, *California Indian Languages,* Berkeley and Los Angeles: University of California Press.

boundary primarily runs along the western flanks of Sonoma Mountain until it reaches Healdsburg, where it crosses to the west side of the Russian River. Within the larger area that constitutes the Southern Pomo homelands, some bands or tribelets occupied distinct areas.

The Bitagomtara were a triblet of the Southern Pomo and they occupied the lands south of Mark West Creek, north of Cotati and the boundary of the Coast Miwok, east of the Laguna de Santa Rosa, and west of Sonoma Canyon.[5, 6] Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant.

Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant. There are several ethnographic villages in the EIR Study Area.[7]

The Southern Pomo population was decimated early in the historic period, especially in the southern part of their territory. Ethnic identity was severely impacted in the region of Santa Rosa and Sebastopol; McLendon and Oswalt reported that the few Southern Pomo speakers remaining in 1976 were from north of Healdsburg.[8] In 1992, the Southern Pomo and Coast Miwok established the Federated Indians of Graton Rancheria and were federally recognized in 2000.

Historic Setting

Much of Santa Rosa lies within the Rancho Cabeza de Santa Rosa, an 8,885-acre grant made to María Ignacia López de Carrillo, the mother-in-law of General Mariano Vallejo. Traveling from San Diego in 1837, she brought seven of her children to settle on the rancho and built the first European dwelling in the Santa Rosa area.[9] After Señora Carrillo's death in 1849, the rancho was divided among seven claimants. As originally platted, the town of Santa Rosa included the blocks between 1st and 5th Streets and between present-day Morgan Street on the west and just beyond E Street to the east.[10] Green's Addition was the first expansion of the town, moving the limits northward. Outlying parcels varied in size, tending to increase in acreage as they got further from the town center.

[5] R. Milliken, 1995, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810*, Menlo Park, CA: Ballena Press.

[6] O. Stewart, 1943, "Notes on Pomo Ethnogeography", *University of California Publications in American Archaeology and Ethnology* 40, no. 2, pp.29–62.

[7] S. Barrett, 1908, *The Ethno-Geography of the Pomo and Neighboring Indians,* University of California Publications in American Archaeology and Ethnology, vol. 6, no. 1, Berkeley, California: University of California Press.

[8] S. McLendon and R. Oswalt, 1978, "Pomo," In *California*, edited by R. Heizer, pp. 274–288, *Handbook of North American Indians*, Vol. 8, W. Sturtevant, general editor, Washington, D.C.: Smithsonian Institution.

[9] M. Hoover, H. Rensch, E. Rensch, W. Abeloe, and D. Kyle, 2002, *Historic Spots in California,* 5th edition, Palo Alto, California: Stanford University Press.

[10] Brewster, J., 1854, Santa Rosa, California. Surveyor's original map folder #12, Sonoma County Recorder's Office.

With the end of World War II, Santa Rosa experienced a population boom, much like the rest of the nation. Census data show that the city had 12,605 people enumerated in 1940, and over the next 10 years, the number rose to 17,902.[11] By 1960, Santa Rosa boasted a population of just over 31,000 people, nearly tripling in size in just 20 years. To accommodate this growth, entire neighborhoods were erected in short order, and the outward movement of families to the suburbs, begun during the late nineteenth century, recommenced with due speed. Much of this growth was bolstered by benefits extended to returning service members and their families. The Servicemen's Readjustment Act of 1944 (also known as the G.I. Bill of Rights) included several programs to ease World War II veterans back into the local economy while avoiding a return to the pre-war depression. Among those benefits was a military loan guarantee program to help purchase homes. In 1950, homeownership in California had risen 11 percent over the proceeding decade and was at an all-time high of 58 percent by 1960.

The years following World War II brought unprecedented well-being to Americans, and commerce flourished as people grew more comfortable with spending. Immediately after World War II, new commercial buildings generally were in downtown areas and other existing commercial centers. Bolstered by post-war consumer confidence, new housing developments appeared, and with them the need for more schools, new churches, and new commercial enterprises. By the end of the 1950s, new commercial construction was usually located in the new suburbs at the edge of town. In Santa Rosa, Hugh Codding led the way with several housing and commercial developments, including Brookwood Terrace, Town & Country Village, and Montgomery Village. These subdivisions tended to have their own commercial areas, and often social features as well.

Historic Resources of the Built Environment

In 1977 and 1989, architectural surveys of the city were completed by Dan Peterson and Anne Bloomfield, respectively, as well as numerous volunteers. Largely focused on the original core downtown and its immediate surroundings, these surveys identified several buildings and districts containing historical buildings. Though these surveys have been immensely helpful, they are over 30 years old and would not meet CEQA requirements by current standards. Based on the analysis of the Built Environment Resource Directory of the California Historical Resources Information System by Tom Origer and Associates for the preparation of this Draft EIR, over 900 buildings and structures have been subjected to some level of historical analysis in the EIR Study Area. The range of analysis includes buildings that have been listed on the National Register to those that have been formally evaluated and found ineligible for listing on any level (national, state, or local), and those identified as potentially important but not yet formally evaluated or listed on a register.

Historic resources include sites, structures, districts, landmarks, or other physical evidence of past human activity generally greater than 50 years old. Table 4.5-1, *Historical Resources in the EIR Study Area*, shows the 34 national- and state-listed historical resources found in the EIR Study Area. Table 4.5-2, *Buildings Classified as Locally Important in the EIR Study Area*, lists the 54 resources classified as locally important.

[11] State of California Department of Finance, 2011, Historical Census Populations of Counties and Incorporated Cities in California, 1850–2010, http://www.dof.ca.gov/research/demographic/state_census_data_center/historical_census_1850-2010/.

TABLE 4.5-1 HISTORICAL RESOURCES IN THE EIR STUDY AREA

Name	Address	Listing
Cnopius House	726 College Avenue	National Register
Comstock House	767 Mendocino Avenue	National Register
De Turk Round Barn	819 Donahue Street	National Register
Flamingo Hotel	2777 4th Street	National Register
William Hood House	7501 Sonoma Highway	National Register; California Historical Landmark
Hotel La Rose	308 Wilson Street	National Register
W. H. Lumsden House	727 Mendocino Avenue	National Register
Luther Burbank House and Garden	200 Santa Rosa Avenue	National Register; California Historical Landmark
McDonald Mansion	1015 McDonald Avenue	National Register
Old Post Office	425 7th Street	National Register, California Register
Park Apartments	300 Santa Rosa Avenue	National Register
Railroad Square District	Downtown Santa Rosa	National Register
Rosenberg's Department Store	700 Fourth Street	National Register; California Register
Sweet House	607 Cherry Street	National Register
Wasserman House	930 Mendocino Avenue	National Register
Pygmailon B&B | Briggs House	331 Orange Street	California Register (listed individually and as a contributor to the Olive Park Historic District)
Olive Park Historic District | Ludwig's Addition		National Register; Locally recognized as a Historic Preservation District
Rosenberg Building	306 Mendocino Avenue	California Register
South Saint Rose Historic District		California Register (overlaps with the boundary of the local St. Rose Historic Preservation District
120 7th Street	120 7th Street	California Register
133 7th Street	133 7th Street	California Register
Old Rose Street School	560 9th Street	California Register (St. Rose Historic Preservation District)
515 Davis Street	515 Davis Street	California Register
Junius Botts Residence	433 Olive Street	California Register
Burbank School	203 South A Street	California Register
Pacific Tire Sales | Palin Brothers Sales Room	35 Sebastopol Avenue	California Register
Lincoln School	709 Davis Street	California Register
Elmer Olsen House	400 Lincoln Street	California Register (St. Rose Historic Preservation District)
Healey Residence	806 McDonald Avenue	California Register (McDonald Historic Preservation District)
1005 Cleveland Avenue	1005 Cleveland Avenue	California Register
A. H. Johnson	1591 Sebastopol Road	California Register
L W Burris Distillery | Cold Storage Plant	700 Donahue Street	California Register (West End Historic Preservation District)
Santa Rosa Wine Cellar | De Turks Winery	722 Donahue Street	California Register (West End Historic Preservation District)
Twentieth Century Folk Ard Environments (Thematic) – John Medica Gardens	5000 Medica Road	California Historical Landmark

Source: Tom Origer and Associates, 2023.

TABLE 4.5-2 BUILDINGS CLASSIFIED AS LOCALLY IMPORTANT IN THE EIR STUDY AREA

ADDRESS	ADDRESS
868 2nd Street	801 Humboldt Street (Summerfield House/Thurston House)
819 3rd Street	912 Humboldt Street
827 3rd Street	931 Humboldt Street
834 3rd Street	1011 Humboldt Street
850 3rd Street (Lafferty Residence)	1200 Humboldt Street
613 4th Street (Kress Building)	100 Junior Street
909 4th Street	622 King Street
1023 4th Street (Hiram and Mary Tripp Residence)	318 Mendocino Avenue (Title Insurance Building)
1032 4th Street	920 Mendocino Avenue
1040 4th Street	762 Orchard Street (The Redwoods)
1069 4th Street (E. A. Wilson Residence)	801 Orchard Street
840 5th Street	807 Orchard Street
710 7th Street (Patricia Geraghty Residence)	302 South E Street
120 10th Street	412 South E Street
722 Beaver Street	716 Slater Street
742 Beaver Street	826 Slater Street (Thompson Home)
881 Carr Avenue (Residential Rehabilitation)	467 Sonoma Avenue
934 Clark Street	473 Sonoma Avenue
446 College Avenue	1103 Sonoma Avenue
600 College Avenue	1145 Sonoma Avenue
705 College Avenue	522 Spencer Street
715College Avenue	602 Spencer Street
807 College Avenue	103 Stanford Street
812 College Avenue	117 Stanford Street
441 Denton Way	622 Wright Street
1324 Fair Oaks Avenue (Stewart Residence/Trussel Residence)	729 Wright Street
716 Howard Street	909 Wright Street

Note: Buildings at 0 A Street (Kessings Bayler & Menheim & Klutes Additions), 17 Davis Street, 550 Elliott Avenue, 712 Elliott Avenue, 800 Sonoma Avenue, and 825 Sonoma Avenue no longer exist and therefore are not listed in this table.
Source: Tom Origer and Associates, 2023.

In addition to the resources listed in Tables 4.5-1 and 4.5-2, there are eight historic preservation districts in the city of Santa Rosa. The SRCC-H combining district zoning designation applies to all parcels in the listed designated preservation districts. Note that the boundaries of the Railroad Square and St. Rose districts overlap with the boundaries of the National Register district and the California Register district respectively.

- Burbank Gardens Historic Preservation District
- Cherry Street Historic Preservation District
- McDonald Historic Preservation District
- Olive Park Historic Preservation District
- Railroad Square Historic Preservation District
- Ridgway Historic Preservation District
- St. Rose Historic Preservation District
- West End Historic Preservation District

Archaeological Resources

Beginning in the early twentieth century, avocational archaeologist Jesse Peter traversed the Santa Rosa area and documented over 100 Native American archaeological sites. Since the enactment of the National Historic Preservation Act (NHPA) of 1966 and the CEQA of 1970, hundreds of surveys have been conducted in the EIR Study Area, which has resulted in the documentation of over 1,000 cultural resources ranging from prehistoric habitation sites to mid-twentieth century developments. Remnants of Native American civilization have been discovered along Santa Rosa Creek and its tributaries, in the adjacent alluvial valleys and surrounding plains, in the hills, in the Trione-Annadel State Park area, in the Laguna de Santa Rosa, and in the Windsor area. The remains of entire settlements, including three former villages, were found in northern Santa Rosa. Given the environmental setting, the archaeologically rich nature of the Santa Rosa area, and the fact that the EIR Study Area has not been entirely surveyed, there is a high potential for finding additional Native American sites in Santa Rosa.

Native American Resources and Consultation

Native American Resources

Santa Rosa was a site of Native American habitation beginning approximately 7,000 years ago, and Santa Rosa contains approximately 190 recorded Native American resources.[12] The Santa Rosa Basin, encompassing the EIR Study Area, contains six major drainages: Santa Rosa, Matanzas, Piner, Rincon, Austin, and Brush Creeks. These creeks may hold prehistoric resources because Native American archaeological sites tend to be near waterways as well as along ridge tops, mid-slope terraces, alluvial flats, the base of hills, and near vegetation ecotones.[13] Trione-Annadel State Park, in the southeast corner of the EIR Study Area, was an important obsidian source for Native American tools. Resources may include chert or obsidian flakes, projectile points, mortars, pestles, dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials.

Native American Consultation: Senate Bill 18

Pursuant to Government Code Section 65352.3-5 (SB 18), a request was sent to the NAHC for a Tribal Consultation List in April 2019 and due to the ongoing nature of the proposed project a new request was sent in August 2024. The NAHC identified 36 local Native American representatives from the following 25 tribes as potentially having local knowledge of Native American places, features, and objects, as defined in PRC Section 5097.9 and PRC Section 5097.993, that are within the EIR Study Area. Tribes denoted with an asterisk (*) were included on the list from the NAHC in 2019 and 2024.

[12] Based on a 2001 review of records and literature on file with the California Historical Resources Information System.
[13] Vegetation ecotones are transition areas between different plant communities.

- Big Valley Band of Pomo Indians of the Big Valley Rancheria
- Cahto Tribe
- Cloverdale Rancheria of Pomo Indians*
- Coyote Valley Band of Pomo Indians
- Dry Creek Rancheria of Pomo Indians*
- Elem Indian Colony Pomo Tribe
- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Federated Indians of Graton Rancheria*
- Guidiville Rancheria of California
- Hopland Band of Pomo Indians
- Kashia Band of Pomo Indians of the Stewarts Point Rancheria*
- Koi Nation of Northern California
- Lytton Rancheria*
- Manchester Band of Pomo Indians of the Manchester Rancheria
- Middletown Rancheria of Pomo Indians of California*
- Mishewal-Wappo Tribe of Alexander Valley*
- Noyo River Indian Community
- Pinoleville Pomo Nation
- Potter Valley Tribe
- Redwood Valley or Little River Band of Pomo Indians
- Robinson Rancheria of Pomo Indians
- Round Valley Reservation/ Covelo Indian Community
- Scotts Valley Band of Pomo
- Sherwood Valley Rancheria of Pomo
- Yokayo Tribe

The City notified the tribal representatives for each of the seven tribes denoted with an asterisk (*) about the proposed project on July 26, 2021 and requested information regarding potential resources at or near the EIR Study Area. While not on the 2019 NAHC list, the City also reached out to Pinoleville Pomo Nation and Tomaras & Ogas, LLP on behalf of the Lytton Rancheria. Anthony Macias, Tribal Historic Preservation Officer of the Kashia Band of Pomo Indians, responded to the City on August 10, 2021 that the city is out of the Aboriginal Territory of the Stewarts Point Rancheria Kashia Band of Pomo Indians, and they had no comments or concerns. Additionally, the City received requests for consultation from the Federated Indians of Graton Rancheria and Lytton Rancheria. The City met with representatives of Federated Indians of Graton Rancheria and with representatives of Lytton Rancheria. In addition, the City maintained ongoing communication with representatives from the Federated Indians of Graton Rancheria and Lytton Rancheria. As a result of the consultations to date (October 2024), only the listed requests have been made. A description of how the City has responded to each of these requests is provided in Section 4.16.3, *Impact Discussion*, under impact discussion TCR-1, in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR.

- Work to develop a better communication system for the required SB 18 and AB 52 consultation between City staff and tribes.[14]
- Tribal acknowledgment to be added to the Housing Element and to be carried forward in the comprehensive General Plan.
- Consider Phase 1 archaeological survey for all projects that involve ground disturbance: allowing potential exceptions where the ground has already been disturbed.
- Develop a threshold for when ministerial projects with ground disturbance can include consultation.
- Expand consideration of projects along waterways to include historical locations and trajectories.
- Ensure the plan includes adequate goals, policies, and actions related to resilience.

[14] AB 52 stands for Assembly Bill 52 which was the legislation that enacted the Native American Historic Resource Protection Act. A detailed discussion of this Act is provided in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR.

As stated, due to the ongoing nature of the project, the City notified the tribal representatives for each of the 25 tribes about the proposed project on September 11, 2024 and requested information regarding potential resources at or near the EIR Study Area.

Sacred Lands File Search

Concurrently with the request for the Tribal Consultation List in August 2024, a request was sent to the NAHC for a Sacred Lands File search. The NAHC reported on August 30, 2024 that the result of the Sacred Lands File search was negative.

4.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts to cultural resources if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.
4. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to cultural resources.

4.5.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as a means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

CUL-1	**Implementation of the proposed project could cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.**

The types of cultural resources that meet the definition of historical resources under CEQA Section 21084.1 generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations. Under CEQA, both prehistoric and historic-period archaeological sites may qualify based on historical associations. As such, the two main historical resources that are subject to impact, and that may be impacted by implementation of the proposed project, are historical archaeological deposits and historical architectural resources. Impacts to

archaeological resources are described under impact discussion CUL-2, and human remains are addressed under impact discussion CUL-3.

As discussed under Section 4.5.1.3, *Existing Conditions*, several historical resources exist in the EIR Study Area. Therefore, implementation of the proposed project could have the potential to directly impact cultural resources by altering land use regulations that govern these properties or surrounding sites. Implementation of the proposed project would allow for an increase in residential, commercial, and industrial development in Santa Rosa over the planning horizon of the proposed General Plan 2050. Potential future development in the EIR Study Area could cause a significant impact on the historical resources in question if new construction were incompatible with the existing historical resources' site relationships that contribute to the significance of the existing property, or if the massing (height and bulk) of new construction were incompatible with the historical resource. Lastly, the design characteristics and materials of new construction could impact adjoining or nearby historical buildings. If new development near historic properties is not compatible, impacts on historical resources could be significant. Additionally, if new development were to directly impact existing resources, impacts on historical resources could be significant.

SRCC Chapter 18-04 adopted the California State Historic Building Code, which provides regulations for permitting repairs, alterations, and additions necessary for the preservation, rehabilitation, relocation, related construction, change of use, or continued use of a qualified historical building or structure. SRCC Chapter 17-22 outlines the methods that items can be identified and protected as cultural and historical resources. Article V, *Permits for Restoration, Rehabilitation, Alteration, Removal, or Demolition*, bans alterations of any kind to any building in a preservation district without a permit from the City. The SRCC-H combining district applies to all properties in a historical district and outlines the standards for the planning and development of sites in these districts. Additionally, the City's *Design Guidelines* contain guiding policies pertaining to historic properties to preserve historic heritage, limit the demolition of historical sites, and ensure alterations are compatible with the existing character of the structure and neighborhood. Standards include requesting a review from the City to determine any historic or architectural significance prior to demolition or alteration if it is determined that the exterior appearance of any designated landmark or any structure in a Preservation District may change.

The proposed General Plan 2050 Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, contains goals, policies, and actions that require local planning and development decisions to consider impacts to historic resources in the built environment. The following goals, policies, and actions would minimize impacts to historic resources:

- Goal 4-1: Preserve and enhance Santa Rosa's community character through attractive urban and environmental design and intentional development.
  - Policy 4-1.1: Preserve and enhance the visual beauty and value of the city's natural waterways, hillsides, historic districts, buildings, structures, and landscapes.
  - Policy 4-1.2: Strengthen and emphasize community focal points, visual landmarks, and features that contribute to the identity of Santa Rosa by applying the design concepts and standards of the Zoning Code, Design Guidelines, Historic Combining Districts, Bicycle and Pedestrian Plan, and the Citywide Creek Master Plan.

- Goal 4-3: Protect the historic and cultural resources of Santa Rosa and enrich the sense of place and understanding of the city's history and prehistory.
  - Policy 4-3.1: Preserve Santa Rosa's historic sites, buildings, and neighborhoods.
    - Action 4-3.1: Identify funding sources and resources to pursue designating new landmarks and historic preservation districts.
    - *Action 4-3.2: Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of historic properties.
    - Action 4-3.3: Provide owners of older and historic buildings, structures, and sites clear and cost-effective options to measurably enhance energy efficiency while maintaining the historic integrity to the greatest extent possible.
    - Action 4-3.4: Pursue designation as a Certified Local Government Program by the National Parks Service to assist in funding local historic preservation.
    - Action 4-3.5: Seek funding and establish mechanisms, such as social media and periodic flyers, to educate property owners in preservation districts about the steps required for changes to historic properties.
    - *Action 4-3.6: Identify and minimize or remove obstacles for owners of historic properties to support preservation, including guides for repurposing facilities.
      Identify resources to:
      - Keep cultural surveys relevant.
      - Periodically update the City's Cultural Heritage Survey to ensure consistency with current guidelines and best practices, to reflect potential changes in status, and to include properties that have become age-eligible for listing.
      - Conduct cultural and/or historic inventories or surveys of areas of the city that have not been surveyed.
      - Install plaques and/or educational signage at locations of cultural significance and significant events.
      - Implement recommendations in the City's Cultural Heritage studies.
      - Partner with the local tourism industry, property owners, businesses, nonprofit organizations, and other public agencies to develop and promote Heritage Tourism opportunities, integrating efforts with ongoing initiatives for economic development and the creative economy.
      - Work with local schools and historic organizations to engage and interest residents of all ages in Santa Rosa's history and historic sites, structures, and neighborhoods.
    - *Action 4-3.7: Identify buildings that should be recognized for cultural significance and/or considered for landmark designation.
    - Action 4-3.8: Strongly encourage and incentivize adaptive re-use of historic buildings and structures over demolition.
    - *Action 4-3.9: Preserve historic aspects of parks while integrating modern uses and amenities.

- Action 4-3.10: Ensure that historic surveys are available on a dedicated City webpage, easily accessible and promoted online.

- Policy 4-3.2: Promote conservation for efforts related to historic buildings, structures, or sites.
  - Action 4-3.11: Explore programs, policies, or procedures that encourage the preservation of materials, such as historic windows, doors, siding, and trim, for potential reuse, as feasible when historic buildings are demolished or renovated.

Because future development under the proposed General Plan 2050 has the potential to occur where historic buildings and/or properties may exist, known and yet to be classified, impacts from the proposed General Plan 2050 are potentially *significant*.

Impact CUL-1: Impacts to known or yet to be classified historic buildings or structures could occur from potential future development under the proposed General Plan 2050.

Significance with Mitigation: Less than significant. Implementation of the Santa Rosa City Code (SRCC), Design Guidelines, and the proposed General Plan 2050 goals, policies, and actions, would ensure that new development and exterior remodels are compatible with cultural and historic resources; that landmarks and historic treasures would be preserved, enhanced, and rehabilitated, and that cultural and historic resources of Santa Rosa would be protected and restored. Specifically, proposed General Plan 2050 *Action 4-3.2 would mitigate potential impacts by requiring the City to follow the Secretary of the Interior's Standards for Preservation, Rehabilitation, Restoration, and Reconstruction of historic structures in Santa Rosa, and *Action 4-3.6 would require the City to work with the owners of historic properties to promote preservation, renovation and rehabilitation of historic structures. Under proposed *Action 4-3.6, *Action 4-3.7, and *Action 4-3.9, the City would require cultural and/or historic inventories or surveys of the city and the identification of buildings and park properties that should be recognized for their cultural significance to further preserve qualifying historic properties in Santa Rosa. Accordingly, implementation of the proposed General Plan 2050 would require the preservation of historic resources and require new development to analyze and avoid any potential impacts to designated historic resources through record searches, preconstruction field surveys, ground-disturbance monitoring, and implementation of appropriate measures or project alternatives to avoid identified significant impacts. Finally, CEQA would require that future potential projects in the EIR Study Area with the potential to significantly impact historical resources be subject to project-level CEQA review wherein the future potential project's potential to affect the significance of a surrounding historical resource would be evaluated and mitigated to the extent feasible. The requirement for subsequent CEQA review, pursuant to State law, would minimize the potential for new development to indirectly affect the significance of existing historical resources to the maximum extent practicable.

Potential impacts from future development on historical resources could lead to (1) demolition, which by definition results in the material impairment of a resource's ability to convey its significance; (2) inappropriate modification, which may use incompatible materials, designs, or construction techniques in a manner that alters character-defining features; and (3) inappropriate new construction, which could introduce incompatible new buildings that clash with an established architectural context. While any of these scenarios, especially demolition and alteration, have the

potential to change the historic fabric or setting of an architectural resource such that the resource's ability to convey its significance may be materially impaired, compliance with federal and State laws as described in Section 4.5.1.2, *Regulatory Framework,* SRCC, and the proposed General Plan 2050 goals, policies, and actions identified would ensure future development would not be detrimental or injurious to property or improvements in the vicinity and impacts would be *less than significant.*

CUL-2 Implementation of the proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines, Section 15064.5.

Historical and pre-contact archaeological deposits that meet the definition of archaeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with potential future development in Santa Rosa. A substantial adverse change in the significance of an archaeological resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired per CEQA Guidelines Section 15064.5(b)(1). Should this occur, the ability of the deposits to convey their significance, either through containing information important in prehistory or history, or through possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

The overall pre-contact archaeological sensitivity of the EIR Study Area is generally considered high. As discussed in Section 4.5.1.3, *Existing Conditions*, remnants of Native American civilization have been discovered throughout Santa Rosa. Given the environmental setting, the archaeologically rich nature of the Santa Rosa area, and the amount of unsurveyed land, there is a high potential for finding additional Native American sites in Santa Rosa.

Implementation of the proposed project could result in development on a number of vacant, rural, or agricultural sites that may not have been as extensively disturbed as urbanized areas. The potential remains that archaeological deposits could be discovered because implementation of the proposed project could result in development on or in the vicinity of areas with the potential to contain significant resources. In addition, development in proximity to known archaeological sites in Santa Rosa would have the potential to contain significant resources that could be permanently damaged by potential future development over the buildout horizon of the proposed project. Ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with the proposed project may result in unanticipated discoveries of cultural resources or the damage or destruction of previously undiscovered resources. As described in Section 4.5.1.3, *Existing Conditions*, the creeks in the EIR Study Area may hold prehistoric resources because Native American archaeological sites tend to be near waterways.

The proposed General Plan 2050 Chapter 2, *Land Use and Economic Development;* Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction;* and Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, contains goals, policies, and actions that require local planning and development decisions to consider impacts to archaeological resources. The following goals, policies, and actions would minimize impacts to archaeological resources:

- Goal 2-2: Promote city-centered growth and investment with a neighborhood-focused approach to create complete and connected communities that provide community members' daily needs within easy walking or biking distance.
    - Policy 2-2.2: Encourage a compact, rather than a scattered, development pattern for new development proposals, particularly in Areas of Change.
- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
    - Policy 3-5.2: Preserve, enhance, and expand a connected network of open spaces for recreation, natural and cultural resource protection, and mobility of species by way of critical linkages between open space lands.
        - Action 3-5.4: Collaborate with regional agencies and private landowners to link inaccessible open spaces to benefit the protection of special environments and ecosystems, such as wetlands, plant communities, wildlife habitats and corridors, historic resources, and tribal and cultural resources.
    - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
    - Policy 3-5.5: Maintain, restore, and protect the city's waterways.
    - Policy 3-5.7: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.
        - *Action 3-5.19: Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for shared use paths and recreation.
        - *Action 3-5.20: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.
- Goal 4-2: Protect tribal cultural resources in Santa Rosa and enrich the sense of place and understanding of the city's history and prehistory.
    - Policy 4-2.1: Protect Native American heritage, honor the early stewards of this land, and treat Native American remains and resources with sensitivity.
        - *Action 4-2.1: Continue to review proposed developments in conjunction with the California Historical Resources Information System, Northwest Information Center, at Sonoma State University to determine whether project areas contain known archaeological resources, both prehistoric and/or historic-era, and tribal cultural resources, or if they have the potential to hold such resources and if so, implement mitigation to protect the resource.

- *Action 4-2.2: Work in good faith with interested communities to evaluate proposed development sites for the presence of subsurface historic, archaeological, and tribal cultural resources. These efforts may include:
  - Consideration of existing reports and studies.
  - Consultation with Native American tribes as required by State law.
  - Appropriate site-specific investigative actions.
  - On-site monitoring during excavation if appropriate.
- *Action 4-2.3: Continue to require that project areas found to contain significant archaeological resources be examined by a qualified consulting archaeologist with recommendations for protection and preservation.

- Policy 4-2.2: Collaborate with the most likely descendants, as identified by the Native American Heritage Commission.
  - *Action 4-2.4: If tribal cultural resources are encountered during development, halt work to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation and recorded identified tribal cultural resources—which may include animals, structures, landscapes, or plants—and determined suitable mitigation measures.

Because future development under the proposed General Plan 2050 may occur where there is the potential for archeological resources, known and unknown, impacts from the proposed General Plan 2050 are potentially *significant*.

Impact CUL-2: Impacts to known and unknown archeological resources could occur from potential future development under the proposed General Plan 2050.

Significance with Mitigation: Less than significant. Implementation of the proposed General Plan 2050 goals, policies, and actions would ensure that new development in the EIR Study Area reduces and mitigates potential impacts to archaeological resources. As demonstrated, the proposed General Plan 2050 goals, policies, and actions encourage infill development, adaptive reuse of structures, and development on underutilized land, which would reduce the potential for disturbing archaeological deposits since ground-disturbing activities have already taken place in developed areas. Specifically, proposed Policy 2-2.2 encourages compact development in the Areas of Change. Proposed Policy 4-1.1 requires the preservation and enhancement of the city's natural waterways and landscapes, Policy 3-5.7 requires that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer, and *Action 3-5.19 and *Action 3-5.20 require new development along channelized waterways to establish an ecological buffer zone between the waterway and development. Additionally, implementation of the proposed *Action 4-2.1 and *Action 4-2.2 would require the preservation of archaeological and historic resources that are found in the EIR Study Area and would require new development to analyze and avoid any potential impacts to archaeological resources through record searches, preconstruction field surveys, ground-disturbance monitoring, and implementation of appropriate measures or project alternatives to avoid identified significant impacts. Proposed *Action 4-2.3 requires the City to continue to require that project areas

found to contain significant archaeological resources be examined by a qualified consulting archaeologist with recommendations for protection and preservation and *Action 4-2.4 requires the evaluation and mitigation of tribal cultural resources by a qualified consulting archaeologist and Native American representative as appropriate. The proposed General Plan 2050 requires development project applicants to consult with Native American representatives regarding cultural resources to identify locations of importance to Native Americans, including archaeological sites and traditional cultural properties. Compliance with federal and State laws, as described in Section 4.5.1.2, *Regulatory Framework,* and the proposed General Plan 2050 goals, policies, and actions listed previously, would protect recorded and unrecorded archaeological deposits in the EIR Study Area by providing for the early detection of potential conflicts between development and resource protection, and by preventing or minimizing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation would ensure that potential impacts from implementation of the proposed project would be *less than significant*.

CUL-3 Implementation of the proposed project would not disturb any human remains, including those interred outside of dedicated cemeteries.

Previously undiscovered human remains associated with pre-contact archaeological deposits may exist in the EIR Study Area, as ground-disturbing activities sometimes uncover such previously unrecorded remains. As described under impact discussion CUL-2, ground-disturbing activities and excavation for the project would have the potential to uncover buried resources. It is possible that human remains may be present in the EIR Study Area. Descendant communities may ascribe religious or cultural significance to such remains, making any such disturbances a potentially significant impact.

As described under impact discussion CUL-2, the proposed General Plan 2050 includes goals, policies, and actions that require local planning and development decisions to minimize impacts to archaeological resources, including human remains. Specifically, proposed Policy 2-2.2 encourages infill development, particularly in the Areas of Change, which reduces opportunities to unearth human remains, Action 3-5.4 requires the City to collaborate with regional agencies to expand open space that would protect historic and tribal cultural resources, which could include human remains, and *Action 4-2.4 outlines required procedures to follow in the event TCRs are encountered. Procedures of conduct following the discovery of human remains have been mandated by Health and Safety Code Section 7050.5, PRC Section 5097.98, and the CCR Section 15064.5(e) (CEQA), as described in Section 4.5.1.2, *Regulatory Framework*. According to the provisions in CEQA, in the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The Sonoma County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. If the NAHC is unable to identify an MLD, the MLD fails to make a recommendation within 48 hours after being notified, or the landowner rejects the

recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.

Therefore, compliance with the mandatory regulatory procedures described and the proposed General Plan 2050 goals, policies, and actions, potential impacts related to the potential discovery or disturbance of any human remains accidently unearthed during construction activities associated with future development in the EIR Study Area would be *less than significant*.

Significance without Mitigation: Less than significant.

CUL-4 Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in less-than-significant cumulative impacts with respect to cultural resources.

The impacts of potential future development under implementation of the proposed project on cultural resources tend to be site specific, and cumulative impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

Potential future development under the proposed project would be primarily within the developed portions (Areas of Change) of the EIR Study Area. This, in conjunction with buildout of the city and the region, has the potential to cumulatively impact cultural resources. As previously discussed, impacts to historical resources, archaeological resources, and human remains in the EIR Study Area would be less than significant with implementation of the proposed General Plan 2050 goals, policies, and actions described in impact discussions CUL-1 through CUL-3. Additionally, the existing federal, state, and local regulations and the proposed General Plan 2050 goals, policies, and actions described throughout this chapter serve to protect cultural resources in the EIR Study Area. Continued compliance with these regulations substantially decreases potential impacts to historical resources, archaeological resources, human remains, and TCRs to the maximum extent practicable. Cumulative impacts would be *less than significant* in this regard.

Significance without Mitigation: Less than significant.

4.6 ENERGY

This chapter describes the regulatory framework and existing conditions of the City of Santa Rosa Environmental Impact Report (EIR) Study Area and evaluates the potential energy impacts from adopting and implementing the proposed project and from future development and activities that could occur under the proposed project. Section 21100(b)(3) of California Environmental Quality Act (CEQA) requires that an EIR include a detailed statement with mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F, *Energy Conservation*, of State CEQA Guidelines states that, to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the project description, environmental setting, and impact analysis portions of technical sections, as well as through feasible mitigation measures and alternatives.

In accordance with Appendices F, *Energy Conservation*, and G, *Environmental Checklist,* of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the proposed project. This chapter summarizes the proposed anticipated energy needs, impacts, and conservation measures associated with future development and activities under the proposed project. Other aspects of the proposed project's energy implications are also discussed in Chapter 3, *Project Description*, Chapter 4.3, *Air Quality*, Chapter 4.8, *Greenhouse Gas Emissions*, and Chapter 4.15*, Transportation*, of this Draft EIR.

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of United States crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 through 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per

year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles. On March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards, which will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which will be a 10 MPG increase relative to model year 2021.[1]

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased CAFE Standards; the Renewable Fuel Standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.[2]

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and State and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the United States Department of Transportation develops and enforces regulations

[1] National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026, accessed July 24, 2023.

[2] United States Environmental Protection Agency, updated May 12, 2022, Summary of the Energy Independence and Security Act, https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act, accessed July 24, 2023.

for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist State Energy Resources Conservation and Development Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy-efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

California Energy Commission

The CEC was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs
- License power plants to meet those needs
- Promote energy conservation and efficiency measures
- Develop renewable energy resources and alternative energy technologies
- Promote research, development, and demonstration
- Plan for and direct the State's response to energy emergencies

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;[3]
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy-efficiency program by 2020.

[3] Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five-billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of the state's electricity and gas use.[4]

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofitted to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Renewable Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent to reach at least 20 percent by December 30, 2010. Executive Order (EO) S 14 08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the California legislature in 2011 (SB X1-2). The CPUC is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state.

Clean Energy and Pollution Reduction Act

The Clean Energy and Pollution Reduction Act, commonly known by its legislative bill number SB 350 was enacted on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, this Act includes the goal to double the energy-efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. This Act also requires the CPUC, in

[4] California Public Utilities Commission, January 2011, CA Energy Efficiency Strategic Plan, https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf, accessed July 25, 2023.

consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. This Act also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Senate Bill 100

On September 10, 2018, SB 100 was signed into law to replace the Clean Energy and Pollution Reduction Act (SB 350) requirements. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill also establishes an overall State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under SB 100, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The Clean Energy, Jobs, and Affordability Act of 2022

The Clean Energy, Jobs, and Affordability Act of 2022, commonly known as its legislative bill number SB 1020 was signed into law on September 16, 2022. This Act requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, this Act requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

Energy-Efficiency Regulations

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations [CCR] Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy-efficiency technologies and methods.[5]

California Building Energy Code: Title 24, Part 6, Energy-Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2022 (CCR Title 24, Part 6). Title 24 requires the design of building shells and

[5] California Energy Commission, 2017, *2016 Appliance Efficiency Regulations*, https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf, accessed July 25, 2023.

building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy-efficiency technologies and methods.

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the 2019 standards on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.[6]

California Building Code: Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code (CBSC). It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen update, which was approved as part of the 2022 Energy Code, became effective on January 1, 2023, and provides updates to the residential and nonresidential voluntary measures.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.[7]

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. They contain energy performance, energy design, water performance, and water design

[6] California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code), Draft Environmental Report. CEC-400-2021-077-D.

[7] California Building Standards Commission, July 2022, *2022 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, https://codes.iccsafe.org/content/CAGBC2022P1/copyright, accessed July 25, 2023.

standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (CCR Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy-efficiency technologies and methods.

Off-road Equipment and Transportation-Related Regulations

Assembly Bill 1493 (Pavley Law)

California vehicle GHG emission standards were enacted under Assembly Bill (AB) 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and was anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the USEPA. In 2012, the USEPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under *Federal*, above). In January 2012, the California Air Resources Board (CARB) approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.[8]

Title 13, Chapter 9, Article 4.8, Section 2449

Section 2449 of the CCR, Title 13, Chapter 9, Article 4.8 was adopted on May 2, 2008, that limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary.

Sustainable Communities and Climate Protection Act

In 2008, the Sustainable Communities and Climate Protection Act, commonly known as its legislative bill number, SB 375, was adopted to connect the GHG emissions-reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle-miles traveled (VMT) and vehicle trips. Specifically, this act required CARB to establish GHG emissions-reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Sonoma County Transportation Authority (SCTA) is the MPO for the cities of Sonoma County, which includes the City of Santa Rosa. Pursuant to the recommendations of the

[8] California Air Resources Board, January 18, 2017, California's Advanced Clean Cars Midterm Review, https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary_Ac.pdf, accessed July 25, 2023.

Regional Transportation Advisory Committee (RTAC), CARB adopted per-capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

Executive Order N-79-20

On September 23, 2020, EO N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new zero-emission vehicles (ZEVs) sold in California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage[9] trucks to be ZE by 2035.
- Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the USEPA, and local air districts.

On August 25, 2022, CARB adopted the Advanced Clean Cars II regulations that codify the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, Advanced Clean Cars II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.

Advanced Clean Fleets Regulation

In April 2023, CARB released the Advanced Clean Fleets (ACF) regulation to accelerate the transition to zero-emission medium- and heavy-duty vehicles.[10] In conjunction with the Advanced Clean Trucks regulation, the ACF regulations helps to ensure that medium- and heavy-duty ZEVs are brought to the market, by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach, which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public infrastructure network.

The ACF regulations covers four main elements:

- Manufacturer sales mandate. Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036.
- Drayage fleets. Beginning January 1, 2024, trucks must be registered in the CARB Online System to conduct drayage activities in California. Non-zero-emission "legacy" drayage trucks may register in the CARB Online System through December 31, 2023. Legacy drayage trucks can continue to operate through their minimum useful life. Beginning January 1, 2024, only zero-emission drayage trucks may

[9] Drayage refers to short-distance transportation of goods between various transportation hugs, including ports, rail yards and warehouses, contributing to the smooth flow of goods.

[10] California Air Resources Board, April 14, 2023, Advanced Clean Fleets Regulation. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about, accessed July 25, 2023.

register in the CARB Online System. All drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035.

- High priority and federal fleets. High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEV Milestones Option to phase-in ZEVs into their fleets:
  - Model Year Schedule: Fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life, as specified in the regulation.
  - ZEV Milestones Option (Optional): Instead of the Model Year Schedule, fleets may elect to meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification.
- State and local agencies. State and local government fleets, including city, county, special district, and State agency fleets, would be required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties would start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option. State and local government fleets may purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

The ACF regulations would also establish requirements that transform the medium- and heavy-duty vehicle sector and demonstrate independent utility through achievement of the following objectives:

- Achieve criteria and GHG emissions reductions consistent with the goals identified in the State Implementation Plan Strategy and Scoping Plan.
- Provide emissions reductions in disadvantaged communities, thereby supporting the implementation of AB 617 (Garcia, C., Chapter 136, Statutes of 2017).
- Support the goals of EO N-79-20, which calls for accelerated ZEV deployment with these targets:
  - 100 percent ZE drayage by 2035
  - 100 percent ZE trucks and buses where feasible by 2045
- Ensure requirements, such as ZEV deployment schedules and related infrastructure build-out, are technologically feasible, cost-effective, and support market conditions.
- Lead the transition away from petroleum fuels and towards electric drivetrains.
- Contribute towards achieving carbon neutrality in California pursuant to SB 100, and in accordance with EO B-55-18.
- Mindfully set requirements to allow time for public ZE infrastructure buildout for smaller fleets or for regional haul applications who would be reliant on a regional network of public chargers.
- Ensure manufacturers and fleets work together to place ZEVs in service suitably and successfully as market expands.
- Establish a fair and level playing field among fleet owners.
- Craft the proposed project in a way that ensures institutional capacity for CARB to manage, implement, and enforce requirements.

Energy Storage

California has set ambitious long-term goals for energy storage beyond 2026 to support its clean energy and climate goals. The State aims to reach 100 percent carbon-free electricity by 2045, which will require significant investment in renewable energy sources like wind and solar, as well as energy storage technologies to balance the variability of these sources.

The California Independent System Operator (CAISO) has a total energy storage capacity of more than 3,160 megawatts (MW) as of June 2022.[11] This includes both large-scale and distributed energy storage systems, such as batteries, pumped hydroelectric storage, and thermal storage. CAISO is responsible for managing the electricity grid for much of California, and it has set a target of adding 3,300 MW of additional energy storage capacity by 2024 to support the integration of more renewable energy sources like wind and solar. As part of SB 100, load-serving entities (LSEs) were required to procure no less than 1.3 gigawatts (GW) of energy storage capacity by 2020, and 3 GW by 2030. Additionally, the CPUC has established a target of 15 GW of energy storage capacity by 2030.[12]

The Integrated Resource Plan

CAISO develops a coordinated grid management plan to integrate the generation and storage capacities of LSEs, called the Integrated Resource Plan (IRP). The IRP is a comprehensive planning document that outlines CAISO's forecasts for electricity demand, supply, and transmission needs over a 20-year planning horizon, as well as its strategies for integrating renewable energy resources and other grid services to meet those needs. The plan is developed in collaboration with LSEs, regulators, and other stakeholders, and is updated periodically to reflect changes in the energy landscape and evolving policy goals. Overall, the IRP plays a critical role in ensuring the reliability and resilience of California's electricity grid as the state continues to transition to a cleaner and more sustainable energy system.

When an individual Battery Energy Storage (BES) facility or generation infrastructure (i.e., solar panels) comes online in California, it is typically included in the IRP through a process known as the Interconnection Queue. The Interconnection Queue is managed by the CAISO, which oversees the operation of the State's electricity grid.

The Interconnection Queue

The Interconnection Queue is an application process that functions as a waiting list of proposed electricity generation and storage projects that are seeking to connect to the grid. When a new BES facility or generation infrastructure is proposed, the developer submits an application to CAISO to request an interconnection to the grid. CAISO evaluates the application to ensure that the facility meets technical and

[11] California Independent System Operator, June 14, 2022, "A golden age of energy storage," http://www.caiso.com/about/Pages/Blog/Posts/A-golden-age-of-energy-storage.aspx, accessed July 25, 2023.

[12] California Public Utilities Commission, December 1, 2022, CPUC Creates New Framework to Advance California's Transition Away From Natural Gas, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report, accessed July 25, 2023.

operational requirements, such as voltage regulation and frequency response, and that it can be integrated effectively into the grid.

Once the BES facility or generation infrastructure is approved by CAISO, it is assigned a point of interconnection on the grid, and its output is added to the IRP as a resource that can provide electricity and other grid services, such as frequency regulation or ramping support. The facility is then dispatched by CAISO based on its bids into the day-ahead and real-time electricity markets, and its output is used to help balance supply and demand on the grid in real-time.

Overall, the Interconnection Queue is an important mechanism for integrating new BES facilities and other electricity resources into the California grid, and for ensuring that the grid remains reliable and resilient as the state continues to transition to a cleaner and more sustainable energy system.

Regional Regulations

Sonoma County Transportation Authority

The SCTA is the congestion management agency for Sonoma County. SCTA is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. SCTA's latest congestion management program is the 2016 Comprehensive Transportation Plan. SCTA's countywide transportation model must be consistent with the regional transportation model developed by the Metropolitan Transportation Commission (MTC) with Association of Bay Area Governments (ABAG) data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the congestion management program system. In addition, SCTA's updated Comprehensive Transportation Plan includes multi-modal performance standards and trip reduction and transportation demand management strategies consistent with the goals of reducing regional VMT in accordance with Sustainable Communities and Climate Protection Act (SB 375).

As part of the implementing framework for the Comprehensive Transportation Plan, communities in Sonoma County have identified Priority Development Areas (PDAs) to focus future population and employment growth. Increased density in PDAs is intended to locate more people near jobs and services in an effort to reduce travel and transportation-related energy impacts.[13]

Plan Bay Area

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, MTC and ABAG adopted *Plan Bay Area* 2050 on October 21, 2021.[14] *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of Sustainable Communities and Climate Protection Act (SB 375). Under the *Plan Bay Area* strategies, just under half of all Bay Area

[13] Sonoma County Transportation Authority, September 2016, *Moving Forward 2040: Sonoma County's Comprehensive Transportation Plan*, https://scta.ca.gov/wp-content/uploads/2016/09/CTP16_090616.pdf.

[14] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 21, 2023.

households would live within 0.5 miles of frequent transit by 2050. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. As described in Chapter 4.0 of this Draft EIR, to achieve *Plan Bay Area*'s sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in PDAs[15] and Transit Priority Areas (TPAs).[16] As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR, the EIR Study Area has six PDAs and three TPAs, including the Mendocino Avenue/Santa Rosa Avenue Corridor PDA, North Santa Rosa Station PDA and TPA, Downtown Station Area PDA and TPA, Sebastopol Road Corridor PDA, Roseland PDA, Santa Rosa Avenue PDA, and Santa Rosa Transit Mall TPA. Development in PDAs and TPAs leverage existing infrastructure and therefore can minimize development in greenfield (undeveloped) areas and maximize growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels and reduce wasteful, inefficient, or unnecessary consumption of energy resources.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives pertaining to energy. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy conservation and use are in Title 3, *Revenue and Finance;* Title 18, *Buildings and Construction*; and Chapter 19, *Subdivisions*, as follows:

- Chapter 3-32, *Utility Users Tax*. This chapter is also known as the utility users tax ordinance. Section 3-32.060, *Electricity Users Tax*, outlines the tax that electric energy users in the city must pay. This code also defines what a charge and what using electric energy use means in this context. Section 3-32.070, *Gas Users Tax*, outlines the tax imposed on every person in the city that uses gas through a main or pipes. Some exclusions from the tax are applicable and described in this code as well.
- Title 18, *Buildings and Construction*. This title adopts by reference, with the additions, insertions, deletions, and changes listed throughout, the California Energy Code in Chapter 18-33, *California Energy Code*, and the California Green Building Standards Code in Chapter 18-42, *California Green Building Standards Code*. This title also includes Chapter 18-68, *Expedited Permit Process for Small Residential Rooftop Solar Energy Systems,* which provides for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 to achieve timely and cost-effective installations of small residential rooftop solar energy systems.
- Chapter 19-04, *Energy Conservation*. This chapter provides for subdivisions to be designed to include passive or natural heating or cooling opportunities. Some examples of these opportunities include having the alignment of the subdivision be in the east-west direction and taking advantage of the available shade and prevailing breezes on the site.

[15] Priority development areas (PDAs) are transit-oriented, infill development opportunity areas in existing communities.
[16] Transit priority areas (TPAs) are half-mile buffers surrounding major transit stops or terminals.

4.6.1.2 EXISTING CONDITIONS

Electricity and Natural Gas

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh), and natural gas is measured in therms. A therm is a measurement of the amount of heat energy in natural gas, equal to 100,000 British thermal units (BTUs). The volumetric billing unit used for natural gas delivered to customers is typically expressed in hundreds of cubic feet (Ccf)—approximately 0.01 therm per Ccf—or thousands of cubic feet (Mcf)—approximately 10.37 therms per Mcf.[17] A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for one hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC's "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 280,738 gigawatt hours in 2021.[18] A gigawatt is equal to one million kW.

Energy Providers

Two energy providers, Sonoma Clean Power (SCP) and Pacific Gas and Electric Company (PG&E), serve the EIR Study Area, as described herein.

Sonoma Clean Power

SCP is the public electricity provider for Sonoma and Mendocino Counties.[19] As a not-for-profit public agency, SCP is independently run by Sonoma County and the participating cities of Coverdale, Cotati, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, unincorporated Sonoma County, and the Town of Windsor. SCP provides electricity generated from renewable sources such as solar, wind, geothermal, and hydropower. Individuals residing or working in the SCP service area are automatically enrolled in SCP.

SCP offers three program options: the CleanStart program, which provides 42 percent renewable power service; the EverGreen program, which provides 100 percent local renewable power service; or the OptOut program, which allows individuals to continue to receive PG&E's basic service.[20] The electric energy provided by SCP is conveyed to customers through PG&E's existing infrastructure. PG&E continues to maintain the grid, repair lines, and provide customer billing services in the SCP service area.

[17] United States Energy Information Administration, June 1, 2021, Frequently Asked Questions (FAQs), https://www.eia.gov/tools/faqs/faq.php?id=45&t=7, accessed July 25, 2023.

[18] California Energy Commission, Electricity Consumption by Planning Area, http://www.ecdms.energy.ca.gov/elecbyplan.aspx, accessed July 25, 2023.

[19] Sonoma Clean Power, 2023, Who We Are, https://sonomacleanpower.org/whoweare, accessed July 25, 2023.

[20] Sonoma Clean Power, 2023, You have the Power, https://sonomacleanpower.org/cleanstart-evergreen, accessed July 25, 2023.

Pacific Gas and Electric Company

Electricity

PG&E is a publicly traded utility company that generates, purchases, and transmits energy and natural gas under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to Eureka, south to Bakersfield, west to the Pacific Ocean, and east to the Sierra Nevada. PG&E's electricity distribution system consists of 106,681 circuit-miles of electric distribution lines and 18,466 circuit-miles of interconnected transmission lines.[21] PG&E owns and maintains above-ground networks of electric transmission and distribution facilities throughout the EIR Study Area.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, also known as solar farms. The bulk electric grid (collectively referred to as "The Grid") is a network of high-voltage transmission lines, linked to power plants in the PG&E system. The distribution system, made up of lower-voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

Natural Gas

PG&E gas transmission pipeline systems serve approximately 4.5 million gas customers in northern and central California.[22] The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. PG&E also adopted the Pipeline 2020 program, which aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders. Total natural gas consumption in PG&E's service area was 449,302,071,200 kilo-BTU for 2021.[23]

In 2021, roughly half of PG&E's energy generated came from renewable resources, including biopower, geothermal, small hydroelectric, solar, and wind power. PG&E's portfolio consists of 7 percent natural gas, 39 percent non-emitting nuclear generation, 4 percent large hydroelectric facilities, and 50 percent eligible renewable energies, which includes small hydroelectric and wind.[24]

[21] Pacific Gas and Electric Company, 2023, Company profile, https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed July 25, 2023.

[22] Pacific Gas and Electric Company, 2023, Company profile, https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed July 25, 2023.

[23] California Energy Commission, 2021, Gas Consumption by Planning Area, http://www.ecdms.energy.ca.gov/gasbyplan.aspx, July 25, 2023.

[24] Pacific Gas and Electric Company, 2023, Exploring clean energy solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page#:~:text=In%202021%2C%20roughly%20half%20of,nuclear%20and%20large%20hydroelectric%20power, accessed July 25, 2023.

The existing electricity and natural gas consumption attributable to nonresidential and residential land uses in the EIR Study Area is shown in Table 4.6-1, *Estimated Existing Electricity and Natural Gas Demand.*

TABLE 4.6-1 ESTIMATED EXISTING ELECTRICITY AND NATURAL GAS DEMAND

Parameter	Electricity Usage (kWh/year) [a]	Natural Gas Usage (Therms/year) [a]
Residential	367,395,591	28,371,401
Nonresidential	525,542,438	15,954,672
Total	**892,938,028**	**44,326,074**
2019 Service Population [b]	275,569	
Per Service Population Consumption	**3,240**	**161**

Notes:
a. Based on electricity and natural gas usage inventory as part of the development of the GHG Reduction Strategy.
b. Service population = residents + jobs.
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.

Fuel Consumption

California is among the top producers of petroleum in the country, with crude oil pipelines throughout the state connecting to oil refineries in the Los Angeles, San Francisco Bay, and Central Valley regions. In addition to producing petroleum, California is also one of the top consumers of fuel for transportation. With this sector accounting for approximately 35 percent of California's total energy demand in 2020, amounting to approximately 2,355.5 trillion BTUs.[25] In addition, in 2020, California's transportation sector consumed approximately 433 million barrels of petroleum fuels.[26]

Furthermore, according to the CEC, California's 2019 fuel sales were approximately 15,365 million gallons of gasoline and 1,756 million gallons of diesel.[27] In Sonoma County, approximately 204 million gallons of gasoline and 32 million gallons of diesel fuel were sold in 2019.[28]

Table 4.6-2*, Existing Operation-Related Annual VMT,* shows the estimated annual VMT currently generated under existing baseline conditions. VMT is based on vehicle trips beginning and ending in the EIR Study Area and from external/internal trips (i.e., trips that either begin or end in the EIR Study Area).

[25] United States Energy Information Administration, 2020, *Table F33: Total Energy Consumption, Price, and Expenditure Estimates*, https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf, accessed July 25, 2023.

[26] United States Energy Information Administration, 2020, T*able F16: Total Petroleum Consumption Estimates*, https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf, accessed July 25, 2023.

[27] California Energy Commission, 2023, *California Retail Fuel Outlet Annual Reporting (CEC-A15) Results*, https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting, accessed July 25, 2023.

[28] California Energy Commission, 2023, *California Annual Retail Fuel Outlet Report Results (CEC-A15),* https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting, accessed July 25, 2023.

TABLE 4.6-2 EXISTING OPERATION-RELATED ANNUAL VMT

Gas VMT	Diesel VMT	Compressed Natural Gas VMT	Electricity VMT
1,093,443,760	111,134,150	1,713,800	12,792,080

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

4.6.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant energy impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

To determine whether the proposed project would result in wasteful, inefficient, or unnecessary consumption of energy resources, this analysis uses the guidance provided in Appendix F, *Energy Conservation*, of the CEQA Guidelines as well as the analytical precedent set by *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168).

According to Appendix F of the CEQA Guidelines, the goal of conserving energy is translated to include decreasing overall per-capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources. In *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168), the Appellate Court concluded that the analysis of wasteful, inefficient, and unnecessary energy consumption was not adequate because it did not consider whether additional renewable energy features could be added to the project.

The proposed project would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and the Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168), the proposed project would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per-capita energy consumption;
- Decreasing reliance on fossil fuels, such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources.

4.6.2.1 METHODOLOGY

The following is a summary of the assumptions used for the City's energy analysis:

- Energy (Natural Gas and Electricity): Energy use for residential and nonresidential land uses in the city were modeled using electricity and natural gas data provided by PG&E and SCP. Residential energy and nonresidential energy forecasts are adjusted for increases in housing units and employment, respectively.
- On-Road Fuel Use: Daily VMT was used as an indicator of fuel use and was based on Origin-Destination Method VMT provided by W-Trans (see Chapter 4.15, *Transportation*, of this Draft EIR). The VMT provided includes the full trip length for land uses in the EIR Study Area (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips, consistent with the recommendations of CARB's RTAC. Accounting of VMT is based on the recommendations of CARB's RTAC created under Sustainable Communities and Climate Protection Act (SB 375).

  Due to varying conditions that influence fuel consumption, such as vehicle fuel type and fuel economy, VMT generation is used herein as a performance metric to measure anticipated fuel consumption during baseline (2019) and future (2050) conditions. At the programmatic level, it is speculative to discuss the specific types of vehicles and fuels that would be used and consumed during operation of future development and activities under the proposed project.

4.6.3 IMPACT DISCUSSION

ENE-1	**Implementation of the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Short-Term Construction Impacts

Potential future development projects from implementation of the proposed project would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that most electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

Construction of potential future development projects over the buildout horizon of the proposed project would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of

construction and would be temporary. It is anticipated that most off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction. Furthermore, the construction contractors would be required to minimize nonessential idling of construction equipment during construction, in accordance with CCR Title 13, Chapter 9, Article 4.8, Section 2449. Such required practices would limit wasteful and unnecessary energy consumption.

Also, potential future projects in the EIR Study Area would be similar to projects currently in the EIR Study Area. Overall, there would be no unusual project characteristics anticipated that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, short-term construction activities that occur as a result of implementation of the proposed project would not result in inefficient, wasteful, or unnecessary fuel consumption.

Long-Term Impacts During Operation

Decreasing Overall Per-Capita Energy Consumption

Operation of potential future development over the buildout horizon of the proposed project would create additional demands for electricity and natural gas compared to existing conditions. Operational use of electricity and natural gas would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; lighting; and charging electric vehicles. Land uses under the proposed General Plan 2050 would also result in additional demands for transportation fuels (e.g., gasoline, diesel, compressed natural gas, and electricity) associated with on-road vehicles.

Building Electricity

Electrical service to the EIR Study Area is provided by PG&E and SCP through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.6-3, *Year 2050 Forecast Electricity Consumption*, by horizon year 2050, electricity use in the EIR Study Area would increase by 63,691,182 kWh/year, or approximately 7 percent, from existing conditions.

TABLE 4.6-3 YEAR 2050 FORECAST ELECTRICITY CONSUMPTION

Land Use	Electricity Usage (kWh/year) Existing Conditions	Proposed General Plan 2050 [a]	Net Change
EIR Study Area			
Residential	367,395,591	415,787,730	48,392,139
Nonresidential	525,542,438	540,841,480	15,299,042
Total	**892,938,028**	**956,629,210**	**63,691,182**
Service Population	275,569	355,425	79,856
Per Service Population Annual Consumption	**3,240**	**2,692**	**-548**

Note:
a. Modified with State Actions.
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.

As a result, the per-service population electricity consumption was estimated to decrease from 3,240 kWh per person per year in 2019 to 2,692 kWh per person per year in 2050, or a reduction of approximately 548 kWh annually. The 2050 electricity consumption estimates reflect the electricity consumption rates of the existing community, which is made up of a building stock that consists of varying ages and energy-efficiency performances. As described in Chapter 3, *Project Description*, of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would be concentrated in the form of infill/intensification on sites already developed and/or underutilized or in close proximity to existing development and infrastructure. Further, the majority of the projected growth would occur in PDAs and TPAs.

All potential future development over the buildout horizon of the proposed General Plan 2050 would be required to demonstrate compliance with the California Building Energy Efficiency Standards and CALGreen standards in effect at the time the individual development applications are submitted and can therefore be expected to be more energy-efficient than the use being replaced, resulting in reductions in electricity consumption on a per-dwelling-unit and per-square-foot basis when compared to existing development. It should be noted that it is unknown how much more energy-efficient future iterations of the California Building Energy Efficiency Standards and CALGreen would be in 2050 compared to existing conditions as those code updates are released on a three-year cycle.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider energy efficiency and impacts. The following goals, policies, and actions would serve to improve energy efficiency and reduce energy use:

- Goal 3-7: Strive to achieve net carbon neutrality no later than 2045.
  - Policy 3-5.3: Increase the use of renewable, carbon free, and distributed energy resources throughout the city.

- Action 3-7.5: Require regular energy audits of existing City-owned and operated structures, identifying levels of existing energy use and potential conservation and efficiency measures.
- Action 3-7.6: Develop a capital project list and funding strategy to complete energy-efficiency projects for City-owned and operated structures and adjust the list annually to add new projects as needed.
- Action 3-7.7: Provide information on the cost-savings potential and other benefits of energy audits and energy-efficient retrofits to encourage their preparation for buildings throughout the city.
- Action 3-7.9: Identify incentives to encourage new buildings to exceed State energy efficiency requirements and/or meet or exceed the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program or equivalent standards.
- Action 3-7.11: Use education and incentives to promote and sustain energy-conserving design and practices.

- Policy 3-7.3: Increase the use of renewable, carbon-free, and distributed energy resources throughout the city.
  - Action 3-7.12: Revise any existing codes and policies that constrain or prohibit the installation of environmentally acceptable forms of distributed energy generation.
  - Action 3-7.13: Identify incentives and other means to encourage new and existing buildings to include battery energy storage systems, especially buildings with solar energy installations and municipal buildings that provide essential community services.
  - Action 3-7.14: Participate in State and local efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation.
  - Action 3-7.15: Continue to participate in utility-sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources.
  - Action 3-7.16: Seek and identify resources to assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings.
  - Action 3-7.17: Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.
  - Action 3-7.18: Encourage the establishment of neighborhood renewable energy microgrids to support resilience.
  - Action 3-7.19: Support State and utility efforts to improve grid resilience and capacity.

- Goal 5-6: Santa Rosa is a resilient city able to adapt to, recover from, and thrive under changing climate conditions.
  - Policy 5-6.4: Encourage collaboration among City departments and with nonprofit organizations to create a network of equitably located resilience centers throughout the city.
    - Action 5-6.10: Seek funding to upgrade existing warming and cooling centers to offer refuge from extreme heat events and poor air quality due to regional wildfire smoke and be equipped with renewable energy generation and backup power supplies.
  - Policy 5-6.7: Strengthen the community's ability to respond to the risks and negative effects of power outages, including public safety power shutoffs (PSPS) and other climate-related threats.
    - Action 5-6.27: Collaborate with PG&E, Sonoma Clean Power, and nonprofit organizations to ensure that those who depend on electricity supply for medical devices and refrigerated medication have backup energy supplies during outages, including extreme heat and wind events.
  - Policy 5-6.8: Increase the resiliency of City-owned buildings and structures to severe weather events and support home and business owners to increase the resilience of their buildings and properties.
    - Action 5-6.29: Seek funding for backup power, preferably from renewable energy sources, and water resources at emergency shelters, resilience centers, and cooling centers.

As a result of compliance with Title 24 energy-efficiency standards and implementation of these proposed General Plan 2050 goals, policies, and actions, per service population building electricity consumption is expected to decrease in 2050 compared to existing conditions.

Building Natural Gas

As shown in Table 4.6-4, *Year 2050 Forecast Natural Gas Consumption*, natural gas use under the proposed project is estimated to total 48,851,700 therms annually. To provide a conservative assessment of what energy consumption may be in 2050 resulting from implementation of the proposed project, the new growth in building space anticipated through 2050 was assumed to include natural gas for space and water heating. With this assumption, by 2050, natural gas use in the EIR Study Area would increase by 4,525,626 therms annually, or approximately 10 percent, from existing conditions. Service population would also increase by 79,856 people under the proposed project. Thus, the per service population natural gas consumption is estimated to decrease from 161 therms per person per year in 2019 to 137 therms per person per year in 2050 for natural gas. As described above, this number can be considered to represent a conservative (i.e., "worst-case" scenario) as some residential projects in the EIR Study Area may opt for voluntary all-electric features.

TABLE 4.6-4 YEAR 2050 FORECAST NATURAL GAS CONSUMPTION

Land Use	Natural Gas Usage (Therms per year)		
	Existing Conditions	Proposed General Plan 2050 [a]	Net Change
EIR Study Area			
Residential	28,371,401	31,665,210	3,293,809
Nonresidential	15,954,672	17,186,490	1,231,818
Total	**44,326,074**	**48,851,700**	**4,525,626**
Service Population	275,569	355,425	79,856
Per Service Population Annual Consumption	**161**	**137**	**-24**

Note:
a. Modified with State Actions.
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR.

Similar to electricity consumption, all potential future development over the buildout horizon of the proposed General Plan 2050 would be required to demonstrate compliance with the current California Building Energy Efficiency Standards and CALGreen and would result in reductions in heating fuel (i.e., natural gas or propane) consumption on a per-dwelling-unit and per-square-foot basis when compared to existing development in the city.

Moreover, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider energy efficiency and impacts. In addition to the proposed General Plan 2050 goals, policies, and actions listed previously, the following goals, policies, and actions would serve to improve energy efficiency and reduce energy consumption in potential future development in the EIR Study Area:

- Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits.
  - Policy 3-6.9: Achieve and maintain ambient air quality standards.
    - Action 3-6.33: Require all new development to be electric vehicle charging ready at a minimum. Explore opportunities to amend the City's municipal codes to require new development to install electric vehicle charging infrastructure beyond the minimum State requirements.
    - Action 3-6.35: Review and amend the City's Building Code and Zoning Code to facilitate the installation of electric vehicle charging infrastructure.
    - Action 3-6.36: Explore efforts to require charging or clean fuel stations on private property, including hydrogen and sustainably sourced biofuels.
    - Action 3-6.37: Expand installation and operation of electric vehicle charging stations on City properties, including curbside in areas of the community where other options are limited.

    - Action 3-6.38: Budget for clean fuel and zero-emission vehicles in the City's long-range capital expenditure plans to transition the existing fleet of gasoline- and diesel- powered vehicles, and work to make the City's fleet among the cleanest in the North Bay by:
        - Purchasing zero-emission vehicles whenever possible that meet or exceed requirements under the California Advanced Clean Fleets Regulation. If zero- emission vehicles are not available, purchase plug-in hybrids, or other vehicle types to minimize emissions.
        - Using biodiesel and pollution- reducing fuel additives in the City's diesel fuel vehicles.
- Goal 3-7: Strive to achieve net carbon neutrality no later than 2045.
    - Policy 3-5.3: Increase the use of renewable, carbon free, and distributed energy resources throughout the city.
        - Action 3-7.10: Assess the effectiveness of the City's environmentally sensitive preferred purchasing and green fleet conversion programs and update the programs, as needed, to support the City's GHG reduction goals.
    - Policy 3-7.3: Increase the use of renewable, carbon-free, and distributed energy resources throughout the city.
        - Action 3-7.20: Require all new electric vehicle (EV) chargers installed by the City to have bi-directional charging capabilities. Encourage private property owners to select EV chargers with bi-directional charging capabilities when installing EV chargers on their properties.
    - Policy 3-7.4: Reduce the use of fossil fuels as an energy source in new and existing buildings.
        - Action 3-7.21: Evaluate and adopt changes to the building code or other municipal codes and policies to decarbonize the building stock while also maximizing energy efficiency.
        - Action 3-7.22: Amend the building or energy code to incentivize building owners to upgrade residential appliances, including water and space heaters, to increase energy efficiency and reduce GHG emissions.
        - Action 3-7.23: Develop new and retrofit existing City facilities to be zero net energy.
        - Action 3-7.24: Continue to update the Building Code, consistent with State law, to increase the use of low-carbon construction materials.

As a result of implementation of these General Plan 2050 goals, policies, and actions, the per-service population heating fuel consumption is expected to decrease in 2050 compared to existing conditions.

Transportation Energy

The potential growth that is projected to occur over the buildout horizon of the proposed project would consume transportation energy from the use of motor vehicles (e.g., gasoline, diesel, compressed natural gas, electricity). Table 4.6-5, *Operation-Related Annual Fuel Usage: Net Change from Existing,* shows the net change in VMT, fuel usage, and fuel efficiency under forecast year 2050 conditions from existing baseline year conditions.

TABLE 4.6-5 OPERATION-RELATED ANNUAL FUEL USAGE: NET CHANGE FROM EXISTING

Land Use	Existing Conditions	Proposed General Plan 2050	Net Change
Gasoline			
VMT [a]	1,093,443,760	78,870,070	-1,014,573,690
Gallons	50,236,587	2,419,159	-47,817,428
Miles Per Gallon	21.77	32.6	10.84
Diesel			
VMT [a]	111,134,150	4,557,910	-106,576,240
Gallons	11,490,536	493,229	-10,997,307
Miles Per Gallon	9.67	9.24	-0.43
Compressed Natural Gas			
VMT [a]	1,713,800	39,610	-1,674,190
Gallons	326,690	6,623	-320,067
Miles Per Gallon	5.25	5.98	0.73
Electricity			
VMT [a]	12,792,080	931,669,180	918,877,100
Gallons	4,674,096	528,941,104	524,267,008
Miles Per kWh	2.74	1.76	-0.98
Hydrogen			
VMT [a]	0	75,221,400	75,221,400
Gallons	-	857,847	857,847
Miles Per kg	0	87.69	87.69
Total VMT	**1,219,083,790**	**1,090,358,170**	**-128,725,620**
Daily VMT	2,229,977	2,745,678	515,701
Service Population (SP)	275,569	355,425	79,856
VMT/SP	8.1	7.7	-0.4

Note:
[a] Daily VMT is provided by W-Trans, 2023. VMT modeled by W-Trans is conservative because it assumed slightly higher population and employees. VMT identified in this table is consistent with the accounting recommendations of CARB's RTAC created under Sustainable Communities and Climate Protection Act (SB 375) (see Methodology above) and is not the same as accounting for VMT under SB 74.
Source: Based as part of the City's GHG Reduction Strategy, see Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.

As shown in Table 4.6-5, implementation of the proposed project would increase daily VMT from 2,229,977 in 2019 to 2,745,678 vehicle miles per day in 2050 in the EIR Study Area, or an increase of approximately 23 percent. Service population would also increase more under the proposed project, from approximately 275,569 to 355,425 people, or an increase of approximately 29 percent. As a result, per-person daily VMT would decrease from approximately 8.1 miles traveled to approximately 7.7 miles traveled daily.

The overall VMT as shown in the table would be primarily attributable to the overall growth associated with the proposed project compared to existing conditions. As discussed in Chapter 4.13, *Population and Housing*, of this Draft EIR, buildout of the proposed project would serve to accommodate expected population, housing, and job growth in the city for the next three Regional Housing Needs Allocation

(RHNA) cycles. Thus, this growth would not represent unplanned population growth for which inadequate planning has occurred.

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed General Plan 2050 includes land use designations, goals, policies, and actions that will help reduce VMT and therefore reduce emissions from automobiles. Please see Chapter 4.15 of this Draft EIR for a complete list of these goals, policies, and actions.

Furthermore, the average vehicle fuel economy would improve between 2019 and 2050 as vehicle manufacturers comply with CAFE standards and other fuel economy standards, resulting in lower transportation energy consumption per mile traveled. The CAFE standards are not directly applicable to residents or land use development projects, but to car manufacturers. Thus, the City of Santa Rosa and its residents do not have direct control in determining the fuel efficiency of vehicles manufactured and that are made available. However, compliance with the CAFE standards by car manufacturers would ensure that vehicles produced in future years have greater fuel efficiency and would generally result in an overall benefit of reducing fuel usage by providing the population of the county more fuel-efficient vehicle options.

While the demand in electricity would increase under the proposed project, in conjunction with the regulatory (i.e., Renewables Portfolio Standard, SB 100, and Clean Energy, Jobs, and Affordability Act of 2022 [SB 1020]) and general trend toward increasing the supply and production of energy from renewable sources, it is anticipated that a greater share of electricity used to power electric vehicles would be from renewable sources in future years (e.g., individual photovoltaic systems, purchased electricity from PG&E, and/or purchased electricity from SCP that is generated from renewable sources).

In addition to regulatory compliance that would contribute to more fuel-efficient vehicles and less demand in fuels, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 includes goals, policies, and actions that would contribute to minimizing overall VMT, and thus associated fuel usage. The following goal, policy, and actions would support environmental review process for VMT analysis and encourage work with the SCTA to support VMT reduction techniques to mitigate VMT impacts associated with future development projects:

- Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.
    - Policy 3-1.1: Work with partner agencies to reduce VMT using existing techniques and explore feasibility of new techniques as they arise.
        - Action 3-1.2: Work with SCTA and other local and regional partners to explore developing a VMT mitigation bank alternative for eligible projects to fund VMT reduction efforts.
        - Action 3-1.3: Continue to participate in discussions addressing regional through-traffic with SCTA, the County of Sonoma, MTC, and other municipalities, prioritizing investments that will reduce VMT and GHG emissions.

- Action 3-1.4: Coordinate transportation plans with those of Sonoma County, MTC, and the State of California, to support interregional travel improvements, particularly connections to public and active transportation modes.

Additionally, the goals, policies, and actions listed under impact discussion TRAN-2 in Chapter 4.15, *Transportation*, of this Draft EIR, would contribute to minimizing overall VMT, and thus associated fuel usage. In combination with improvements in fuel economy standards through 2050, the proposed project would result in a decrease in transportation energy consumption, and thus an overall decrease in energy consumption.

Decreasing Reliance on Fossil Fuels

The proposed project would be considered to conflict with this criterion if it did not take steps to decrease the reliance on fossil fuels. As discussed in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR, future potential development projects over the buildout horizon of the proposed General Plan 2050 would be required to comply with the CBSC current at the time of their building application submittal, including the California Building Energy Efficiency Standards and CALGreen. As the current CBSC is the 2022 CBSC, individual development projects going through the application process today would result in greater energy efficiency than the current performance of existing structures in the city. In addition, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and BES infrastructure or demonstrate energy-efficiency performance equivalent to including photovoltaic and BES features.

In addition to improvements in energy efficiency and on-site renewable energy generation and energy storage standards, SB 100 requires that LSEs incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources. By January 1, 2046, all LSEs in California are required to source 100 percent of their in-state electricity sales from renewable and carbon-free sources. As a result, potential future development projects over the buildout horizon of the proposed General Plan 2050 would improve their energy efficiency through compliance with the CBSC current at the time of their building application submittal and LSEs would supply electricity that is increasingly sourced from carbon-free sources. Moreover, consistent with EO N-79-20 and CARB's Advanced Clean Cars II Regulation, which require that 100 percent of in-state vehicle sales starting in 2035 are electric or hybrid electric, vehicles utilized by future residents and employees accommodated by the proposed project are expected to consist more of EVs than what is experienced under existing conditions.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 includes goals, policies, and actions that are intended to reduce the use of nonrenewable energy. The same proposed General Plan 2050 goals, policies, and actions listed above encourage the reduction of nonrenewable energy use and the use of new energy sources and building electrification. Furthermore, the following goals, policies, and actions would also support the decrease reliance on fossil fuels by reducing VMT through the promotion of active transportation:

- Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.
  - Policy 3-1.2: Promote a citywide mode shift away from single-occupancy vehicles to support ambitious VMT and GHG reduction goals.
    - Action 3-1.5: Develop a process that invests in and prioritizes non-automobile modes of transportation in capital improvement projects to reduce VMT and GHGs, prioritizing, in order:
      1. Active transportation modes, including walking, bicycling, and rolling.
      2. Public transportation, including inter-city and regional systems.
      3. Other shared vehicles such as carpool, vanpool, and rideshare/transportation network companies.
    - Action 3-1.7: Prioritize transportation alternatives such as active and public transportation, that reduce demand on existing facilities in lieu of widening roadways and further impacting the natural environment.
    - Action 3-1.8: Work with regional partners to develop mobility hubs as locations for multi-modal transportation, specifically accommodating active and public transportation modes.
    - Action 3-1.14: Provide information on funding opportunities and other incentives designed to encourage developers of sites in Transit Priority Areas and Priority Development Areas to integrate transit-supportive components, such as unlimited pass programs, transit-serving pedestrian infrastructure, and/or transit subsidies, as appropriate.
- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.1: Ensure that the active transportation network remains in good condition by maintaining facilities, tracking the state of infrastructure, and managing the network in a way that serves all users.
    - Action 3-2.2: Use mapping to identify gaps in the active transportation network, and complete those gaps, except where it may be infeasible due to lack of City right-of way.
    - Action 3-2.4: Improve connections in the active transportation network to ensure that all who choose to walk, roll, or ride have adequate access to public transportation amenities, especially in Equity Priority Areas and Areas of Change.
    - Action 3-2.6: Ensure that major arterials have active transportation infrastructure that accommodates all road users and does not present a barrier to regional travel for any mode.
    - Action 3-2.7: Improve active transportation crossings of major transportation barriers, such as the SMART rail lines, Highway 101, and Highway 12.
  - Policy 3-2.2: Continue to expand and improve the active transportation network toward completing a safe, continuous, convenient, and attractive network of designated routes that connect all neighborhoods and that is equitably accessible for all ages and abilities.

- Action 3-2.9: Implement and update the City's Active Transportation Plan, as appropriate, recognizing that:
  - The Active Transportation Plan will create a blueprint for the City to construct a low-stress active transportation network for all ages and abilities.
  - The Active Transportation Plan will prioritize separating network users in time and space to increase user safety and comfort.
  - Each update of the Active Transportation Plan will result in a General Plan Amendment and will therefore become policy and action incorporated into the General Plan.
- Action 3-2.10: Use the Urban Streets Design Guide and the Urban Bikeways Design Guide created by the National Association of City Transportation Officials (NACTO) as guides to update City Street Design and construction standards and implement a low-stress network for all ages and abilities, specifically through protected and separated bicycle lanes.
- Action 3-2.12: Identify and analyze arterial corridors and improve them by preparing and implementing corridor plans to address all transportation modes, specifically active transportation, focusing on separated or protected facilities for all ages and abilities.
- Action 3-2.18: Prioritize addressing active transportation deficiencies in Equity Priority Areas.

- Policy 3-2.5: Address traffic volumes and speeds in neighborhoods to reduce cut-through traffic and promote use of existing low-stress streets for active transportation travel.
  - Action 3-2.31: Implement traffic-calming measures, where appropriate, to improve neighborhood livability and preserve low-stress active transportation routes, such as:
    - Narrowing street widths.
    - Adding curb extensions to reduce crossing distances for pedestrians.
    - Adding or removing on-street parking, depending on feasibility and right-of-way.
    - Adding chicanes, chokers, or diverters to slow traffic.
    - Creating rough-paved crosswalks to increase visibility and encourage slow vehicle movement.
    - Adding rumble strips or speed tables with bicycle cutouts to slow vehicles but allow for seamless bicycle passage.
    - Adding planted islands.
  - Action 3-2.32: Include active transportation network improvements and traffic calming in regular paving and maintenance projects unless infeasible due to engineering or conflict with emergency access.

- Goal 3-3: Transition away from single-occupancy vehicles.
  - Policy 3-3.1: Continue to offer and improve TDM programs that incentivize a shift away from single-occupancy vehicles.

- Action 3-3.1: Work with local employers and existing residential and commercial development to expand TDM and related efforts to help meet employee transportation needs through modes that reduce VMT from single-occupancy automobile trips less than five miles, such as:
  - Unlimited free access to transit service (CityBus, Sonoma County Transit, and SMART).
  - Funding for increased transit frequency.
  - Paid incentives to active transportation and micromobility users, including a transportation allowance and secure on-site bicycle parking, lockers, showers and other facilities that support bicycling commuting to and from work.
  - Programs and incentives to expand carpooling, vanpooling, and car sharing.
  - Staggered work shifts, flex time (e.g., 9/80 work schedule), and telecommuting.
  - Paid-parking disincentives for single-occupant vehicles and/or parking cash-out incentives.

As a result of implementation of these General Plan 2050 goals, policies, and actions, the proposed project would incrementally decrease reliance on fossil fuel energy resources through 2050.

Increasing Reliance on Renewable Energy

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider renewable resources and active modes of transportation. The same proposed General Plan 2050 goals, policies, and actions listed previously would support the use of renewable energy resources.

In addition to the proposed General Plan 2050 goals, policies, and actions, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and BES infrastructure or demonstrate energy-efficiency performance equivalent to including photovoltaic and BES features. In addition, it is anticipated that each new code cycle for the CBSC improves on the last one and requires higher performance for energy efficiency and incorporates additional requirements for on-site renewable energy and EV charging infrastructure. Potential future development projects over the buildout horizon of the proposed General Plan 2050 would therefore result in a net increase from existing conditions in on-site photovoltaic electricity generation and EV charging stations and associated infrastructure, further supporting and accelerating the adoption of EVs and the use of renewable energy in future years.

Similarly, LSEs that serve future development projects in the EIR Study Area, such as PG&E and SCP, would be required to incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources through 2045 under SB 100. As a result, electricity consumed by individual development projects as well as existing structures in the EIR Study Area would rely more on renewable and carbon-free sources for electricity in future years than is experienced under existing conditions.

Summary

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, Renewables Portfolio Standard, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the proposed General Plan 2050 includes goals, policies, and actions related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation that will further contribute to minimizing building, transportation-related energy, and nonrenewable sources of energy demands. As stated, the buildout that could occur under the proposed project would reduce the per-capita transportation energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy sources.

Implementation of the proposed General Plan 2050 goals, policies, and actions, in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with potential growth under the proposed project would decrease overall energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy. As such, the energy consumption under the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

ENE-2 Implementation of the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

California Renewables Portfolio Standard Program

The State's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 44 percent by 2024 (SB 100), 50 percent by 2026 (SB 100), 52 percent by 2027 (SB 100), 60 percent by 2030 (SB 100), 90 percent by 2035 (SB 1020), 95 percent by 2040 (SB 1020), and 100 percent by 2045 (SB 100). Additionally, SB 1020 requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as PG&E and SCP, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. In addition, customers in Sonoma County will automatically receive electric generation service from SCP's Clean Energy program, which uses approximately 50 percent renewable energy and 91 percent carbon-free.[29] Even if customers in the EIR Study Area were to opt out of SCP's service, and therefore receive all their electricity from PG&E, 48

[29] Sonoma Clean Power, Frequently Asked Questions, https://sonomacleanpower.org/frequently-asked-questions#:~:text=Why%20is%20Sonoma%20Clean%20Power,you%20choose%20to%20opt%20out., accessed July 25, 2023.

percent of PG&E's base plan electricity is generated from renewable energy in 2021.[30] By 2030, PG&E is set to meet the State's new 60 percent renewable energy mandate set forth in SB 100.

The net increase in energy demand associated with implementation of the proposed project would be within the service capabilities of PG&E and SCP and would not impede their ability to implement California's renewable energy goals. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of California's RPS program, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

ENE-3 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy and energy efficiency.

All the development projects in the vicinity of the project's EIR Study Area are within the service area of PG&E and SCP. These projects would result in a long-term increase in operational energy demand for electricity and natural gas use associated with population growth. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the SCP and PG&E service area would implement the requirements of the Building and Energy Efficiency Standards (CCR, Title 24, Part 6) and the California Green Building Code (CCR, Title 24, Part 11). Furthermore, new buildings would use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations.

As shown in Table 4-6.5, future development would decrease annual VMT, and thus fuel consumption. Moreover, vehicles would be subject to the USEPA CAFE standards for vehicular fuel efficiency, and average corporate fuel economy continues to increase as a result of State and federal laws, including the Pavley Advanced Clean Cars program. Vehicle turnover also improves the overall fuel economy of California's vehicle fleets. The proposed General Plan 2050 also includes goals, policies, and actions to reduce energy use and measures to align with the State's goals for carbon neutrality. Cumulative impacts would therefore be *less than significant*.

Significance without Mitigation: Less than significant.

[30] Pacific Gas and Electric Company, 2021, Power Content Label, https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2022/1022-Power-Content-Label.pdf, accessed August 29, 2023.

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4.7 GEOLOGY AND SOILS

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to geology and soils associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to geology and soils, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 REGULATORY FRAMEWORK

Federal Regulations

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. Additionally, it specifies that these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers. This act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of Interior in 2000, which establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.[1]

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface fault rupture to structures used for human occupancy.[2] The main purpose of this act is to prevent the construction of buildings used for human occupancy on top of active faults. This act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as earthquake-induced liquefaction or landslides.[3] This act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around surface traces of active faults, and to issue appropriate maps.[4] The maps, which are developed using existing United States Geological Survey's

[1] U.S. Department of the Interior, May 2000, *Fossils on Federal & Indian Lands, Report of the Secretary of the Interior*. https://www.blm.gov/sites/blm.gov/files/programs_paleontology_quick%20links_Assessment%20of%20Fossil%20Management%20on%20Federal%20%26%20Indian%20Lands%2C%20May%202000.pdf, accessed January 31, 2022.

[2] California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, https://www.conservation.ca.gov/cgs/alquist-priolo, accessed January 31, 2022.

[3] California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, https://www.conservation.ca.gov/cgs/alquist-priolo, accessed January 31, 2022.

[4] California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, https://www.conservation.ca.gov/cgs/alquist-priolo, accessed January 31, 2022.

(USGS) 7.5-minute quadrangle map bases, are then distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, which was passed in 1990, addresses seismic hazards such as liquefaction and seismically induced landslides.[5] Under this act, seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. Section 2691(c) of this act states that "it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety." Section 2697(a) of the act states that "cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard."

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations. The California Building Code (CBC) is in Part 2 of Title 24. The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Through the CBC, the State provides a minimum standard to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. They also regulate grading activities, including drainage and erosion control.

California Environmental Quality Act

Paleontological resources are afforded protection under the California Environmental Quality Act (CEQA). The Society of Vertebrate Paleontology has set significance criteria for paleontological resources.[6] Most practicing professional vertebrate paleontologists adhere closely to the Society of Vertebrate Paleontology's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the Society of Vertebrate Paleontology.

[5] California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, https://www.conservation.ca.gov/cgs/alquist-priolo, accessed January 31, 2022.

[6] Society of Vertebrate Paleontology, 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources,* Impact Mitigation Guidelines Revision Committee.

California Public Resources Code Section 5097

California Public Resources Code Section 5097.5 prohibits the destruction or removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

California Penal Code Section 622.5

The California Penal Code Section 622.5 details the penalties for damage or removal of paleontological resources from private or public lands.

Regional Regulations

Sonoma County Emergency Operations Plan

The Sonoma County Emergency Operations Plan (EOP) is the foundation for disaster response and recovery operations for Sonoma County and outlines how the County complies with and implements the requirements of the California Emergency Services Act to protect the lives and property within Sonoma County. The Sonoma County EOP establishes the emergency organization, specifies policies and general procedures, and provides for coordination of the responsibilities of the County departments in all phases of an emergency or disaster. The Sonoma County EOP provides an overview of the Emergency Operations Center and outlines the various modes of activation of the EOP. Most provisions related to geology, soils, and seismic events are in the Hazard Analysis Summary of the EOP.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives pertaining to geology and soils. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to geology, soils, and seismic events are in Title 14, *Potable and Recycled Water*; Title 15, *Sewers*; Title 17, *Environmental Protection;* Title 18, *Buildings and Construction;* Title 19, *Subdivisions;* and Title 20, *Zoning*, as follows:

- Chapter 14-30, *Water Efficient Landscape*. Section 14-30.055, *Grading Design Plan*, sets forth the requirements for the submittal of grading plans that demonstrate that the project has been designed to minimize soil erosion. This plan must be submitted along with the landscape design plan and the irrigation design plan.
- Chapter 15-08, *Pretreatment*. Section 15-08.210, *Hauled Wastewater*, requires that septic tanks can only be introduced by the Director of Facilities, and that the waste shall not violate any requirements established by the City. This section also states that haulers/generators of industrial wastewater need to obtain wastewater discharge permits.
- Chapter 15-16, *Sewer Connections*. Section 15-16.021, *Discovery and Repair of Illegal Connections*, adopts certain rules and regulations against property owners making connections that direct surface water runoff or groundwater to a sewer service lateral which in turn is connected to a public sanitary sewer.

- Chapter 17-08, *Seismic Safety*. Section 17-08.020, *Earthquake Fault Zones*, sets forth the requirements for a State Geologist to delineate active and recently active earthquake fault zones that are a potential hazard. Any projects within the delineated earthquake fault zone require specialized approval authority from the decision-making body. Section 17-08.060, *Building Permits for Projects within Earthquake Fault Zones*, states that the decision-making body shall evaluate the suitability of a project and can attach conditions to the project if necessary. The decision-making body also can deny permits if it is found that the site is unsuitable for the proposed project.
- Chapter 17-12, *Storm Water*. Section 17-12.100, *Purpose and Intent of Article*, states that the purpose and intent of this chapter is to protect and enhance the water quality of watercourses and water bodies from erosion and other sources of contamination. Sections in this chapter require applicants to comply with National Pollution Discharge Elimination System Permit to control and monitor erosion and loss of soil.
- Chapter 18-16, *California Building Code*. Section 18-16.010, *Citation of California Building Code,* adopts the CBC in its entirety, subject to the amendments, additions, and deletions set forth in this chapter. The purpose of the CBC is to prescribe regulations governing the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area, and maintenance of all buildings and structures within the city. By regulating the design and construction of excavations, foundations, building frames, retaining walls, and other structures, the City's Building Code provides protections during the design, permitting, and construction of structures intended for human occupancy.
- Chapter 19-64, *Grading and Erosion Control*. Section 19-64.010, *Requirements,* outlines the Grading and Erosion Control standards new subdivisions must adhere to prevent sedimentation or damage to on-site and off-site property.
- Chapter 20-32, *Hillside Development Standards*. This chapter includes the regulations required to preserve the City's natural waterways and hillsides, amongst other areas, conserves open spaces and natural features, design standards to ensure the hillside development will be sensitive to existing terrain. Section 20-32.050, *Site Planning and Development Standards*, specifically requires that development on hillsides be located on the most geologically stable portion of the site. Section 20-32.060, *Hillside Development Permit,* requires a review process for the City to consider the appropriateness of proposed development on hillside parcels to ensure that a proposed project minimizes its environmental impact, including the preparation of geotechnical reports that identify and mitigate impacts.

Hazard Mitigation Plan

On December 7, 2021, the Santa Rosa City Council adopted the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), which also provides an update to the City's Local Hazard Mitigation Plan (LHMP).[7] The MJHMP consists of two volumes. Volume 1 includes all federally required elements of a disaster mitigation plan as they apply to the entirety of Sonoma County. Volume 2 consists of chapters, or

[7] City of Santa Rosa, 2021, Local Hazard Mitigation Plan, https://www.srcity.org/540/Local-Hazard-Mitigation-Plan, accessed March 9, 2023.

annexes, for each local agency and special district participating in the MJHMP. The LHMP identifies the natural hazards faced by the city, assesses vulnerabilities to these hazards, and identifies mitigation strategies that can be taken to reduce or alleviate the loss of life, personal injury, and property damage that otherwise might result from these natural hazards. Mitigation actions are suggested and carried out by various City departments. The City of Santa Rosa Annex serves as a five-year update to the LHMP and is in Volume 2, Chapter 3. It includes a section on earthquake hazards and mitigating actions for Santa Rosa. Mitigation actions for earthquakes include the following:[8]

- Continue to update the City's emergency planning documents every five years to ensure consistency with state and federal law, local conditions, and best practices and the most recent science.
- Replace or retrofit water-retention structures determined to be structurally deficient, including levees, dams, reservoirs, and tanks. Continue to analyze and identify needs for future upgrades. Evaluate, reinforce, and/or enhance wastewater treatment facility structures with seismic risk.
- Create inventory and develop funding mechanisms to assist building owners to retrofit unreinforced masonry, soft-story, and/or non-ductile concrete structures.
- Require the retrofit of seismically vulnerable structures consistent with City Code. This program should include community education and outreach.
- Conduct seismic evaluations on City-owned leased buildings that contain critical facilities/operations to determine the need for upgrades/retrofitting.
- Conduct Microgrid feasibility study.
- Secure redundant power supply for City-owned and leased facilities and infrastructure that lack adequate back-up power.
- Relocate/Update Emergency Operations Center (EOC)[9] to City-owned facility that can accommodate use and renovation to permanent warm/hot EOC with appropriate equipment for communication and situational awareness.
- Actively participate in the annual maintenance protocols outlined in Volume I of the MJHMP
- Support the County-wide initiatives identified in Volume I of the MJHMP.
- Integrate the LMHP into other plans, ordinances and programs that dictate land use decisions within the community including the General Plan, Specific Plans, and the City Code.
- Develop a plan for expediting the repair and functional restoration of water and wastewater systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water/Wastewater Agency Response Network. Communicate that plan to local governments and critical facility operators.
- Explore the feasibility of resilience hubs within the City of Santa Rosa.

[8] Sonoma County, 2021, Sonoma *County Hazard Mitigation Plan Update, Volume 2: Chapter 3: City of Santa Rosa*, https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Planning/Long%20Range%20Plans/Hazard%20Mitigation%20Plan/Adopted-Sonoma-County-MJHMP-Volume-2-December-2021.pdf, accessed October 21, 2022.

[9] Warm/hot refers to the level of Emergency Operations Center staffing.

4.7.1.2 EXISTING CONDITIONS

Geology

Santa Rosa is on the eastern side of the Santa Rosa Plain, a northwest-trending intermountain valley of the California Coast Ranges. The valley is bounded on the west by the Mendocino Ridge and on the east by the Sonoma and Mayacamas Mountains. The city's geology varies from consolidated sedimentary and volcanic rock in the highland areas to the east, to deep, uncompressed sediments of sand, silt, clay, and gravel underneath the flat valley floor. Recent geophysical studies indicate that depositional basins underlying the Santa Rosa Plain in the vicinity of Santa Rosa may extend for more than a mile beneath the surface and may be the source of increased levels of ground shaking at the surface during earthquakes.

The Santa Rosa Plain is also bounded and transected by major faults, including the active northwest-striking, right-lateral Rodgers Creek-Healdsburg fault zone running along the east side of the plain. The west and southwest side of the plain is bounded by a system of poorly defined faults generalized as the Sebastopol fault.

Soils

Most soils within Santa Rosa are clayey alluvial soils, riverwash, and some silty and gravelly soils and loams.[10] The most prominent soil type in the city is the Zamora silty claim loam found on 0 to 2 percent slopes, although many other soil units are also mapped in the area, including Arbuckle, Clear Lake, Guenoc, Haire Clays, Spreckles, Wright, and Yolo soil series units.[11] Zamora soils are moderately permeable and exhibit slow runoff and slight susceptibility to erosion hazards.[12]

Regional Seismicity

The Earth's crust includes tectonic plates that locally collide with or slide past one another along plate boundaries. California is particularly susceptible to such plate movements, notably the largely horizontal or "strike-slip" movements of the Pacific Plate as it impinges on the North American Plate. In general, earthquakes occur when the accumulated stress along a plate boundary or fault is suddenly released, resulting in seismic slippage. This slippage can vary widely in magnitude, ranging in scale from a few millimeters or centimeters to tens of feet.

Santa Rosa and communities across the San Francisco Bay region reside within the active boundary between the Pacific and North American tectonic plates, where the Pacific plate slowly and continually slides northwest past the North American plate. Several major and active faults are part of this complex plate boundary, most notably the San Andreas, Hayward, Rodgers Creek, Calaveras, Maacama, San Gregorio, Concord, Green Valley, and Greenville Faults, all of which are capable of producing ground shaking in Santa Rosa.

[10] Santa Rosa General Plan EIR, p. 4.M-2.
[11] Santa Rosa General Plan EIR, p. 4.M-2.
[12] Santa Rosa General Plan EIR, p. 4.M-2.

The performance of human-made structures during a major seismic event varies widely due to a number of factors, including:

- Location, with respect to active fault traces or areas prone to liquefaction or seismically-induced landslides.
- Type of building construction (i.e., wood frame, unreinforced masonry, non-ductile concrete frame).
- Proximity, magnitude, depth, and intensity of the seismic event itself as well as many other factors.

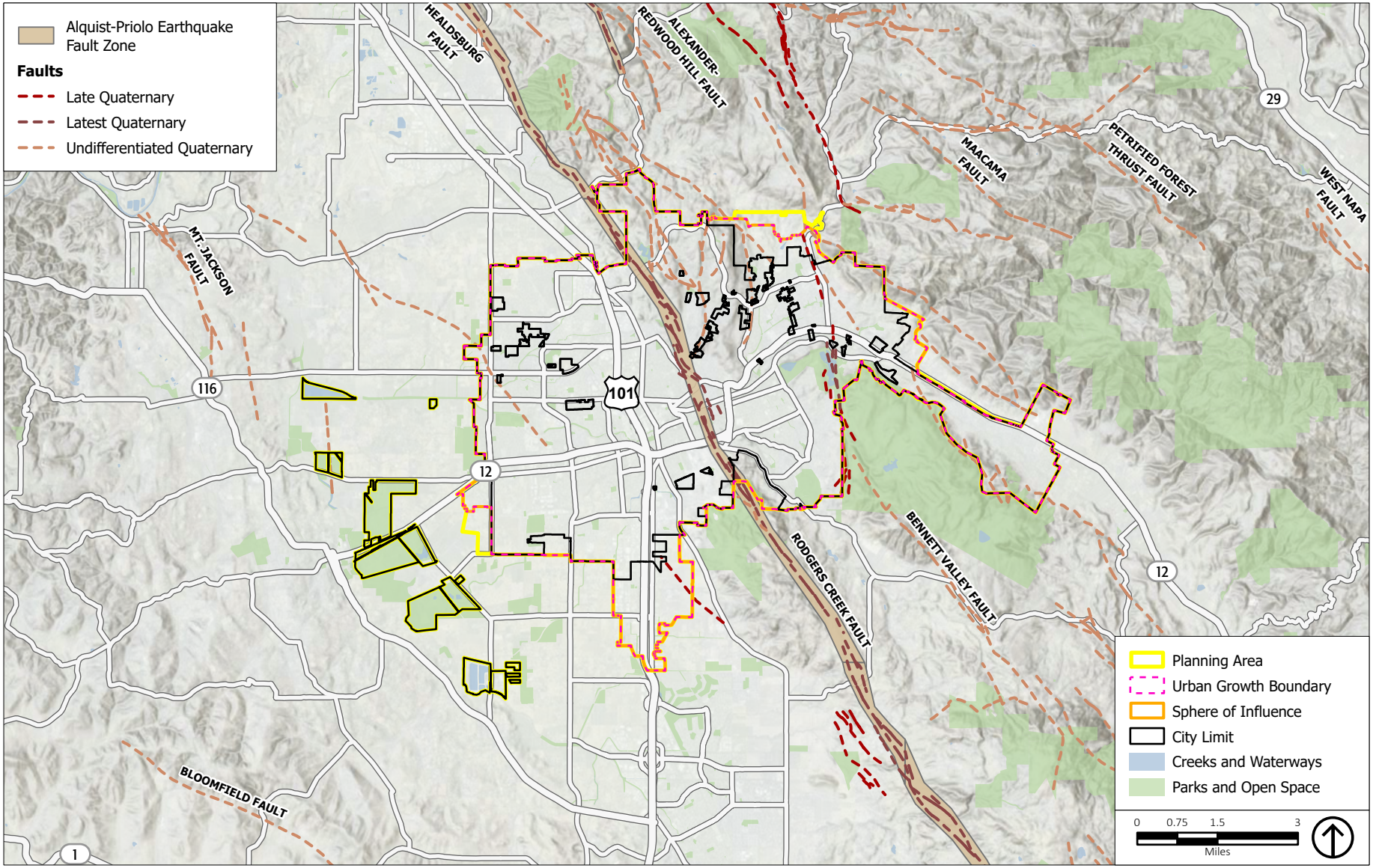
In general, evidence from past earthquakes shows that wood-frame structures tend to perform well during a seismic event, especially when their foundations are properly designed and anchored. Conversely, older, unreinforced masonry structures and nonductile reinforced concrete buildings (especially those built in the 1960s and early 1970s) do not perform as well if they have not undergone appropriate seismic retrofitting. Applicable building code requirements, such as those found in the CBC, include seismic requirements that are designed to ensure the satisfactory performance of building materials under prescribed seismic conditions.

The Richter Scale is used to describe the magnitude of an earthquake. Each one-point increase in magnitude (M) represents a 10-fold increase in earthquake wave size and a 30-fold increase in energy release (strength). For example, an M8 earthquake produces 10 times the ground motion amplitude of an M7 earthquake, 100 times that of an M6 quake, and 1,000 times the motion of a M5 earthquake. However, the M8 earthquake is 27,000 times stronger than an M5 quake. Typically, earthquakes of M5 or greater are considered strong earthquakes capable of producing damage.

Seismic activity in the nearby Coast Ranges is generally associated with active faults of the San Andreas system, which includes major active faults. Over the width of the San Francisco Bay region, approximately 1.5 inches per year of relative horizontal movement occurs between the North American and Pacific Plates. This movement is partially accommodated by earthquakes and creep along several active faults. Locations of these active faults relative to Santa Rosa are shown on Figure 4.7-1, *Regional Faults*.

The San Andreas Fault, approximately 20 miles to the west of Santa Rosa, is the fastest-slipping fault along the plate boundary and the source of two magnitude 7.8 to 7.9 earthquakes in history, including the 1906 San Francisco earthquake, which destroyed much of downtown Santa Rosa, toppled City Hall, and killed at least 85 people; the city's population was approximately 7,000 at the time.

The Rodgers Creek Fault runs through the central part of Santa Rosa and was the source of two moderate earthquakes—of magnitudes 5.6 and 5.7, respectively—that struck below the north end of the city within a period of two hours on the night of October 1, 1969. Fortunately, no one died in the earthquakes, but many old commercial buildings downtown; homes in several residential neighborhoods; and a few modern, engineered buildings were all damaged. Although none collapsed, at least 74 buildings in the central business district sustained damage and about a third of those were beyond repair. The shaking toppled brick chimneys and broke windows over a wide area; locally, the earthquake ruptured water mains and buckled sidewalks and curbs. Total damage, including building contents, exceeded $7 million ($50.6 million in 2020 dollars).



Source: USGS, 2019; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.7-1
Regional Faults

Table 4.7-1, *Distances and Directions to Active Faults*, provides a summary of the key faults that could produce significant earthquakes (exceeding M5) that could impact Santa Rosa. The table also includes the maximum associated magnitudes of earthquakes along each fault. Due to the proximity of active fault lines, Santa Rosa is historically susceptible to earthquake-related hazards, which include ground shaking and liquefaction.

TABLE 4.7-1 DISTANCES AND DIRECTIONS TO ACTIVE FAULTS

Fault	Approx. Distance and Direction from Site	Fault Length (miles)	Maximum Magnitude	Slip Rate (mm/yr)
Rodgers Creek	Within City	39	7.0	9.0
Bennett Valley	0.75 miles southeast	24	Unspecified	Unspecified
Alexander-Redwood Hill	0.75 miles north	12	Unspecified	Unspecified
Maacama	3 miles northeast	113	7.5	9.0
Healdsburg	3 miles northwest	19	7.5	1.0
Tolay	4.5 miles southwest	21	Unspecified	1.0
Bloomfield	7.5 miles southwest	11	Unspecified	Unspecified

Note: Distances are approximate; mm/yr = millimeters per year
Sources: Cao, T., W. A. Bryant, B. Rowshandel, D. Branum, and C. J. Wills, June 2003, *The Revised 2002 California Probabilistic Seismic Hazard Maps*, https://www.conservation.ca.gov/cgs/Documents/PSHA/2002%20California%20Hazard%20Maps.pdf, accessed August 28, 2023; United States Geological Surve, 2023, U.S. Quaternary Faults website, https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf, accessed August 28, 2023.

Landslides

Landslides are gravity-driven movements of earth materials that can include rock, soil, unconsolidated sediment, or combinations of such materials. The rate of landslide movement can vary; some move rapidly, as in a soil or rock avalanche, while other landslides creep or move slowly for long periods of time. The susceptibility of a given area to landslides depends on many variables, although the general characteristics that influence landslide hazards are widely acknowledged. Some important factors are:

- Slope Material. Loose, unconsolidated soils and soft, weak rocks are more hazardous than are firm, consolidated soils or hard bedrock.
- Slope Steepness. Most landslides occur on moderate to steep slopes.
- Structure and Physical Properties of Materials. This includes the orientation of layering and zones of weakness relative to slope direction.
- Water Content. Increased water content increases landslide hazard by decreasing friction and adding weight to the materials on a slope.
- Vegetation Coverage. Abundant vegetation with deep roots promotes slope stability.
- Proximity to Areas of Erosion or Human-Made Cuts. Undercutting slopes can greatly increase landslide potential.
- Earthquake Ground Motions. Strong seismic ground motions can trigger landslides in marginally stable slopes or loosen slope materials and also increase the risk of future landslides.

Santa Rosa has experienced landslides in the past ranging from small, localized events to events that caused injury and substantial damage. On December 31, 2005, a mudslide on Montgomery Drive collided with houses and automobiles as it extended into the middle of the road. Two houses were damaged and a third was destroyed. The home that sustained the heaviest damage also involved a person that was

trapped alone for an hour and sustained minor injuries before being rescued by Santa Rosa Fire Department. An additional fire department engine was sent to the end of Sullivan Court to evaluate the home above the slide, secure utilities, and evacuate residents at risk.

Decreased vegetation from wildfires can combine with excessive ground moisture from heavy rains to cause landslides. These conditions occurred in 1997 to activate the Hidden Acres landslide in the Bennett Valley area (outside of the Santa Rosa city limit). Landslides were also a major concern following the 2017 wildfires, with preventative actions taken to cover and protect exposed slopes in fire-damaged hillside areas of the city.

Landslide-prone areas in the EIR Study Area are depicted in Figure 4.7-2, *Landslide Map*, and broken down into three categories: "Mostly landslides" cover areas with the largest and most concentrated landslides; "few landslides" indicates smaller, more scattered landslides; and "flat land" is unlikely to have a landslide. Portions of the northern and southern reaches of the city have experienced few to many landslides. The landslide hazard for both earthquake- and moisture-induced landslides is increased with steep slopes close to the Rodgers Creek Fault Zone.

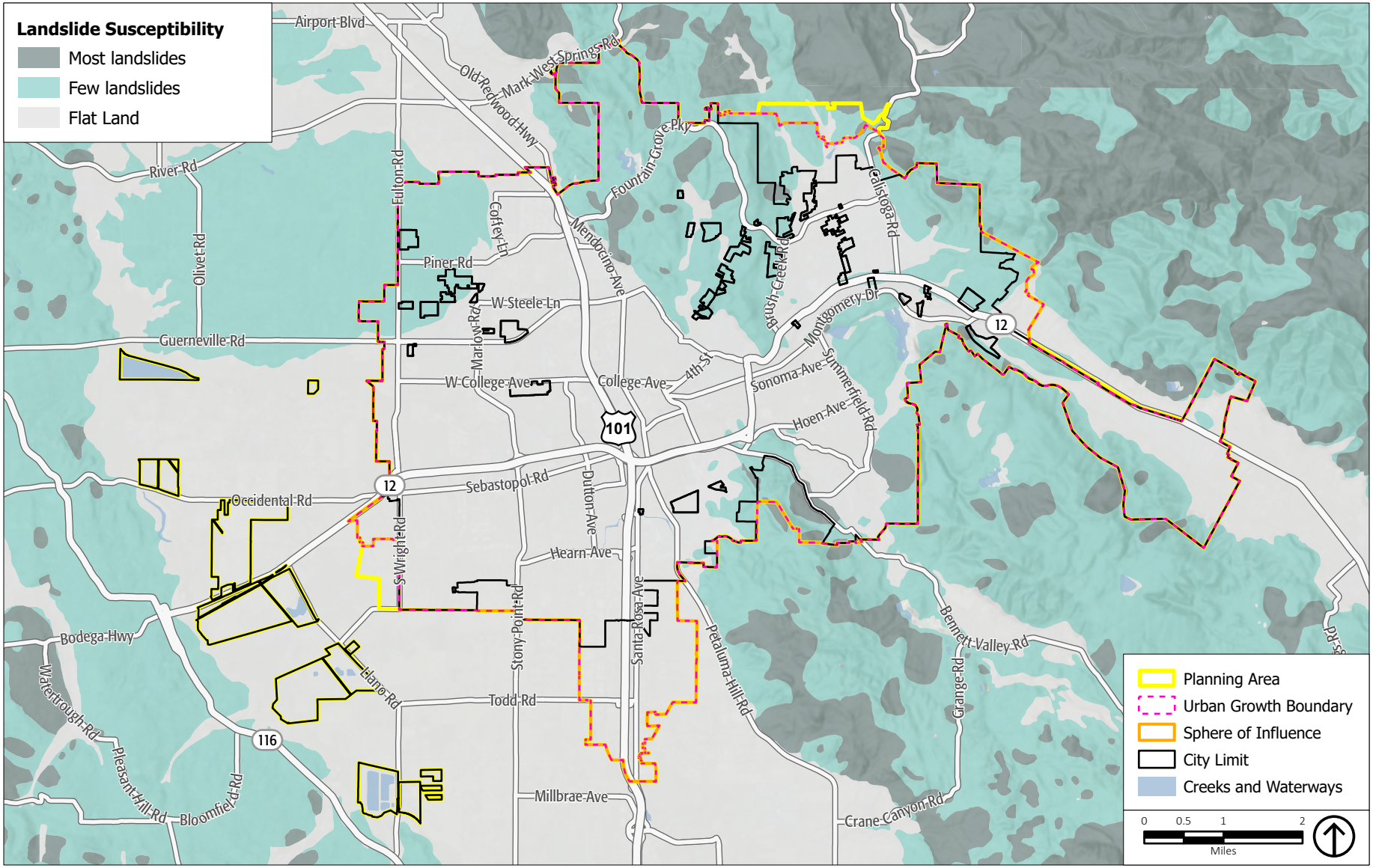
Outside of these larger areas, localized landslides are possible along small slopes elsewhere in the city, including the sides of the Santa Rosa Creek and the Santa Rosa Flood Control Channel. Landslides in these areas are unlikely to cause substantial injuries or destruction but may result in limited damage.

Liquefaction and Related Ground Failure

Liquefaction refers to loose, saturated sand or gravel deposits that lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based on three main contributing factors: (1) cohesionless, granular soils having relatively low densities (usually of Holocene age); (2) shallow groundwater (generally less than 50 feet); and (3) moderate to high seismic ground shaking. Cohesionless and granular soils are sand or gravel, typically with little or no clay content. Soil liquefaction generally occurs in submerged granular soils and nonplastic silts during or after strong ground shaking.

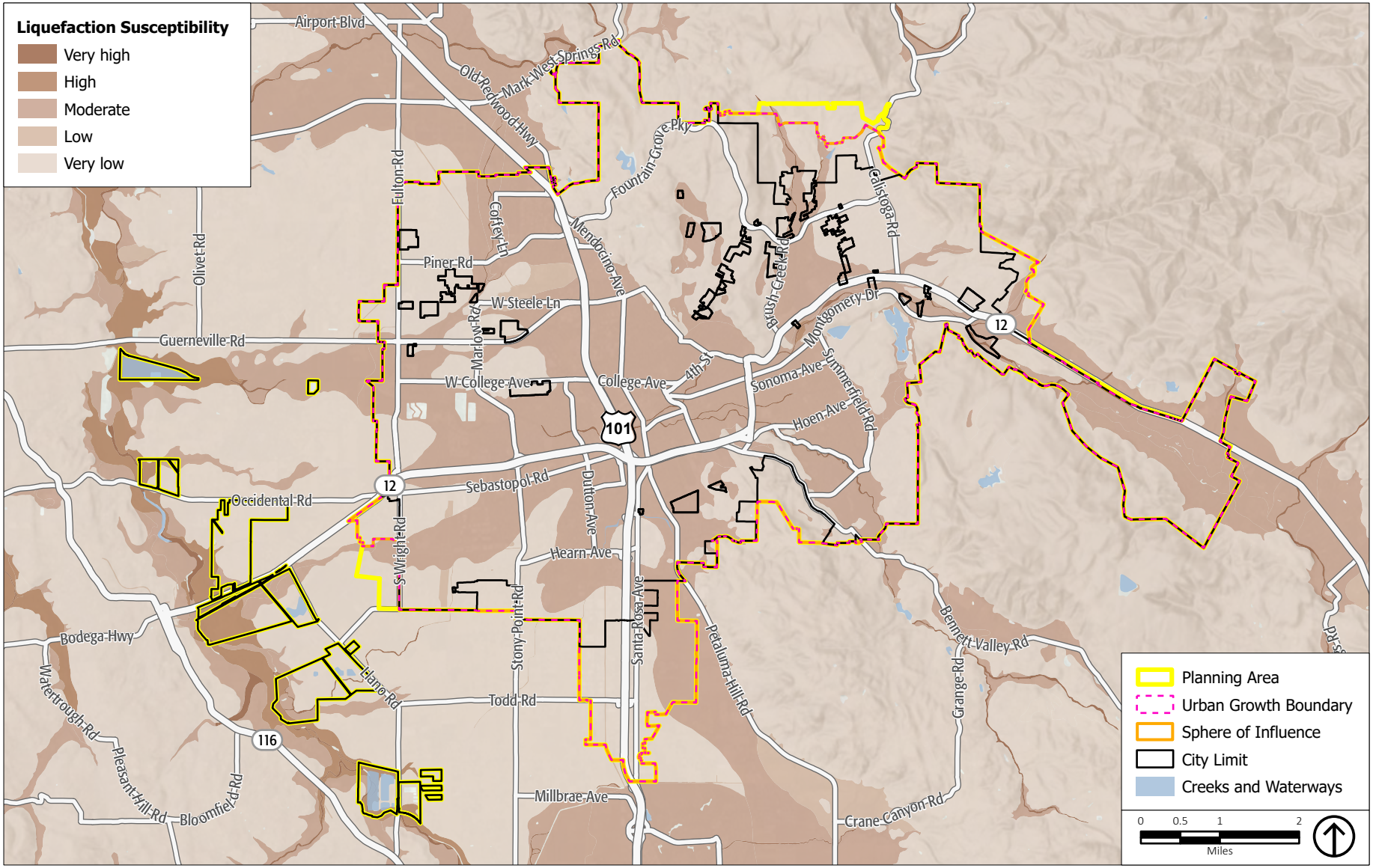
The Seismic Hazards Mapping Act (1990) directed the State Geologist to delineate regulatory "zones of required investigation" to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-triggered ground failures. Zones of required investigation, referred to as Seismic Hazard Zones in the California Code of Regulations, Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements.

Lateral spreading involves lateral ground movements caused by seismic shaking. These lateral ground movements are often associated with a weakening or failure of an embankment or soil mass overlying a layer of liquefied sands or weak soils. Shallow groundwater; liquefiable, cohesionless soils; and the presence of a free face, such as a stream bank, are all contributing factors in determining the likelihood of lateral spreading. Figure 4.7-3, *Liquefaction Susceptibility*, shows the liquefaction susceptibility of the EIR Study Area.



Source: USGS, 1997; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.7-2
Landslide Map



Source: USGS, 2006; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.7-3
Liquefaction Susceptibility

Erosion

Erosion occurs when the upper layers of soil are displaced by erosive agents such as water, ice, snow, air, plants, animals, or anthropogenic forces. Sandy soils on moderate slopes, or clayey soils on steep slopes are susceptible to erosion when exposed to these forces. Erosion can become more frequent when established vegetation is disturbed or removed due to grading, wildfires, or other factors. Within the valley areas of the EIR Study Area, water flow in streams is generally sluggish, and erosion is nearly imperceptible. With a greater slope gradient, erosion can cause the soil underneath buildings and structures to become compromised or fail, which is typically limited to localized areas. Based on a review of the Web Soil Survey, the soils within the EIR Study Area have a low to moderate risk from erosion.[13] The risk of erosion is greatly increased during grading and construction activities when soils are loosened and bare of vegetation. Erosion-control measures prevent downstream sedimentation and surface water degradation.

Subsidence

Subsidence is the gradual sinking of the ground as a result of loss of subsurface materials, with little or no horizontal motion. It is often accompanied by large-scale ground cracking, and in some cases, the cracking has movement across it, making it into incipient faulting. Ground cracking from subsidence in the future would be expected to occur along the boundaries of groundwater basins, such as a contact between alluvium and bedrock, or over prominent geologic structures, i.e., faults.

Subsidence of the ground surface has been reported in alluvial basins where significant amounts of groundwater (often in an overdraft condition) or petroleum are withdrawn over long periods. The primary cause of non-tectonic subsidence has been the alluvial compaction by closing of porosity due to removal of large quantities of groundwater or petroleum and a significant lowering of the groundwater levels. Shifts in the water table or loss of groundwater are major causes.

Subsidence may occur over a small or large area depending on the amount of subsurface movement. Subsidence can also be caused by excavation work, hydrocompaction, or oxidation of organic soils. On rare occasions, subsidence may occur due to earthquake-induced ground movement.

Expansive/Shrink-Swell Soils

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can exhibit wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

[13] United States Department of Agriculture, 2023, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, accessed August 29, 2023.

Expansive soils are typically very fine-grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Linear extensibility soil tests are often used to identify expansive soils, where soil sample volume/length changes in response to reduced moisture content.[14] A linear extensibility of 3 percent or greater connotes moderate to high shrink-swell potential. This soil behavior has the potential to cause damage to buildings, roads, and other structures.

Most soils within Santa Rosa are clayey alluvial soils, riverwash, and some silty and gravelly soils and loams.[15] The soils most prone to expansion in the EIR Study Area include Raynor clay, Clear Lake clay, Diablo clay, Wright loam, and Yorkville clay loam.[16]

Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. These are valued for the information they yield about the history of the Earth and its past ecological settings. There are two types of resources: vertebrate and invertebrate. These resources are found in geologic strata conducive to their preservation, typically sedimentary formations. Paleontological sites are areas that show evidence of prehumen activity. Often, they are simply small outcrops visible on the surface or sites encountered during grading. While the sites are important indications, it is the geologic formations that are the most important, since they may contain important fossils. Potentially sensitive areas for the presence of paleontological resources are based on the underlying geologic formations. The EIR Study Area is an area filled with fertile sediments as a result of terrestrial deposits from millions of years ago. Based on this and the alluvium of the EIR Study Area, it is likely that paleontological resources would be found within the EIR Study Area. The Pliocene Sonoma Volcanics are the only unit besides recent artificial fill that do not have a potential for paleontological resources within the EIR Study Area.

Unique Geologic Features

Unique geologic features are those that are unique to the field of geology. Each rock unit tells a story of the natural processes operating at the time it was formed. The rocks and geologic formations exposed at the earth's surface or revealed by drilling and excavation are our only record of that geologic history. What makes a geologic unit or feature unique can vary considerably. For example, a geologic feature may be considered unique if it is the best example of its kind and has distinctive characteristics of a geologic principle that is exclusive locally or regionally, is a key piece of geologic information important to geologic history, contains a mineral that is not known to occur elsewhere in the area, or is used as a teaching tool. Unique geological features are not common in Santa Rosa or the EIR Study Area. The geologic processes are generally the same as those in other parts of the state, country, and even the world. The previously described geology and soils in the EIR Study Area are common throughout the city and region and are not considered unique.

[14] US Army Corps of Engineers, 1983, Field Manual TM 5-818-7, https://www.discountpdh.com/wp-content/themes/discountpdh/pdf-course/foundation-in-expansive-soils.pdf, accessed July 7, 2023.

[15] Santa Rosa General Plan EIR, p. 4.M-2.

[16] United States Department of Agriculture, 2023, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, accessed August 29, 2023.

4.7.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant geology and soils impacts if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides, or other similar hazards.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
4. Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
7. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to geology and soils.

4.7.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

GEO-1	**Implementation of the proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides, or other similar hazards.**

The location and underlying geology in the EIR Study Area make it likely to experience seismic hazards, including strong seismic ground shaking and secondary hazards. As described in Section 4.7.1.1, *Regulatory Setting*, the State and City have established regulations to protect the residents of Santa Rosa from seismic hazards. The following discussions address the potential impacts from implementation of the proposed project with respect to earthquake faults, strong seismic ground shaking, seismic related ground shaking, and landslides.

Earthquake Faults

As stated in Section 4.7.1.2, *Existing Conditions,* there are active faults that are very nearby and within the EIR Study Area. Due to this, there is the possibility that surface fault rupture could occur along the active trace or within the associated Alquist Priolo Earthquake Fault Zone of the Rodgers Creek fault. SRCC Chapter 17-08 requires the State Geologist to delineate active and recently active earthquake fault zones and that an evaluation of the suitability of a project can attach conditions to the project if necessary. Pursuant to SRCC Chapter 17-08, the decision-making body also can deny permits if it is found that the site is unsuitable for the proposed project. Compliance with SRCC regulations would reduce impacts related to fault rupture.

Strong Seismic Ground Shaking

Ground shaking is responsible for most of the damage from earthquakes and can damage or destroy buildings, structures, pipelines, and infrastructure. The intensity of shaking depends on the type of fault, distance to the epicenter, magnitude of the earthquake, and subsurface geology. Rodgers Creek Fault, Maacama Fault, and Healdsburg Fault are the most likely faults and potentially capable of producing the most intense ground accelerations within the EIR Study Area. Secondary effects of earthquakes are nontectonic processes such as liquefaction, lateral spreading, seismically induced landslides, and ground lurching, which can lead to ground deformation. Ground deformation, including fissures, settlement, displacement, and loss of bearing strength, are the leading causes of damage to structures during a moderate to large earthquake.

In northern California, there is no method to completely avoid earthquake hazards. However, appropriate measures to minimize the effects of earthquakes are included in the CBC, with specific provisions for seismic design. The design of structures in accordance with the CBC would minimize the effects of ground shaking to the greatest degree feasible, except for during a catastrophic seismic event. The City has adopted the CBC in SRCC Chapter 18-16. Additionally, potential future development projects under the

proposed project would be required to comply with SRCC Chapter 17-08, which would reduce impacts related to ground shaking.

Seismic-Related Ground Failure

Secondary effects of earthquakes are nontectonic processes such as ground deformation, including fissures, settlement, displacement, and loss of bearing strength, and are the leading causes of damage to structures during a moderate to large earthquake. Secondary effects could lead to ground deformation, including liquefaction, lateral spreading, seismically induced landslides, and ground lurching.

Based on the potential for strong ground shaking, combined with a groundwater depth of under 50 feet in much of the EIR Study Area,[17] much of the city is within an area with high liquefaction susceptibility. All potential future structures constructed in the EIR Study Area would be designed in accordance with current seismic design standards as found in the CBC, which the City has adopted in SRCC Chapter 18-16. Design measures would be implemented according to the most recent CBC, which would reduce the impact of liquefaction and seismic settlement, including, but not limited to, ground improvement techniques such as in-situ densification, load transfer to underlying nonliquefiable bearing layers, and over-excavation and recompaction with engineered fill method. These design measures would reduce the potential exposure of people and structures to the hazard from liquefaction and seismic settlement.

Landslides

Marginally stable slopes (including existing landslides) may be subject to landslides caused by earthquakes. The landslide hazard depends on many factors, including existing slope stability, shaking potential, and presence of existing landslides. Landslides, debris flows, or any movement of earth or rock are most common in areas of high topographic relief, such as steep canyon walls or steep hillsides. Landslide-prone areas in the EIR Study Area are depicted in Figure 4.7-2. The landslide hazard for both earthquake- and moisture-induced landslides are increased with steep slopes close to the Rodgers Creek Fault Zone. In addition, localized landslides are possible along small slopes elsewhere in the city, including the sides of the Santa Rosa Creek and the Santa Rosa Flood Control Channel. While these landslide-prone areas exist within Santa Rosa, the potential future development under the proposed project is expected to occur in existing urban areas and would be concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development where the topography is generally flat. New development or redevelopment in any of the portions of the EIR Study Area deemed to be within landslide-susceptible areas would be required to comply with grading, erosion, and sediment control regulations in the CBC (SRCC Chapter 18-16) and the provisions in SRCC Chapters 14.30 and 19-64.

[17] Santa Rosa Plain Groundwater Sustainability Agency, 2023, Basin Conditions, https://santarosaplaingroundwater.org/conditions/, accessed August 29, 2023.

Summary

In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider geological and soil impacts. The following General Plan goal, policy, and actions would serve to minimize potential adverse impacts from earthquakes:

- Goal 5-1: Minimize community exposure to seismic and geologic hazards.
  - *Policy 5-1.1: New development, redevelopment, and major remodels shall avoid or adequately mitigate seismic and geologic hazards.
    - *Action 5-1.1: Prior to new development approval, ensure geologic studies and analyses are deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer for applicable hazard conditions.
    - *Action 5-1.2: Restrict development in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a California Certified Engineering Geologist and/or Geotechnical Engineer.
    - Action 5-1.3: Avoid or adequately mitigate any development of critical facilities—hospitals, fire stations, emergency management headquarters, broadcast services, sewage treatment plants, and places of large congregations—in high-risk geologic hazard zones (e.g., Rodgers Creek Fault zone, liquefiable soils, areas of slope instability.
    - Action 5-1.4: Establish and periodically update an inventory of seismically vulnerable structures that includes unreinforced masonry construction, soft-story construction, and nonductile concrete construction.
    - Action 5-1.5: Require retrofitting and abatement of structural hazards to levels of risk acceptable to the Building Official.
    - Action 5-1.6: Prioritize retrofitting and abatement of City-owned buildings in areas determined to experience strong ground shaking during an earthquake.
    - Action 5-1.7: Provide owners of potentially vulnerable structures, such as unreinforced masonry, soft-story construction, and/or nonductile concrete, with information needed to retrofit to meet the latest State seismic safety requirements.
    - Action 5-1.8: Retrofit and harden water storage facilities, wastewater conveyance, electricity transmission lines, roadways, water detention facilities, levees, and other utilities near the Rodgers Creek Fault.

Because potential future development under the proposed General Plan 2050 has the potential to be constructed where there is the potential for geological hazards, impacts are considered potentially *significant*.

Impact GEO-1: Impacts from potential future development under the proposed General Plan 2050 where there are known geological hazards could occur over the buildout horizon of the proposed project.

Significance with Mitigation: Less than significant. Implementation of the proposed General Plan 2050 goals, policies, and actions, as well as compliance with State, regional, and local regulations pertaining to structural safety regarding fault rupture, ground shaking, liquefaction, and landslides, would ensure that potential future development under the proposed project would not directly or indirectly cause or worsen the likelihood of or substantial adverse effects from seismic hazards related to earthquakes, including the risk of loss, injury, or death. Specifically, proposed General Plan 2050 *Policy 5-1.1 requires that potential future development avoid or mitigate seismic hazards; *Action 5-1.1 requires potential future development to prepare geologic studies are prepared by qualified engineers; and *Action 5-1.2 requires that potential future development be restricted in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a qualified engineer. This includes prohibiting development that would be subject to geological hazard due to its location and/or design and that cannot be mitigated to safe levels. Compliance with the Santa Rosa City Code (SRCC) regulations and proposed General Plan 2050 goals, policies, and actions would mitigate impacts by permitting development only in areas where potential danger to the health, safety, and welfare of the community can be adequately mitigated. Because potential future development under the proposed project would be required to comply with both the California Building Code and the SRCC as well as proposed General Plan 2050 goals, policies, and actions, implementation of the proposed project would not cause or worsen seismic ground shaking; therefore, impacts would be *less than significant.*

GEO-2 Implementation of the proposed project would not result in substantial soil erosion or the loss of topsoil.

Soils are particularly prone to erosion during the grading phase of development, especially during heavy rains. Substantial soil erosion or the loss of topsoil during construction of future development could undermine structures or minor slopes, which would be a concern during implementation of the proposed project.

The CBC provides regulations for construction to provide proper grading, drainage, and erosion and sediment control. In addition, SRCC Chapter 17-12 protects and enhances the water quality of watercourses and water bodies from erosion and other sources of contamination. Erosion-control measures can include seeding slopes, installation of temporary dikes and swales, placement of straw bales and filter fences, outlet protection, grass-lined swales, and installation of sediment retention structures, as appropriate for specific sites. In addition, SRCC Section 14-30.055 and Section 19-64.010 sets forth the requirements for the submittal of grading plans that demonstrate that potential future development has been designed to minimize soil erosion.

As described in further detail in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR, to minimize potential impacts related to erosion, future development pursuant to the proposed project would require compliance with the Construction General Permit (CGP) Water Quality Order WQ 2022-0057-DWQ, which includes the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). A

SWPPP requires an erosion-control plan with the incorporation of best management practices to control erosion during construction. Typical construction best management practices include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. While this regulation is primarily aimed at water quality, it is another mechanism routinely applied by the City that would help to minimize the risk of erosion.

In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider potential geological and soil impacts. The following goal, policy, and actions would serve to minimize potential adverse impacts from soil erosion:

- Goal 5-1: Minimize community exposure to seismic and geologic hazards.
  - Policy 5-1.5: Promote erosion-control strategies that reduce hazards to structures, properties, and drainages.
    - Action 5-1.9: Identify enhanced erosion-control measures for properties that exhibit high erosion potential, are in areas of steep slopes, or have experienced past erosion problems.
    - Action 5-1.10: Ensure each update to the Community Wildfire Protection Plan identifies slope stability and wildfire hazard areas and mitigation strategies to reduce post-wildfire erosion.

Implementation of the proposed General Plan 2050 goal, policy, and actions identified above, as well as adherence to existing regulatory requirements that include, but are not limited to, the CBC and the SRCC grading and drainage requirements for new developments, would ensure that impacts associated with substantial erosion and loss of topsoil from potential future development would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-3	**Implementation of the proposed project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**

Unstable geologic units are known to be present within the EIR Study Area. The following sections discuss the hazards associated with landslides, lateral spreading, subsidence, liquefaction, or collapse.

Landslides

As stated under impact discussion GEO-1, the EIR Study Area includes landslide-prone areas; however, the majority of the potential future development under the proposed project is expected to occur in existing urban areas and would be concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development where the topography is generally flat. The areas of high landslide susceptibility are not located in the highly urbanized portions within the EIR Study Area where potential future development is anticipated to occur; therefore, implementation of General Plan

2050 would not be intentionally located on a geologic unit or on soil that is unstable. However, there is the potential that future development could occur near areas of potential landslides. As described under impact discussion GEO-1, new development or redevelopment in any of the portions of the EIR Study Area deemed to be within landslide-susceptible areas would be required to comply with grading, erosion, and sediment control regulations in the CBC (SRCC Chapter 18-16), SRCC Chapter 14.30 and 19-64, SRCC Chapters 17-08 and 20-32, and proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2, which would mitigate impacts from the potential of landslides.

Subsidence

Subsidence has not been observed within Santa Rosa and groundwater levels have not declined significantly. The probability of subsidence impacts is generally low in Santa Rosa, due to the lack of significant groundwater overdraft conditions within the EIR Study Area. As described in further detail in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR, under the Sustainable Groundwater Management Act, in groundwater basins that are designated as medium and high priority, local public agencies and groundwater sustainability agencies must assess conditions in their local groundwater basins and then prepare groundwater sustainability plans. The act encourages sustainable groundwater management practices to reduce the potential for future land subsidence, and ongoing surveying of the ground surface by the California Department of Water Resources and the USGS provides a way to verify that efforts in preventing subsidence are effective. The Santa Rosa Plain Groundwater Sustainability Agency's groundwater programs continue to prevent long-term groundwater overdraft conditions and reduce the impact of subsidence.

Liquefaction and Lateral Spreading

As stated under impact discussion GEO-1, based on the potential for strong ground shaking combined with a groundwater depth of under 50 feet in much of the EIR Study Area, much of the EIR Study Area is within an area susceptible to liquefaction. All structures constructed in the EIR Study Area would be designed in accordance with current seismic design standards as found in the CBC. Design measures would be implemented according to the most recent CBC, which would reduce the impact of liquefaction and seismic settlement, including, but not limited to, ground improvement techniques such as in-situ densification, load transfer to underlying nonliquefiable bearing layers, and over-excavation and recompaction with engineered fill method. These design measures would reduce the potential exposure of people and structures to the hazard from liquefaction and seismic settlement such that there would not be a significant impact. Further, the requirements for the preparation of site-specific assessments that include project-specific mitigation pursuant to SRCC Chapter 17-08 and proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2 to reduce the impacts from ground lurching or lateral spreading.

Settlement and Collapse

Settlement and collapse are likely to exist in areas with alluvial soils. Areas of large settlement can damage, or in extreme cases, destroy structures. The presence of compressible soils in the EIR Study Area represents a hazard to structures and people.[18] CBC's design code has been adopted by the City (SRCC Chapter 18-16) and requires that structures be designed to mitigate compressible soils. Methods that could be used to reduce the impact of compressible soils include in-situ densification, transferring the load to underlying non-compressible layers with piles, and over excavation of compressible soil and recompaction with engineered fill.

Summary

Because potential future development under the proposed General Plan 2050 has the potential to be constructed where there are unstable soils or soils that could become unstable over the buildout horizon of the proposed project, impacts are considered potentially *significant*.

Impact GEO-3: Impacts from potential future development under the proposed General Plan 2050 where there are potentially unstable soils could occur over the buildout horizon of the proposed project.

Significance with Mitigation: Less than significant. As determined under impact discussions GEO-1 and GEO-2, potential future development from implementation of the proposed project would be required to comply with the California Building Code, as adopted in Santa Rosa City Code (SRCC) Chapter 18-16, which provides regulations for building design and construction to ensure geologic and soil stability. In addition to protections afforded by State laws, the proposed General Plan 2050 goals, policies, and actions listed under impact discussions GEO-1 and GEO-2 would require local planning and development decisions to consider potential risks of development on unstable soils or geologic units. Specifically, SRCC Chapters 17-08 and 20-32 and proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2 requirements for geotechnical reports that identify and mitigate impacts related to unstable soils.

All potential future development under the proposed project would be required to comply with State, regional, and local regulations, including SRCC provisions and the proposed General Plan 2050 goals, policies, and actions, to ensure that potential future development that results from implementation of the proposed project would not directly or indirectly cause substantial adverse effects. Therefore, impacts would be *less than significant*.

[18] United States Department of Agriculture, 2023, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, accessed August 29, 2023.

GEO-4 Implementation of the proposed project could be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Based on the presence of alluvial materials in the EIR Study Area, there is some potential for expansive/shrink-swell soils throughout Santa Rosa.[19, 20] Expansive soils are possible wherever clays and elastic silts may be present, including alluvial soils and weathered granitic and fine-grained sedimentary rocks. The presence of expansive soils represents a hazard to structures and people.

As discussed under impact discussion GEO-1, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains policies and actions that require local planning and development decisions to consider potential geological and soil impacts. Additionally, SRCC Chapters 17-08 requires that an evaluation of the suitability of a project can attach conditions to the project if necessary to mitigate impacts from expansive soils and SRCC Chapter 20-32 requires a review process for the City to consider the appropriateness of proposed development on hillside parcels to ensure that a proposed project minimizes its environmental impact, including the preparation of geotechnical reports that identify and mitigate impacts. As part of the City review process regulations from the CBC shall be followed, including the use of a soils engineer, as outlined in SRCC Chapter 18-16, Appendix J. Specific engineering methods that could be used to reduce the impact of expansive soils include drainage-control devices to limit water infiltration near foundations, over-excavation and recompaction of engineered fill method, or support of the foundation with piles.

Because potential future development under the proposed General Plan 2050 has the potential to be constructed where there are expansive soils in the EIR Study Area, impacts are considered potentially *significant*.

Impact GEO-4: Impacts from potential future development under the proposed General Plan 2050 where there are expansive soils could occur over the buildout horizon of the proposed project.

> Significance with Mitigation: Less than significant. Implementation of the proposed General Plan 2050 goals, policies, and actions would mitigate potential impacts as a result of developing on expansive soils. Specifically, proposed *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2 include requirements for geotechnical reports that would ensure that new development, redevelopment, and major remodels avoid or adequately mitigate seismic and geologic hazards as part of the City project review process. Additionally, compliance with existing State, regional, and local regulations, would ensure that potential future development under the proposed project would not directly or indirectly cause substantial adverse effects, including the risks to life or property. Therefore, impacts would be *less than significant*.

[19] Wagner, D. L., and E. J. Bortugno, 1982, Geologic Map of the Santa Rosa Quadrangle, scale 1:250,000, https://ngmdb.usgs.gov/Prodesc/proddesc_518.htm , accessed August 29, 2023.

[20] United States Department of Agriculture, 2023, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, accessed August 29, 2023.

GEO-5	Implementation of the proposed project would not utilize septic tanks or alternative wastewater disposal systems where soils would be incapable of adequately supporting such systems, where sewers are not available for the disposal of wastewater.

As discussed in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, wastewater from new lots or parcels would be discharged into the existing public sanitary sewer system serviced by the City of Santa Rosa. Therefore, potential future development in the EIR Study Area is not anticipated to result in the use of septic tanks or alternative wastewater disposal systems.

In the event septic tanks or alternative wastewater disposal systems are required, SRCC Chapter 15-16 would allow for the construction of septic tanks or alternative wastewater disposal systems provided that the applicant obtains a City permit and the wastewater disposal system is only employing subsurface soil absorption facilities where such facilities would not endanger or affect the public water supply. In addition, such a wastewater disposal system is subject to inspection by City personnel, who have the authority to deny the permit if conditions are not up to City standards.

Compliance with State, regional, and local regulations for structural safety regarding inadequate soils would ensure that potential future development under the proposed project would not directly or indirectly cause substantial adverse effects. Therefore, potential future development would not result in septic tanks or alternative wastewater disposal systems where soils are not capable of adequately supporting such systems, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-6	Implementation of the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As stated in Section 4.7.1.2, *Existing Conditions*, the geology and soils in the EIR Study Area are common throughout the city and region and are not considered unique. However, geological formations underlying the EIR Study Area have the potential to contain unique paleontological resources. Potential future development would be required to comply with the federal Paleontological Resources Preservation Act, which limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency, and PRC Section 5097, which prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency. Ground-disturbing construction activities (e.g., grading and excavation) associated with potential future development in the EIR Study Area could uncover fossilized remains of organisms from prehistoric environments that have not been recorded. The implementation protocols and adherence to the Society of Vertebrate Paleontology standards would ensure the protection of unique paleontological resources during construction of future development. Some protocols include, but are not limited to:

- Excavations within a 50-foot radius of the find shall be temporarily halted or diverted.
- Ground-disturbance work shall cease until a City-approved, qualified paleontologist determines whether the resource requires further study.
- The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards as appropriate, evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5.
- The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find.
- If is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Santa Rosa review and approval prior to implementation.
- All construction activities shall adhere to the recommendations in the excavation plan.

Compliance with federal, state, regional, and local regulations pertaining to paleontological resources, would ensure that potential future development under the proposed project would not directly or indirectly cause substantial adverse effects to paleontological resources. Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-7 Implementation of the proposed project would not in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to geology and soils.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, the cumulative setting includes growth within the EIR Study Area in combination with projected growth in the rest of Sonoma County and the surrounding region. As discussed previously, implementation of the proposed project would not result in significant impacts related to geology and soils. Although the project site includes some potentially significant hazards—strong ground shaking, subsidence, settlement, collapse, seismic-related ground failure, and erosion—anticipated development in the EIR Study Area would be subject to regulations pertaining to seismic safety, including the CBC and SRCC requirements and proposed General Plan 2050 goals, policies, and actions identified under impact discussions GEO-1 through GEO-7. Compliance with these requirements would, to the maximum extent practicable, reduce cumulative, development-related impacts that pertain to seismic shaking, seismic-related ground failure, seismically induced landslides, soil erosion, and unstable soils. Similarly, compliance with relevant SRCC requirements and the requirements of the CBC would minimize the cumulative impacts associated with substantial erosion or loss of topsoil. Though none of the soils in the EIR Study Area are considered to have unique geological resources, unique paleontological resources may occur. Site-specific evaluation in the event that previously unknown resources are discovered during construction activities for new development or redevelopment would be required. Future development would be focused on specific sites or areas, which would be evaluated for site development constraints on a case-by-case basis. Cumulative development in adjacent jurisdictions would be subject to the same federal, state, and local regulations. Since impacts associated with geology

and soils are by their nature focused on specific sites or areas, the less-than-significant impacts in the EIR Study Area to avoid impacts related to geology and soils from the proposed project would not contribute to a cumulative increase in hazards in the immediate vicinity of the EIR Study Area or greater Sonoma County. Therefore, cumulative impacts associated with geology and soils would be *less than significant*.

Significance without Mitigation: Less than significant.

4.8 GREENHOUSE GAS EMISSIONS

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts from greenhouse gas (GHG) emissions associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts from GHG emissions, and identifies proposed General Plan 2050 goals, policies, and actions, as well as feasible mitigation measures, that would minimize any potentially significant impacts. The GHG emissions modeling prepared for the proposed GHG Reduction Strategy is included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

Discussions regarding climate-related hazards, such as air quality, landslides, sea-level rise, flooding, drought, and wildfires are in Chapter 4.3, *Air Quality*; Chapter 4.7, *Geology and Soils*; Chapter 4.10, *Hydrology and Water Quality*; and Chapter 4.18, *Wildfire*, of this Draft EIR.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 TERMINOLOGY

The following are definitions for terms used throughout this chapter:

- Greenhouse gases (GHG). Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- Global warming potential (GWP). Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO_2) over a given period (20, 100, and 500 years). CO_2 has a GWP of 1.
- Carbon dioxide-equivalent (CO_2e). The standard unit to measure the amount of GHGs in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- $MTCO_2e$. Metric ton of CO_2e.
- $MMTCO_2e$. Million metric tons of CO_2e.

4.8.1.2 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6),

hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[1,2] The major GHGs are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (i.e., sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock, and other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high global warming potential (GWP) gases. The GWP of applicable GHG emissions are shown in Table 4.8-1, *Greenhouse Gas Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5) GWP values for methane (CH_4), a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 280 MT of CO_2.

TABLE 4.8-1 GREENHOUSE GAS EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO_2

GHGs	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO_2 [a]	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO_2 [a]	Sixth Assessment Report (AR6) Global Warming Potential Relative to CO_2 [a]
Carbon Dioxide (CO_2)	1	1	1
Methane (CH_4) [b]	25	28	30
Nitrous Oxide (N_2O)	298	265	273

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflects the latest information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in AR5 are used by the 2022 Scoping Plan for long-term emissions forecasting. Therefore, this analysis utilizes AR5 GWP values consistent with the current Scoping Plan.
a. Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.
b. The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.
Sources: Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007*; Intergovernmental Panel on Climate Change, 2013, *Fifth Assessment Report: Climate Change 2013*; IPCC 2021, *Sixth Assessment Report: Climate Change 2022*.

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels such as coal, diesel, and biomass. The share of black carbon emissions from transportation is dropping and is expected to continue to do so between now and 2030 as a result of California's air quality programs. The remaining black carbon emissions come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion. However, state and national GHG inventories do not include black carbon due to work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities.

The recent Sixth Assessment Report (AR6) of the IPCC summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO_2 have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5 degrees Celsius (°C) warming.[3] These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.[4] In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. Human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime.[5]

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty—for example, on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

[3] California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality, https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf, accessed July 24, 2023.

[4] California Environmental Protection Agency, Climate Action Team, March 2006, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, http://s3-us-west-2.amazonaws.com/ucldc-nuxeo-ref-media/0bdec21c-ca2b-4f4d-9e11-35935ac4cf5f, accessed July 24, 2023.

[5] Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007, Impacts, Adaptation and Vulnerability,* https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg2_full_report.pdf, accessed July 24, 2023.

Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near-term, even for the very low GHG emissions scenario.[6] Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1 degree Fahrenheit (°F) higher than historical levels, and some areas have seen average increases in excess of 2°F.[7] The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.
- High heat increases the risk of death from cardiovascular, respiratory, and other diseases.
- Droughts are likely to become more frequent and persistent.
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.
- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.
- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.
- Sea level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs.[8]

[6] Intergovernmental Panel on Climate Change, 2021, *Sixth Assessment Report: Climate Change 2022*, https://report.ipcc.ch/ar6/wg1/IPCC_AR6_WGI_FullReport.pdf, accessed July 24, 2023.

[7] California Office of Emergency Services, June 2020, *California Adaptation Planning Guide*, https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf, accessed July 24, 2023.

[8] California Office of Emergency Services, June 2020, *California Adaptation Planning Guide*, https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf, accessed July 24, 2023.

Table 4.8-2, *Summary of Greenhouse Gas Emissions Risk to California*, shows the global climate change risks to California, which includes impacts public health, water resources, agriculture, coastal sea level, forest and biological resources, energy, and wildfire.

TABLE 4.8-2 SUMMARY OF GREENHOUSE GAS EMISSIONS RISK TO CALIFORNIA

Impact Category	Potential Risks
Public Health	Heat waves will be more frequent, hotter, and longer Poor air quality made worse Higher temperatures increase ground-level ozone (i.e., smog) levels
Water Resource	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand	Potential reduction in hydropower Increased energy demand
Wildfire	Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase by 58 percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location.

Sources: California Climate Change Center, July 2012, *Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California;* Climate Change Center, July 2006, *Our Changing Climate, Assessing the Risks to California*; Climate Change Center, May 2009, *The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California;* California Natural Resources Agency, July 2014, *Safeguarding California: Reducing Climate Risk, An Update to the 2009 California Climate Adaptation Strategy;* California Office of Emergency Services, June 2020, *California Adaptation Planning Guide; California Council on Science and Technology, September 2012, California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets, https://ccst.us/wp-content/uploads/2012ghg.pdf, accessed July 24, 2023*

4.8.1.3 REGULATORY FRAMEWORK

Federal Regulations

The United States Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.[9]

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding. The finding identified emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, according to guidance by the Bay Area Air Quality Management District (BAAQMD), are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

United States Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2e per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2017 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (MPG) in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

[9] United States Environmental Protection Agency, December 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity, https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html, accessed July 24, 2023.

On December 21, 2021, under the direction of Executive Order (EO) 13990, the National Highway Traffic Safety Administration repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the National Highway Traffic Safety Administration announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021.[10]

State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill (AB) 32, AB 1279, Senate Bill (SB) 32, and SB 375.

Executive Order S-03-05

EO S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Global Warming Solutions Act (2006)

The Global Warming Solutions Act, commonly known by its legislative bill number AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. This Act follows the 2020 tier of emissions reduction targets established in EO S-03-05. The California Air Resources Board (CARB) prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of this Act.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires State agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, *Safeguarding California*, in order to ensure climate change is accounted for in state planning and investment decisions.

[10] National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026, accessed July 24, 2023.

Senate Bill 32 and Assembly Bill 197

In September 2016, SB 32 and AB 197 were signed into law, making the executive order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

2022 Climate Change Scoping Plan Update

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State's anthropogenic GHG emissions.[11] The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This plan expands upon earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time. The path forward was informed by the recent AR6 of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB's 2022 Scoping Plan identifies strategies as shown in Table 4.8-3, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State's carbon neutrality goals.

[11] California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf, accessed July 24, 2023.

TABLE 4.8-3 PRIORITY STRATEGIES FOR LOCAL GOVERNMENT CLIMATE ACTION PLANS

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide electric vehicle (EV) charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
Vehicle Miles Traveled (VMT) Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, accessed July 24, 2023, https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf.

For residential and mixed-use development projects, CARB recommends this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- Transportation Electrification
  - Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.

- Vehicle Miles Traveled (VMT) Reduction
  - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
  - Does not result in the loss or conversion of the State's natural and working lands;
  - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS);
  - Reduces parking requirements by:
    - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
    - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
    - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
  - At least 20 percent of the units are affordable to lower-income residents;
  - Result in no net loss of existing affordable units.
- Building Decarbonization
  - Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management and air pollution control districts have developed or adopted.[12]

Assembly Bill 1279

Assembly Bill 1279, signed in September 2022, codified the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act, commonly known by its legislative bill number SB 375, was adopted in 2008 to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with

[12] California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf, accessed July 24, 2023.

goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, this Act required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). Metropolitan Transportation Commission (MTC) is the MPO for the Bay region, which includes Napa, Marin, San Francisco, and Contra Costa counties. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018, which became effective in October 2018. CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated Sustainable Communities and Climate Protection Act (SB 375) targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks compared to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from Sustainable Communities and Climate Protection Act (SB 375) than are currently in place, which for 2035 translates into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCS. As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 $MMTCO_2e$ in 2035 compared to the current targets.[13]

Transportation Sector Specific Regulations

Assembly Bill 1493 (Pavley Law)

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the previous discussion of federal regulations under subheading "Update to Corporate Average Fuel Economy Standards [2017 to 2026].")

[13] California Air Resources Board, February 2018, *Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375_Updated_Final_Target_Staff_Report_2018.pdf, accessed July 24, 2023.

In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles (ZEV) into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Advanced Clean Fleets and Advanced Clean Trucks

In April 2023, CARB adopted the Advanced Clean Cars II rule, which requires all new passenger vehicles, trucks, and SUVs sold in California to be zero emissions by 2035. The regulation amends the Zero-Emission Vehicle Regulation to require an increasing number of ZEVs to support Governor Newsom's 2020 EO N-79-20 and amends the Low-Emission Vehicle Regulations to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions. This rule will substantially reduce air pollutants that threaten public health and would further develop the ZEV market starting with the 2026 model year.

In April 2023, CARB approved the Advanced Clean Fleets, which requires a phased-in transition toward zero-emission medium-and-heavy duty vehicles. Under the new rule, fleet owners operating vehicles for private services (such as Postal Service, state and local government fleets) will begin their transition toward ZEVs starting in 2024. The rule also requires an end to combustion truck sales in 2036 and follows the 2020 adoption of the Advanced Clean Trucks rule, which put in place a requirement for manufacturers to increase the sale of zero-emission trucks.

Executive Order S-01-07

On January 18, 2007, the state set a new Low-Carbon Fuel Standard (LCFS) for transportation fuels sold in the state. EO S 01 07 set a declining standard for GHG emissions measured in CO_2e gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the "fuel cycle."

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZEVs in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle (EV) charging stations). EO B 16-2012 also directed the number of ZEVs in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero emission by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, EO N-79-20 was signed into law. The goal of this EO is for 100 percent of in-state sales of new passenger cars and trucks to be zero emission by 2035. Additionally, the fleet goals for trucks are for 100 percent of drayage trucks to be zero emission by 2035, and 100 percent of medium- and heavy-duty vehicles in the state to be zero emission by 2045, where feasible. The EO's goal for the state is to transition to 100 percent zero-emission off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, and X1-2 and Executive Order S 14 08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under SB 1078 (Sher) and SB 107 (Simitian). Under the Renewable Portfolio Standards (RPS), certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Clean Energy and Pollution Reduction Act

The Clean Energy and Pollution Reduction Act, commonly known by its legislative bill number SB 350, was enacted on October 7, 2015. This Act establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. This Act also sets a new goal to double energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, SB 100 was signed into law to replace the Clean Energy and Pollution Reduction Act (SB 350) requirements. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The Clean Energy, Jobs, and Affordability Act Of 2022

The Clean Energy, Jobs, and Affordability Act Of 2022, commonly known as its legislative bill number SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

The 2022 Building Energy Efficiency Standards were adopted on August 11, 2021, and went into effect on January 1, 2023. The 2022 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, and more. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.[14]

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective on January 1, 2023.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated

[14] California Energy Commission, May 19, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report, CEC-400-2021-077-D.

appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Diversion Regulations

Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and county prepare and submit a source reduction and recycling element. This Act also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, AB 1826 was signed into law requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to SB 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirement (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of a 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use. In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

Regional Regulations

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA) is the congestion management agency for Sonoma County. SCTA is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. SCTA's latest congestion management program is the 2016 Comprehensive Transportation Plan (CTP).

SCTA's countywide transportation model must be consistent with the regional transportation model developed by the MTC with Association of Bay Area Governments (ABAG) data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the congestion management program system. In addition, SCTA's updated CTP includes multimodal performance standards and trip reduction and transportation demand management strategies consistent with the goal of reducing regional VMT in accordance with SB 375.

As part of the implementing framework for the CTP, communities in Sonoma County have identified Priority Development Areas (PDA) to focus future population and employment growth. Increased density in PDAs is intended to locate more people near jobs and services in an effort to reduce travel and transportation related GHG emissions.[15]

Plan Bay Area

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, MTC and ABAG adopted *Plan Bay Area* 2050 on October 21, 2021.[16] *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of Sustainable Communities and Climate Protection Act (SB 375). Under the *Plan Bay Area* strategies, just under half of all Bay Area households would live within 0.5 miles of frequent transit by 2050. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecast to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19 percent reduction in per-capita emissions by 2035—but only if all strategies are implemented.[17]

As described in Chapter 4.0 of this Draft EIR, to achieve *Plan Bay Area*'s sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in PDAs[18] and Transit Priority Areas (TPAs).[19] Development in PDAs and TPAs leverage existing infrastructure and therefore can minimize development in green field (undeveloped) areas and maximize growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels and reduce wasteful, inefficient, or unnecessary consumption of energy resources. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR, the EIR Study Area has six PDAs and three TPAs—the Mendocino Avenue/Santa Rosa Avenue Corridor PDA, North Santa Rosa Station PDA and TPA, Downtown Station Area

[15] Sonoma County Transportation Authority, September 2016, *Moving Forward 2040: Sonoma County's Comprehensive Transportation Plan*, https://scta.ca.gov/wp-content/uploads/2016/09/CTP16_090616.pdf, accessed August 24, 2023.

[16] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 21, 2023.

[17] Association of Bay Area Governments and the Metropolitan Transportation Commission, 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed August 24, 2023.

[18] PDAs are transit-oriented, infill development opportunity areas within existing communities.

[19] TPAs are half-mile buffers surrounding major transit stops or terminals.

PDA and TPA, Sebastopol Road Corridor PDA, Roseland PDA, Santa Rosa Avenue PDA, and Santa Rosa Transit Mall TPA.

Bay Area Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.[20]

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

Bay Area Commuter Benefits Program

Under BAAQMD Regulation 14, *Model Source Emissions Reduction Measures*, Rule 1, *Bay Area Commuter Benefits Program*, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. In partnership with the BAAQMD and the MTC, the rule's purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area's traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four

[20] Bay Area Air Quality Management District, 2017, *Spare the Air: Cool the Climate, Final 2017 Clean Air Plan*, https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed July 24, 2023.

commuter benefit options including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

Local Regulations

Santa Rosa City Code

The Santa Rosa Municipal Code (SRCC) includes various directives pertaining to GHG emissions. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to GHG emissions are in Title 18, *Building Regulations,* as follows:

- Title 18, *Buildings and Construction*. This title adopts by reference, with the additions, insertions, deletions, and changes listed throughout, the California Green Building Standards Code in Chapter 18-42, *California Green Building Standards Code*. This title also includes Chapter 18-68, *Expedited Permit Process for Small Residential Rooftop Solar Energy Systems,* which provides for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 in order to achieve timely and cost-effective installations of small residential rooftop solar energy systems.

4.8.1.4 EXISTING CONDITIONS

Community-Wide GHG Emissions Inventory

The City's community-wide GHG emissions inventory conducted for the proposed GHG Reduction Strategy (see Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR, and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050) includes the following sectors:

- Transportation. GHG emissions created by driving on-road vehicles, including passenger and freight vehicles, in Santa Rosa. In the 2019 inventory, this sector also includes emissions from fuel use on Sonoma-Marin Area Rail Transit (SMART) trains.
- Residential energy. GHG emissions are attributed to the use of electricity and natural gas in residential buildings.
- Nonresidential energy. GHG emissions are attributed to the use of electricity and natural gas in nonresidential buildings.
- Solid waste. GHG emissions released from trash collected from residents and businesses in Santa Rosa.
- Off-road equipment. GHG emissions from equipment that does not provide on-road transportation, such as tractors for construction or equipment used for landscape maintenance.
- Agriculture. GHG emissions from fertilizer used for crop cultivation.
- Water and wastewater. This sector accounts for the electricity used to process and transport from the water used by and the wastewater generated from city community members, as well as direct emissions from processing wastewater.

- **Land use and sequestration.** Emissions released into the atmosphere from development of previously undeveloped land and GHG emissions absorbed and stored in trees and soils on locally controlled lands as part of healthy ecosystems.
- **Stationary sources.** Emissions from fuel use at major industrial facilities permitted by state and regional air quality authorities. Stationary source emissions are informational and are not included in the community total.
- **Wildfire and controlled burns.** Emissions released by wildfires and controlled burns.

Industrial sources of emissions that require a permit to operate from BAAQMD are not included in the community inventory. However, due to the 15/15 Rule,[21] natural gas and electricity use data for industrial land uses may also be aggregated with the nonresidential land uses in the data provided by Pacific Gas & Energy (PG&E) and Sonoma Clean Power (SCP). Life-cycle emissions are not included in this analysis because not enough information is available for the proposed project, and therefore, would be speculative. Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's GHG emissions inventory but treats it separately.

GHG Emissions Factors

Table 4.8-4, *Existing Greenhouse Gas Emission Factors,* shows the emissions factors for the baseline year. Some sectors, including agriculture and off-road emissions, are calculated using formulae or models and do not have specific emission factors.

TABLE 4.8-4 EXISTING GREENHOUSE GAS EMISSIONS FACTORS

Emissions Sector	Unit	Baseline Year Rate	Source
On-road transportation (light and medium-duty vehicles)	$MTCO_2e$/ mile	0.000347	California Air Resources Board
On-road transportation (heavy-duty vehicles)	$MTCO_2e$/ mile	0.001124	California Air Resources Board
On-road transportation (all vehicles)	$MTCO_2e$/ mile	0.00044	California Air Resources Board
PG&E electricity	$MTCO_2e$/ kWh	2.65062E-05	PG&E
SCP electricity (CleanStart)	$MTCO_2e$/ kWh	1.87125E-05	SCP
SCP electricity (EverGreen)	$MTCO_2e$/ kWh	1.75747E-05	SCP
Direct access electricity	$MTCO_2e$/ kWh	0.0004	California Energy Commission
Natural gas	$MTCO_2e$/ therm	0.0053	US Community Protocol
Municipal Solid Waste (MSW)	$MTCO_2e$/ ton	0.2779	CalRecycle
Alternative Daily Cover (ADC)	$MTCO_2e$/ ton	0.2419	CalRecycle

Source: Based on the emissions inventory and forecast being conducted for the City's GHG Reduction Strategy Plan, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR, and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.

[21] The 15/15 Rule was adopted by the California Public Utility Commission in the Direct Access Proceeding (CPUC Decision 97-10-031) to protect customer confidentiality. The 15/15 Rule requires that any aggregated information provided by the utilities must be made up of at least 15 customers (100 for residential sectors) and a single customer's load must be less than 15 percent of an assigned category.

Community Emissions

Emissions associated with the EIR Study Area are shown in Table 4.8-5, *Existing Greenhouse Gas Emissions Inventory in the EIR Study Area.*

TABLE 4.8-5 EXISTING GREENHOUSE GAS EMISSIONS INVENTORY IN THE EIR STUDY AREA

Emissions Sector	Existing $MTCO_2e$	% of Total
On-Road Transportation	541,140	58%
Nonresidential Energy	162,400	17%
Residential Energy	158,340	17%
Off-road Equipment	40,570	4%
Solid Waste/Landfills	33,630	4%
Water and Wastewater	5,510	1%
Agriculture	280	<1%
Land Use and Sequestration	-13,060	-1%
Total Community Emissions	**928,810**	**100%**
Service Population (SP)	**275,569**	--
$MTCO_2e$/SP	3.4	--
Stationary Sources [a]	12,400	--

Source: Based on the emissions inventory and forecast being conducted for the City's GHG Reduction Strategy Plan, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.
Notes: All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.
a. Stationary sources are not included in the community-wide GHG inventory total. They are provided as informational items.

The existing land uses in Santa Rosa consist of single-family and multi-family residences, recreation/parks, retail, office, commercial, industrial, and institutional uses. Operation of these land uses generates GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips for employees and residents; area sources such as landscaping and agricultural equipment and consumer cleaning products; water demand; waste generation; and solid waste generation.[22]

4.8.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact related to GHG emissions if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG emissions.
3. In combination with past, present, and reasonably foreseeable projects, result in cumulative GHG emission impacts in the area.

[22] Emissions from water demand and wastewater are emissions associated with electricity used to supply, treat, and distribute water.

4.8.2.1 GREENHOUSE GAS EMISSION IMPACTS

BAAQMD's 2022 *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (GHG Justification Report) contains instructions on how to evaluate, measure, and mitigate GHG impacts generated from land use development projects and plans. For purposes of this analysis, the City of Santa Rosa is using BAAQMD's current GHG plan-level significance thresholds to evaluate the proposed project's potential impacts related to GHG emissions.

BAAQMD, in its GHG Justification Report, recommends the use of one of two plan-level criteria to determine the GHG emission impact resulting from a proposed plan. If a proposed plan cannot demonstrate consistency with the BAAQMD-recommended Criterion A or Criterion B, that plan would result in a potentially significant impact related to GHG emissions.

A. The proposed plan must be consistent with a local GHG reduction strategy that meets the criteria under California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b); or
B. The proposed plan must meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

The proposed project includes the proposed GHG Reduction Strategy which is an update to the City's current Santa Rosa Community-wide Climate Action Plan (CCAP) adopted on June 5, 2012. The proposed GHG Reduction Strategy demonstrates consistency with the latest legislative reduction target established by SB 32 for year 2030 and AB 1279 for year 2045. Therefore, Criterion A and B are used herein to determine the proposed project's GHG emissions impacts.

4.8.2.2 GREENHOUSE GAS PLAN CONSISTENCY

To determine whether the proposed project is consistent with the applicable plan or policy adopted for the purpose of reducing GHG emissions, the proposed project is analyzed for consistency with applicable policies contained in the State's Scoping Plan and *Plan Bay Area*. It should be noted that the proposed project builds on the City's proposed GHG Reduction Strategy's emission reduction objectives, emissions inventory, and forecast to align with current legislative reduction targets established by SB 32 and AB 1279.

4.8.3 IMPACT DISCUSSION

GHG-1 Implementation of the proposed project would not generate GHG, either directly or indirectly, that may have a significant impact on the environment.

Future potential development over the buildout horizon of the proposed project would contribute to global climate change through direct and indirect emissions of GHGs from land uses within the EIR Study Area.

Forecast Emissions Compared to Existing Conditions

Potential buildout over the buildout horizon of the proposed project is not linked to a specific development time frame but is assumed over a 25-year project horizon through 2050. For purposes of evaluating if the proposed project would achieve State's GHG reduction goal for year 2030 (SB 32) and year 2045 (AB 1279), forecasted GHG emissions for year 2030, 2045, and 2050 are shown.

Table 4.8-6, *EIR Study Area GHG Emissions Business-as-Usual Forecast*, provides a comparison of the change in GHG emissions in the EIR Study Area between the CEQA baseline (2019), year 2030, year 2045, and the proposed General Plan 2050 horizon year (2050) conditions. As shown in Table 4.8-6, the increase in residential units and population associated with the proposed General Plan 2050 results in an increase in on-road transportation, residential and nonresidential building energy use, solid waste, off-road equipment, water and wastewater, and agriculture.

Table 4.8-6 accounts for reductions from State measures that have been adopted to reduce GHG emissions, including:

- The RPS requires increases in renewable electricity supplies.
- The Clean Car Standards require increased fuel efficiency of on-road vehicles and decreased carbon intensity of vehicle fuels.
- The updated Title 24 Building Energy Efficiency Standards require new buildings to achieve increased energy efficiency targets.
- The LCFS mandates reduced carbon intensity of fuels used in off-road equipment.
- The short-lived climate pollutants law (SB 1383) proposes a comprehensive strategy to reduce methane and other emissions of short-lived GHGs through regulations on dairy operations and urban landfills, including higher diversion rates of food waste from landfills.

After accounting for reductions from State and regional actions, projected development in the years 2030, 2045, and 2050 would result in a net increase of 45,260 $MTCO_2e$, 106,960 $MTCO_2e$, and 127,580 $MTCO_2e$ GHG emissions from existing conditions, respectively. The primary reason for the overall increase in community-wide GHG emissions is mainly due to the net increase in service population of 28,335 people at year 2030, 66,976 people at year 2045 and 79,856 people at year 2050. Without additional local GHG reduction strategies, the EIR Study Area would not achieve consistency with the GHG reduction goals of SB 32 (i.e., 40 percent reduction below 1990 levels by 2030) and AB 1279 (i.e., 85 percent reduction below 1990 levels by 2045).

TABLE 4.8-6 EIR STUDY AREA GHG EMISSIONS BUSINESS-AS-USUAL FORECAST

	GHG Emissions ($MTCO_2e$/Year)						
Emissions Sector	Baseline	Year 2030	Net Change 2030 from Baseline	Year 2045	Net Change 2045 from Baseline	Year 2050	Net Change 2050 from Baseline
On-Road Transportation	541,140	549,620	8,480	561,180	20,040	565,020	23,880
Nonresidential Energy	162,400	168,310	5,910	176,380	13,980	179,080	16,680
Residential Energy	158,340	176,180	17,840	200,520	42,180	208,620	50,280
Off-road Equipment	40,570	51,300	10,730	63,400	22,830	67,490	26,920
Solid Waste	33,630	37,090	3,460	41,810	8,180	43,380	9,750
Water and Wastewater	5,510	5,550	40	5,540	30	5,540	30
Agriculture	280	180	-100	50	-230	10	-270
Land Use and Sequestration	-13,060	-14,160	-1,100	-13,110	-50	-12,750	310
Total Community Emissions (BAU)	**928,810**	**974,070**	**45,260**	**1,035,770**	**106,960**	**1,056,390**	**127,580**
Reductions from State and Regional Actions	—	**-170,570**	—	**-344,240**	—	**-363,680**	—
Total Community Emissions (with Existing State Actions)	—	**803,500**	—	**691,530**	—	**692,710**	—
SB 32 (2030) and AB 1279 (2045) Target	—	669,420	—	167,350	—	167,350	—
Target achieved?	—	**No**	—	**No**	—	**No**	—

Source: Based on the emissions inventory and forecast being conducted for the City's GHG Reduction Strategy, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.
Notes: BAU = business as usual; estimates do not incorporate any emission reductions from statewide or GHG reduction measures.

Local GHG Reduction Measures

The proposed General Plan 2050 directs implementation of the proposed GHG Reduction Strategy. The proposed GHG Reduction Strategy is an update to and replacement of the City's 2012 CCAP. Like the previous 2012 CCAP, the integrated GHG Reduction Strategy includes GHG reduction measures and implementation programs based on the City's ongoing implementation of the 2012 CCAP, an updated GHG emissions inventory, and projections of future GHG emissions. The GHG emissions impact of the following existing actions have been quantified in the EIR Study Area:

- Participation in SCP. The City of Santa Rosa is a participant in SCP, a community choice electricity provider that provides higher levels of renewable energy than PG&E. In 2019, SCP provided approximately 86 percent of Santa Rosa's residential and 90 percent of its nonresidential electricity, excluding direct access electricity.
- Solar system installations. Since 2019, approximately 4,500 residential and 80 commercial solar systems have been installed in Santa Rosa.
- Micromobility programs. Between July 2022 and June 2023, the City's Bird Scooter program provided nearly 9,000 scooter rides. In February 2019, the SCTA released a request for proposals for implementation of a county-wide bike sharing program, which would also operate in Santa Rosa.
- Installation of public EV chargers. The City of Santa Rosa contains approximately 162 publicly available EV chargers.
- Installation of graywater systems. Since the beginning of 2020, the City has rebated the installation of seven graywater systems.
- Cash for Grass Rebate Program. The City's Cash for Grass Rebate Program provides rebates for qualifying residents and building owners who replace their lawns with water-efficient landscaping.
- Expansion and upgrading of the City's bike network. Since 2020 the City has constructed 0.6 miles of new bike lanes and has upgraded 5.6 miles, primarily from Class II to Class IIB bikes lanes. The City committed to adding another 4 miles of bike lanes to the bike network by the end of 2023.
- Electric new construction reach code. On November 19, 2019, the City passed a reach code that required new residential construction of three stories and below to be all electric.[23]

The City's GHG Reduction Strategy identifies GHG emissions reductions for the EIR Study Area that would ensure consistency with the State GHG reduction mandates of SB 32, AB 1279, and the State's carbon neutrality goals. Table 4.8-7, *Proposed GHG Reduction Strategies*, shows the local GHG emission reductions associated with each of the GHG reduction measures.

[23] The City has suspended its enforcement of Ordinance 2022-015 because of a decision on January 2, 2024, by the U.S. Court of Appeals 9th Circuit that invalidated a City of Berkeley ordinance that prohibited natural gas infrastructure in new buildings, precluding cities and counties from adopting ordinances that prohibit the installation of gas plumbing in buildings. The City is currently evaluating options for a replacement reach code that will achieve similar objectives for energy efficiency and GHG emissions reductions in a manner that is consistent with the recent court decision.

TABLE 4.8-7 PROPOSED GHG REDUCTION MEASURES

GHG Reduction Measures	2030 GHG Reductions ($MTCO_2e$/Year)	2045 GHG Reductions ($MTCO_2e$/Year)	2050 GHG Reductions ($MTCO_2e$/Year)
1. Locate and design new development to minimize vehicle dependence	13,740	11,560	13,550
2. Improve the frequency, coverage, and effectiveness of local and regional transit and rail networks.	10,860	14,930	17,120
3. Develop and expand transportation demand management (TDM) programs to reduce VMT and dependence on single-occupancy vehicle trips.	610	1,090	1,160
4. Enhance active transportation and micromobility systems.	1,680	2,990	3,500
5. Accelerate the adoption of zero-emission light-duty and heavy-duty vehicles.	50,500	248,880	256,420
6. Transition to zero-emission motorized equipment, including construction and landscaping.	13,240	32,120	39,270
7. Reduce community-wide energy use and increase energy efficiency in new and existing buildings, including municipal buildings.	31,580	182,370	191,560
8. Transition to carbon neutral new buildings.	1,730	8,940	10,230
9. Increase local renewable energy generation and the use of renewable, carbon free, and distributed energy systems, including energy storage, throughout the city.	70	—	—
10. Reduce the amount of recyclable and compostable material sent to landfills.	6,930	10,820	11,220
11. Reduce total waste generation.	2,080	3,840	5,230
12. Improve indoor and outdoor water use efficiency.	—	—	—
13. Expand water catchment and reuse opportunities.	—	—	—
14. Increase local natural carbon sequestration opportunities in Santa Rosa.	4,550	15,470	19,020
15. Reduce embedded carbon in goods and services used by the City and community members.	—	—	—
16. Maximize opportunities for local food production.	—	—	—
17. Integrate climate action across all City departments and programs.	—	—	—
Total GHG Reductions from Proposed GHG Reduction Measures	**137,570**	**533,020**	**568,290**

Source: Santa Rosa GHG Reduction Strategy, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.
Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC's AR6.

Table 4.8-8, *GHG Emissions Reduction Target Analysis with the Proposed GHG Reduction Strategy*, shows that with the additional local measures identified in the proposed GHG Reduction Strategy, the EIR Study Area would achieve the SB 32 GHG reduction target for year 2030, AB 1279 GHG reduction targets for year 2045 and beyond to horizon year 2050. With implementation of the proposed GHG Reduction Strategy, the EIR Study Area would achieve a 40 percent decrease in GHG emissions in the EIR Study Area by 2030 from 1990 levels, an 86 percent decrease in GHG emissions in the EIR Study Area by 2045 from 1990 levels, 89 percent decrease in GHG emissions by 2050 from 1990 levels, and would make substantial progress toward the State's carbon neutrality goals. Therefore, the proposed project would not result in a substantial increase in the magnitude of community-wide GHG emissions and would be consistent with the GHG reduction goals identified under SB 32 and AB 1279.

TABLE 4.8-8 GHG REDUCTION TARGET ANALYSIS WITH THE PROPOSED GHG REDUCTION STRATEGY

Scenario	2030 GHG Emissions ($MTCO_2e$/Year)	2045 GHG Emissions ($MTCO_2e$/Year)	2050 GHG Emissions ($MTCO_2e$/Year)
Total Community Emissions (BAU)	974,070	1,035,770	1,056,390
GHG Reductions from State & Regional Actions	-170,570	-344,240	-363,680
GHG Reductions from Proposed GHG Reduction Measures	-137,570	-533,020	-568,290
Total Community Emissions (with State Actions & Regional Actions + Proposed GHG Reduction Measures)	**665,930**	**158,510**	**124,420**
SB 32 (2030) and AB 1279 (2045) Target	669,420	167,350	167,350
Achieves Target	Yes	Yes	Yes

Source: Santa Rosa GHG Reduction Strategy, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR and Appendix A, *Greenhouse Gas Reduction Strategy*, of the proposed General Plan 2050.
Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC's AR6.

As identified in Table 4.8-8, the proposed project would be consistent with the current long-term legislative reduction targets under SB 32 and AB 1279, which is attributable to both Statewide emission reduction strategies such as CARB's Advanced Clean Cars II and Advanced Clean Fleets Regulations. Furthermore, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider GHG emissions (see Chapter 4.15, *Transportation*, of this Draft EIR for a complete list of these goals, policies, and actions).

Potential future development projects over the buildout horizon of the proposed project would experience emission reductions from implementation of State measures and strategies to reduce Statewide GHG emissions, such as the LCFS mandate or RPS requirements. The proposed General Plan 2050 goals, policies, and actions listed above, and the strategies that would be maintained from the proposed GHG Reduction Strategy would serve to further support potential GHG reductions for potential future development projects in the EIR Study Area.

Furthermore, the proposed GHG Reduction Strategy is consistent with State and BAAQMD's CEQA Guidelines, which establishes it as a "qualified" GHG Reduction Plan and allows it to support streamlined environmental review of GHG emissions for new development. A project-specific environmental review that relies on the Reduction Strategy for its cumulative impact analysis must show consistency with the Reduction Strategy by preparing a Consistency Checklist, which allows the applicant to identify specific GHG reduction strategies from the Reduction Strategy that are applicable to the project and demonstrate how the project will implement these strategies to ensure that the project's emissions are consistent with community-wide emissions forecast contained herein.

In summary, implementation of the proposed project would result in a net decrease in emissions from existing conditions. Additionally, with implementation of the proposed GHG Reduction Strategy, emissions from existing and planned development in the EIR Study Area would achieve the GHG reduction goals identified under SB 32 for year 2030, AB 1279 for year 2045, and additional reductions for horizon year 2050, which is consistent with the thresholds identified by BAAQMD's CEQA Guidelines. Therefore, growth

within the EIR Study Area associated with the proposed project would not have a cumulatively considerable impact on GHG emissions and this impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GHG-2 The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

The following discusses consistency other applicable plans adopted for the purpose of reducing GHG emissions, which include CARB's Scoping Plan and MTC/ABAG's Plan Bay Area.

CARB Scoping Plan

The CARB Scoping Plan is applicable to State agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require local jurisdictions to adopt its policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the State agencies from the Scoping Plan result in GHG emissions reductions at the local level. So local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS mandate and changes in the corporate average fuel economy standards.

Potential future development projects over the buildout horizon of the proposed project would be required to adhere to the programs and regulations identified by the Scoping Plan and implemented by State, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32, SB 32, and AB 1279. Future development projects would be required to comply with these state GHG emissions reduction measures because they are statewide strategies. For example, new buildings over the buildout horizon of the proposed project would be required to meet the CALGreen and Building Energy Efficiency Standards in effect at the time when applying for building permits. Furthermore, the proposed General Plan 2050 goals, policies, and actions listed under impact discussion GHG-1 would help achieve GHG reduction goals.

Moreover, the proposed General Plan 2050 directs implementation of the proposed GHG Reduction Strategy. As described under impact discussion GHG-1, the proposed GHG Reduction Strategy aligns the GHG reduction goals for the EIR Study Area for existing and new development with SB 32, AB 1279, and the carbon neutrality goals identified in the 2022 Scoping Plan. Therefore, the proposed project would result in a net benefit because implementation of the proposed GHG Reduction Strategy would align future development in the EIR Study Area with the policies and objectives identified by CARB. Implementation of the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be *less than significant*.

Plan Bay Area

Plan Bay Area aims to achieve the passenger vehicle emissions reductions identified under SB 375 and build a sustainable vision for the Bay Area.[24] In addition to significant transit and roadway performance investments to encourage focused growth, *Plan Bay Area* directs funding to neighborhood active transportation and complete streets projects, climate initiatives, lifeline transportation and access initiatives, safety programs, and PDA planning. The EIR Study Area contains six PDAs and three TPAs, as shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0, *Environmental Analysis*, of this Draft EIR.

While *Plan Bay Area* does not override local land use control, it provides guidance to the local jurisdictions such as the City of Santa Rosa on how future development can be consistent with the State's GHG and VMT reduction goals. This includes constructing more infill development in downtowns and centers in close proximity to jobs and services.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the expansion of the city into surrounding lands is no longer a focus of City planning efforts, and the City has identified 21 Areas of Change where the City will focus on housing, services, connectivity, and/or infrastructure needed to make these complete neighborhoods. Table 4-2, *General Plan 2050 Areas of Change by Priority Development and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR shows the 11 Areas of Change that are within or directly adjacent to a PDA and/or TPA. Accordingly, future development is projected to occur primarily in the form of infill/intensification on sites already developed or underutilized, and/or in close proximity to existing development and infrastructure. While the proposed project does not prohibit development opportunities outside of infill locations, the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider GHG and VMT reduction goals consistent with *Plan Bay Area* (see subheading "Plan Bay Area" under impact discussion LU-2 in Chapter 4.11, *Land Use*, of this Draft EIR for a complete list of these goals, policies, and actions).

Furthermore, the proposed General Plan 2050 itself would not introduce a substantial number of unplanned population growth in the EIR Study Area, as described in Chapter 4.13, *Population and Housing*, of this Draft EIR. The proposed General Plan 2050 includes goals, policies, and actions that would limit development in certain areas and control the growth within the EIR Study Area. All potential future development would be required to comply with any required site-specific infrastructure improvements and to pay any project-specific impact fees.

Overall, the proposed project would be consistent with the overall goals of *Plan Bay Area* in concentrating new development in locations where there is existing infrastructure and transit. Therefore, the proposed project would not conflict with the land use concept plan in Plan Bay Area and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[24] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 24, 2023.

GHG-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative GHG emission impacts in the area.

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under impact discussions GHG-1 and GHG-2 are not project-specific impacts to global warming, but the proposed project's contribution to this cumulative impact. As discussed above, the EIR Study Area would experience a reduction in GHG emissions for the years 2030, 2045, and 2050 from existing conditions despite the anticipated population and employment growth. Additionally, with implementation of the proposed GHG Reduction Strategy, implementation of the proposed project would meet the legislative reduction target that aligns with SB 32 and AB 1279 and substantial progress with the State's carbon neutrality targets. be consistent with applicable plans adopted for the purpose of reducing GHG emissions. Consequently, GHG emissions generated by the proposed project and their contribution to global climate change would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.9 HAZARDS AND HAZARDOUS MATERIALS

This chapter of the Draft Environmental Impact Report (EIR) describes the potential hazards and hazardous materials impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential hazards and hazardous materials impacts, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts. A discussion of wildland fire hazards is provided in Chapter 4.18, *Wildfire*, of this Draft EIR.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

Federal Regulations

United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) is the primary federal agency that regulates hazardous materials and waste. In general, the USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs, delegating the responsibility for issuing permits, and monitoring and enforcing compliance to states and Native American tribes. USEPA programs promote handling hazardous waste safely, cleaning up contaminated land, and reducing waste volumes through such strategies as recycling. California falls under the jurisdiction of USEPA Region 9. Under the authority of the Resource Conservation and Recovery Act (RCRA) and in cooperation with State and tribal partners, the USEPA Region 9 Waste Management and Superfund Divisions manage programs for site environmental assessment and cleanup, hazardous and solid waste management, and underground storage tanks.

United States Department of Transportation

The United States Department of Transportation (USDOT) has the regulatory responsibility for the safe transportation of hazardous materials between states and internationally. The USDOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service regulations. The federal RCRA of 1976 imposes additional standards for the transport of hazardous waste.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from materials manufacturers. The material safety data

sheets describe the risks, as well as proper handling and procedures, related to specific hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the "cradle to grave" regulation of hazardous waste. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to the Sonoma County Fire and Emergency Services Department Hazardous Materials (HazMat) Division.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, required Superfund actions to consider the standards and requirements found in other State and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased State involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as SARA Title III, was enacted in October 1986. This law requires State and local governments to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by USEPA's Office of Emergency Management. USEPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through California Accidental Release Prevention (CalARP) program.

Hazardous Materials Transportation Act

The USDOT regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated on March 22, 2008.

The Stafford Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) of 1988 authorizes federal government assistance for emergencies and disasters when State and local capabilities are exceeded. The Stafford Act forms the statutory authority for most federal disaster response activities, especially as they relate to the Federal Emergency Management Agency (FEMA) and FEMA programs.

National Response Framework

The 2016 National Response Framework, published by the United States Department of Homeland Security, is a guide for the nation to respond to all types of disasters and emergencies.[1] This framework describes specific authorities and best practices for managing incidents that range from serious local or large-scale terrorist attacks to catastrophic natural disasters. In addition, the 2016 National Response Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

[1] United States Department of Homeland Security, October 28, 2019, *National Response Framework*, https://www.fema.gov/sites/default/files/2020-04/NRF_FINALApproved_2011028.pdf, accessed March 8, 2023.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the USDOT to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the USDOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. USDOT's and PHMSA's regulations governing natural gas transmission pipelines, facility operations, employee activities, and safety are found in the Code Regulations Title 49, *Transportation*, Parts 190 through 192, Part 195, and Part 199.

Pipeline Safety Improvement Act of 2002

The Pipeline Safety Improvement Act mandates that the USDOT, the Department of Energy, and the National Institute of Standards and Technology in the Department of Commerce carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities.[2] The purpose of the Research and Design Program is to identify safety and integrity issues and develop methodologies and technologies to characterize, detect, and manage risks associated with natural gas and hazardous liquid pipelines.

Pipeline Inspection, Enforcement, and Protection Act of 2006

The Pipeline Inspection, Enforcement, and Protection Act confirms the commitment to the Integrity Management Program and other programs enacted in the Pipeline Safety Improvement Act of 2002. The 2006 legislation includes provisions on:

- Preventing excavation damage to pipelines through the enhanced use and improved enforcement of State "One-Call" laws that preclude excavators from digging until they contact the State One-Call system to locate the underground pipelines;
- Minimum standards for Integrity Management Programs for distribution pipelines (including installation of excess flow valves on single-family residential service lines based on feasibility and risk);
- Standards for managing gas and hazardous liquid pipelines to reduce risks associated with human factors (e.g., fatigue);
- Authority for the Secretary to waive safety standards in emergencies;
- Authority for the Secretary to assist in restoration of disrupted pipeline operations;
- Review and update incident reporting requirements;
- Requirements for senior executive officers to certify operator integrity management performance reports; and

[2] United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, last updated October 27, 2017, Pipeline Safety Improvement Act of 2002, https://www.phmsa.dot.gov/pipeline/congressional-mandates/pipeline-safety-improvement-act-2002, accessed March 8, 2023.

- Clarification of jurisdiction between states and PHMSA for short laterals that feed industrial and electric generator consumers from interstate natural gas pipelines.[3]

Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 was designed to examine and improve the state of pipeline safety regulation. This act accomplishes the following:

- Reauthorizes PHMSA's federal pipeline safety programs through fiscal year 2015.
- Provides the regulatory certainty necessary for pipeline owners and operators to plan infrastructure investments and create jobs.
- Improves pipeline transportation by strengthening enforcement of current laws and improving existing laws where necessary.
- Ensures a balanced regulatory approach to improving safety that applies cost-benefit principles.
- Protects and preserves Congressional authority by ensuring certain key rulemakings are not finalized until Congress has an opportunity to act.[4]

State Regulations

California Environmental Protection Agency

One of the primary State agencies that regulate hazardous materials is CalEPA. CalEPA is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. The California DTSC, a department of the CalEPA, protects California and its residents from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and Safety Code.[5] The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Business Plans. The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

California Division of Occupational Safety and Health

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the State-level agency responsible for ensuring workplace safety. CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event

[3] United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, December 29, 2006, *Pipeline Inspection, Enforcement, and Protection Act of 2006*, https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/technical-resources/pipeline/gas-distribution-integrity-management/61781/pipesact2006.pdf, accessed March 8, 2023.

[4] United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, last updated February 16, 2023, Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, https://www.phmsa.dot.gov/legislative-mandates/pipeline-safety-act/pipeline-safety-regulatory-certainty-and-job-creation-act-2011, accessed March 8, 2023.

[5] Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) and the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.

that a work site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

California Office of Emergency Services

The California Office of Emergency Services (Cal OES) was established as part of the Governor's Office on January 1, 2009. It was created pursuant to Assembly Bill (AB) 38, which merged the duties, powers, purposes, and responsibilities of the former Governor's Emergency Management Agency with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for ensuring the State's readiness to respond to and recover from all hazards—natural, humanmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

California Department of Transportation and California Highway Patrol

Caltrans and the CHP are the two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. Caltrans manages more than 50,000 miles of California's highways and freeways, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highways, freeways, and intercity rail lines. The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to ensure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the state. Common carriers are licensed by the CHP, pursuant to Section 32000 of the California Vehicle Code. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

California Building Code

The State of California provided a minimum standard for building design through the California Building Code (CBC), which is found in Title 24, Part 2 of the California Code of Regulations. The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis and may be subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the typical fire safety requirements of the CBC, including the installation of sprinklers in all high-rise buildings and the establishment of fire-resistance standards for fire doors and building materials. Section 414 of the CBC includes requirements for buildings

and structures occupied for the manufacturing, processing, dispensing, use, or storage of hazardous materials.

California Health and Safety Code

California Health and Safety Code Chapter 6.95 and California Code of Regulations Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

California Office of Emergency Services

The California Governor's Office of Emergency Services (CalOES), formerly the California Emergency Management Agency (CalEMA), was established on January 1, 2009, created by AB 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the CalOES with those of the Governor's Office of Homeland Security. CalOES is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for ensuring the state's readiness to respond to and recover from all hazards – natural, humanmade, emergencies, and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

California Fire Code

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

Senate Bill 379

Senate Bill 379, approved October 8, 2015, requires all cities and counties to include climate adaptation and resiliency strategies in the Safety Elements of their General Plans upon the next revision beginning January 1, 2017. The bill requires the climate adaptation update to include a set of goals, policies, and objectives for their communities based on the vulnerability assessment, as well as implementation measures, including the conservation and implementation of natural infrastructure that may be used in adaptation projects. Specifically, the bill requires that upon the next revision of a General Plan or Local Hazard Mitigation Plan (LHMP), the Safety Element is to be updated as necessary to address climate adaptation and resiliency strategies applicable to the city or county.

Regional Regulations

North Coast Regional Water Quality Control Board

The Porter-Cologne Water Quality Control Act[6] established the State Water Resources Control Board (SWRCB) and divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The North Coast Region RWQCB – Region 1 regulates water quality in the Southeast Greenway Area. The North Coast RWQCB has the authority to require groundwater investigations and/or remedial action if the quality of groundwater or surface waters of the state are threatened.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products. The latter are typically the responsibility of CalEPA and the California Air Resources Board (CARB). The BAAQMD is responsible for preparation of attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and issuance of permits for activities, including demolition and renovation activities affecting asbestos-containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1). The BAAQMD's boundaries embrace the southern part of Sonoma County, including the Southeast Greenway Area.

Sonoma County Department of Health Services, Environmental Health and Safety Branch

A CUPA is a local agency that has been certified by CalEPA to implement the local Unified Program. The CUPA can be a County, City, or joint powers authority. A participating agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. The Sonoma County Fire and Emergency Services Department Hazardous Materials (HazMat) Division is the certified CUPA for the County of Sonoma, including the City of Santa Rosa and vicinity.[7] Funding for this Division is provided through fees charged to the businesses, which are regulated by the County under these CUPA programs.[8]

[6] California Water Code Sections 13000 et seq.

[7] Hazardous Materials Unit and CUPA Programs, https://permitsonoma.org/divisions/firepreventionandhazmat/servicesandfees/hazardousmaterialsunitandcupaprogram, accessed June 23, 2023.

[8] Hazardous Materials Unit and CUPA Programs, https://permitsonoma.org/divisions/firepreventionandhazmat/servicesandfees/hazardousmaterialsunitandcupaprogram, accessed June 23, 2023.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SCCC) includes various directives pertaining to hazards and hazardous materials. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to hazards and hazardous materials are in Title 18, *Buildings and Construction* as follows:

- Chapter 18-04, *General Provisions*. Section 18-04.015, *Adoption by Reference*, this section adopts multiple codes, including the 2019 Edition of the CFC and the CBC. This CFC in its entirety, is subject, however, to the amendments, additions, and deletions set forth in this chapter. The Santa Rosa Fire Prevention Code is intended to regulate and govern the safeguarding of life and property from fire and explosion hazards arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the occupancy of buildings in Santa Rosa.

  The CBC is adopted in its entirety, subject, however, to the amendments, additions, and deletions set forth in this chapter. The CBC includes several provisions regarding the storage and disposal of hazardous materials. Such provisions include storage of flammable and combustible liquids in aboveground tanks and the storing and dispensing of liquified petroleum gas and other flammable liquids and gases.
- Chapter 18-16, *2019 California Building Code*. This chapter includes provisions to store flammable and combustible liquids in aboveground tanks and the storing and dispensing of liquified petroleum gas and other flammable liquids and gases.
- Chapter 18-44, *2019 California Fire Code*. This chapter includes provisions to prevent fire and protect the residents and visitors of Santa Rosa from fire-related hazards.

Hazard Mitigation Plan

On December 7, 2021, the Santa Rosa City Council adopted the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), which also provides an update to the City's Local Hazard Mitigation Plan (LHMP).[9] The MJHMP consists of two volumes. Volume 1 includes all federally required elements of a disaster mitigation plan as they apply to the entirety of Sonoma County. Volume 2 is made up of Annexes (chapters) for each local agency and special district participating in the MJHMP. The City of Santa Rosa Annex, which serves as a five-year update to the LHMP is found in Volume 2, Chapter 3. The LHMP identifies the natural hazards faced by the city, assesses vulnerabilities to these hazards, and identifies mitigation strategies that can be taken to reduce or alleviate the loss of life, personal injury, and property damage that otherwise might result from said natural hazards. Mitigation actions are suggested and carried out by various City departments.

[9] City of Santa Rosa, 2021, *Local Hazard Mitigation Plan*, https://www.srcity.org/540/Local-Hazard-Mitigation-Plan, accessed March 9, 2023.

Santa Rosa Fire Department

The Santa Rosa Fire Department (SRFD) is responsible for the registration, installation, operation, and abandonment of underground storage tanks (USTs) in the city. In addition, they maintain responsibility for enforcement of the CFC (with local amendments) and emergency abatement regulations in the SRCC.

4.9.1.2 EXISTING CONDITIONS

Hazardous Materials Sites

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. The California Environmental Quality Act (CEQA) Section 21092.6 requires the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- USEPA National Priorities List. The USEPA's National Priorities List includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risks to human health and the environment.
- USEPA CERCLIS and Archived Sites. The USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review of archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned status.
- USEPA RCRIS (RCRA Info). The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- DTSC Cortese List. The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database.
- DTSC HazNet. DTSC uses this database to track hazardous waste shipments.
- SWRCB LUSTIS. Through the Leaking Underground Storage Tank Information System (LUSTIS), the SWRCB maintains an inventory of USTs and LUSTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the "Cortese List," named after the authoring legislator. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on internet websites hosted by the boards or departments referenced in the statute, including DTSC's online EnviroStor database and the SWRCB's online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency's jurisdiction. A search of the databases on March 8, 2023, identified 596 sites in the EIR Study

Area: 11 from EnviroStor, 580 from Geotracker, and 5 duplicated in both. Of the 596 sites, 103 are designated as active and the remaining 493 sites are designated as "closed" or "completed – case closed," indicating that they have been investigated and/or remediated to the satisfaction of the lead responsible agency (i.e., RWQCB, DTSC, Sonoma County Department of Health Services) based on land use at the time of closure. The 103 active hazardous materials sites are listed in Table 4.9-1, *Active Hazardous Materials Sites.* The majority of the active sites are classified undergoing site assessment.

Schools

Because sensitive population groups include children, CEQA requires an evaluation of hazardous emissions or handling hazardous materials, substances, or waste within 0.25 miles (1,320 feet) of an existing or proposed private or public school. As discussed in detail in Chapter 4.14, *Public Services, Parks, and Recreation*, of this Draft EIR, Santa Rosa is served by 8 public school districts, 1 community college, and 27 private schools in the EIR Study Area. There are currently no known proposals for new schools in the EIR Study Area.

Airport Hazards

The Charles M. Schulz Sonoma County Airport is 2.7 miles northwest of Santa Rosa in the unincorporated County of Sonoma, approximately 1 mile from the Santa Rosa North SMART station. The Airport Influence Area (AIA) of the Charles M. Schulz Sonoma County Airport is adjacent to, but outside of, the EIR Study Area.[10]

Emergency Response and Evacuation Planning Areas

As described in Section 4.9.1.1, *Regulatory Framework*, the EIR Study Area is in the planning area of the Sonoma County Emergency Operations Plan and the MJHMP. The City has developed designated evacuation zones for the entire community.[11] Approximately 30 zones have been identified and are used for large-scale emergencies that require mass evacuations. The Santa Rosa Police Department (SRPD) manages evacuations in the city and developed evacuations zones working with the SRFD, Emergency Management, and Traffic Engineering staff to develop a plan for Santa Rosa. Law enforcement agencies will typically be responsible for enforcing an evacuation order and a number of tools to alert the community will be used, these include SoCoAlert, WEA, CivicReady, and Hi/Lo Sirens. Evacuation routes are determined by public safety officials at the time of the emergency based on current and anticipated conditions as well as the nature of the threat or hazard.[12]

[10] Sonoma County, 2001, *Comprehensive Airport Land Use Plan: Sonoma County Airport Referral Area*, https://permitsonoma.org/longrangeplans/adoptedlong-rangeplans/airportlanduseplan/chapter8/sonomacountyairport, accessed March 8, 2023.

[11] City of Santa Rosa, Evacuation Zone Look-Up Tool for the City of Santa Rosa, https://www.srcity.org/3368/Evacuation-Zones, accessed June 22, 2023.

[12] City of Santa Rosa, Frequently Asked Questions, https://www.srcity.org/3183/Frequently-Asked-Questions, accessed June 22, 2023.

TABLE 4.9-1 ACTIVE HAZARDOUS MATERIALS SITES

SITE NAME	ADDRESS	SITE TYPE	STATUS
EnviroStor Sites [a]			
C&D Batteries	265 Roberts Avenue	Evaluation	Refer: RWQCB
Cogwheel Shop	4025 Sebastopol Road	Evaluation	Refer: RWQCB
Former Point St. George Fisheries	8 Sebastopol Road	Voluntary Cleanup	Refer: RWQCB
Fountain Grove Plaza Site	3975 Old Redwood Highway	State Response	Active
Golden Technology Site	3017 and 3019 Santa Rosa Avenue	State Response	Active
Hewlett-Packard Company (Valley Site)	1201 Piner Road	Corrective Action	Refer: RWQCB
McMinn Avenue	841 McMinn Avenue	Evaluation	Refer: RWQCB
Naval Auxiliary Air Station, Santa Rosa	Finley Avenue and Wright Road	Military Evaluation	Refer: RWQCB
PG&E – Santa Rosa Gas Plant	First Steet, East of B Street		Refer: RWQCB
Redwood Chemicals	2450 Stony Point Road	Evaluation	Refer: Local Agency
Santa Rosa Circuits	35 and 48 West Barham Avenue	Evaluation	Refer: RWQCB
Geotracker Sites [b]			
A. F. O'Connor Station	1333 Fourth Street	Lust Cleanup Site	Open - Remediation
Am/Pm Mini Mart	440 Hearn Avenue	Lust Cleanup Site	Open - Remediation
Beacon #489 (Former)	921 Sebastopol Road	Lust Cleanup Site	Open - Verification Monitoring
Bega Property	1470 Mendocino Avenue	Cleanup Program Site	Open - Inactive
Bennett Valley Cleaners	2753 Yulupa Avenue	Cleanup Program Site	Open - Remediation
Bepex Corporation	150 Todd Road	Cleanup Program Site	Open - Verification Monitoring
Best Cleaners	1007 College Avenue, West	Cleanup Program Site	Open - Remediation
Boomers Fabricare Center	1321 Guerneville Road	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Bp / Redwood Oil #110	760 Sebastopol Road	Lust Cleanup Site	Open - Verification Monitoring
Bradley	1143 Briggs Avenue	Cleanup Program Site	Open - Remediation - Land Use Restrictions
Bromley Property	1500 Santa Rosa Avenue	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Bsc Cleaners	800 Sebastopol Road	Cleanup Program Site	Open - Site Assessment
C & D Batteries	265 Roberts Avenue	Cleanup Program Site	Open - Inactive
Chevron #9-2642 / Redwood Oil	1100 Bennett Valley Road	Lust Cleanup Site	Open - Remediation
Chevron, Herron's	4180 Montgomery Drive	Lust Cleanup Site	Open - Assessment & Interim Remedial Action

TABLE 4.9-1 ACTIVE HAZARDOUS MATERIALS SITES

SITE NAME	ADDRESS	SITE TYPE	STATUS
Chevron, Herron's	4180 Montgomery Drive	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Cloudburst Car Wash	1322 Fourth Street	Lust Cleanup Site	Open - Remediation
Coddingtown Former Dry Cleaner	733 Coddingtown Mall Drive	Cleanup Program Site	Open - Remediation
Crown Cleaners	1975 Mendocino Avenue	Cleanup Program Site	Open - Site Assessment
D&J Cleaners (Former)	400 Todd Road, East	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Dalley Property	175 Scenic Avenue	Cleanup Program Site	Open - Site Assessment
Downey	109 Chestnut	Cleanup Program Site	Open - Site Assessment
Downey Property	121 Chestnut Street	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Empire Cleaners	526 Sonoma Avenue	Cleanup Program Site	Open - Site Assessment
Exxon #7-3035	4501 Sonoma Highway	Lust Cleanup Site	Open - Verification Monitoring
Fast & Easy Mart	5321 Old Redwood Hwy	Lust Cleanup Site	Open - Verification Monitoring
Fouche Auto Wreckers	2290 Dutton Avenue	Cleanup Program Site	Open - Remediation
Gartin Cleaners	2320 Midway Drive	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Golden Technology	3017 Santa Rosa Avenue	Cleanup Program Site	Open - Verification Monitoring
Hewlett Packard Valley Site	1201 Piner Road	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Hirsch, Phil - Slic Site	230 South A Street	Cleanup Program Site	Open - Site Assessment
Industrial Machine & Engine Rp	928 Dutton Avenue, North	Cleanup Program Site	Open - Inactive
Jdsu/Ocli (Former)	2789 Northpoint Parkway	Cleanup Program Site	Open - Verification Monitoring
Jean's Shell	3785 Santa Rosa Ave	Lust Cleanup Site	Open - Assessment & Interim Remedial Action
Jemco (Former)	365 Todd Rd	Lust Cleanup Site	Open - Verification Monitoring
Lakeside Cleaners	4211 Montgomery Drive	Cleanup Program Site	Open - Remediation
Malm Fireplaces, Inc.	368 Yolanda Avenue	Cleanup Program Site	Open - Remediation
McGowen Auto Wrecking (Former)	112 Holbrook	Cleanup Program Site	Open - Inactive
McMinn Avenue Area	Sebastopol Road / Roseland Area	Cleanup Program Site	Open - Inactive
McPhail's	975 Wright Street	Lust Cleanup Site	Open - Eligible for Closure
McPhail's	975 Wright Street	Cleanup Program Site	Open - Remediation

TABLE 4.9-1 ACTIVE HAZARDOUS MATERIALS SITES

SITE NAME	ADDRESS	SITE TYPE	STATUS
Pegg Oil Company	21 Frances Street	Cleanup Program Site	Open - Inactive
Peter Pan Cleaners	2231 Mendocino Avenue	Cleanup Program Site	Open - Site Assessment
PG&E Santa Rosa Manufactured Gas Plant (Former)	111 Santa Rosa Avenue	Lust Cleanup Site	Open - Verification Monitoring
PG&E Santa Rosa Manufactured Gas Plant (Former)	111 Santa Rosa Avenue	Cleanup Program Site	Open - Verification Monitoring - Land Use Restrictions
PG&E Substation B (Former)	10 E Street	Cleanup Program Site	Open - Site Assessment
Private Residence	Private Residence	Lust Cleanup Site	Open - Eligible for Closure
Private Residence	Private Residence	Cleanup Program Site	Open - Site Assessment
Redwood Oil #114	1855 Guerneville Road	Lust Cleanup Site	Open - Verification Monitoring
Redwood Oil #141 (Bulk Plant)	455 Yolanda Avenue	Lust Cleanup Site	Open - Verification Monitoring
Redwood Oil & Chevron Bulk Plant #206308	258 Roseland Avenue	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Revard Cleaners	2410 Montgomery Drive	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Roseland Cleaners	761 Sebastopol Road	Cleanup Program Site	Open - Remediation
Round Barn Project	Round Barn Boulevard	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Santa Rosa Air Center	3842 Finley Avenue	Cleanup Program Site	Open - Site Assessment
Santa Rosa Air Center	3842 Finley Avenue	Lust Cleanup Site	Open - Site Assessment
Santa Rosa City Pump Station #6	5204 Montgomery Drive	Lust Cleanup Site	Open - Site Assessment
Santa Rosa City, Freeway Well #3	Ridgway & Cleveland	Cleanup Program Site	Open - Site Assessment
Santa Rosa Cleaners	1415 Fulton Road	Cleanup Program Site	Open - Site Assessment
Santa Rosa Memorial Hospital	1160 Montgomery Drive	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Santa Rosa Naas (General File)	3842 Finley Avenue	Military Cleanup Site	Open - Assessment & Interim Remedial Action
Santa Rosa Naval Auxiliary Air Station - AOC 1 - Former Operations Control Tower/Building 5	3842 Finley Avenue	Military Cleanup Site	Open - Inactive
Santa Rosa Naval Auxiliary Air Station - AOC 5 - Kodiak Hanger/Building 5	3842 Finley Avenue	Military Cleanup Site	Open - Inactive
Santa Rosa Naval Auxiliary Air Station - AOC 6 - Former Incinerator/Building 27	3842 Finley Avenue	Military Cleanup Site	Open - Inactive

TABLE 4.9-1 ACTIVE HAZARDOUS MATERIALS SITES

SITE NAME	ADDRESS	SITE TYPE	STATUS
Santa Rosa Naval Auxiliary Air Station – AOC 10 - Former Firing Range	3842 Finley Avenue	Military Cleanup Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station – AOC 15 - Former Fuel Farm	3842 Finley Avenue	Military Cleanup Site	Open - Inactive
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 1	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 26	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 28	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 38	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 9-1	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 9-2	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - SRNAAS Tank 9-3	Finley Avenue	Military UST Site	Open - Site Assessment
Santa Rosa Naval Auxiliary Air Station - Us Santa Rosa Federal Center (Fuds) (FEMA Area)		Military Cleanup Site	Open - Inactive
Santa Rosa Old Town Sewer Replacement	College Avenue Condu	Cleanup Program Site	Open - Inactive
Santa Rosa U-Haul Center	3601 Santa Rosa Ave	Lust Cleanup Site	Open - Eligible for Closure
SCWA - Hewett And North Dutton Avenue	Hewett Street/North Dutton Avenue	Cleanup Program Site	Open - Inactive
Shell	2005 Guerneville Road	Lust Cleanup Site	Open - Verification Monitoring
Shell Service Station - Dutton Avenue	255 Dutton Avenue	Lust Cleanup Site	Open - Verification Monitoring
Shell, Dz Products Facility	257 Dutton Avenue	Cleanup Program Site	Open - Site Assessment
Simoncini'S Automotive	1244 Central Avenue	Cleanup Program Site	Open - Inactive
Sonoma County Administration Complex	2688 Ventura Avenue	Cleanup Program Site	Open - Site Assessment
Sonoma French Dry Cleaners	946 College Avenue, West	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Srdpw College Avenue	College Avenue	Cleanup Program Site	Open - Inactive
Srdpw Garage No 9	97 D Street	Lust Cleanup Site	Open - Assessment & Interim Remedial Action
Standard Oil Bulk Facility	205 Chestnut Street	Cleanup Program Site	Open - Site Assessment

TABLE 4.9-1 ACTIVE HAZARDOUS MATERIALS SITES

SITE NAME	ADDRESS	SITE TYPE	STATUS
Stevenson Equipment	3975 Redwood Highway, Old	Cleanup Program Site	Open - Verification Monitoring
Texaco	1101 Yulupa Avenue	Lust Cleanup Site	Open - Verification Monitoring
Texaco Farmers Lane	1400 Farmers Lane	Lust Cleanup Site	Open - Remediation
The Bird	1150 Santa Rosa Avenue	Lust Cleanup Site	Open - Site Assessment
Thompson Cleaners	4040 Montgomery Drive	Cleanup Program Site	Open - Remediation
U Save Cleaners	600 Lewis Road	Cleanup Program Site	Open - Site Assessment
Union Pacific Railroad Company - Frances St	99 Frances Street	Cleanup Program Site	Open - Remediation
Unocal #3312	1311 Fourth Street	Lust Cleanup Site	Open - Remediation
Von Tillow Burbank Cleaners	1730 Fourth Street	Lust Cleanup Site	Open - Assessment & Interim Remedial Action
Westside Engine & Machine	12 3Rd St West (Aka 211 Roberts Avenue)	Lust Cleanup Site	Open - Site Assessment
Westside Plaza Dry Cleaners	320 W 3Rd St, Suite H	Cleanup Program Site	Open - Site Assessment
Zedrick, Dave	164 Calistoga Road	Cleanup Program Site	Open - Inactive

Note: Some sites are duplicated under EnviroStor and GeoTracker sites.
a: Department of Toxic Substances Control, 2023, EnviroStor, https://www.envirostor.dtsc.ca.gov/public/, accessed March 8, 2023.
b: State Water Resources Control Board, 2023, GeoTracker, https://geotracker.waterboards.ca.gov/, accessed March 8, 2023.

4.9.2 STANDARDS OF SIGNIFICANCE

Impacts related to wildland fires are fully discussed in Chapter 4.18, *Wildfire*, of this Draft EIR. Therefore, the following standard is not discussed in this chapter:

- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Implementation of the proposed project would result in a significant impact related to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. In combination with past, present, and reasonably foreseeable projects, result in cumulative hazards and hazardous materials impacts in the area.

4.9.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

HAZ-1 Implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Implementation of the proposed project would result in potential new development in the EIR Study Area. Hazardous materials would be routinely used, transported, and handled throughout the city.

Residential land uses could use common cleaning products, building maintenance products, paints and solvents, fertilizers and pesticides used in landscaping and yard care, along with other similar items. In general, these potentially hazardous materials would not be of the type to occur in sufficient quantities to pose a significant hazard to public health and safety or to the environment.

Companies in the Industrial or Commercial land use designations of the proposed General Plan 2050 could use, store, or generate hazardous materials for research, manufacturing, cleaning, or other commercial uses, and the proposed project would include agricultural uses in the EIR Study Area that may also use or transport hazardous materials such as pesticides. These commercial, industrial, and agricultural activities are subject to a variety of federal, state, and local laws, policies, and regulations, as described in Section 4.9.1.1, *Regulatory Framework*. All hazardous materials to be transported must remain in compliance with USDOT regulations. Potential future development in the EIR Study Area would be subject to regulatory programs such as those overseen by RWQCB and DTSC. Nonresidential development that would require the use of hazardous materials regulated by federal, state, regional, and local agencies would issue permits for the use of the hazardous materials, which would be monitored and routinely updated by the responsible agency depending on the type of material. These agencies also require applicants for development of potentially contaminated properties to perform investigation and cleanup if the site is found to be contaminated with hazardous substances. In addition, the Sonoma County Fire and Emergency Services Department Hazardous Materials Division has responsibility in Santa Rosa for the implementation and enforcement of hazardous material regulations as a CUPA. The Hazardous Materials Division also keeps track of aboveground petroleum storage tanks, underground storage tanks, and hazardous waste generators within county jurisdictional boundaries.[13]

Potential future development that would introduce hazardous materials to a site, or that would generate hazardous waste, would be regulated pursuant to federal, state, regional, and local laws. Compliance with these regulations would minimize the potential for a significant adverse effect on the environment due to the routine use, transport, and disposal of hazardous materials. In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider the impacts of hazards and hazardous materials. The following goal, policies, and actions would serve to further minimize exposure to hazardous materials from routine transport, use, or disposal in the EIR Study Area and ensure that new development would not create a significant hazard to the public or environment through routine transport, use, or handling of hazardous materials:

[13] Sonoma County Fire and Emergency Services Department, Services, 2023, https://permitsonoma.org/divisions/firepreventionandhazmat/servicesandfees/hazardousmaterialsunitandcupaprogram/services, accessed June 23, 2023.

- Goal 5-4: Protect all community members and businesses from hazardous materials exposures and releases.
  - Policy 5-4.1: Reduce the potential for hazardous materials exposure to community members, visitors, and employees.
    - Action 5-4.2: Continue to require that hazardous materials used in business and industry be used, handled, transported, and stored in accordance with federal, State, and local regulations.
    - Action 5-4.3: Continue to restrict future siting of businesses—including hazardous waste repositories, incinerators, or other hazardous waste disposal facilities—that use, store, process, or dispose of large quantities of hazardous materials or wastes in areas subject to seismic fault rupture or significant ground shaking.
  - Policy 5-4.3: Ensure adequate capacity and safeguards on routes used to transport hazardous materials to prevent or minimize impacts from accidental release.
    - Action 5-4.8: Where applicable, ensure regional and local routes for transportation of hazardous materials and waste are adequately marked and unsafe conditions are adequately addressed, where feasible.

As part of the City's project approval process, potential future development and redevelopment would be required to comply with existing federal, state, regional, and local regulations, including the proposed General Plan 2050 goal, policies, and actions that have been prepared to minimize impacts related to hazardous materials. Compliance with these regulations would minimize the risk of an adverse effect on the environment; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-2 Implementation of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The proposed project would facilitate potential future development in the EIR Study Area. Some of the potential new development could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action, as indicated in Table 4.9.1, *Active Hazardous Materials Sites.* Construction of new buildings and improvements could have the potential to release potentially hazardous soil-based materials into the environment during site grading and excavation operations. Likewise, demolition of existing structures could potentially result in the release of hazardous building materials (e.g., asbestos, lead paint, etc.) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the proposed uses.

As described in impact discussion HAZ-1, companies in the Industrial or Commercial land use designation of the proposed General Plan 2050 could use, store, or generate hazardous materials for research, manufacturing, cleaning, or other commercial uses, and agricultural uses within the EIR Study Area may also use or transport hazardous materials such as pesticides. Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider the impacts of hazards and hazardous materials. In addition to the proposed General Plan 2050 goal, policy, and action identified in impact discussion HAZ-1, the following goal, policy, and action would serve to minimize the potential for release of hazardous materials into the environment:

- Goal 5-4: Protect all community members and businesses from hazardous materials exposures and releases.
    - Policy 5-4.1: Reduce the potential for hazardous materials exposure to community members, visitors, and employees.
        - Action 5-4.1: Continue to coordinate with the North Coast Regional Water Quality Control Board on remediation, cleanup, and risk evaluation prior to changes in site use in areas where hazardous materials and petroleum products have impacted soil or groundwater.

Potential future development under the proposed project would also be required to comply with existing regulations as part of the City's project approval process, described in Section 4.9.1.1, *Regulatory Framework.* Additionally, compliance with the Stormwater Pollution Prevention Plan and best management practices required for projects at or greater than one acre in size in the EIR Study Area (see Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR for additional details), as well as the proposed General Plan 2050 goals, policies, and actions identified above, would ensure potential future development under the proposed General Plan 2050 would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-3 Implementation of the proposed project would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

As discussed in Section 4.9.1.2, *Existing Conditions*, there are public schools and private schools dispersed throughout the EIR Study Area. Accordingly, it is possible that implementation of the proposed project could result in potential future development that would involve hazardous materials, either through construction or operation of new development, within 0.25 miles of an existing or proposed school. As described in impact discussions HAZ-1 and HAZ-2, while some potential future development under the proposed project could be reasonably expected to handle hazardous materials or generate hazardous emissions, the storage, use, and handling of these materials would be subject to existing federal, State, and local regulations. Potential future development would be required to comply with existing regulations as described in Section 4.9.1.1, *Regulatory Framework*, as well as the proposed General Plan 2050 goals, policies, and actions that have been prepared to minimize impacts as a result of hazardous materials, as

outlined in impact discussions HAZ-1 and HAZ-2. Specifically, proposed Policy 5-4.1 requires the City to reduce the potential for hazardous materials exposure to community members, visitors, and employees. These regulations would ensure requirements regarding use or transport of hazardous materials are met prior to construction, which includes buffer zones between schools and hazardous materials sites. Therefore, impacts would be *less than significant*.

For an additional discussion about toxic air contamination emissions during construction and operation, please see impact discussion AIR-3 in Chapter 4.3*, Air Quality*, of this Draft EIR. Impacts were found to be less than significant with implementation of proposed General Plan 2050 *Action 6-1.5 and *Action 6-1.6, which require operational health risk assessments and construction health risk assessments, respectively.

Significance without Mitigation: Less than significant.

HAZ-4 Implementation of the proposed project would not be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

As discussed in Section 4.9.1.2, *Existing Conditions*, a total of 596 hazardous materials sites are listed on databases complied pursuant to Government Code Section 65962.5. Of the 596 sites, 103 are designated as active and the remaining 493 sites are designated as "closed" or "completed – case closed," indicating that they have been investigated and/or remediated to the satisfaction of the lead responsible agency (i.e., RWQCB, DTSC, Sonoma County Department of Health Services) based on land use at the time of closure.

Potential new development and redevelopment would occur over the buildout horizon within the EIR Study Area. Some potential future development could occur on properties that are included in the databases listed in Table 4.9-1, *Active Hazardous Material Sites*. As discussed in impact discussions HAZ-1 through HAZ-3, construction on a site listed in the database could result in the release of potentially hazardous soil-based materials into the environment during site grading and excavation operations. Further, demolition of existing structures could potentially result in the release of hazardous building materials (e.g., asbestos, lead-based paint) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of future development.

As described in impact discussions HAZ-1 through HAZ-3, potential future development under the proposed project would be required to comply with all federal, State, regional, and local regulations regarding the safe handling, transport, disposal, and use of hazardous materials. Further, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that would require land planning and development decisions to consider the impacts of hazards and hazardous materials. In addition to the goals, policies, and actions listed in impact discussion HAZ-2, the following goal, policy, and actions would serve to reduce the impacts that potential future development on sites with known hazardous materials could have on the environment and the public:

- Goal 5-4: Protect all community members and businesses from hazardous materials exposures and releases.
  - Policy 5-4.2: Minimize risks to human health from hazardous materials.
    - Action 5-4.5: Inventory brownfield sites and identify necessary measures to remediate hazards.
    - Action 5-4.6: Work with landowners and support funding identification and cleanup of identified brownfield sites, particularly in Equity Priority Areas.
    - Action 5-4.7: Seek funding and technical assistance to facilitate brownfield redevelopment, including federal tax incentives for brownfield sites, Department of Toxic Substances Control (DTSC) Revolving Loan Fund Program, Cleanup Loans and Environmental Assistance to Neighborhoods Loan Program, Brownfields Tax Incentives, and the U.S. Environmental Protection Agency brownfields grant and loan programs.

However, because hazardous materials sites exist in the EIR Study Area, as indicated in Table 4.9-1, it is possible that future development could occur on a designated hazardous materials site, which could result in the direct contact, inhalation, or ingestion of hazardous materials that could potentially cause adverse health impacts to construction workers, future site inhabitants, and nearby sensitive receptors. The preparation of project-specific management plans and studies would require mitigation that would protect construction workers, future site inhabitants, and nearby sensitive receptors.

The severity of health effects would depend on the contaminant(s), concentration, use of personal protective equipment during construction, and duration of exposure. Site-specific Environmental Site Management Plans (ESMP) for locations with known contamination would summarize soil and groundwater analytical data collected on the project site during past investigations; identify management options for excavated soil and groundwater, if contaminated media are encountered during deep excavations; and identify monitoring, irrigation, or other wells requiring proper abandonment in compliance with local, State, and federal laws, policies, and regulations. The ESMP would include measures for identifying, testing, and managing soil and groundwater suspected of or known to contain hazardous materials. The ESMP would:

- Provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively;
- Describe required worker health and safety provisions for all workers potentially exposed to hazardous materials, in accordance with State and federal worker safety regulations; and
- Designate personnel responsible for implementation of the ESMP.

For sites with potential residual contamination in soil or groundwater that are planned for redevelopment with an overlying occupied building, a soil vapor intrusion assessment would indicate the potential for significant vapor intrusion into an occupied building, project design shall include vapor controls or source removal, as appropriate, in accordance with regulatory agency requirements. Soil vapor mitigations or controls could include vapor barriers, passive venting, and/or active venting.

Proposed General Plan 2050 Action 5-4.1 requires the City to continue to require remediation, cleanup, and risk evaluation prior to changes in site use in areas where hazardous materials and petroleum products have impacted soil or groundwater. The implementation of this action would result in site-specific mitigation as required, including preparing ESMPs and soil vapor intrusion assessments. Compliance with applicable federal, State, and local laws and regulations regarding cleanup and reuse of a listed hazardous materials site, as well as proposed General Plan 2050 goals, policies, and actions listed above, would ensure potential future development under the proposed project would not create a significant hazard to the public or the environment; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-5	**Implementation of the proposed project would not, for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.**

As discussed in Section 4.9.1.2, *Existing Conditions*, the Charles M. Schulz Sonoma County Airport AIA is located northwest of, but greater than two miles outside of, the EIR Study Area. Therefore, implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area and there would be *no impact*.

Significance without Mitigation: No impact.

HAZ-6	**Implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

As discussed in Section 4.9.1.2, *Existing Conditions*, the SRPD manages the evacuations in the City of Santa Rosa and has developed evacuation zones working with the SRFD, Emergency Management, and Traffic Engineering staff. Through the SRPD, approximately 30 evacuation zones have been created to be used in large-scale emergencies.

Compliance with applicable federal, State, and local laws and regulations regarding emergency response or emergency evacuation as described in Section 4.9.1.1, *Regulatory Framework*, would ensure potential future development under the proposed project would not interfere with an adopted emergency response plan, or emergency evacuation plan. In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider the impacts of hazards and hazardous materials. The following goal, policies, and actions would serve to minimize conflict with emergency response and evacuation plans:

- Goal 5-5: Ensure that Santa Rosa is prepared for future emergencies.
  - Policy 5-5.1: Encourage City staff and community members to be prepared for and capable of responding to emergency events.
    - Action 5-5.1: Maintain and periodically update the City's Emergency Operations Plan.
    - Action 5-5.2: Coordinate with staff of the Sonoma County Operational Area (which consists of the cities, special districts, and unincorporated areas of the county) to update joint emergency response and disaster response plans, as needed.
    - Action 5-5.3: Promote public awareness of the natural hazards and potential effects of disasters in the Planning Area through community and volunteer organizations.
  - Policy 5-5.2: Ensure all community members and businesses are informed and empowered to address hazard vulnerabilities, including Equity Priority Populations.
    - Action 5-5.4: Provide multilingual and culturally appropriate educational materials to increase awareness of hazard risks/vulnerabilities and strategies that community members and businesses can employ to mitigate risks/vulnerabilities.
    - Action 5-5.5: Incorporate strategies from the Community Wildfire Protection Plan, Local Hazard Mitigation Plan, and other resilience-building plans into outreach and educational information.
  - Policy 5-5.3: Promote emergency response and preparedness training for City staff, community members, and businesses to increase community resilience.
    - Action 5-5.6: Participate in emergency response exercises in the Operational Area that involve key hazards of concern for the city.
  - Policy 5-5.4: Prioritize projects and strategies that mitigate hazards and increase community resilience.
    - Action 5-5.7: Update the Local Hazard Mitigation Plan per State and federal requirements and implement action items as feasible.
  - Policy 5-5.5: Ensure that coordination between the City and Operational Area continuously improves to meet the changing risks of the community.
    - Action 5-5.11: Continue to implement mutual aid, automatic aid, and California's Mutual Master Aid System to provide effective emergency response.
    - Action 5-5.12: Maintain effective mutual-aid agreements with neighboring cities and Sonoma County to support emergency management.
    - Action 5-5.13: Continue to execute mutual-aid agreements with public and private entities to support community emergency management.
  - Policy 5-5.6: Prioritize investments that expand and enhance evacuation capacity and capabilities.
    - Action 5-5.14: Require all new development projects to provide adequate access for fire and emergency response personnel.

- Action 5-5.15: Prohibit the creation of new single ingress/egress roadway conditions in the city.
- Action 5-5.16: Retrofit existing single-access residential neighborhoods to include additional access routes or other provisions to increase evacuation safety.
- Action 5-5.17: Analyze the capacity, viability, and safety of evacuation routes for hazard areas in the city (e.g., WUIFA) and incorporate the results into the City's Emergency Operations Plan.

Compliance with applicable federal, State, and local laws and regulations regarding emergency response or emergency evacuation, as described in Section 4.9.1.1, *Regulatory Framework*, and proposed General Plan 2050 goals, policies, and actions listed would ensure potential future development under the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-7 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to hazards and hazardous materials.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, this cumulative analysis takes into account potential future development under the proposed project, in combination with impacts from projected growth in Sonoma County. As discussed previously, potential future development under the proposed project would not result in significant impacts from the increased use of hazardous household materials. The proposed project would not interfere with implementation of emergency response plans. In addition, potential project-level impacts associated with hazards and hazardous materials would be further reduced through compliance with proposed General Plan 2050 goals, policies, and actions, and other local, regional, State, and federal regulations. Since impacts associated with hazardous materials, are, by their nature, focused on specific sites or areas, the less-than-significant impacts in the EIR Study Area from the proposed project would not contribute to a cumulative increase in hazards in the immediate vicinity of the EIR Study Area or throughout the region. Therefore, the potential for cumulative impacts associated with hazards and hazardous materials would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.10 HYDROLOGY AND WATER QUALITY

This chapter of the Draft Environmental Impact Report (EIR) describes the potential hydrology and water quality impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential hydrology and water quality impacts, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

The United States Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management and the Clean Water Act (CWA) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the USEPA authority to implement pollution control programs. In California, the authority is delegated to the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs).

The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA also provides loans for the construction of wastewater treatment plants as well as nonpoint source pollution control and estuary protection projects through the Clean Water State Revolving Fund.

Permits to dredge or fill waters of the United States are administered by the United States Army Corps of Engineers (USACE) under Section 404 of the CWA. “Waters of the United States” are defined as territorial seas and traditional navigable waters, perennial and intermittent tributaries to those waters, lakes and ponds and impoundments of jurisdictional waters, and wetlands that have a surface connection with and are adjacent to jurisdictional waters. The regulatory branch of the USACE is responsible for implementing and enforcing Section 404 of the CWA and issuing permits. Any activity that discharges fill material and/or requires excavation in waters of the United States must obtain a Section 404 permit. Before issuing the permit, the USACE requires that an analysis be conducted to demonstrate that the proposed project is the least environmentally damaging alternative. Also, the USACE is required to comply with the National Environmental Policy Act before it may issue an individual Section 404 permit.

Under Section 401 of the CWA, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with USACE Section 404 permits for dredge and fill discharges. In addition, an application for Individual Water Quality Certification and/or Waste Discharge Requirements must be submitted for any activity that would result in the placement of dredged or fill material in waters of the State that are not jurisdictional to the USACE, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California. The authority to either grant water quality certification or waive the requirement is delegated to the North Coast RWQCB (Region 1).

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as "impaired." Once a water body has been designated as impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4s). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Under the NPDES program, all facilities that discharge pollutants into waters of the U.S. are required to obtain an NPDES permit.

Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The City of Santa Rosa lies within the jurisdiction of the North Coast RWQCB (Region 1) and is subject to the waste discharge requirements of the Phase I MS4 Permit (Order No. R1-2014-0030; NPDES No. CA0025054) that regulates stormwater discharges from the City of Santa Rosa; portions of unincorporated Sonoma County; Sonoma

County Water Agency; the cities of Cotati, Cloverdale, Healdsburg, Rohnert Park, Sebastopol, and Ukiah; and the town of Windsor.

Under Provision Section D of the MS4 permit (Planning and Land Development), the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low-impact development (LID) techniques. In addition, each co-permittee must develop a Hydromodification Control Plan that requires all new development or redevelopment projects that create or replace one acre or more of impervious surfaces to implement stormwater control measures such that post-development runoff volumes remain the same or lower than pre-development volumes.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year. According to FEMA maps, there are several portions of the EIR Study Area within a 100-year floodplain.

As required by the FEMA regulations, all development constructed within the 100-year floodplain (as delineated on the Flood Insurance Rate Map) must be elevated so that the lowest floor is at or above the base flood elevation level. Local cities and counties have the authority to require the lowest floor to be at a higher elevation than the FEMA requirements to account for climate change and sea level rise. The term "development" is defined by FEMA as any human-made change to improved or unimproved real estate, including, but not limited to, buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development and must demonstrate that the development does not cause any rise in base flood elevation levels. Following completion of any development that changes existing 100-year floodplain boundaries, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a Flood Insurance Rate Map revision, as soon as practicable, but not later than six months after such data become available.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act provides the basic authority for the United States Fish and Wildlife Service (USFWS) to evaluate impacts to fish and wildlife from proposed water resource development projects. This act requires that all federal agencies consult with the USFWS, the National Marine Fisheries Service, and state wildlife agencies (i.e., the California Department of Fish and Wildlife [CDFW]) for activities that affect, control, or modify waters of any stream or bodies of water. Under this act, the

USFWS has responsibility for reviewing and commenting on all water resources projects. For example, the USFWS would provide consultation to the USACE regarding issuance of a Section 404 permit.

If a project may result in the "incidental take" of a listed species, an incidental take permit is required. An incidental take permit allows a developer to proceed with an activity that is legal in all other respects but that results in the "incidental taking" of a listed species. A Habitat Conservation Plan must also accompany an application for an incidental take permit. The purpose of a Habitat Conservation Plan is to ensure that the effects of the permitted action or listed species are adequately minimized and mitigated.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.) is the basic water quality control law for California. This act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The SWRCB is the primary state agency responsible for the protection of California's water quality and groundwater supplies. The RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. As described previously, Santa Rosa is within the jurisdiction of the North Coast RWQCB (Region 1).

The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce Waste Discharge Requirements, NPDES permits, Section 401 water quality certifications, or other approvals. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services for drinking water regulations, the CDFW, and the Office of Environmental Health and Hazard Assessment.

State Water Resources Control Board

In California, the SWRCB has broad authority over water quality control issues. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA. It also regulates public drinking water systems, NPDES wastewater discharges, water quality monitoring, water recycling programs, landfill disposal, water rights, and implements drought restrictions.

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. Regional boundaries are based on watersheds, and water quality requirements are based on the unique differences in climate, topography, geology, and hydrology for each watershed. Each RWQCB makes water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with these requirements, and taking appropriate enforcement actions. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The City of Santa Rosa is within the jurisdiction of the North Coast RWQCB (Region 1), which regulates surface water and groundwater quality in the watershed that

encompasses the counties of Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity.

SWRCB Construction General Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the newly reissued SWRCB Construction General Permit (Order WQ 2022-0057-DWQ; NPDES No. CAS000002), which was adopted on September 8, 2022, and becomes effective on September 1, 2023. Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMP) and prepare a SWPPP containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a weekly visual monitoring program, a sampling program to ensure compliance with water quality standards, and on-site collection of samples and inspection of BMPs prior to, during, and after qualifying precipitation events. Water quality monitoring has a schedule based on the risk level of the site.

SWRCB Industrial General Permit

The Statewide General Permit for Stormwater Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ and amended by 2015-0122-DWQ (2018), implements the federally required stormwater regulations in California for stormwater associated with industrial activities that discharge to waters of the United States. This regulation covers facilities that are required by federal regulations or by the RWQCBs to obtain an NPDES permit. Dischargers are required to eliminate non-stormwater discharges, develop SWPPPs that include BMPs, conduct monitoring of stormwater runoff, and submit all compliance documents via the SWRCB's SMARTS program.

SWRCB Trash Amendments

On April 7, 2015, the SWRCB adopted an amendment to *The Water Quality Control Plan for Ocean Waters of California* to control trash. In addition, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California added Part 1, *Trash Provisions*. Together, they are collectively referred to as "the Trash Amendments." The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-generation rates. Areas such as high density residential, industrial, commercial, mixed urban, and public transportation stations are considered priority land uses. There are two compliance tracks for Phase I and Phase II MS4 permittees:

- Track 1: Permittees must install, operate, and maintain a network of certified full capture systems in storm drains that capture runoff from priority land uses.
- Track 2: Permittees must implement a plan with a combination of full capture systems, multi-benefit projects, institutional controls, and/or other treatment methods that have the same effectiveness as Track 1 methods.

The Trash Amendments provide a framework for permittees to implement their provisions. Full compliance must occur within 10 years of the permit, and permittees must also meet interim milestones such as average load reductions of 10 percent per year. The Trash Amendments require municipalities to install certified trash control systems, such as filters, on all catch basins no later than December 2, 2030.[1]

California Department of Fish and Wildlife

The CDFW protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Sections 1600 to 1616 of the California Fish and Game Code. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a streambed alteration agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation.

Sustainable Groundwater Management Act of 2014

In the midst of a major drought in 2014, a three-bill legislative package consisting of Assembly Bill (AB) 1739, Senate Bill (SB) 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA), was signed into law on September 16, 2014.[2] The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." Under SGMA, in groundwater basins that are designated as medium and high priority, local public agencies and groundwater sustainability agencies (GSA) must assess conditions in their local groundwater basins and then prepare groundwater sustainability plans (GSP).

California Water Code Section 13751: Water Wells

Section 13751 of the Water Code requires a well completion report (WCR) to be completed by each person who digs, bores, or drills a water well, cathodic protection well, groundwater monitoring well, or geothermal heat exchange well or abandons or modifies an existing well. The WCR should be filed with Department of Water Resources (DWR) within 60 days of the date that construction, alteration, abandonment, or destruction of a well is completed.[3] Completed WCRs are sent to and maintained at the DWR regional office that serves the area where the well is located.

[1] State Water Resources Quality Control Board, September 2022, Storm Water Program: Trash Implementation Program, https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html, accessed April 4, 2023.

[2] Department of Water Resources, 2022, Sustainable Groundwater Management Act (SGMA), https://water.ca.gov/programs/groundwater-management/sgma-groundwater-management, accessed April 5, 2023.

[3] California Department of Water Resources, 2023, Well Completion Reports, https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports, accessed April 5, 2023.

California Plumbing Code

The latest version of the California Plumbing Code was issued in 2022 and became effective as of January 1, 2023. The code is updated on a three-year cycle. It specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems. One of the purposes of the plumbing code is to prevent conflicting plumbing codes within local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. The City of Santa Rosa adopts the California Plumbing Code under SRCC Section 18-24.010, *Citation of California Plumbing Code*.

Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act includes the State of California's Model Water Efficient Landscape Ordinance (MWELO), which requires cities and counties to adopt landscape water conservation ordinances. The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. State law requires all land use agencies, which includes cities and counties, to adopt an ordinance that is at least as efficient as the MWELO prepared by DWR.

The 2015 revisions to the MWELO improve water savings in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water-efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf. New development projects that include landscape areas of 500 square feet or more, and rehabilitated landscape projects with an area equal to or greater than 2,500 square feet, are subject to these requirements.. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review.[4] The City of Santa Rosa adopts the MWELO Ordinance in the Santa Rosa City Code (SRCC) Title 14, Chapter 14-30, *Water Efficient Landscape*.

Regional Regulations

North Coast Basin Water Quality Control Plan

The City of Santa Rosa is within the jurisdiction of the North Coast RWQCB (Region 1). The North Coast RWQCB addresses region-wide water quality issues through the creation and triennial update of the *Water Quality Control Plan* for the North Coast Region (Basin Plan). The Basin Plan was adopted in 1975 and most recently amended in 2018. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters designated in the Basin Plan.[5] The North Coast RWQCB also administers the MS4 permit for Sonoma County and the municipalities within the county, including the City of Santa Rosa.

[4] California Code of Regulations, Title 23, Division 2, Chapter 2.7, Section 490.1, *Applicability*.

[5] North Coast Regional Water Quality Control Board, updated August 20, 2021, An Introduction to the Basin Plan, https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/#amendment, accessed April 5, 2023.

Municipal Regional Stormwater NPDES Permit

Municipal stormwater discharge in the City of Santa Rosa is subject to the Waste Discharge Requirements of the MS4 Permit (Order No. R1-2014-0030; NPDES No. CA0025054). All new development or redevelopment projects that create or replace 10,000 square feet of impervious surfaces are subject to post-construction BMP implementation. Projects that create or replace more than one acre of impervious surface are also required to comply with the hydromodification provisions of the MS4 permit, which requires capturing and retaining 100 percent of the volume of runoff generated by a 1.0-inch rainfall event over a 24-hour period.

The treatment control BMPs should be properly selected, designed, inspected, and maintained according to the permit requirements. LID methods are the primary mechanisms for implementing such controls. Santa Rosa has prepared the Low Impact Development Technical Design Manual to assist developers in properly designing and sizing BMPs for new development and redevelopment projects.[6] The City requires submittal of documentation that the proposed projects meet these requirements by submitting the *2017 Storm Water LID Determination Worksheet.*

Santa Rosa Plain Subbasin Groundwater Sustainability Plan

Most of the City of Santa Rosa is within the Santa Rosa Valley, Santa Rosa Plain Groundwater Subbasin, which has been designated as a medium-priority groundwater basin and is not in critical overdraft.[7] Medium priority groundwater subbasins are required under SGMA to form a GSA and prepare a GSP. There are two other groundwater subbasins within the EIR Study Area along the eastern edge of Santa Rosa: the Santa Rosa Valley–Rincon Valley subbasin and the Kenwood Valley subbasin. Both are designated very low priority because of a total groundwater use of less than 1,000 acre-feet per year, and they are not required to prepare GSPs.

The Santa Rosa Plain GSA consists of the Sonoma County Water Agency (Sonoma Water), which prepared the GSP; Sonoma County; the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol; the town of Windsor; Gold Ridge Resources Conservation District; Sonoma Resource Conservation District; and an organized group of mutual water and public utilities regulated companies (known as Independent Water Systems). The GSP was prepared in December 2021 and was approved by DWR in January 2023.[8] The GSP describes current and historical groundwater conditions, prepares a water budget, establishes sustainable yield criteria and a groundwater monitoring network, and develops management programs to ensure that the basin will meet its sustainability goals.[9]

[6] City of Santa Rosa, 2020. *Storm Water Low Impact Development Technical Design Manual.*

[7] Department of Water Resources, SGMA Data Viewer, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#currentconditions, accessed April 5, 2023.

[8] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed April 5, 2023.

[9] Santa Rosa Plain Groundwater Sustainability Agency and Sonoma Water, December 2021, *Groundwater Sustainability Plan: Santa Rosa Plain Groundwater Subbasin*, http://santarosaplaingroundwater.org/wp-content/uploads/000_Santa_Rosa_GSP_508.pdf, accessed April 5, 2023.

Sonoma Water

Sonoma Water, previously known as the Sonoma County Water Agency, provides water supply, wastewater management, and flood protection to Sonoma County. Sonoma Water manages and maintains a water transmission system that provides naturally filtered Russian River water that is delivered to Santa Rosa under a contractual agreement. Santa Rosa is currently entitled to receive 56.6 million gallons of water per day (for the average-day peak month demand), up to a total annual volume of 29,100 acre-feet. This amount of water makes Santa Rosa the largest consumer of water in the Sonoma Water service area. Additionally, Sonoma Water has partnered with federal agencies to help build and manage a variety of flood protection projects, including Spring Lake, Matanzas Creek Reservoir, Piner Creek Reservoir, and Brush Creek Middle Fork Reservoir.[10] Sonoma Water also manages a proactive stream maintenance program for more than 80 miles of creeks throughout its service area, including those in Santa Rosa.[11]

Sonoma Water has also recently published the Flood Management Design Manual to be used by public agencies and private entities in Sonoma County that are designing, constructing, or maintaining waterways, channels, closed conduits, or culverts. It provides the methodology and criteria for analyzing storm drain systems and facilities that are necessary to convey stormwater runoff from large storm events. It replaces the previous Sonoma County Water Agency Flood Control Design Criteria.[12] The Santa Rosa *Storm Drain Design Standards,* as described below, uses this methodology for the hydrologic and hydraulic design of storm drains within the city.

Sonoma County Multi-Jurisdictional Hazard Mitigation Plan

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *Sonoma County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021, in accordance with the federal Disaster Mitigation Act of 2000, provides an assessment of natural hazards in the County and a set of actions to reduce or alleviate the loss of life, personal injury, and property damage from these hazards. The MJHMP was reviewed and approved by FEMA in order for the County to maintain eligibility for disaster relief funding.

An annex to the MJHMP provides an assessment of hazards and vulnerabilities specific to the City of Santa Rosa. The Santa Rosa annex includes a list of past natural hazard events and mitigation measures to address future hazards. For example, one of the mitigation measures is to update the City's emergency planning documents every five years to ensure consistency with state and federal law, location conditions, best practices, and the most recent science.

[10] Sonoma Water, Flood Protection Facilities, https://www.sonomawater.org/flood-protection-facilities, accessed April 5, 2023.

[11] Sonoma Water, Stream Maintenance Program, https://www.sonomawater.org/stream-maintenance-program, accessed April 5, 2023.

[12] Sonoma Water, 2020, *Flood Management Design Manual*, https://www.sonomawater.org/media/PDF/Water%20Resources/Flood%20Protection/Flood%20Management%20Design%20Manual/FMDM_Main_Body_Mar2020_ADA%20v2.pdf, accessed August 4, 2023.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to hydrology and water quality in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to hydrology and water quality impacts are in Title 14, *Potable and Recycled Water;* Title 16, *Storm Water Enterprise;* Title 17, *Environmental Protection;* Title 18, *Buildings and Construction*; Title 19, *Subdivisions;* and Title 20, *Zoning,* as follows*:*

- Chapter 14-12, *Wells*. This chapter describes the procedures for regulating the construction, reconstruction, and destruction of existing and abandoned water wells, test holes, and excavations within the City. The Chief Health Officer determines the requirements for the issuance of water well permits. The chapter also requires that all developed parcels in zones of groundwater contamination (i.e., the Red Zone) must be connected to the City's potable water supply system.
- Chapter 14-30, *Water Efficient Landscape*. This chapter ensures efficient water use by establishing standards for landscape design appropriate to Santa Rosa's climate, soils, water resources, and land use and resource planning. The Water Efficient Landscape Policy was initially adopted by Resolution No. 21142 of the Santa Rosa City Council on December 22, 1992, in response to California's Government Code Section 65591, which requires local agencies to adopt water efficient landscape regulations. The policy was replaced by the Water Efficient Landscape Ordinance, which initially was enacted in January 2010 and most recently updated in 2016. The chapter applies to all new public and private projects with landscaping that require a conditional use permit or design review by the City or a utilities certificate. This includes office, commercial, industrial, and institutional landscaping; park and greenbelt landscaping; developer-installed landscaping in multiple-family residential; and common areas of single-family residential developments.
- Chapter 15-08, *Pretreatment*. Section 15-08.050, *Wastewater Discharge Permit Classification,* regulates discharges to the sewer system based on the classification of wastewater discharged by users and provides a basis for sewer use charges. This section requires projects that discharge groundwater from construction dewatering to the sanitary sewer system to apply to the City for a wastewater discharge permit and pay the applicable user fee.
- Title 16, *Storm Water Enterprise*. This title was added to the SRCC in 1996 to comply with the NPDES permit and to control and reduce flooding, property damage, erosion, and stormwater quality degradation. The code established a Storm Water Enterprise and Utility to prescribe and collect charges (special assessments) for the services and facilities of the enterprise, which are collected through the property tax rolls.
- Chapter 17-12, *Storm Water*. This chapter prohibits the impairment or obstruction of the natural flow of stormwaters in a channel, pipe, or storm drain system unless an encroachment permit or grading permit has been issued by the City Engineer or Chief Building Official. The chapter also addresses stormwater quality in accordance with the requirements of the NPDES permit, prohibits the discharge of non-stormwater into the City's storm drain system, and requires the reduction of pollutants in stormwater discharges by implementing BMPs and LID features for new development and redevelopment projects.

- Chapter 18-24, *California Plumbing Code*. This chapter adopts the California Plumbing Code which specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems, including requirements for water conservation systems.
- Chapter 18-42, *California Green Building Standards Code*. This chapter adopts by reference, with the additions, insertions, deletions and changes listed throughout, the California Green Building Standards Code which establishes building standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent.
- Chapter 18-52, *Flood Damage Prevention*. This chapter is in accordance with FEMA regulations and establishes flood damage prevention measures that apply to all areas of special flood hazard (i.e., 100-year floodplains) within the city. It requires that buildings and development projects that are vulnerable to floods be protected against flood damage at the time of construction by obtaining a development permit and implementing construction standards specified in the chapter.
- Chapter 19-64, *Grading and Erosion Contr*ol. This chapter provides the grading and erosion control measures that shall be implemented during the design of all subdivisions. BMPs include minimizing soil exposure during the rainy season, retaining natural vegetation as feasible, divert runoff away from steep slopes, minimize length and steepness of slopes by benching or terracing, and trap runoff laden with sediment in basins to allow settlement prior to discharge to receiving waters.
- Chapter 20-30, *Standards for All Development and Land Uses*. Section 20-30.040, *Creekside Development*, provides minimum setbacks from waterways to provide protection for owners of riparian property and the public from the hazards of stream bank failures and flooding. In general, the setback area on either side of a natural or modified waterway shall be 50 feet from the top of the highest bank for new structures.

Citywide Creek Master Plan

The Citywide Creek Master Plan (CCMP), adopted in 2007 and updated in 2013, provides guidelines for the care, management, restoration, and enhancement of the network of creeks and waterways that flow through Santa Rosa, which affect water quality.[13] This plan was prepared in conjunction with Sonoma County and Sonoma Water. The CCMP addresses the nearly 100 miles of creeks that flow through Santa Rosa. The CCMP provides goals, objectives, and policies that focus on the preservation and enhancement of local creeks, the development of trails, and recreational and educational opportunities for residents of the City. The plan also provides maps for each watershed, a description of existing conditions, and recommendations for habitat restoration and recreational access. Implementation of the CCMP will occur over several years and be periodically updated. Project funding is anticipated from grants or other funding sources that are involved in restoring fish and wildlife habitat and improving recreational opportunities and access.

[13] City of Santa Rosa, County of Sonoma, and Sonoma County Water Agency, August 2013, *Santa Rosa Citywide Creek Master Plan*, https://www.srcity.org/DocumentCenter/View/13792/Santa-Rosa-Citywide-Creek-Master-Plan-PDF, accessed April 5, 2023.

The Santa Rosa Creek Design Guidelines are provided as an appendix to the CCMP and should be used in conjunction with the CCMP when developing projects to restore and enhance waterways in Santa Rosa. Also included in the appendices are restoration concept plans for Pierson Reach, Roseland Creek, Kawana Spring (Upper Colgan Creek), and Lower Colgan Creek.

Storm Water Low Impact Development Technical Design Manual

Recently revised in 2020 and applicable for all new development in Santa Rosa, the Storm Water Low Impact Development Technical Design Manual provides technical guidance for project designs that require the implementation of permanent stormwater BMPs intended to satisfy NPDES permit requirements.[14] The intention of the Stormwater Low Impact Development Technical Design Manual is to promote LID goals of minimizing adverse impacts from stormwater runoff; minimizing the percentage of impervious surfaces on land development projects and implementing mitigation measures to mimic the pre-development water balance; minimizing pollutant loadings from impervious surfaces such as rooftops, parking lots, and roadways; and properly selecting, designing, and maintaining treatment control BMPs and hydromodification control BMPs.

Storm Drain Standards

The City of Santa Rosa has established public storm drain standards to assist developers and their engineers in the design of storm drain facilities within the City.[15] The document provides the methodology for determining stormwater runoff rates and the hydraulic design criteria to be used in sizing storm drains. In general, drainage systems must be designed to accommodate flows from storms with recurrence intervals ranging from 10 to 100 years, depending on the waterway classification to which it discharges. Open channels that will be maintained by Sonoma Water must be designed as specified in the 2020 Sonoma Water *Flood Management Design Manual*.

4.10.1.2 EXISTING CONDITIONS

Topography and Climate

The City of Santa Rosa is in the Santa Rosa Plain, an alluvial plain that gently slopes from the Mayacamas Mountains and the Valley of the Moon in the east to Laguna de Santa Rosa in the west. The eastern edge of the city borders Hood Mountain Regional Park, and elevations in this area can range up to 1,200 feet above mean sea level (msl), whereas the non-contiguous westernmost portions of the city are at elevations of about 84 feet above msl. Downtown Santa Rosa is at an elevation of about 150 feet msl.

[14] Cities of Cloverdale, Cotati, Healdsburg, Rohnert Park, Santa Rosa, Sebastopol, and Ukiah, County of Sonoma, Sonoma Water, and Town of Windsor, revised December 2020, *Storm Water Low Impact Development Technical Design Manual*, https://www.srcity.org/DocumentCenter/View/14974/2017-Storm-Water-Technical-Design-Manual-Narrative-revised-1621, accessed April 5, 2023.

[15] City of Santa Rosa, 2005, *Public Storm Drain Standards.*

Santa Rosa has a Mediterranean climate with cool, wet winters and hot, dry summers. In the summer, fog often moves in from the Pacific Ocean in the evenings and mornings, but it usually clears to warm, sunny weather by late morning or noon before returning in the late evening. The mean annual precipitation is 31 inches per year, with most of the rainfall occurring between the months of October and April.[16] The average maximum temperature of 82.8 degrees Fahrenheit occurs in August and the average minimum temperature of 36.7 degrees Fahrenheit occurs in January.[17]

Regional Hydrology

The City of Santa Rosa is within the Laguna de Santa Rosa Watershed, which drains approximately 254 square miles in Sonoma County. Major tributaries include Windsor Creek, Mark West Creek, Santa Rosa Creek, Blucher Creek, and Copeland Creek. These creeks drain into Laguna de Santa Rosa, which flows into the Russian River, which ultimately flows into the Pacific Ocean. The watershed serves as an important stopover for thousands of birds migrating along the Pacific Flyway and is home to a wide variety of animals, including more than 200 species of birds, rare and endangered salmon, steelhead, salamanders, mountain lions, bobcats, coyote, mink, badger, and river otter. The watershed is also an important agricultural, recreational, and educational resource. Laguna de Santa Rosa serves as a natural holding basin during the wet season as an overflow area for the Russian River during flood events.[18]

There are nine subwatersheds that lie within the EIR Study Area, as shown on Figure 4.10-1, *Subwatersheds*, and described in the Santa Rosa Citywide Creek Master Plan. Water typically flows from east to west across the Santa Rosa Plain and eventually discharges into Laguna de Santa Rosa. The nine watersheds are described below:

- Santa Rosa Creek Subwatershed. This subwatershed drains approximately 78.6 square miles, including agricultural land, parks and open space, and urban land uses. Santa Rosa Creek originates on the northwestern slope of Hood Mountain and flows westward through the urban area of Santa Rosa and then agricultural land before flowing into Laguna de Santa Rosa north of Sebastopol. Tributaries of Santa Rosa Creek include Skyhawk Creek and College Creek. Steelhead and rainbow trout are present in Santa Rosa Creek. Additional reports applicable to this subwatershed include the Santa Rosa Creek Master Plan, Santa Rosa Creek Design Guidelines, and the Prince Memorial Greenway Project, which was constructed where the creek passes through the downtown area of Santa Rosa.
- Oakmont Creek Subwatershed. This subwatershed is in the eastern portion of the City; Oakmont Creek and 12 mostly seasonal creeks drain the hillslopes adjacent to Oakmont. Oakmont is divided into two separate subwatershed basins. There is a divide between the Sonoma Creek subwatershed which flows into San Pablo Bay, and the Santa Rosa Creek subwatershed, which flows into the Russian River. Three of the Oakmont creeks flow east to Sonoma Creek while the other creeks connect to

[16] National Weather Service, 2023, NOAA Online Weather Data for the Last 23 Years of Record, https://www.weather.gov/wrh/climate?wfo=mtr, accessed August 3, 2023.

[17] Western Regional Climate Center, updated October 31, 2012, Period of Record Monthly Climate Summary – Temperature, https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7965, accessed April 6, 2023.

[18] North Coast Regional Water Quality Control Board, 2023, Laguna de Santa Rosa: Hydrologic Sub-areas, https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/russian_river/laguna_de_santa_rosa/, accessed August 3, 2023.

Oakmont Creek and flow to Santa Rosa Creek near the northeast boundary of Spring Lake. The headwaters of these creeks are mostly in Annadel State Park and Hood Mountain Regional Park. Tributaries to Oakmont Creek are Laurel Creek, Badger Creek, and Melita Creek.

- Brush Creek Subwatershed. Brush Creek and its tributaries originate in the hillsides surrounding Rincon Valley in northeast Santa Rosa. The major tributaries are Rincon Creek, Ducker Creek, and Austin Creek. Two creeks also flow into Austin Creek: Progress Creek and Promissory Creek. Although parts of Brush Creek have been modified due to urban growth, it is still home to migrating steelhead trout, the western pond turtle, sprawling oak trees, and many other riparian plants and animals. The headwaters of Brush Creek include two branches that join at the Brush Creek Reservoir, which is owned and operated by Sonoma Water.
- Matanzas Creek Subwatershed. Matanzas Creek flows from the northern slopes of Sonoma Mountain and across the agricultural and rural land of Bennett Valley before entering the City near Galvin Community Park. Downtown of South E Street, Matazanas Creek is routed underground to its confluence with Santa Rosa Creek at Santa Rosa Avenue near City Hall. The largest tributary to Matanzas Creek is Spring Creek, which begins in Annadel State Park. Matanzas Reservoir and the Spring Creek Dam and Diversion to Spring Lake are major flood control structures. Other tributaries include Lornadell Creek, Sierra Park Creek, and Cooper Creek.
- Piner Creek Subwatershed. Piner Creek and its tributaries drain the northwest portion of Santa Rosa. The tributaries include Nagasawa, Russell, Indian, Coffey, and Steele Creeks. Peterson Creek and its tributary Forestview Creek drain directly into Santa Rosa Creek. Piner and Russell Creeks begin east of US Highway 101 in the Fountaingrove neighborhood. Piner Creek flows into Fountaingrove Lake and continues under US Highway 101 in northwest Santa Rosa before joining Santa Rosa Creek west of Fulton Road. Russell Creek crosses under US Highway 101 and flows west and into Piner Creek. Coffey Creek and Steele Creek begin west of US Highway 101. Peterson Creek and Forestview Creek start in northwest Santa Rosa and flow southwest into Santa Rosa Creek. Most westward reaches of these creeks have been engineered to provide flood control.
- Paulin Creek Subwatershed. This subwatershed is located east of the Piner Creek subwatershed. Paulin Creek and its tributaries, Poppy Creek and Pomo Creek, flow into Piner Creek. Paulin Creek originates in the hillside above Hidden Valley, flows under US Highway 101, and joins with Pine Creek west of Marlow Road. Poppy Creek begins as an intermittent drainage in the Proctor Terrace neighborhood and flows into two City-owned ponds located north of the Rural Cemetery on Franklin Avenue. The creek flow is then diverted to storm drainpipes that rejoin the creek channel at Mendocino Avenue, wind through the Santa Rosa Junior College neighborhood, flows through Steele Lane Park, and joins Paulin Creek downstream of Major Drive. Pomo Creek is mainly underground but travels a short distance through Northwest Community Park before joining Paulin Creek.
- Southern Santa Rosa Creeks Subwatershed. This subwatershed is in the southern portion of the City and includes four creeks that flow into Laguna de Santa Rosa: Roseland Creek, Kawana Springs Creek, Colgan Creek, and Old Colgan Creek. These creeks are not considered to support steelhead trout, due to warm water temperatures, lack of stream habitat complexity, and limited summertime flows. Roseland Creek originates southwest of the US Highway 101 and State Route 12 interchange and flows into Laguna de Santa Rosa southeast of Sebastopol near the Laguna Treatment Plant. Just under 50 percent of Colgan Creek's 5,000-acre drainage area lies within the EIR Study Area and is mostly

channelized. Kawana Springs Creek (also known as Upper Colgan Creek) flows westward from its headwaters in the oak woodlands on Taylor Mountain to Colgan Avenue and joins Colgan Creek. The reach from Petaluma Hill Road to its confluence with Old Colgan Creek consists of a flood control channel owned and operated by Sonoma Water. In 2002, the City Council adopted the Lower Colgan Creek Restoration Concept Plan, and a second restoration concept plan for Kawan Springs Creek (Upper Colgan Creek) was adopted in 2007.

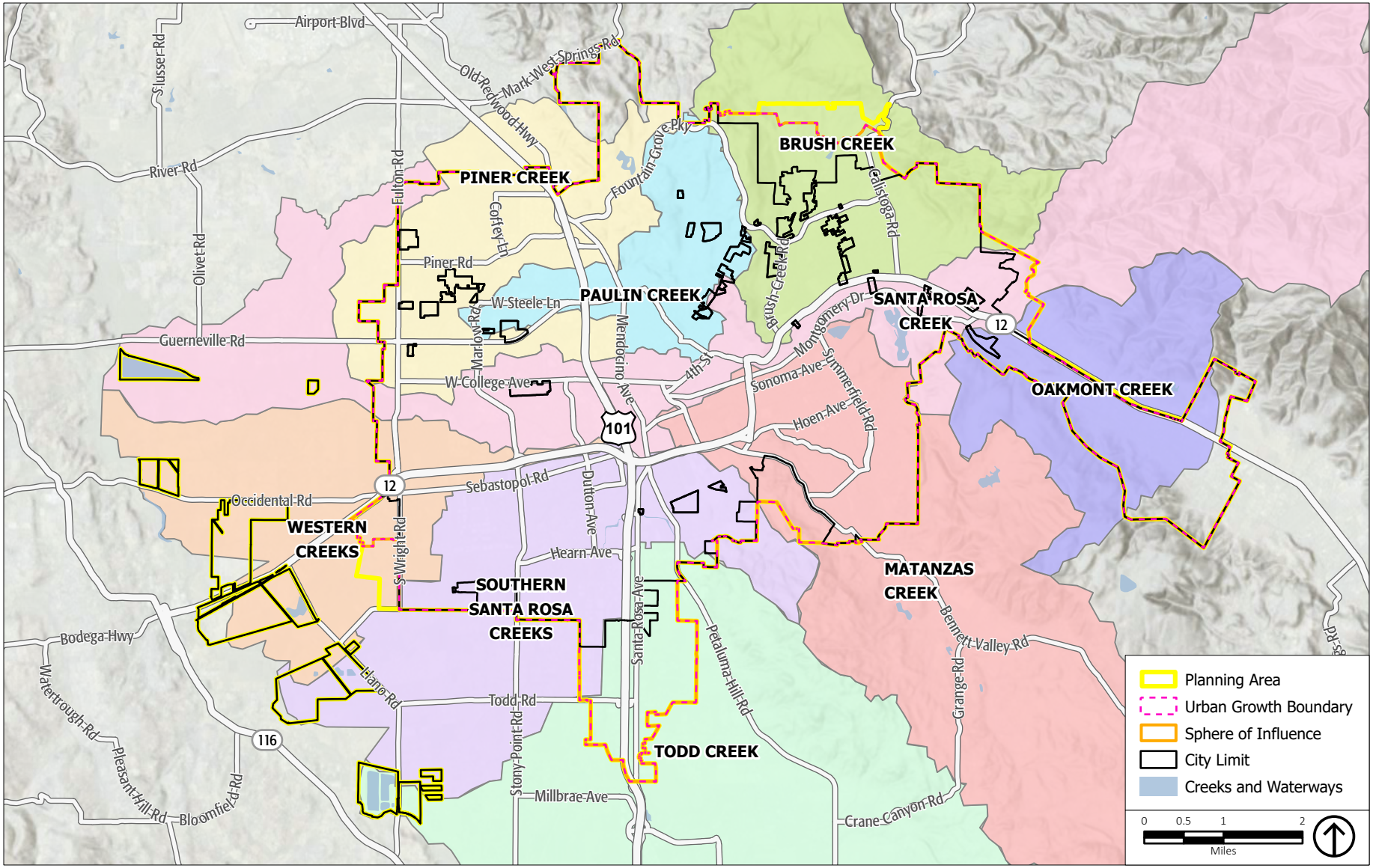
- Western Creeks Subwatershed. This subwatershed in the western portion of the city consists primarily of low gradient, seasonal creeks that originate at outfalls of the City's storm drain system west of US Highway 101 and flow into Laguna de Santa Rosa. The five creeks within this subwatershed are Gravenstein Creek, Naval Creek, Irwin Creek (also known as Spirit Creek), Riccas Creek, and Countryside Creek. Most of the areas through which these creeks flow are private property.
- Todd Creek Subwatershed. This subwatershed is located in a small area in the far southern portion of the city. Todd Creek begins on the western slope of Taylor Mountain and flows to the south and west to connect with Laguna de Santa Rosa. This creek is primarily a grass-lined, channelized stream. The tributaries to Todd Creek that flow through the city are Hunter Creek and Moorland Creek. Moorland Creek is channelized and begins along the Northwest Pacific Railroad and flows south to join Todd Creek. Hunter Creek begins on the west side of Taylor Mountain and is a modified channel with riprap along the banks at the confluence with Todd Creek.

Local Hydrology

The City's storm drain system consists of approximately 320 miles of storm drain lines and 75 miles of open channels and ditches. These facilities are part of an integrated system of roadside gutters, drainage ditches, pipelines, and creeks that are used to collect and convey the stormwater runoff to creeks within the city and ultimately into the Laguna de Santa Rosa. The City's storm drain system also makes use of stormwater detention facilities used to attenuate peak flows and allow for the settlement of sediment from the stormwater flows before continuing downstream. The Public Works Department works year-round cleaning silt, trash, and other pollutants out of the City's catch basins and storm drains, using a large vacuum truck. Sonoma Water's Stream Maintenance crews are responsible for removing sediment and vegetation in the creeks that flow through Santa Rosa. A more detailed discussion of the storm drain system is provided in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR.

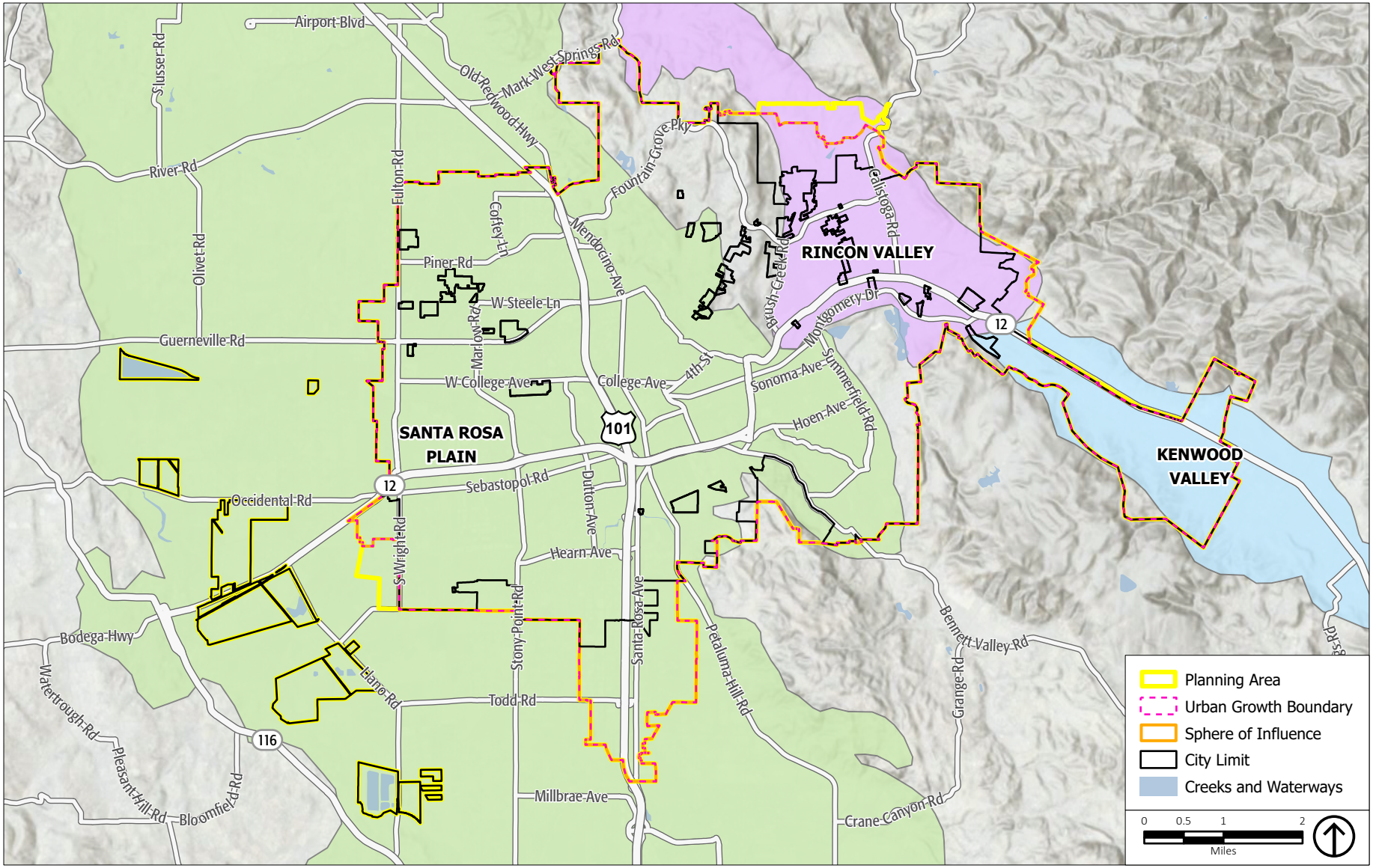
Groundwater Basin

Most of the EIR Study Area is within the Santa Rosa Plain Groundwater Subbasin, which is one of three subbasins within the larger Santa Rosa Valley Groundwater Basin. There are two other groundwater subbasins within the EIR Study Area along the eastern edge of the city—the Santa Rosa Valley–Rincon Valley Subbasin and the Kenwood Valley Subbasin. Both are designated very low priority because of a total groundwater use of less than 1,000 acre-feet per year, and they are not required to form GSAs or prepare GSPs. Figure 4.10-2, *Groundwater Subbasins,* shows the three groundwater subbasins in the EIR Study Area.



Source: City of Santa Rosa, 2013; ESRI, 2022; PlaceWorks, 2024.

Figure 4.10-1
Subwatersheds



Source: City of Santa Rosa, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.10-2
Groundwater Subbasins

The Santa Rosa Plain Subbasin is generally bounded on the west by low-lying hills of the Mendocino Range and on the east by the Sonoma Mountains and Mayacamas Mountains. The Subbasin includes the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol; the town of Windsor; and areas of unincorporated Sonoma County. The Santa Rosa Plain Subbasin is designated by DWR as a medium-priority groundwater basin and is not in critical overdraft.[19]

The Santa Rosa Plain GSA consists of the Sonoma County Water Agency (Sonoma Water), which prepared the GSP; Sonoma County; the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol; the town of Windsor; Gold Ridge Resources Conservation District; Sonoma Resource Conservation District; and an organized group of mutual water and public utilities regulated companies (known as independent water systems). The GSP was prepared in December 2021 and was approved by DWR in January 2023.[20]

The major water suppliers in the Subbasin are the cities and towns that are part of the GSA and Cal American Water–Larkfield. Most of the water suppliers rely primarily on imported Russian River water supplied by Sonoma Water, but they also pump groundwater for supplemental supply and for use during droughts and emergencies. Residences outside of the urban communities rely on individual domestic wells, which are estimated to number between 4,000 and 5,500. Agriculture, which accounts for 26 percent of the land use within the Subbasin, relies on groundwater and recycled water, where available, for irrigation of wine grapes. In 2020, imported water accounted for 45 percent of the water supply in the Subbasin, groundwater accounted for 35 percent, and recycled water for about 20 percent.[21] For further discussion on water supply, please refer to Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR.

Groundwater aquifers are present at depths generally less than 200 feet below ground surface, where many residential wells are drilled, and at deeper depths, where most municipal, industrial, and agricultural wells are constructed. In general, groundwater flows from the highlands in the east to Laguna de Santa Rosa. Groundwater levels are relatively stable, and total groundwater pumping rates through the year 2040 are estimated to be only 39 percent of the sustainable yield.[22] The GSP describes projects and management actions that will be implemented to ensure that groundwater pumping rates remain below the sustainable yield.

Shallow groundwater is encountered in perched aquifers in Santa Rosa at depths ranging from 3 to 20 feet below ground surface.[23] Therefore, construction dewatering may be required with future development in the EIR Study Area. The City requires project applicants to evaluate dewatering options that avoid discharge to surface waters or the storm drain. If groundwater from construction activities is directed to the sanitary sewer, project applicants must apply for a one-time wastewater discharge permit from the City, as per SRCC Section 15.-08.050, *Wastewater Discharge Permit Classification.* The permit conditions

[19] Department of Water Resources, SGMA Data Viewer, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#currentconditions, accessed August 12, 2023.

[20] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed August 12, 2023.

[21] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed August 12, 2023.

[22] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed August 12, 2023

[23] Gregg Drilling, 2023, Northern California Groundwater Depth Table.

may require filtering to remove sediment and/or monitoring to verify that the discharged groundwater is in accordance with the City's wastewater discharge requirements. If groundwater from dewatering activities is directed to surface water or the storm drain, project applicants must obtain coverage under the North Coast RWQCB Order No. R1-2020-0006 (NPDES No. CAG024902), *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region.* This requires project applicants to submit to the North Coast RWQCB a Notice of Intent (NOI), a Best Management Practice and Pollution Prevention (BMP/PP) Plan, and appropriate fees. The RWQCB permit requires the implementation of BMPs, such as settling tanks, to minimize sediment discharge, turbidity, and color impacts. A monitoring and reporting program is also required as part of the BMP/PP Plan with sampling and analysis of specified water quality parameters, such as turbidity, pH, specific conductance, and dissolved oxygen.

Water Quality

Surface water quality is affected by point-source and nonpoint-source pollutants. Point-source pollutants are emitted at a specific point, such as a pipe, and nonpoint-source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point-source pollutants are controlled with pollutant discharge regulations or water discharge requirements. Nonpoint-source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, the amount and frequency of rainfall, and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the "first flush," when early rainfall flushes out pollutants that have accumulated on hardscape surfaces during the preceding dry months.

The North Coast RWQCB monitors surface water quality through implementation of the Basin Plan. Unlike other RWQCBs, which designate beneficial uses for individual surface water bodies and groundwater within their jurisdiction, the North Coast RWQCB designates beneficial uses on a watershed basis. Santa Rosa is in the Laguna de Santa Rosa watershed, which is further divided into the Laguna, Santa Rosa, and Mark West Hydrologic Subareas. The Laguna and Santa Rosa Hydrologic Subareas are in the EIR Study Area.

The beneficial uses for these watersheds are listed in Table 4.10-1, *Designated Beneficial Uses in the EIR Study Area*. The North Coast RWQCB further characterizes beneficial uses as existing or potential, as shown in the table.

TABLE 4.10-1 DESIGNATED BENEFICIAL USES IN THE EIR STUDY AREA

Hydrologic Subarea	Existing Beneficial Use
Laguna	AGR, IND, GWR, FRSH, NAV, POW, REC1, REC2, COMM, WARM, COLD, WILD, RARE, MIGR, SPWN
Santa Rosa	MUN, AGR, IND, GWR, NAV, REC1, REC2, COMM, WARM, COLD, WILD, RARE, MIGR, SPWN
	Potential Beneficial Use
Laguna	MUN, PRO, SHELL, AQUA
Santa Rosa	PRO, POW, SHELL, AQUA

Note: Designated Beneficial Use abbreviations:

AGR – Agricultural supply	COLD – Cold freshwater habitat	COMM – Commercial and sport fishing
FRSH – Freshwater replenishment	GWR – Groundwater recharge	IND – Industrial service supply
MIGR – Fish migration	MUN – Municipal and domestic supply	PRO – Industrial process supply
RARE – Preservation of rare and endangered species		
REC-1 – Water contact recreation	REC-2 – Non-contact water recreation	SPWN – Fish spawning
WARM – Warm freshwater habitat	WILD – Wildlife habitat	NAV – Navigation
POW – Hydropower generation	AQUA – Aquaculture	SHELL – Shellfish harvesting

Source: North Coast Regional Water Quality Control Board, 2018, Water Quality Control Plan for the North Coast Region.

The North Coast RWQCB also developed regulations regarding point source discharges to protect the Russian River, which include restrictions on wastewater discharge into the Russian River Watershed. Wastewater can only be discharged between October 1 and May 14 at a maximum rate of 1 percent of the flow in the river. At other times, wastewater discharges are prohibited. The City of Santa Rosa can discharge wastewater from its wastewater treatment plant at several points during the winter discharge season in compliance with these requirements.[24]

In addition to the establishment of beneficial uses and water quality objectives, another approach to improve water quality is a watershed-based methodology that focuses on all potential pollution sources and not just those associated with point sources. If a body of water does not meet established water quality standards under traditional point source controls, it is listed as an impaired water body under Section 303(d) of the CWA. For 303(d) listed water bodies, a limit is established that defines the maximum amount of pollutants that can be received by that water body. Listed impaired water bodies in the EIR Study Area and their associated pollutants of concern are presented in Table 4.10-2, *Listed Impaired Water Bodies in the EIR Study Area.* Also included are the water bodies that receive runoff and potential pollutants from the rivers and creeks within the EIR Study Area.

[24] North Coast RWQCB, 2023, Laguna de Santa Rosa: Hydrologic Sub-areas 114.21, 114.22, 114.23https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/russian_river/laguna_de_santa_rosa/, accessed August 5, 2023.

TABLE 4.10-2 LISTED IMPAIRED WATER BODIES IN THE EIR STUDY AREA

Name	Pollutants of Concern
Santa Rosa Creek	Sedimentation/Siltation, Indicator Bacteria, Water Temperature, Manganese
Tributaries to Santa Rosa Creek	Sedimentation/Siltation, Indicator Bacteria, Water Temperature
Spring Lake (Santa Rosa Creek Reservoir)	Mercury
Tributaries to Laguna de Santa Rosa (except Santa Rosa Creek and its tributaries)	Indicator Bacteria, Dissolved Oxygen, Sedimentation/Siltation, Water Temperature
Laguna de Santa Rosa	Mercury, Sedimentation/Siltation, Water Temperature, Dissolved Oxygen, Phosphorus, Indicator Bacteria
Lower Russian River	Water Temperature, Aluminum, Sedimentation/Siltation, Specific Conductivity, Indicator Bacteria

Source: State Water Resources Control Board, 2023, 2018 Integrated Report Map, https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report/2018IR_map.html, accessed August 5, 2023.

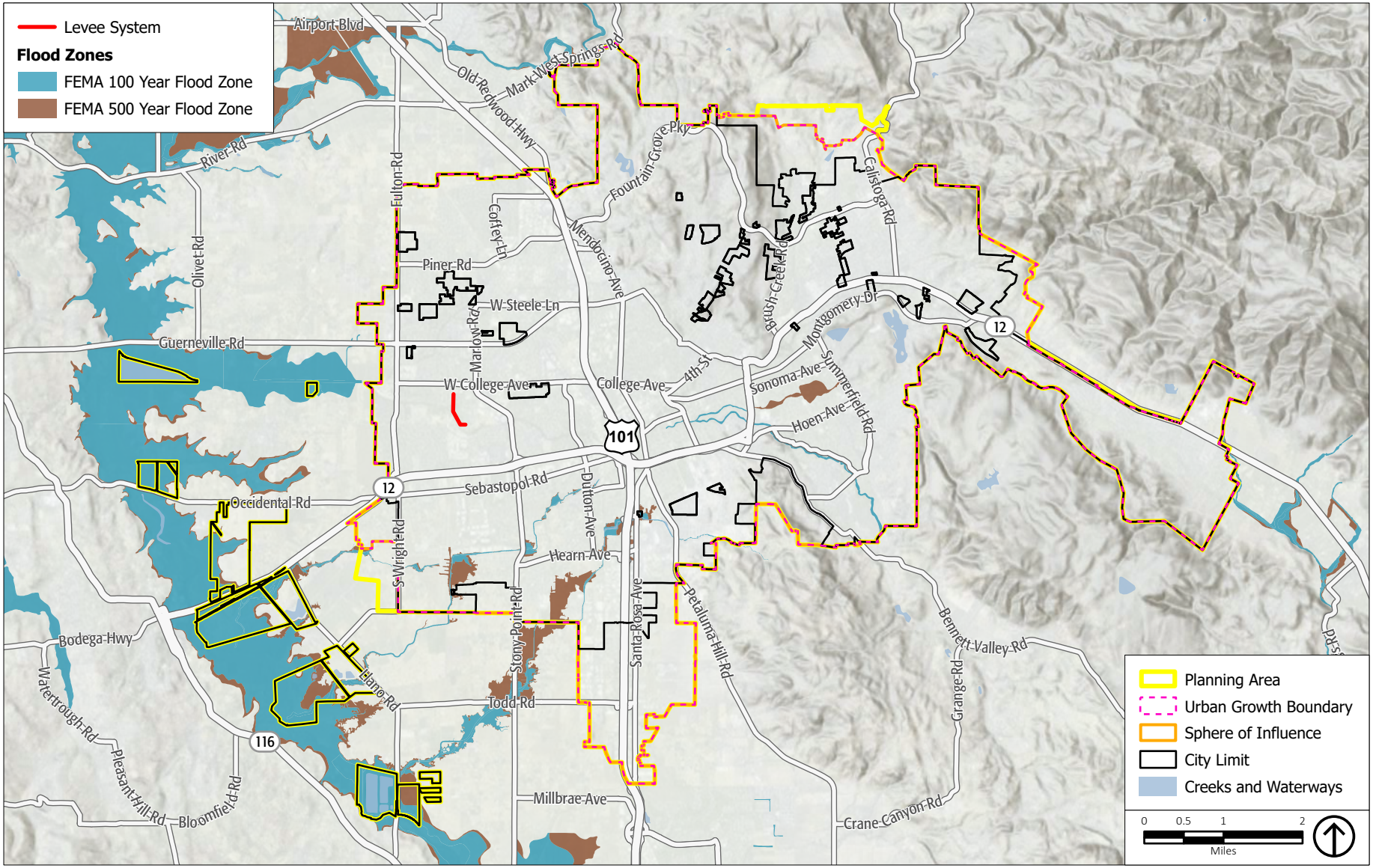
Once a water body has been placed on the 303(d) list of impaired waters, states are required to develop a TMDL threshold to address each pollutant causing impairment. A TMDL defines how much of a pollutant a water body can tolerate and still meet water quality standards. There are no approved TMDLs for any pollutants in the impaired water bodies on Table 4.10-2.

Flood Zones

FEMA identifies floodplain zones to assist cities with mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain is defined as an area that has a 1 percent chance of being inundated in any given year. FEMA also prepares maps for 500-year floods that indicate a risk of 0.2 percent of flooding in any given year. In some locations, FEMA also provides measurements of base flood elevations for the 100-year flood, which is the minimum height of the flood waters during a 100-year event. Base flood elevation is reported in feet above sea level. Depth of flooding is determined by subtracting the land's height above sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage.

The main type of flooding that occurs in the EIR Study Area is riverine flooding. Riverine flooding occurs when the local creeks overtop their banks during extreme rainfall events. Flooding typically occurs during the winter within 24 to 48 hours after a storm event. Coupled with flat topography and a high groundwater table, stormwater runoff from these events can exceed the capacity of the City's storm drain system. Localized flooding can also occur in flat, urbanized areas of the City after heavy rain events.

A map of the EIR Study Area locations that are within the 100-year floodplains is shown on Figure 4.10-3, *Potential Flood Hazards*. FEMA maps areas at risk from inundation from a 100-year flood, which has a 1 percent chance of occurring in any year, and a 500-year flood, where the risk of flooding is 0.2 percent annually. These areas are primarily located along the creeks that run through the city, including Spring Creek, Matanzas Creek, Colgan Creek, Naval Creek, Roseland Creek, and Kawana Springs Creek.



Source: CalOES, 2021; FEMA, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.10-3
Potential Flood Hazards

Approximately 168 acres in the EIR Study Area are within the 100-year floodplain, and about 284 acres are in the 500-year floodplain.[25] Erosion is a secondary hazard related to flooding in Santa Rosa, especially along Matanzas Creek.

The noncontiguous areas of the EIR Study Area to the west are within the 100-year floodplain of Laguna de Santa Rosa. The 100-year flood zone is also known as a Special Flood Hazard Area; homeowners with mortgages within the Special Flood Hazard Area are required to be protected by flood insurance. Areas within the 500-year floodplain are also shown on Figure 4.10-3, but there are no restrictions on building within the 500-year floodplain. There also is one levee in the city, Sonoma County Levee 31, which is also shown on Figure 4.10-3. It is not FEMA accredited and is locally constructed, operated, and maintained.

Flooding has had serious impacts on Santa Rosa in the past, most notably the January 2006 flooding and landslides in the Russian River watershed. Seven days of heavy rain totaling almost seven inches resulted in Laguna de Santa Rosa reaching peak capacity and overflowing. The rising water in the Laguna created a backwater condition and subsequently raised the water levels in surrounding creeks, leading to erosion, sedimentation, and flooding. FEMA declared the flood a major disaster, and the City's Emergency Operations Center was activated to respond to the incident.[26] The most recent flooding was in January 2023 when Colgan Creek overflowed its banks and in March 2023 with flooding along State Route 12. The City's Laguna Treatment Plant has also experienced flooding on numerous occasions.[27] The southern portion of Santa Rosa is more prone to flooding because of its flat topography. Roseland and Colgan Creeks receive most of the stormwater from southern Santa Rosa and are prone to flooding. Climate change may result in more frequent intense storms, resulting in an increased risk of flooding in the future.

Dam Inundation

Dam failure is the uncontrolled release of impounded water behind a dam. Partial or complete dam failures can occur from one or more of the following causes:

- Earthquake
- Overtopping caused by floods that exceed the dam capacity due to inadequate spillway capacity
- Internal erosion caused by embankment or foundation leakage due to piping or rodent activity
- Improper design resulting in structural failure
- Movement or failure of the foundation
- Inadequate operation, maintenance, and upkeep
- Settling and cracking of concrete or embankment dams
- Failure of upstream dams on the same waterway

[25] City of Santa Rosa, 2016, *City of Santa Rosa Local Hazard Mitigation Plan,* prepared by Michael Baker International.

[26] City of Santa Rosa, 2016, *City of Santa Rosa Local Hazard Mitigation Plan,* prepared by Michael Baker International.

[27] Sonoma County, October 2021, *Multijurisdictional Hazard Mitigation Plan Update 2021, Volume 1: Area-Wide Elements*, https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Planning/Long%20Range%20Plans/Hazard%20Mitigation%20Plan/Adopted-Sonoma-County-MJHMP-Volume-1-December-2021.pdf, accessed August 5, 2023.

Flash floods can occur within six hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching. Other types of failures and breaches can take much longer, from days to weeks. However, dam failure is a very rare occurrence. No known failures have occurred on dams in Santa Rosa or Sonoma County.[28]

The California Water Code requires owners of all dams under California Division of Safety of Dams (DSOD) jurisdiction (except dams classified as low downstream hazard) to prepare dam inundation maps. These maps must be updated every ten years or when there are changes to downstream development or terrain. The dam inundation maps are submitted to DSOD for review and approval. Once the maps are approved, the dam owner must submit the map with the Emergency Action Plan to the California Office of Emergency Services for review and approval. The Office of Emergency Services is required by State law to work with State and federal agencies, dam owners and operators, municipalities, floodplain managers, planners, and the public to make available dam inundation maps. Dam inundation maps are used in the preparation of local hazard mitigation plans and general plan safety element updates.

For federally owned and maintained dams, the US Army Corps of Engineers has a Dam Safety Program that recognizes the catastrophic nature of potential dam failure and operates a comprehensive dam safety program, which includes: 1) periodic special engineering studies, 2) surveillance and monitoring programs, 3) routine inspections and maintenance activities, and 4) preparation of emergency response and preparedness plans.

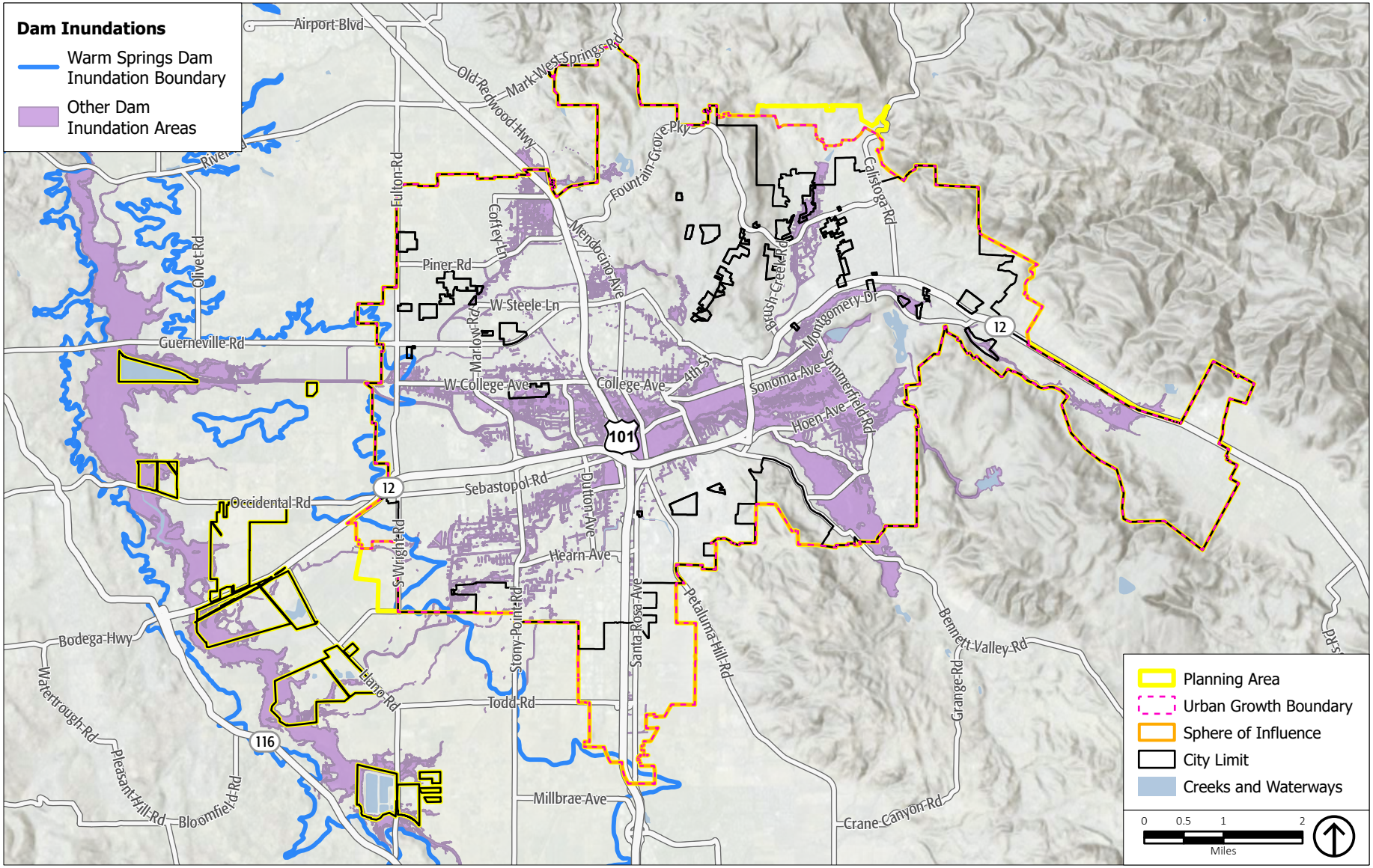
The inundation zones in the EIR Study Area are shown on Figure 4.10-4, *Dam Inundation Zones.* A list of the dams is in Table 4.10-3, *Dams with Inundation Zones in the EIR Study Area.*

TABLE 4.10-3 DAMS WITH INUNDATION ZONES IN THE EIR STUDY AREA

Dam Name	Owner	Water Course	Year Built	Hazard Rating
Warm Springs	Army Corps of Engineers	Dry Creek	1982	High
Annadel No. 1	CA Dept. of Parks and Recreation	Spring Creek	1956	Extremely High
Piner Creek	Sonoma Water	Paulin Creek	1962	Extremely High
Middle Fork Brush Creek	Sonoma Water	Brush Creek	1961	Extremely High
Matanzas Creek	Sonoma Water	Matanzas Creek	1963	Extremely High
Santa Rosa Creek Reservoir	Sonoma Water	Santa Rosa Creek	1963	Extremely High
Lake Ralphine	City of Santa Rosa	Santa Rosa Cr. Trib.	1882	Extremely High
Fountaingrove	City of Santa Rosa	Mark West Cr. Trib.	1953	Extremely High
Meadow Lane	City of Santa Rosa	Offstream	1979	High
Delta Pond	City of Santa Rosa	Russian River Trib.	1984	Significant
The Hill Ranch	Private Trust	Santa Rosa Creek	1955	High
Pond No. 2	City of Santa Rosa	Offstream	1962	Low

Source: Sonoma County Multijurisdictional Hazard Mitigation Plan, 2021; PlaceWorks, 2023.

[28] Sonoma County, October 2021, *Multijurisdictional Hazard Mitigation Plan Update 2021, Volume 1: Area-Wide Elements*, https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Planning/Long%20Range%20Plans/Hazard%20Mitigation%20Plan/Adopted-Sonoma-County-MJHMP-Volume-1-December-2021.pdf, accessed August 5, 2023.



Source: CalOES, 2016; City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.10-4
Dam Inundation Zones

All of the dams listed in Table 4.10-3, except the Warm Springs Dam, are under the jurisdiction of the DSOD. The Warm Springs Dam forms Lake Sonoma Reservoir and is owned and operated by the US Army Corps of Engineers. The reservoir provides water supply and flood management. Water supply releases from this dam are controlled by Sonoma Water and water released for flood control management is managed by the Army Corps of Engineers. Pond No. 2, which is within the City limits, is a relatively small dam (12 feet high with a storage area of 240 acre-feet) and has a low hazard rating. Dams classified as low downstream hazard do not have to prepare dam inundation maps.

Hazard classifications are based on potential downstream impacts to life and property if a dam were to fail when operating at full capacity. The hazard classification is not related to the condition of the dam. High hazard indicates that the dam failure could result in the loss of at least one human life, and extremely high hazard indicates that the dam failure is expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 people or more.[29]

The DSOD inspects and monitors all jurisdictional dams through the Dam Safety Program. The dams are inspected twice a year and continually monitored for seepage and settlement. The Sonoma County Department of Emergency Management coordinates preparedness efforts to mitigate against, plan for, respond to, and recover from natural hazards, including the possibility of dam failure.

There are no state or local restrictions for development in dam inundation zones; however, each dam owner is required to prepare an emergency action plan (EAP) and coordinate its response to a dam incident with local authorities. The EAP is required to include warning and notification procedures that would involve the SoCo Alert system, Sonoma County's new emergency notification system, the Sonoma Department of Emergency Management, Sonoma County Sheriff's Department, and the Sonoma Valley Fire District. The City of Santa Rosa supplements the SoCo Alert System with the CivicReady Public Safety Alerts and Notifications System for residents and businesses to receive text messages, emails, or phone calls from the City's Emergency Operations Center.

The Sonoma County Department of Emergency Management maintains copies of the most recent dam EAPs and inundation maps and uses this information to plan notification for downstream areas in the event of a dam failure. Also, the Santa Rosa Emergency Operations Center manages and maintains emergency plans and training for City staff and the community.

Tsunami

A tsunami is a series of traveling ocean waves generated by a catastrophic event such as an earthquake, submarine landslide, or volcanic eruption. The EIR Study Area is approximately 25 miles from San Pablo Bay and 15 miles from the Pacific Ocean and is not within any mapped tsunami inundation zone.[30]

[29] California Division of Safety of Dams, 2023, Downstream Hazard, https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Division-of-Safety-of-Dams-Definitions-for-Downstream-Hazard-and-Condition-Assessment.pdf, accessed August 8, 2023.

[30] California Department of Conservation, 2022, Sonoma County Tsunami Hazard Areas, https://www.conservation.ca.gov/cgs/tsunami/maps/sonoma, accessed April 6, 2023.

Seiche

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. Seiches can be created by winds, earthquakes, or tsunamis. Bodies of water such as reservoirs, ponds, lakes, or large aboveground storage tanks can experience seiche waves up to several feet in height during a strong earthquake. The water sloshes back and forth until the wave motion is dampened by friction.

Although a seiche could theoretically occur at any of the reservoirs with dam inundation zones that impact the city or are in the city, seiches associated with dams and reservoirs typically create waves that are one foot high or less. Dams are designed to have a freeboard height below the top of the dam that accounts for wave action on the surface of the reservoir. Therefore, it is unlikely that a seiche would occur and cause overtopping of a dam or reservoir, resulting in downstream flooding. to significantly impact the EIR Study Area. Seismic activity could result in seiches occurring and impacting the aboveground water tanks in the city. However, the tanks are constructed to withstand seismic events and would not result in failure that would cause significant flooding.

4.10.2 STANDARDS OF SIGNIFICANCE

The implementation of the proposed project would result in a significant impact related to hydrology and water quality if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.
4. In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
6. In combination with past, present, and reasonably foreseeable projects, results in a cumulative impact with respect to hydrology and water quality.

4.10.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under the California Environmental Quality Act. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if explicitly not stated, is implied.

HYD-1 Implementation of the proposed project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Construction

Buildout under the proposed project would involve soil disturbance, construction, and operation of land uses that could generate pollutants affecting stormwater. Clearing, grading, excavation, and construction activities have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints, may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, future development that involves the disturbance of one acre or more of land would require compliance with the Construction General Permit (CGP) Order WQ 2022-0057-DWQ, which includes the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, and a SWPPP. The construction contractor is required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB.

Submittal of the PRDs and implementation of the SWPPP throughout the construction phase of development pursuant to the proposed project will address anticipated and expected pollutants of concern from construction activities. For future construction projects that disturb less than one acre of land, project applicants would be required to implement an effective combination of erosion and sediment control BMPs, as specified in the RWQCB MS4 permit. For example, minimum BMPs for sediment control include measures such as silt fences, fiber rolls, sandbag barriers, and stabilized construction site entrance/exit. SRCC Chapter 19-64 also contains requirements for controlling erosion

and sediment during construction. The City confirms implementation of appropriate BMPs through construction site inspections.

Operation

Potential future development and activities under the proposed project may result in long-term impacts to the quality of stormwater and urban runoff, subsequently impacting downstream water quality and/or San Francisco Bay. Future development can potentially create new sources for runoff contamination through changing land uses. As a consequence, future development within the EIR Study Area as a whole may have the potential to increase the post-construction pollutant loadings of certain constituent pollutants associated with the proposed land uses and their associated features, such as landscaping.

To help prevent long-term impacts associated with land use changes and in accordance with the requirements of the MS4 permit (Order No. R1-2015-0030) and the City's Low Impact Development Technical Design Manual, all new development and redevelopment projects that involve the creation and/or replacement of 10,000 square feet or more of impervious surface must incorporate LID site design, source control, and stormwater treatment measures to address post-construction stormwater runoff. These projects would be required to submit a Storm Water Low Impact Development Determination Worksheet and submit an Initial and Final Storm Water Low Impact Development Submittal (SWLIDS) to be reviewed and approved by the City of Santa Rosa. The City's Low Impact Development Technical Design Manual is updated periodically to reflect the latest MS4 permit requirements; therefore, potential future development over the buildout horizon of the proposed project would need to comply with the latest thresholds and reissuance of the MS4 permit.

In addition, projects that create and/or replace one acre or more of impervious surfaces must comply with the hydromodification requirements specified in the MS4 permit and the City's Low Impact Development Technical Design Manual. The hydromodification provisions require that projects capture 100 percent of the volume of runoff generated by a 1-inch, 24-hour storm event. The MS4 permit and City also require that all projects treat such stormwater on-site for the pollutants of concern and install trash capture devices. For all projects that create and/or replace 10,000 square feet of impervious surface but less than one acre of impervious surface, any increase in stormwater volume from the 1-inch, 24-hour storm event must be captured onsite and trash capture requirements must be implemented. Projects creating and/or replacing one acre or more of impervious surface must comply with the hydromodifications described above.

The SWLIDS submitted to the City shall also contain a maintenance and inspection section that includes the scope and frequency of BMP inspections, regularly scheduled maintenance, recordkeeping requirements, and a declaration of covenant stating that ongoing maintenance of BMPs on private property is the owner's responsibility. This declaration also must be recorded at the County Recorder's Office so that it will be attached to the title of the land and must include a map of all site BMPs.

As part of the statewide mandate to reduce trash within receiving waters, the City is required to adhere to the requirements of the California Trash Amendments. The requirements include the installation and maintenance of trash screening devices at all public curb inlets, grate inlets, and catch basin inlets. The trash screening devices must be certified trash full capture systems and must be installed on all inlets by

2030. As described in the Low Impact Development Technical Design Manual, trash capture requirements must be met for new development and redevelopment projects in all areas of the site, including both existing areas and new or replaced impervious areas.

Additionally, all potential future development under to the proposed project would be required to comply with the requirements of the SRCC, which prohibits illicit discharge into the storm drain system (Section 17-12.140) and includes policies to reduce the pollutants in stormwater (Section 17-12.170). All development that discharges storm water associated with industrial activity shall also comply with the requirements of the General Industrial Permit (Order No. 2014-0057-DWQ) and amended in 2018 by Order No. 2015-0122-DWQ.

Summary

Chapter 3, *Circulation, Conservation, and Greenhouse Gas Reduction*, and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality, including during construction and operation of potential future development. The following goals, policies, and actions would serve to minimize potential adverse impacts on water quality and stormwater discharge:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
    - Action 3.5-5: Explore options that help to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special- status species, such as:
      - Avoidance of sensitive habitat.
      - Clustered development.
      - Transfer of development rights.
      - Compensatory mitigation, such as habitat restoration or creation.
    - Action 3-5.6: Protect high-quality wetlands and vernal pools from development and other activities.
    - Action 3-5.8: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).
    - *Action 3-5.10: Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species.

- Policy 3-5.4: Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including, but not limited to, aquatic or terrestrial vegetated open space, systems that provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.
    - *Action 3-5.11: Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat.
- Policy 3-5.5: Maintain, restore, and protect the city's waterways.
    - Action 3-5.14: Implement the Citywide Creek Master Plan and promote a "one water" approach that teaches preservation and stewardship of local creeks and water resources.
    - Action 3-5.15: Periodically review the status of local creeks and plan for ongoing restoration, planning, and stewardship, as identified in the Citywide Creek Master Plan.
    - Action 3-5.16: Seek funding to maintain and restore citywide creeks, including for recreational opportunities linked to creeks as well as for flood control.
    - Action 3-5.17: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.
- Policy 3-5.6: Restore channelized waterways and avoid creating additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.
    - Action 3-5.18: Restore and enhance the ecological function of channelized waterways, consistent with the Citywide Creek Master Plan, and avoid channelizing additional segments of the waterways system.
- Policy 3-5.7: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.
    - *Action 3-5.19: Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation.
    - *Action 3-5.20: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

- Policy 3-5.8: Encourage multiple use of waterways, including:
  - Flood mitigation and storage;
  - Groundwater recharge;
  - Opportunities for restoration and stewardship;
  - Climate adaptation;
  - Wildlife habitats;
  - Passive recreational open space uses;
  - Nature study;
  - Pedestrian and bicycle circulation; and
  - Other compatible outdoor uses.
- Goal 3-6: Use nature- and science-based strategies to preserve and create environments that provide ecosystem benefits.
  - Policy 3-6.2: Protect groundwater recharge areas, particularly creeks and riparian corridors.
    - Action 3-6.1: Work with the Santa Rosa Plain Groundwater Sustainability Agency to identify and map groundwater recharge areas and provide groundwater recharge area maps to local agencies to foster planning that protects groundwater supplies.
- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
  - Policy 5-2.6: Manage, maintain, and improve stormwater drainage and capacity.
    - Action 5-2.12: Require dedication, improvement, and ongoing maintenance of stormwater management and retention areas as a condition of development approval.
    - Action 5-2.13: Identify and collect development impact fees needed to pay for mitigation of stormwater management impacts for new development.
    - *Action 5-2.14: Require improvements that maintain and improve the storm drainage system citywide and prioritize areas needing significant investment, consistent with the Santa Rosa Citywide Creek Master Plan goals of preserving natural conditions of waterways and minimizing channelization of creeks.
    - *Action 5-2.15: Ensure creek-side paths and trails are consistent with the Citywide Creek Master Plan and Active Transportation Plan and are incorporated into stormwater improvement projects along creek corridors.
  - Policy 5-2.7: Provide storm drainage facilities that accommodate increased development and enhanced water quality.
    - Action 5-2.16: Cooperate with Sonoma Water and the Northern California Regional Water Quality Control Board on assessments of stormwater drainage facilities to ensure adequate capacity to accommodate increases in residential and commercial development.
    - *Action 5-2.17: Require implementation of best management practices for all new development to reduce discharges of nonpoint-source pollutants to the storm drain system.
- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.1: Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents.

- Action 5-9.3: Maintain water, wastewater, and recycled water system integrity and capacity by continuing to prioritize maintenance and preserve funding for maintenance, rehabilitation, and replacement of existing infrastructure.
- Action 5-9.8: Evaluate the City's long-term water supply strategies, including development of new sources of water supply, enhanced water-efficiency programs, and implementation of appropriate growth-control measures, if deemed necessary by the City.
- Action 5-9.9: Work with State agencies to identify water quality issues and apply for remediation funds, as needed.

- Policy 5-9.2: Maintain water quality and encourage Santa Rosa Water customers to save water.
  - Action 5-9.12: Regularly monitor water quality to maintain high levels of water quality for human consumption and for other life systems in the region.
  - Action 5-9.13: Require new development projects to provide water-efficient landscaping in accordance with the City's Water Efficient Landscape Ordinance.
  - Action 5-9.14: Continue to comply with statewide regulations for long- term urban water use efficiency.
  - Action 5-9.15: Promote water efficiency through public education, incentives, rebates, technical assistance, customer programs, and information about indoor and outdoor water use efficiency measures.
- Policy 5-9.4: Ensure that adequate wastewater capacity is available to serve existing and future needs of the city.
  - *Action 5-9.30: Evaluate stormwater capture and reuse consistent with goals of the Santa Rosa Citywide Creek Master Plan and the MS4 National Pollutant Discharge Elimination System (NPDES) permit to preserve natural conditions of waterways, minimize channelization of creeks, and protect water quality, and identify, educate, and label to promote community awareness that storm drains flow untreated into creeks.
  - Action 5-9.32: Employ a multi-benefit "one-water" approach for new capital projects to include stormwater quality (low-impact development features) on a large scale, flood mitigation, creek restoration, and increased groundwater recharge.
- Policy 5-9.6: Identify and work with partners to address impacts from groundwater threats and solid waste.
  - Action 5-9.39: Consult with appropriate regional, State, and federal agencies to monitor water quality and address local sources of groundwater and soil contamination, including underground storage tanks, septic tanks, and industrial uses, as necessary, to achieve State and federal water quality standards.

Potential future development under the proposed General Plan 2050 has the potential to impair water quality and as such impacts from the proposed project are potentially *significant*.

Impact HYD-1: Impacts to water quality could occur from implementation of the proposed project.

Significance with Mitigation: Less than significant. Implementation of the proposed General Plan 2050 goals, policies, and actions listed above would reduce impacts related to water quality. Specifically, proposed *Action 3-5.10 and *Action 3-5.11 require the evaluation and mitigation of sensitive habitats, which includes wetlands and waterways, and would ensure impacts to water quality would be mitigated. Proposed *Action 3-5.19 and *Action 3-5.20 require that new development along channelized waterways establish an ecological buffer zone between the waterway and development and that adequate setbacks be maintained to protect water quality. Proposed *Action 5-2.14 and *Action 5-2.15 require improvements that maintain and improve the storm drainage system citywide and that ensure creekside paths and trails are developed consistent with the Citywide Creek Master Plan, which ensures runoff is captured and water quality is protected. Proposed *Action 5-2.17 requires implementation of best management practices for all new development to reduce discharges of nonpoint-source pollutants to the storm drain system. Lastly, proposed *Action 5-9.30, requires the evaluation of stormwater capture and reuse consistent with goals of the Santa Rosa Citywide Creek Master Plan and the MS4 NPDES permit. Implementation of the proposed General Plan 2050 goals, policies, and actions, in conjunction with adherence to MS4 permit requirements, the CGP, and the City's Low Impact Development Technical Design Manual, would ensure that potential future development under the proposed project would not violate any water quality standards or waste discharge requirements for both construction and operational phases, and impacts would be *less than significant.*

HYD-2	**Implementation of the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

Implementation of the proposed project would result in a significant environmental impact if it would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Potential future development under the proposed project could result in an increase in impervious surfaces, thus reducing groundwater recharge.

Groundwater Use

Most of the City of Santa Rosa lies within the Santa Rosa Plain Groundwater Subbasin, which is designated by DWR as a medium-priority groundwater basin and is not in critical overdraft. The City of Santa Rosa is one of ten entities that have formed a GSA and prepared a GSP for this groundwater subbasin. There are two other groundwater subbasins along the eastern edge of the city, the Santa Rosa Valley–Rincon Subbasin and the Kenwood Valley Subbasin. These subbasins are designated by DWR as very low priority and are not required to form GSAs or prepare GSPs because of limited groundwater withdrawal. Santa Rosa does not pump groundwater from these subbasins for municipal water supply.

Most of the City's water supply (about 93 percent) is purchased from Sonoma Water, which provides surface water from the Russian River watershed. Sonoma Water supplements its surface water supplies with groundwater from three wells in the Santa Rosa Plain Subbasin. However, annual production from these wells has declined over the past five years (2016–2020) to an average of 20 acre-feet per year (AFY).[31] The City of Santa Rosa supplements its water supplies from Sonoma Water with groundwater pumped from six municipal wells in the Santa Rosa Plain Subbasin. Over the past three years (2020–2022), the City pumped an average of 1,234 AFY from the municipal groundwater wells.[32]

With buildout of the proposed General Plan 2050, the City anticipates a groundwater pumping rate of up to 2,300 AFY. This is less than the City's historical groundwater pumping rate of 2,870 AFY and well below the 50-year maximum pumping rate projection in the GSP of 3,500 AFY. A pumping rate of up to 2,300 AFY is not anticipated to exceed the groundwater subbasin's sustainable yield.[33] In addition, the GSP contains future projects that will ensure the sustainability of the groundwater subbasin, including aquifer recharge, stormwater capture and recharge, and aquifer storage and recovery.

Potential future development over the buildout horizon of the proposed project would be required to implement the water-efficient requirements specified in the CALGreen (SRCC Chapter 18-42) and California Plumbing Codes (SRCC Chapter 18-24) and the MWELO (SRCC Chapter 14-30) requirements for water efficient landscaping. Future projects that meet the criteria under California Water Code Section 10912 would be required to prepare a water supply assessment that demonstrates that project water demands would not exceed water supplies. In addition, residential, commercial, and industrial water usage can be expected to decrease in the future as a result of the implementation of water conservation practices.

Groundwater Recharge

Although potential future development over the buildout horizon of the proposed project would increase the amount of impervious surfaces and could potentially impact groundwater recharge, these projects would be required to implement BMPs and LID measures in accordance with the MS4 permit and the City's Low Impact Development Technical Design Manual. New development or redevelopment projects would be required to implement site design measures, source control measures, stormwater treatment measures, and hydromodification measures to be included in a SWLIDS that must be submitted and approved by the City. These measures minimize the impact of impervious surfaces by including permeable pavement, drainage to landscape areas and bioretention areas, and the collection of rooftop runoff in rain barrels or cisterns. These measures also increase the potential for groundwater recharge. In addition, the GSP prepared for the Santa Rosa Plain Subbasin includes future projects that would promote groundwater recharge, including aquifer recharge, stormwater capture and recharge, and aquifer storage and recovery.

[31] Sonoma Water, 2021, 2020 Urban Water Management Plan, https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

[32] City of Santa Rosa, 2023, SB 610 Water Supply Assessment for the Santa Rosa General Plan 2050.

[33] City of Santa Rosa, 2023, SB 610 Water Supply Assessment for the Santa Rosa General Plan 2050.

If construction dewatering is required for future development within the EIR Study Area and extracted groundwater is discharged to the sanitary sewer, project applicants must apply for a one-time wastewater discharge permit from the City, pursuant to SRCC Section 15.08.050. If groundwater is discharged to surface water or the storm drain, project applicants must obtain coverage under the North Coast RWQCB Order No. R1-2020-0006. Construction dewatering could have a temporary effect on the shallow groundwater aquifer, but this effect would be limited in terms of the quantity of groundwater withdrawn and the duration of the withdrawal. Therefore, construction dewatering would not result in a significant impact in terms of groundwater recharge.

Summary

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality, including groundwater. In addition to the goals, policies, and actions listed under impact discussion HYD-1, the following goals, policies, and actions would serve to minimize potential adverse impacts to groundwater:

- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
  - Policy 5-2.2: Promote the enhancement and expansion of open space for flood management and passive recreation where appropriate and safe.
    - Action 5-2.5: Protect floodplains by retaining and expanding, as feasible, open space areas that can retain stormwater, recharge groundwater/aquifers, and prevent/reduce flooding.
- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.1: Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents.
    - Action 5-9.11: Continue working with the Santa Rosa Plain Groundwater Sustainability Agency to implement the Groundwater Sustainability Plan and achieve sustainability of local groundwater resources.
  - Policy 5-9.4: Ensure that adequate wastewater capacity is available to serve existing and future needs of the city.
    - Action 5-9.28: Improve stormwater management to increase infiltration, provide treatment, promote groundwater recharge, reduce flood risk, capture trash, and enhance the environment.

Compliance with the SRCC requirements for new construction, water efficient landscaping, and the General Plan 2050 goals, policies, and actions identified above would further protect groundwater resources. Therefore, the proposed project would not significantly interfere with groundwater recharge and would not substantially deplete groundwater supplies and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-3	**Implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.**

Potential new development or redevelopment within the EIR Study Area and changes in land use could result in an increase in impervious surfaces. This in turn could result in an increase in stormwater runoff, higher peak discharges to storm drains, the potential to cause nuisance flooding in areas without adequate drainage facilities, and the potential to cause erosion or siltation in streams. Increases in tributary flows can exacerbate creek bank erosion or cause destabilizing channel incision.

Erosion and Siltation

All potential future development under the proposed project would be required to implement construction-phase BMPs as well as post-construction site design, source control measures, and treatment controls in accordance with the requirements of the CGP, the SRCC, the MS4 Permit, and the City's Low Impact Development Technical Design Manual. Typical construction BMPs include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. Each new development or redevelopment project that disturbs one or more acre of land would be required to prepare and submit a SWPPP to the SWRCB that describes the measures to control erosion and sedimentation due to construction activities.

Once future development projects have been constructed, the MS4 permit requirements for new development or redevelopment projects must be implemented and include site design measures, source control measures, LID, and treatment measures that address stormwater runoff and would reduce the potential for erosion and siltation. Site design measures include limits on clearing, grading, and soil compaction; minimizing impervious surfaces; conserving the natural areas of the site as much as possible; complying with stream setback ordinances; and protecting slopes and channels from erosion. LID measures include the use of permeable pavements, directing runoff to pervious areas, and the construction of bioretention areas. The SWLIDS report submitted to the City must also include operation and maintenance procedures and an agreement to maintain any stormwater treatment and control facilities for perpetuity. Adherence to the streambed alteration agreement process under Sections 1601 to 1606 of the California Fish and Game Code would further reduce erosion and siltation impacts that may occur due to streambed alterations. Projects subject to hydromodification must also maintain the pre-project creek erosion potential by implementing various control measures.

In addition, as described under impact discussion GEO-2 in Chapter 4.7, *Geology and Soils*, of this Draft EIR, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 includes proposed Policy 5-1.5, which requires the City to promote erosion-control strategies that reduce hazards to structures, properties, and drainages. This policy is supported by proposed Action 5.1-9 and Action 5-1.10, which require the City to identify enhanced erosion-control measures for properties that exhibit high erosion potential, are in areas of steep slopes, or have experienced past erosion problems and ensure that each update to the Community Wildfire Protection Plan identifies slope stability, wildfire hazard areas, and mitigation strategies to reduce post-wildfire erosion. Implementation of these policies would further minimize impacts related to erosion.

Flooding On- or Off-Site

All potential future development under the proposed project must comply with the requirements of the MS4 Permit and the City's Low Impact Development Technical Design Manual. Regulated projects must implement BMPs, including LID BMPs and site design BMPs, which effectively minimize imperviousness, retain or detain stormwater on-site, decrease surface water flows, and slow runoff rates. Projects that create and/or replace one acre of impervious surface must also adhere to the hydromodification requirements of the MS4 permit and the Low Impact Development Technical Design Manual to ensure that 100 percent of the post-project runoff generated by a 1.0-inch, 24-hour storm event is infiltrated and/or retained on-site. Adherence to these regulatory requirements would minimize the amount of stormwater runoff from new development and redevelopment within the EIR Study Area.

Stormwater Drainage System Capacity

Potential future development that involves the creation and/or replacement of 10,000 square feet or more of impervious surfaces would trigger the implementation of site design measures to reduce stormwater runoff, pursuant to the MS4 Permit and the City's Low Impact Development Technical Design Manual. Prior to the issuance of grading permits, the City will require completion and submittal of a Final SWLIDS report for review and approval to ensure that these requirements are met. Stormwater treatment measures are required to temporarily detain site runoff for projects that create or replace 10,000 square feet or more of impervious surface, using specific numeric sizing criteria based on volume and flow rate. Implementation of these stormwater measures will reduce the amount of stormwater runoff that is ultimately discharged to the City's storm drain system and the creeks that run through Santa Rosa. Projects that create and/or replace one acre or more of impervious surfaces must also adhere to the hydromodification requirements of the MS4 permit and demonstrate that 100 percent of the post-project runoff generated by a 1.0-inch, 24-hour storm event is infiltrated and/or retained on-site.

Projects that meet the MS4 regulatory criteria would need to demonstrate that the regulatory requirements for the sizing and temporary on-site retention of stormwater runoff have been met by submitting a Stormwater Determination Worksheet and a SWLIDS report to the City for review and approval prior to the issuance of grading permits. This would minimize the amount of stormwater runoff from new development and redevelopment sites in the EIR Study Area. Also, as part of the permitting process, future development would be required to pay a stormwater assessment pursuant to SRCC Title 16, which is designed to mitigate the impacts of stormwater discharged into the creeks and waterways in

Santa Rosa. The assessments are used to evaluate and maintain the storm drain system, implement flood control improvements, respond to flooding issues, and restore creeks and habitat.

In addition, new development and redevelopment within the EIR Study Area would not create substantial additional sources of polluted runoff. During the construction phase, projects would be required to prepare SWPPPs, thus limiting the discharge of pollutants from the site. During operation, projects must implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants.

Redirecting Flood Flows

The discussion above regarding on- and off-site flooding is also applicable to the analysis of impeding or redirecting flood flows. Since new development projects are required to comply with the MS4 Permit and retain stormwater on-site via the use of bioretention facilities or other stormwater treatment measures, any flood flows would also be retained for a period of time on-site, which would minimize the potential for flooding impacts. Impact discussion HYD-4 discusses the potential for impeding or redirecting flood flows with development in areas within the 100-year floodplain.

Summary

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts related to hydrology and water quality, including drainage patterns. In addition to the goals, policies, and actions identified under impact discussions HYD-1 and HYD-2, the following goals, policies, and actions would serve to minimize potential adverse impacts related to erosion, flood flows, and storm drain capacity:

- Goal 5-1: Minimize community exposure to seismic and geologic hazards.
  - Policy 5-1.2: Promote erosion-control strategies that reduce hazards to structures, properties, and drainages.
    - Action 5-1.9: Identify enhanced erosion-control measures for properties that exhibit high erosion potential, are in areas of steep slopes, or have experienced past erosion problems.
- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
  - Policy 5-2.1: Ensure land use strategies consider flood impacts and stormwater management tactics to reduce the effects of future inundation.
    - Action 5-2.1: Ensure land use strategies consider flood impacts and stormwater management tactics to reduce the effects of future inundation.
    - Action 5-2.2: Complete and implement the Storm Drain Master Plan.
    - Action 5-2.3: Coordinate with Sonoma Water regarding flood zones, land use, and flood mitigation strategies.
    - Action 5-2.4: Employ flood mitigation strategies in the development of plans and projects along creeks and waterways.

- Policy 5-2.3: Comply with all applicable FEMA flood-management regulations and requirements.
  - Action 5-2.7: Continue to maintain and periodically update flood hazard data, and coordinate with federal, State, and local agencies responsible for flood hazard analysis and management activities.
  - Action 5-2.8: Continue to incorporate into public works projects features and appropriate standards that reduce flooding hazards, including daylighting culverts in urban areas such as downtown.
- Policy 5-2.4: Ensure that the design of new development in a flood zone provides adequate flood protection without negatively impacting adjacent or downstream properties.
  - Action 5-2.9: Require an evaluation of flood hazards and appropriate on-site mitigation options by a qualified professional for any project in a FEMA- and Department of Water Resources (DWR)– designated flood zone during the development review process.

With compliance with the MS4 permit, the City's stormwater requirements, and proposed General Plan 2050 goals, policies, and actions, potential future development under the proposed project would not result in substantial erosion or siltation and would not substantially increase the rate of surface runoff which would result in flooding, impede or redirect flood flows, or exceed the capacity of the drainage system. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-4	**Implementation of the proposed project would not, in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.**

Pollutant Release in Flood Hazard Zones

Buildout pursuant to the General Plan 2050 could involve development of some projects in FEMA 100-year flood zones. As shown on Figure 4.10-3, the land that borders the creeks that run through Santa Rosa are within the 100-year floodplain. Also, the noncontiguous areas west of the city are within the 100-year floodplain of Laguna de Santa Rosa.

Potential future development over the buildout horizon of the proposed project within the 100-year flood zones would be subject to floodplain requirements listed in SRCC Chapter 18-52. Prior to the start of construction or development within a Flood Hazard Area (i.e., 100-year floodplain), the City requires project applicants to obtain a development permit from the City's Floodplain Administrator and construct new development in accordance with the standards in SRCC Section 18-52.080, *Standards of Construction*. The standards of construction vary depending on whether the proposed structure is residential or nonresidential. In general, the standards of construction include provisions for flood risk reduction, including anchoring and flood-resistant materials and construction methods, with the lowest floors elevated at or one foot above the base flood elevation. No permits are issued by the City for structures within floodways, i.e., the drainage area necessary for a 100-year floodplain. Compliance with FEMA's

National Flood Insurance Program requirements and SRCC requirements would reduce potential flood hazards and ensure that pollutants are not released during flood inundation.

Additionally, as discussed in Section 4.10.1.1, *Regulatory Framework*, the Santa Rosa Jurisdictional Annex of the MJHMP includes hazard mitigation actions to help reduce the risk of damage or injury from floods. These actions include continued implementation of floodplain management measures, incorporation of FEMA guidelines into the planning process, and the assessment and mitigation of urban drainage flooding.

Pollutant Release in Dam Inundation Zones

As shown on Figure 4.10-4, areas of Santa Rosa are within the inundation zones of the various dams. The probability of dam failure is very low, and Santa Rosa and Sonoma County have never been impacted by a major dam failure. In addition, dam owners are required to maintain emergency action plans that include procedures for damage assessment and emergency warnings. An EAP identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life should those conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities, such as the City's Santa Rosa Emergency Operations Center. Because the likelihood of catastrophic dam failure is very low, impacts related to the release of pollutants due to dam inundation are not considered significant.

Pollutant Release from Tsunamis and Seiches

Santa Rosa is approximately 25 miles from San Pablo Bay and 15 miles from the Pacific Ocean and is not within any mapped tsunami inundation zone. Therefore, there is no potential for the release of pollutants due to a tsunami.

Although seiches could theoretically occur at reservoirs within or in close proximity to Santa Rosa, the wave heights are usually one foot or less, and dams are typically designed with a freeboard height of at least three feet. Therefore, it is unlikely that a seiche would cause overtopping of a dam or reservoir, resulting in downstream flooding or the release of pollutants. Aboveground water storage tanks in the city could experience a seiche associated with a large earthquake. However, the tanks are constructed to withstand seismic events and would not result in failure that would cause significant flooding or the release of pollutants.

Summary

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality, including release of pollutants. In addition to the goals, policies, and actions identified under impact discussions HYD-1, HYD-2, and HYD-3 the following goal, policy, and actions would serve to minimize potential adverse impacts related to inundation:

- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
    - Policy 5-2.5: Protect public and private properties from dam inundation

- Action 5-2.10: Coordinate with dam owners/operators to ensure that dam safety inspections are conducted annually, as required by the California Division of Safety of Dams (DSOD).
- Action 5-2.11: Prioritize investment in flood-control mitigation that also reduces impacts associated with dam failure.

The proposed General Plan 2050 goals, policies, and actions identified above would address the potential for flooding, dam inundation, and seiches. In conjunction with the implementation of the City's floodplain management requirements, and activation of the City's emergency response system in the case of a dam failure, the potential impact that there would be a release of pollutants from flooding, tsunamis, or seiches would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-5 Implementation of the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Adherence to the State CGP, the SRCC, the MS4 Permit, and City's Low Impact Development Technical Design Manual would ensure that surface and groundwater quality are not adversely impacted during construction and operation of new development pursuant to the proposed General Plan 2050. As a result, site development will not obstruct or conflict with the implementation of the North Coast RWQCB's Basin Plan.

Most of the City's potable water supply is purchased from Sonoma Water, which provides surface water from the Russian River watershed. The City supplements its surface water supplies with groundwater obtained from municipal groundwater wells and accounts for about 6 percent of its total water demand. The City's groundwater supplies are from the Santa Rosa Plain Subbasin, which has been designated by DWR as a medium priority basin and is not in critical overdraft. The City is one of ten GSAs that prepared a GSP for the Santa Rosa Plain Subbasin that was approved by DWR in January 2023.

With buildout of the proposed General Plan 2050, the City anticipates a groundwater pumping rate of up to 2,300 AFY. This is less than the City's historical groundwater pumping rate of 2,870 AFY and well below the 50-year maximum pumping rate projection in the GSP of 3,500 AFY. A pumping rate of up to 2,300 AFY is not anticipated to exceed the groundwater subbasin's sustainable yield.[34] In addition, the GSP contains future projects that will ensure the sustainability of the groundwater subbasin, including aquifer recharge, stormwater capture and recharge, and aquifer storage and recovery. Therefore, the proposed General Plan 2050 would not obstruct or conflict with a groundwater management plan.

As described under impact discussion HYD-1, Chapter 3, *Circulation, Open Space Conservation, and Greenhouse Gas Reduction*, and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contain goals, policies, and actions that require local

[34] City of Santa Rosa, 2023, SB 610 Water Supply Assessment for the Santa Rosa General Plan 2050.

planning and development decisions to consider impacts to hydrology and water quality, including consistency with water quality control plans or sustainable groundwater management plans. With adherence to the proposed General Plan 2050 goals, policies, and actions, and continued compliance with State and City regulatory requirements, the proposed project would not obstruct or conflict with a water quality control plan or groundwater management plan, and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

HYD-6	**Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to hydrology and water quality.**

The geographic context used for the cumulative assessment of hydrology, drainage, flooding, and water quality encompasses the subwatersheds in the EIR Study Area, as shown on Figure 4.10-1. Potential new development in these subwatersheds could increase impervious areas, thus increasing runoff and flows into the storm drainage systems. Potential future development would be required to comply with the MS4 Permit, implement BMPs that direct drainage to landscaped areas, and integrate bioretention facilities into the site design.

All projects would be required to comply with the SRCC and various water quality regulations that control construction-related and operational discharge of pollutants into stormwater. The water quality regulations implemented by the North Coast RWQCB take a basinwide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit encompasses all of the surrounding municipalities to manage stormwater systems and be collectively protective of water quality. Projects in these subwatersheds would implement structural and nonstructural source-control BMPs that reduce the potential for pollutants to enter runoff, and treatment control BMPs that remove pollutants from stormwater.

Projects in the watersheds may be constructed within 100-year flood zones or dam inundation zones. Projects within the 100-year flood zone would be mandated to purchase flood insurance through the National Flood Insurance Program. In addition, Sonoma County and other jurisdictions within these subwatersheds regulate development within flood zones in a similar manner as SRCC Chapter 18-52 and in compliance with FEMA standards to limit cumulative flood hazard impacts.

There have been no dam failures in Santa Rosa or Sonoma County, and the risk of a catastrophic dam failure causing flooding to downstream residents is very low. In addition, in the case of an imminent dam failure, the Sonoma County and Santa Rosa's Emergency Operations Plans would be activated to ensure that residents and businesses are notified and if necessary evacuated in a timely manner.

In summary, cumulative impacts to hydrology, drainage, and flooding would be *less than significant*, and impacts of the proposed project would not be cumulatively considerable.

Significance without Mitigation: Less than significant.

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4.11 LAND USE AND PLANNING

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts related to land use and planning associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts related to land use and planning, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 REGULATORY FRAMEWORK

State Regulations

Cortese-Knox Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000[1] established a Local Agency Formation Commission (LAFCO) in each county in California, and authorized these commissions to review, approve, or deny proposals for boundary changes and incorporations for cities, counties, and special districts. The LAFCO established a "sphere of influence" (SOI) for cities within their jurisdiction that describes the city's probable future physical boundaries and service area. The Santa Rosa SOI is regulated by Sonoma County LAFCO. The Santa Rosa SOI is shown on Figure 3-2, *General Plan 2050 Planning Boundaries and EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR. The City does not propose to annex or de-annex any areas of the SOI as part of the proposed project.

Regional Regulations

Plan Bay Area

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Government (ABAG) adopted *Plan Bay Area* 2050*,* the regional transportation plan/sustainable community strategy on October 21, 2021, as mandated by the Sustainable Communities and Climate Protection Act (Senate Bill 375).[2] *Plan Bay Area* lays out a development scenario for the nine-county Bay Area region that works to align transportation and land use planning in order to reduce vehicle miles traveled (VMT) through modified land use patterns. *Plan Bay Area* projects growth and development patterns through 2050.

[1] California Government Code, Sections 56000–56001.

[2] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, accessed July 21, 2023, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

Plan Bay Area distributes future growth across the San Francisco Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including general plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in Priority Development Area (PDA). In addition to funding transportation and planning projects in PDAs, *Plan Bay Area* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other state legislation.[3]

As described in Chapter 4.0 of this Draft EIR, as part of the implementing framework for *Plan Bay Area*, PDAs and Transit Priority Areas (TPA) are identified as areas where concentrated development can have beneficial environmental effects and reduce adverse environmental impacts. PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development in existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within one-half mile around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR, the EIR Study Area has six PDAs and three TPAs.

Local Regulations

While the City has other local regulations that regulate land use and guide land use decisions, all specific plans, master plans, and zoning in the city must be consistent with the General Plan. The General Plan is the community's overarching policy document that defines a vision for future change and sets the "ground rules" for locating and designing new projects that enhance the character of the community, expanding the local economy, conserving and preserving environmental resources, improving public services and safety, minimizing hazards, and fostering community health. The General Plan, which includes a vision, guiding principles, goals, policies, and actions, functions as the City's primary land use regulatory tool. It provides a basis for judging whether specific development proposals and public projects are in harmony with General Plan policies. It is the constitution for future change in Santa Rosa. The General Plan must be used as the basis for all planning-related decisions made by City staff, the Planning Commission, and the City Council. Other decision-making bodies that rely on the General Plan to guide future decisions include, but are not limited to, the Art in Public Places Committee, Bicycle and Pedestrian Advisory Board, Cultural Heritage Board, Design Review Board, Transportation and Public Works Department, and the Recreation and Parks Department.

[3] Association of Bay Area Governments and Metropolitan Transportation Commission, 2022, Frequently Asked Questions: Does *Plan Bay Area* override local land use control? accessed August 31, 2022, https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851.

4.11.1.2 EXISTING CONDITIONS

The term "existing land use" refers to the existing built environment, which may be different from the general plan or zoning designations that the City applies for planning purposes. The City of Santa Rosa is relatively built out with well-established residential neighborhoods at lower densities than the greater San Francisco Bay Area. Low density, primarily single-family residential is the predominant land use in the city. Single-family residential uses cover 52 percent of the city's 41 square miles. Commercial uses are generally located in the heart of Santa Rosa and along US Highway 101, with 15 unique commercial districts in addition to Downtown Santa Rosa, which operates as a mixed-use district. Over half of all commercial development in the city is strip retail. Industrial uses are generally situated in the northern and southern outskirts of Santa Rosa, often near US Highway 101, and occupy only about 3 percent of the city's land area (718 acres). Outside the city limit, the SOI includes some built-up urban areas, agricultural, and undeveloped land.

4.11.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant land use impact if it would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to land use and planning.

4.11.3 IMPACT DISCUSSION

LU-1 Implementation of the proposed project would not physically divide an established community.

The physical division of an established community typically refers to the construction of a physical feature or the removal of a means of access that would impair mobility within an existing community or between a community and outlying areas.

Potential future development from implementation of the proposed General Plan 2050 would not result in a change in land use or zoning that would cause the construction or removal of any physical features or means of access throughout the EIR Study Area or the region. As discussed in Chapter 3, *Project Description,* of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would primarily occur in the form of infill/intensification on sites already developed and/or underutilized, and/or in close proximity to existing development and infrastructure in the proposed Areas of Change, of which most are in PDAs and TPAs. While the proposed General Plan 2050 does not prohibit development opportunities outside of infill locations, it does require the City to ensure that growth and change serve community needs and protect the environment, as identified in proposed Goal 2-1 of Chapter 2, *Land Use and Economic Development*.

Proposed Policy 2-1.2, which supports Goal 2-1, encourages development that supports community health and quality of life and fosters complete neighborhoods in both established and emerging neighborhoods. Additionally, the proposed General Plan 2050 maintains the existing roadway patterns and would not include any new major roadways or other physical features through existing neighborhoods that would create new physical barriers in the EIR Study Area. Therefore, implementation of the proposed project would not physically divide an established community. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

LU-2	**Implementation of the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.**

Land-Use Plans, Policies, and Regulations

While the proposed General Plan 2050 is the primary planning document for the City of Santa Rosa and the proposed update is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and state laws, implementation of the proposed project has the potential to conflict with "land use" plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For the purposes of this EIR, a "land use" plan is a policy, or regulation that addresses how land is used. The following discusses the proposed project and its relationship to the land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, as listed in Section 4.11.1.1, *Regulatory Framework*.

Sonoma Local Agency Formation Commission

The proposed Santa Rosa SOI is regulated by the Sonoma County LAFCO and any proposed jurisdictional boundary changes, including annexations and detachments of territory to and/or from the city, are subject to Sonoma County LAFCO review and approval. The Sonoma County LAFCO also must review any contractual service agreements and determine the SOI. Although the City does not propose to annex or de-annex any areas of the SOI as part of the proposed General Plan 2050, annexation proposals could occur during the buildout horizon of the proposed General Plan 2050.

Chapter 2, *Land Use and Economic Development*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts from annexations from the SOI to the city limit. The following goal, policies, and actions would serve to minimize impacts from annexations through collaboration with the Sonoma County LAFCO:

- Goal 2-1: Ensure that growth and change serve community needs, protect the environment, improve the City's fiscal stability, and enhance quality of life for all members of the community.
  - Policy 2-1.2: Facilitate future annexations with a thoughtfully designed and transparent strategy that ensures the City's ongoing fiscal health and supports a high quality of life for community members.

- Action 2-1.5: Prepare a specific plan prior to annexation of land in south Santa Rosa, south from the current City boundary to the Urban Growth Boundary, including both the east and west sides of Highway 101 to identify and accommodate needs related to City services, such as fire and police, water, wastewater, stormwater, transportation, and parks.
- Action 2-1.6: Require a fiscal impact analysis for proposed annexations when determined necessary by staff to ensure a full accounting of infrastructure and public service costs and confirm whether revenue enhancement mechanisms are necessary to ensure net fiscal balance.
- Action 2-1.7: Allow annexations or City utility connections only if they do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.
- Action 2-1.8: Work with LAFCO to require all proposed annexations within a county island to prepare a sentiment survey of all property owners in the island to determine the feasibility of annexing the full county island.

- Policy 2-1.3: Promote and participate in cooperative planning efforts with surrounding jurisdictions and the County, especially related to countywide and regional issues such as transportation, waste management, climate resilience and adaptation, hazard mitigation, and affordable housing.
  - Action 2-1.9: Continue to meet with County of Sonoma staff to coordinate land use issues of mutual concern in the Urban Growth Boundary.
- Policy 2-1.6: Maintain consistency between LAFCO and City of Santa Rosa Disadvantaged Unincorporated Community maps.
  - Action 2-1.19: Continue to coordinate with Sonoma Local Agency Formation Commission regarding mapping of Disadvantaged Unincorporated Communities (DUCs) and update the General Plan as necessary to address needs of identified DUCs within the Santa Rosa Sphere of Influence—consistent with Government Code Section 65302.10.(a).

The proposed project acknowledges that the City will follow adopted Sonoma County LAFCO policies to review any proposed SOI changes and annexation requests. Accordingly, the proposed General Plan 2050 would not conflict with or be inconsistent with the Sonoma County LAFCO policies, and the impact would be *less than significant*.

Plan Bay Area

While *Plan Bay Area* is not intended to override local land use control, it provides guidance to the local agencies such as Santa Rosa that focuses on achieving the State's GHG and VMT reduction goals. This includes constructing more infill development in downtowns and centers in close proximity to jobs and services. Chapter 2, *Land Use and Economic Development*, and Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider GHG and VMT reduction goals. The following goals, policies, and actions would serve to support the goals of the *Plan Bay Area*:

- Goal 2-1: Ensure that growth and change serve community needs, protect the environment, improve the City's fiscal stability, and enhance quality of life for all members of the community.
  - Policy 2-1.4: Ensure that City policy, codes, programming, and practices support a range of land uses.
    - Action 2-1.10: Consider updating the Zoning Code to allow for compatible residential and commercial uses in office parks, light industrial areas, and other similar areas.

      Such compatible uses could include, but are not limited to, live-work units, artisan studios/shops, galleries, brew pubs, coffee shops, tasting rooms, sports and entertainment venues, and event spaces.
    - Action 2-1.14: Update the Zoning Code to:
      1. Rezone parcels to ensure consistency with the General Plan.
      2. Rezone Planned Development communities into appropriate zoning districts consistent with General Plan land uses.
      3. Create development standards for Missing Middle Housing types.
- Goal 2-2: Promote city-centered growth and investment with a neighborhood-focused approach to create complete and connected communities that provide community members' daily needs within easy walking or biking distance.
  - Policy 2-2.1: Support development of complete neighborhoods, especially in Areas of Change, ensuring they offer convenient, equitable access to goods and services needed to support daily life, such as healthy food, recreation, active transportation infrastructure, and transit.
    - Action 2-2.1: Work with landowners and developers to encourage development that will increase access to goods and services that support daily life, such as access to fresh produce, recreation and sporting opportunities, community gathering places, active transportation infrastructure, and transit.
  - Policy 2-2.2: Encourage a compact, rather than a scattered, development pattern for new development proposals, particularly in Areas of Change.
    - Action 2-2.5: Explore ways to encourage development in Areas of Change that includes services within one-half mile walking and biking distance of residential neighborhoods
    - Action 2-2.7: Maintain Priority Development Area and Transit-Oriented Community designations in accordance with Plan Bay Area and ongoing ABAG/MTC efforts to ensure consistency with regional planning.
  - Policy 2-2.3: Maintain close land use/transportation relationships to promote multi-modal transportation and discourage travel by automobile in all private development, capital improvement projects, and area plans.

- Goal 2-3: Create dense and varied housing types near transit to reduce greenhouse gas emissions and promote livability.
    - Policy 2-3.1: Ensure that residential developments, including subdivisions and neighborhoods, are designed to foster livability, maintain local and historic character of neighborhoods, and offer diverse housing types to satisfy a wide range of needs and retain local character.
        - Action 2-3.1: Update the Zoning Code to permit residential and mixed-use development by right in some nonresidential zoning districts, as mandated by State law.
        - Action 2-3.2: Identify barriers and/or incentives to mixed-use redevelopment in areas that are currently lacking components of a complete neighborhood and mitigate/implement these

In addition to the proposed General Plan 2050 goals, policies, and actions listed above, see Chapter 4.3, *Air Quality*, Chapter 4.6, *Energy*, Chapter 4.8, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR for complete lists of proposed General Plan 2050 goals, policies, and actions that would minimize conflict with the goals of *Plan Bay Area*. Accordingly, the proposed project would not conflict with or be inconsistent with *Plan Bay Area*, resulting in a *less-than-significant* impact.

Non-Land-Use Plans, Policies, and Regulations

Plans, policies, and regulations concerning a wide range of topics can also have direct and indirect effects on land use decision-making. The proposed General Plan 2050's potential to conflict with other applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect are discussed in detail in the other environmental topic chapters of this Draft EIR. Specifically, these discussions are in Chapter 4.3, *Air Quality*; Chapter 4.4, *Biological Resources*; Chapter 4.5, *Cultural Resources*; Chapter 4.8, *Greenhouse Gas Emissions*; Chapter 4.9, *Hazards and Hazardous Materials*; Chapter 4.10, *Hydrology and Water Quality*; Chapter 4.12, *Noise*; Chapter 4.13, *Population and Housing*; Chapter 4.14, *Public Services, Parks, and Recreation*; Chapter 4.15, *Transportation*; Chapter 4.16, *Tribal Cultural Resources;* Chapter 4.17, *Utilities and Service Systems*; and Chapter 4.18, *Wildfire*. Some of these key regulations include:

- Air Quality. Bay Area Air Quality Management District (BAAQMD) has prepared several plans to attain the National and California ambient air quality standards. The air quality management plans prepared by BAAQMD provide the framework for San Francisco Bay Area Air Basin to achieve attainment of the State and federal ambient air quality standards.
- Biological Resources. The federal Endangered Species Act and California Endangered Species Act protect plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Wildlife. The Migratory Bird Treaty Act protects migratory birds, any of their parts, eggs, and nests. The Bald and Golden Eagle Protection Act of 1940, as amended, provides for the protection of bald eagles and golden eagles. The federal and State Clean Water Acts protect habitat for animals and plants. The Native Plant Protection Act of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State."[4]

[4] California Fish and Game Code Section 1900.

- Cultural and Tribal Cultural Resources. The National Historic Preservation Act defines the responsibilities of federal agencies to protect and preserve Historic Properties. The American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act of 1990 protect Native American artifacts. California Government Code Section 65352.3-5, formerly known as Senate Bill 18, and Assembly Bill 52 are both intended to protect Native American resources as well.
- Greenhouse Gas Emissions and Vehicle Miles Traveled. The *Plan Bay Area* provides guidance to reduce VMT and thus reduce GHG emissions to meet the State's goals.
- Hydrology and Water Quality. The federal and State Clean Water Acts include regulations for protecting water quality. The City of Santa Rosa is within the jurisdiction of the North Coast Regional Water Quality Control Board (Region 1). The North Coast water board addresses regionwide water quality issues through the creation and triennial update of the *Water Quality Control Plan* for the North Coast Region (Basin Plan).
- Natural Hazards. The City of Santa Rosa adopted the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan, which also provides an update to the City's local hazard mitigation plan, on December 2021. The City's local hazard mitigation plan identifies the natural hazards faced by the city, assesses vulnerabilities to these hazards, and identifies mitigation strategies that can be taken to reduce or alleviate the loss of life, personal injury, and property damage that otherwise might result from said natural hazards. Mitigation actions are suggested and carried out by various City departments.
- Population and Housing. ABAG is the official comprehensive planning agency for the Sonoma County area and is responsible for taking the overall Regional Housing Needs Assessment provided by the State and preparing a formula for allocating that housing need by income level across its jurisdiction.
- Utilities and Service Systems. The National Pollutant Discharge Elimination System permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems.

For a complete list and description of the applicable non-land-use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, please see the individual chapters of this Draft EIR listed previously.

Summary

In summary, the proposed project is the primary planning document for the City of Santa Rosa. The proposed General Plan 2050 is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and state laws. Because the proposed General Plan 2050 is the overriding planning document for the City, and because the proposed General Plan 2050 involves amending the current General Plan and the Zoning Ordinance, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

LU-3 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to land use and planning.

The geographic context for the cumulative land use and planning impacts would occur from potential future development under the proposed project combined with impacts of development on lands adjacent to the city.

As discussed under Impact Discussions LU-1 and LU-2, the proposed project would not divide an established community or conflict with established plans, policies, and regulations. The proposed project would not conflict with any State, regional, or local land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Potential future development over the buildout horizon of the proposed project would not create substantial land use impacts. Development would likely continue to occur in the surrounding cities and the unincorporated areas of Sonoma County. However, such development would largely take place in already urbanized areas and would not require development or demolition that would create land use conflicts or divide established communities. Therefore, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts related to land use changes, and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

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4.12 NOISE

This chapter of the Draft Environmental Impact Report (EIR) describes the potential noise impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential noise impacts, and identifies proposed General Plan 2050 goals, policies, and actions, as well as feasible mitigation measures, that would minimize any potentially significant impacts.

4.12.1 ENVIRONMENTAL SETTING

4.12.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." The following are brief definitions of terminology used in this section:

- Sound. A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- Decibel (dB). A unitless measure of sound on a logarithmic scale.
- A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level. The value of an equivalent, steady sound level, which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- Statistical Sound Level (L_n). The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- Day-Night Sound Level (L_{dn} or DNL). The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

- Community Noise Equivalent Level (CNEL). The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 p.m. to 10:00 p.m. and 10 dB from 10:00 p.m. to 7:00 a.m. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- Noise-Sensitive Receptor. Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.
- Peak Particle Velocity (PPV). The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dB are detectable under quiet, controlled conditions and changes of less than 1 dB are usually indiscernible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernable to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by weighting frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Sound Measurement

Sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear’s de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8, and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time, or 1, 5, and 15 minutes per hour. These "L_n" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed subsequently.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law and the County require that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The L_{dn} descriptor uses the same methodology but only adds a 10 dBA increment between 10:00 p.m. and 7:00 a.m. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. Table 4.12-1, *Typical Noise Levels*, shows typical noise levels from familiar noise sources.

TABLE 4.12-1 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation, May 13, 2011, *I-80 Davis OGAC Pavement Noise Study*, https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/davis-noise-study-12yr-report-may2011-a11y.pdf, accessed October 4, 2022.

Vibration Fundamentals

Vibration is an oscillating motion. Like noise, vibration is transmitted in waves, but in this case through earth or solid objects. Unlike noise, vibration is typically felt rather than heard. Vibration can be either natural, as in the form of earthquakes, volcanic eruptions, landslides, or human-made, as from explosions, heavy machinery, or trains. Both natural and human-made vibration may be continuous such as from operating machinery, or impulsive as from an explosion.

Vibration amplitudes are usually described in terms of either vibration decibels (VdB) or peak particle velocity (PPV). Table 4.12-2, *Human and Architectural Reactions to Typical Vibration Levels in Peak Particle Velocity,* and Table 4.12-3, *Human Reaction to Typical Vibration Levels in Vibration Decibels*, present the human reaction to various levels of PPV and VdB, respectively.

TABLE 4.12-2 HUMAN AND ARCHITECTURAL REACTIONS TO TYPICAL VIBRATION LEVELS IN PEAK PARTICLE VELOCITY

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006 to 0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling (houses with plastered walls and ceilings)
0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation, 2020, *Transportation and Construction Vibration Guidance Manual*.

TABLE 4.12-3 HUMAN REACTION TO TYPICAL VIBRATION LEVELS IN VIBRATION DECIBELS

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many humans.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration tolerable only if there are an infrequent number of events per day.

Source: Federal Transit Administration, 2018, *Transit Noise and Vibration Impact Assessmen*t.

Vibrations also vary in frequency, and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz. The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

4.12.1.2 REGULATORY FRAMEWORK

Federal Regulations

Federal Highway Administration

Proposed federal or federal-aided highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes, require an assessment of noise and consideration of noise abatement pursuant to Title 23 of the Code of Federal Regulations (CFR) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The Federal Highway Administration (FHWA) adopted noise abatement criteria for sensitive receivers (e.g., picnic and recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals) when "worst-hour" noise levels approach or exceed 67 dBA L_{eq}.[1]

United States Environmental Protection Agency

In addition to FHWA standards, the United States Environmental Protection Agency (USEPA) has identified the relationship between noise levels and human response. The USEPA has determined that over a 24-hour period, a L_{eq} of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at a L_{eq} of 55 dBA and interior levels are at or below 45 dBA. These levels are relevant to planning and design and useful for informational purposes, but they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated. The USEPA also has set 55 dBA L_{dn} as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA L_{dn}, have settled on the 65 dBA L_{dn} level as their standard. At 65 dBA L_{dn}, activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

United States Department of Housing and Urban Development

The United States Department of Housing and Urban Development (HUD) has set the goal of 65 dBA L_{dn} as a desirable maximum exterior standard for residential units developed under HUD funding. This level is also generally accepted in the State of California.

[1] California Department of Transportation, April 2020, *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf, accessed October 4, 2022.

Federal Transit Administration

The Federal Transit Administration (FTA) has identified construction noise thresholds in the *Transit Noise and Vibration Impact Assessment Manual*,[2] which limit daytime construction noise to 80 dBA L_{eq} at residential land uses and to 90 dBA L_{eq} at commercial and industrial land uses.

The FTA also provides damage criteria during construction vibration exposure depending on building material type and vibration impact criteria for sensitive buildings, residences, and institutional land uses near rail transit and railroads. The thresholds for residences and buildings where people normally sleep (e.g., nearby residences) are 72 VdB for frequent events (more than 70 events of the same source per day), 75 VdB for occasional events (30 to 70 vibration events of the same source per day), and 80 VdB for infrequent events (less than 30 vibration events of the same source per day).

State Regulations

General Plan Guidelines

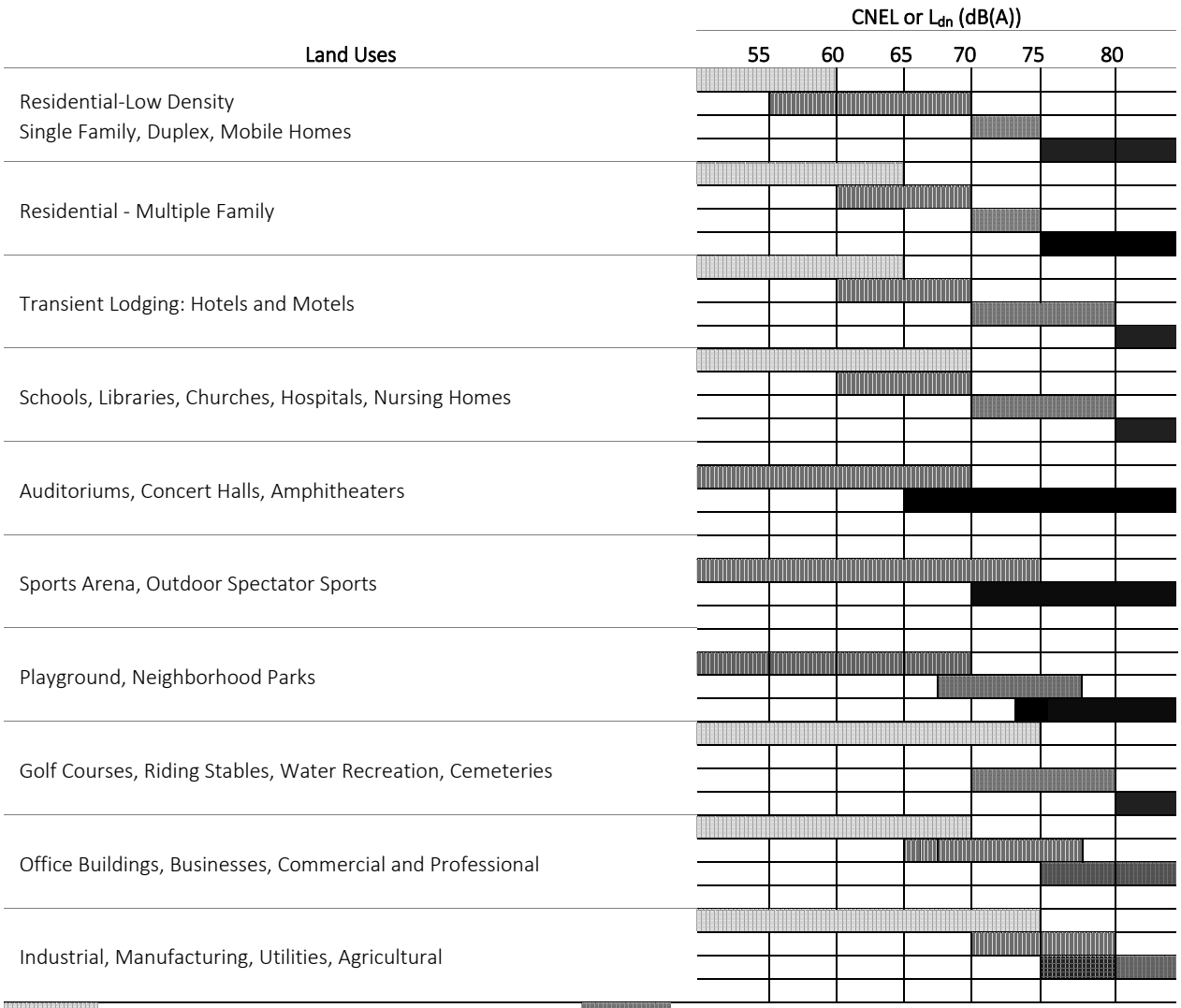
The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels, expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. The General Plan Guidelines provide cities with recommended community noise and land use compatibility standards that can be adopted or modified at the local level based on conditions and types of land uses specific to that jurisdiction. The City of Santa Rosa has not adopted its own noise and land use compatibility guidelines. Therefore, the State of California's guidelines shown in Table 4.12-4, *State Community Noise and Land Use Compatibility*, are applied in this Draft EIR.

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the CCR, commonly referred to as the California Building Code (CBC). The CBC is in Part 2 of Title 24. The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The CBC, Title 24, Part 2, Volume 1, Chapter 12, Section 1207.11.2, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the L_{dn} or the CNEL, consistent with the Noise Element of the local General Plan.

[2] Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment Manual*, FTA Report No. 0123.

TABLE 4.12-4 STATE COMMUNITY NOISE AND LAND USE COMPATIBILITY



Normally Acceptable:
Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

Clearly Unacceptable:
New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research, 2017, *State of California General Plan 2017 Guidelines*, Appendix D.

California Building Code: CALGreen

The State of California's noise insulation standards are codified in the CCR, Title 24, Part 11, *California Green Building Standards Code* (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (Section 5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located in a noise environment of 65 dB(A) CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dB(A) $L_{eq(1hr)}$.

Division of Aeronautic Noise Standards

CCR Title 21 sets forth the State's airport noise standards.[3] In the findings described in Section 5006, the standard states the following: "A level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a CNEL value of 65 dB for purposes of these regulations. This criterion level has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep, and community reaction." Based on this finding, the airport noise standard as defined in Section 5012 is set at a CNEL of 65 dBA. Assembly Bill (AB) 2776 requires any person who intends to sell or lease residential properties in an airport influence area to disclose that fact to the person buying the property.

California Department of Transportation

The California Department of Transportation (Caltrans) recommends a vibration limit of 0.5 inches per second (in/sec) peak particle velocity (PPV) for buildings structurally sound and designed to modern engineering standards. A conservative vibration limit of 0.25 to 0.30 in/sec PPV has been used for older buildings that are found to be structurally sound but cosmetic damage to plaster ceilings or walls is a major concern. For historic buildings or buildings that are documented to be structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. All of these limits have been used successfully and compliance with these limits has not been known to result in appreciable structural damage. All vibration limits referred to herein apply on the ground level and take into account the response of structural elements (i.e., walls and floors) to groundborne excitation.

Assembly Bill 1307

Signed into law on September 7, 2023, AB 1307 amends the California Environmental Quality Act (CEQA) and adds Public Resources Code (PRC) Section 21085. Pursuant to PRC Section 20185 for residential projects, the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment. Accordingly, the noise from residential development projects is limited to construction noise, noise from the operation of the house (e.g., heating, ventilation, and air

[3] California Code of Regulations Airport Noise Standards, Title 21, Public Works Division 2.5, Division of Aeronautics (Department of Transportation), Chapter 6 Noise Standards, Article 1. General.

conditioning [HVAC] equipment), and increases in transportation noise from vehicle trips generated from the residential project.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse noise impacts in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to noise are in Title 17, *Environmental Protection*, and Title 18, *Buildings and Construction,* as follows:

- Chapter 17-16, ***Noise***. This chapter is also known as the City's noise ordinance and is designed to protect people from non-transportation noise sources such as machinery, equipment, pumps, fans, air conditioners, or other similar mechanical devices.
  - Section 17-16.030, ***Ambient Base Noise Level Criteria.*** This section establishes the criteria to be used as a base (ambient noise level) from which noise levels can be compared, as shown in Table 4.12-5, *Ambient Base Noise Level Criteria*.

TABLE 4.12-5 AMBIENT BASE NOISE LEVEL CRITERIA

Zone	Time	Sound Level A (decibels) Community Environment Classification
R-1 and R-2	10:00 p.m. to 7:00 a.m.	45
	7:00 p.m. to 10:00 p.m.	50
	7:00 a.m. to 7:00 p.m.	55
Multi-family	10:00 p.m. to 7:00 a.m.	50
	7:00 a.m. to 10:00 p.m.	55
Office & Commercial	10:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 10:00 p.m.	60
Intensive Commercial [a]	10:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 10:00 p.m.	65
Industrial	Anytime	70

Note:
[a] See Appendix B of the City Clerk's file as set forth on a map on file in the office of the City clerk.
Source: Santa Rosa City Code, Section 17-16.030.

  - Section 17-16.040, ***Standards for Determining Violation***. This section provides a list of qualitative variables to take into account when determining whether a noise disturbs the peace and quiet of a neighborhood, including background noise levels, proximity to residences, time of day, and duration. More specifically, Section 17-16.120, *Machinery and Equipment*, states that noise produced by machinery, equipment, pumps, fans, HVAC, and similar mechanical devices is not to exceed the ambient base noise level by more than 5 dB at receiving properties. Other sections discuss restrictions on noise sources, such as leaf blowers and sound-amplifying equipment.

- Section 17.16-120, *Machinery and Equipment*. This section sets the standards for operating machinery and equipment, which could include construction-related equipment, not to exceed ambient base noise level by more than 5 dB at receiving properties.
- Section 17-16.170, *Regulations Generally*. This section limits the operation of sound-amplifying equipment at commercial and noncommercial uses to between the hours of 9:00 a.m. and 6:00 p.m. each day except Sunday and legal holidays. No operation of sound-amplifying equipment for commercial purposes shall be permitted on Sundays or legal holidays. The operation of sound-amplifying equipment for noncommercial purposes on Sundays and legal holidays shall only occur between the hours of 10:00 a.m. and 6:00 p.m. Additionally, noise levels emanating from sound-amplifying equipment shall not exceed 15 dBA above the ambient base noise levels in Table 4.12-5. Sound-amplifying equipment shall not be operated within 200 feet of churches, schools, or hospitals.
- Chapter 18-16, *California Building Code*. Section 18-16.010, *Citation of California Building Code,* adopts the CBC in its entirety, subject, however, to the amendments, additions, and deletions set forth in this chapter. The purpose of the CBC is to prescribe regulations governing the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area, and maintenance of all buildings and structures in the city. By regulating the design and construction of excavations, foundations, building frames, retaining walls, and other structures, the City's Building Code provides protections during the design, permitting, and construction of structures intended for human occupancy.
- Chapter 18-42, *California Green Building Standards Code*. Section 18-42.010, *Citation of California Green Building Standards Code,* adopts all sections of the California Green Building Standards Code, Part 11 of Title 24, 2022 Edition, published by the California Building Standards Commission, including its appendices, to, amongst other things, control interior noise levels resulting from exterior noise sources.

4.12.1.3 EXISTING CONDITIONS

Noise-Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals, are particularly sensitive to noise and vibration. Noise-sensitive receptors in the EIR Study Area include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities that are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration.

Ambient Noise Measurements

Noise from transportation activity is the primary component of the noise environment in Santa Rosa. Transportation corridors that traverse the city, such as US Highway 101 and State Route (SR) 12; major arterial roadways, such as Santa Rosa Avenue and Stony Point Road; and train activity along the Sonoma-Marin Area Rapid Transit (SMART) corridor, are the predominant sources of environmental noise. Aircraft

associated with the Charles M. Schulz-Sonoma County Airport also contribute to the noise environment during overflights. Lastly, portions of the city include industrial land uses that contribute to the noise environment in localized areas.

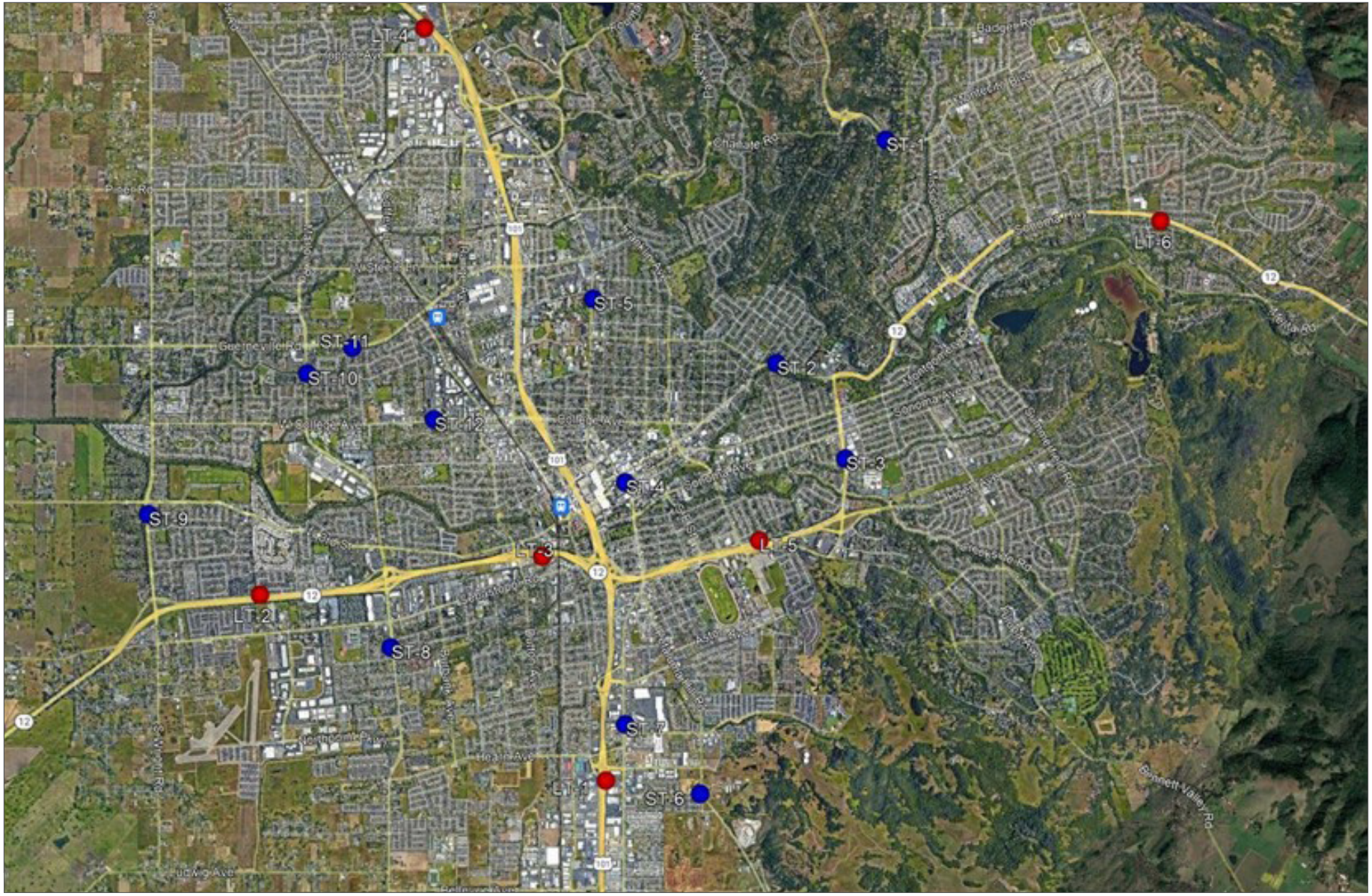
The monitoring was completed to establish existing sources and noise levels in the city. Long-term (LT) measurements made hour-by-hour over a period of 24 hours or more provide information on how noise levels vary throughout the day and night and how noise levels may vary from day to day. A series of attended short-term (ST) measurements were also made. The person attending the measurements identified the noise sources that occurred during the measurement and noted the level of noise associated with identifiable events, which assisted in quantitatively and qualitatively characterizing the noise environments along the major roadways and also in the quieter areas. The day-night average noise level (L_{dn}) is the metric used in the city to characterize the 24-hour average noise exposure level. It is also important to know how noise levels vary within each hour of the day and night. For this purpose, standard acoustical descriptors L_{eq}, L_{max}, L_1, L_{10}, L_{50}, L_{90}, and L_{min} were also measured and reported.

The ambient noise monitoring survey was completed between Wednesday, May 3, 2023, and Friday, May 5, 2023. Six long-term (LT) noise measurements (LT-1 through LT-6) and 12 short-term (ST) (10-minute duration) noise measurements (ST-1 through ST-12) were made within the EIR Study Area. The measurement locations are shown on Figure 4.12-1, *Long-Term and Short-Term Noise Measurement Locations*.

Long-Term Noise Monitoring

The LT measurements were made hour-by-hour over a period of 24 hours between Wednesday, May 3, 2023, and Friday, May 5, 2023. A description of each LT location is provided herein:

- LT-1 was at the western boundary of the Cost Plus parking lot near the US Highway 101 northbound off-ramp at Yolanda Avenue, approximately 90 feet from the centerline of the nearest through lane of US Highway 101 northbound and approximately 40 feet from the nearest lane of the off-ramp. LT-1 was positioned above the existing six-foot sound wall along the perimeter of the shopping center.
- LT-2 was positioned in the northeast corner of the Occidental Road/Michael Drive intersection, approximately 45 feet north of the centerline of Occidental Road and approximately 120 feet north of the centerline of the nearest through lane of westbound SR 12.
- LT-3 was at Holbrook Street, approximately 115 feet south of the nearest through lane along eastbound SR 12 and approximately 515 feet west of the center of the SMART tracks.
- LT-4 was along the northern boundary of the Kohl's parking lot, approximately 70 feet southwest of the centerline of the nearest through lane of southbound US Highway 101.
- LT-5 was made along Maple Avenue between Gordon Lane and Brookwood Avenue. LT-5 was approximately 25 feet north of the centerline of Maple Avenue and approximately 150 feet north of the centerline of the nearest through lane of westbound SR 12.
- LT-6 was made in the southwestern corner of the SR 12/Peppertree Lane intersection, approximately 60 feet south of the centerline of the nearest through lane of eastbound SR 12.



Source: © Google Earth, 2023.

Long-term (LT) noise monitoring

Short-term (ST) noise monitoring

Figure 4.12-1

Long-Term and Short-Term Noise Measurement Locations

Table 4.12-6, *Summary of Long-Term Noise Monitoring*, summarizes measurement details of each LT measurement location.

TABLE 4.12-6 SUMMARY OF LONG-TERM NOISE MONITORING

Receptor ID	Location	Hourly Average Noise Levels, dBA L_{eq}		Day-Night Average Noise Level, dBA L_{dn}
		Daytime Hours (7:00 a.m. to 10:00 p.m.)	Nighttime Hours (10:00 p.m. to 7:00 a.m.)	
LT-1	Western boundary of Cost Plus parking lot near US Highway 101 northbound exit at Yolanda Avenue	70 to 76	66 to 75	78
LT-2	Northeast corner of Occidental Road/Michael Drive	69 to 75	59 to 73	75
LT-3	Along Holbrook Street, ~115 feet south of centerline of nearest through lane of eastbound SR 12	62 to 66	54 to 66	68
LT-4	Northern boundary of Kohl's parking lot, ~70 feet southwest of centerline of nearest through lane of southbound US Highway 101	68 to 79	65 to 78	80
LT-5	Along Maple Avenue, ~150 feet north of the centerline of nearest through lane of eastbound SR 12	67 to 74	57 to 72	74
LT-6	Southwest corner of SR 12/Peppertree Lane	64 to 76	53 to 69	71

Source: Illingworth and Rodkin, 2023.

Short-Term Noise Monitoring

Short-term measurements at ST-1 through ST-5 were made on Wednesday May 3, 2023, between 12:20 p.m. and 2:10 p.m. in 10-minute increments. Measurements at ST-6 through ST-12 were made on Thursday May 4, 2023, between 9:10 a.m. and 12:10 p.m. in 10-minute increments. A description of each ST location is provided herein:

- ST-1 measurements were made at the end of Montecito Avenue, approximately 70 feet from the centerline of Fountaingrove Parkway, which was the dominant noise at ST-1. During this 10-minute period, 206 passenger vehicles passed ST-1 along Fountaingrove Parkway, generating noise levels of 57 to 75 dBA.
- ST-2 measurements were made in the northeastern corner of the 4th Street/Diamond Court intersection. Traffic along 4th Street was the dominant noise source, with passenger vehicles generating noise levels of 64 to 74 dBA and heavy trucks generating noise levels of 73 to 75 dBA.
- ST-3 measurements were made along the western boundary of the Ross Dress for Less parking lot, approximately 70 feet from the centerline of Farmers Lane, which was the dominant noise source at ST-3. Passenger vehicles along Farmers Lane generated noise levels of 60 to 76 dBA, and heavy trucks generated noise levels of 69 to 76 dBA during the ST-3 measurement.
- ST-4 measurements were made at the Old Courthouse Square, approximately 45 feet north of the centerline of 3rd Street. Passenger vehicles (57 to 70 dBA) and a single bus (67 dBA) along 3rd Street were the dominant noise sources.

- ST-5 measurements were from the parking lot along Mendocino Avenue between Dexter Street and Carr Avenue. ST-5 was approximately 60 feet east of the centerline of Mendocino Avenue, which was the dominant noise source at ST-5. Passenger vehicles (58 to 79 dBA) and a single bus (76 dBA) along 3rd Street were the dominant noise sources.
- ST-6 measurements were made at the Petaluma Hill Road/Old Petaluma Hill Road intersection, approximately 65 feet west of the centerline of Petaluma Hill Road, which was the dominant noise source at ST-6. During this 10-minute period, traffic along Petaluma Hill Road consisted of passenger vehicles (63 to 78 dBA), heavy trucks (75 dBA), and motorcycles (73 dBA).
- ST-7 measurements were made at the western boundary of the parking lot of Applebee's Grill and Bar along Santa Rosa Avenue, approximately 80 feet from the centerline of ST-7. Traffic along Santa Rosa Avenue, consisting of passenger vehicles (58 to 75 dBA), heavy trucks (70 to 74 dBA), and buses (71 dBA), was the dominant noise source.
- ST-8 measurements were made at the southwestern corner of the Stony Point Road/Mesa Way intersection, approximately 70 feet from the centerline of Stony Point Road. Traffic along Stony Point Road, consisting of passenger vehicles (60 to 77 dBA), heavy trucks (71 to 75 dBA), and buses (70 dBA), was the dominant noise source.
- ST-9 measurements were made south of the parking lot of commercial retail uses located at 2496 West 3rd Street, approximately 75 feet east of the centerline of Fulton Road. Passenger vehicles (54 to 75 dBA) and heavy trucks (65 to 77 dBA) along Fulton Road were the dominant noise sources.
- ST-10 measurements were made between residences at 1951 Jennings Avenue and 1950 Greeneich Avenue, representing the backyards of both residences. ST-10 was approximately 60 feet east of the centerline of Marlow Road, which was the dominant noise source at ST-10 and consisted of passenger vehicles (60 to 76 dBA) and a single bus (79 dBA).
- ST-11 measurements were made along Guerneville Road, representing the backyards of residences at 1660 and 1658 Ridley Avenue. ST-11 was approximately 60 feet south of the centerline of Guerneville Road, which was the dominant noise source and consisted of passenger cars (60 to 77 dBA), heavy trucks (75 dBA), and buses (74 dBA).
- ST-12 measurements were made at the West College Avenue/Eardley Avenue intersection, approximately 60 feet north of the centerline of West College Avenue. Traffic along West College Avenue, consisting of passenger vehicles (61 to 76 dBA), heavy trucks (74 dBA), and motorcycles (74 dBA), was the dominant noise.

Table 4.12-7, *Summary of Short-Term Noise Monitoring*, summarizes measurement details of each ST measurement location.

TABLE 4.12-7 SUMMARY OF SHORT-TERM NOISE MONITORING

Receptor ID	Location	Date, Time	10-minute Noise Level Measurements, dBA					
			L_{max}	L_1	L_{10}	L_{50}	L_{max}	10-minute L_{eq}
ST-1	Side yard equivalent at 5710 Montecito Avenue	5/3/2023, 12:20 to 12:30	75	73	70	63	53	66
ST-2	Side yard equivalent at 2129 4th Street	5/3/2023, 12:50 to 13:00	75	74	72	69	62	69
ST-3	Parking lot of 750 Farmers Lane (Ross Dress for Less)	5/3/2023, 1:10 to 1:20	76	75	72	68	60	69
ST-4	Front of Old Courthouse Square along 3rd Street	5/3/2023, 1:40 to 1:50	70	69	67	61	56	63
ST-5	At parking lot along Mendocino Avenue between Dexter Street and Carr Avenue	5/3/2023, 2:10 to 2:20	79	77	71	67	60	68
ST-6	At the intersection of Petaluma Hill Road and Old Petaluma Hill Road	5/4/2023, 9:10 to 9:20	78	73	70	66	57	67
ST-7	Parking lot of 2250 Santa Rosa Avenue (Applebee's Grill + Bar)	5/4/2023, 9:30 to 9:40	75	73	68	63	56	65
ST-8	Side yard equivalent at 1103 Stony Point Road	5/4/2023, 10:10 to 10:20	77	76	72	62	52	67
ST-9	South of parking lot of 2496 West 3rd Street, along Fulton Road	5/4/2023, 10:30 to 10:40	77	74	69	63	49	65
ST-10	Backyard equivalent of 1951 Jennings Avenue and 1950 Greeneich Avenue, along Marlow Road	5/4/2023, 11:00 to 11:10	79	75	72	66	56	68
ST-11	Backyard equivalent of 1660 and 1658 Ridley Avenue, along Guerneville Road	5/4/2023, 11:20 to 11:30	77	76	73	65	52	68
ST-12	At the intersection of West College Avenue and Eardley Avenue	5/4/2023, 12:00 to 12:10	76	74	72	67	58	68

Source: Illingworth and Rodkin, 2023.

Vehicular Noise

SoundPLAN Version 8.2, a three-dimensional ray-tracing computer program, was used to develop the traffic noise contours calculated for the Existing (2019) traffic conditions along major roadways in the EIR Study Area. Calculations accounted for the source of noise (traffic), the frequency spectra of the noise source, traffic speeds, vehicle mix information, and the topography of the area. In order to provide a credible worst-case assessment of existing and future traffic noise conditions throughout the city, the modeling did not incorporate existing buildings or barriers, including centerline K-rails on the expressway medians, into the calculations. The geometric data used to create the model were based on GIS information provided by the City. Existing (2019) peak hour traffic data and traffic speeds provided by the traffic consultants (W-Trans) were input into the model for local roadways and expressways. A truck mix of 1 percent was used along the local roadways, while truck mix along US Highway 101 and SR 12 were

obtained from the Caltrans website.[4] Through Santa Rosa, heavy and medium trucks consist of 3 percent each along US Highway 101 and consist of 1 percent and 2 percent, respectively, along SR 12.

The noise contours represent the primary traffic noise sources in the EIR Study Area. Figure 4.12-2, *Traffic Noise Contours for the Existing (2019) Scenario*, provides the existing (2019) traffic noise contours for the EIR Study Area.

Table 4.12-8, *Existing Noise Levels in the EIR Study Area*, summarizes the Existing L_{dn} noise levels, as measured at a distance of 75 feet from the centerline of the roadway. For all receptors along US Highway 101 and SR 12, 75-foot distances were measured from the centerline of the nearest through lane.

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
US Highway 101	South of Todd Road	81
	Todd Road to Yolanda Avenue	81
	Yolanda Avenue to Baker Avenue	81
	Baker Avenue to SR 12	82
	SR 12 to 3rd Street	81
	3rd Street to College Avenue	82
	College Avenue to Steele Lane/ Guerneville Road	82
	Steele Lane/Guerneville Road to Bicentennial Way	82
	North of Bicentennial Way	80
SR 12	Farmers Lane to Brookwood Avenue	78
	Brookwood Avenue to US Highway 101	79
	US Highway 101 to Dutton Avenue	79
	Dutton Avenue to Stony Point Road	78
	West of Stony Point Road	75
3rd Street	Brookwood Avenue to E Street	57
	E Street to Santa Rosa Avenue	60
	Santa Rosa Avenue to B Street	64
	B Street to US Highway 101	72
	US Highway 101 to Olive Street/ Railroad Street /Wilson Street	73
	Olive Street/Railroad Street/ Wilson Street to Dutton Avenue	65
	Dutton Avenue to Stony Point Road	65
	Stony Point Road to Fulton Road	67
Administration Drive	West of Mendocino Avenue	59
Aston Avenue/Allan Way	Petaluma Hill Road to Brookwood Avenue	61
B Street	South of 3rd Street	64
	3rd Street to Healdsburg Avenue/Mendocino Avenue	62

[4] Caltrans Traffic Census Program. https://dot.ca.gov/programs/traffic-operations/census

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Badger Road	Calistoga Road to Wallace Road	55
Bellevue Avenue	East of Dutton Avenue	65
	Dutton Avenue to Stony Point Road	62
Bennett Valley Road	Santa Rosa Avenue to E Street	73
	E Street to Brookwood Avenue	73
	Brookwood Avenue to Farmers Lane	71
	Farmers Lane to Tachevah Drive	67
	Tachevah Drive to Bethards Drive	64
	Bethards Drive to Yulupa Avenue	53
	East of Yulupa Avenue	55
Bethards Drive	Bennett Valley Road to Yulupa Avenue	63
	Yulupa Avenue to Creekside Road	59
	Creekside Road to Summerfield Road	61
Bicentennial Way	Fountaingrove Parkway to Mendocino Avenue	68
	Mendocino Avenue to US Highway 101	70
	US Highway 101 to Range Avenue	72
Brookwood Avenue	Kawana Springs Road to Linwood Avenue	57
	Aston Avenue to SR 12	62
	SR 12 to Sonoma Avenue	67
	Sonoma Avenue to 3rd Street	66
	3rd Street to College Avenue	67
Brush Creek Road	Sonoma Highway to Fountaingrove Parkway	60
	Fountaingrove Parkway to Badger Road	61
Bryden Lane	4th Street to Montecito Avenue	65
Burbank Avenue	Hearn Avenue to Sebastopol Road	59
Calistoga Road	Sonoma Highway to Montecito Boulevard	64
	Montecito Boulevard to Badger Road	67
	North of Badger Road	66
Chanate Road	Mendocino Avenue to Franklin Avenue	66
	Franklin Avenue to Parker Hill Road	66
	Parker Hill Road to Fountaingrove Parkway	63
Cleveland Avenue	9th Street to College Avenue	67
	College Avenue to Frances Street/ Range Avenue	71
	Frances Street/Range Avenue to Guerneville Road	73
	Guerneville Road to Bicentennial Way	71
	Bicentennial Way to Piner Road	74
	Piner Road to Hopper Avenue	68

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Coffey Lane	Guerneville Road to Steele Lane	59
	Steele Lane to Piner Road	59
	Piner Road to Pine Meadows Drive/Barnes Road	66
	Pine Meadows Drive/Barnes Road to Hopper Avenue	60
	North of Hopper Avenue	58
Colgan Avenue	Santa Rosa Avenue to Petaluma Hill Road	61
College Avenue	4th Street to Brookwood Avenue	65
	Brookwood Avenue to E Street	68
	E Street to Mendocino Avenue	69
	Mendocino Avenue to US Highway 101	71
	US Highway 101 to Cleveland Avenue	74
	Cleveland Avenue to Dutton Avenue	72
	Dutton Avenue to Stony Point Road	68
	Stony Point Road to Fulton Road	66
Corby Avenue	Bellevue Avenue to US Highway 101 southbound ramps	78
	US Highway 101 southbound ramps to Hearn Avenue	69
	North of Hearn Avenue	67
Corporate Center Parkway	Northpoint Parkway to Sebastopol Road	65
Cross Creek Road	North of Thomas Lake Harris Drive	59
Cypress Way	Hoen Avenue to Creekside Road	58
Dutton Avenue	South of Bellevue Avenue	60
	North of Bellevue Avenue	57
	Hearn Avenue to Sebastopol Road	62
	Sebastopol Road to SR 12	68
	SR 12 to 3rd Street	72
	3rd Street to College Avenue	62
	College Avenue to Guerneville Road	69
E Street	Maple Avenue to Sonoma Avenue	62
	Sonoma Avenue to 3rd Street	62
	3rd Street to 4th Street	65
	4th Street to College Avenue	62
Farmers Lane	Bennett Valley Road to SR 12	68
	SR 12 to Hoen Avenue	70
	Hoen Avenue to Sonoma Avenue	70
	Sonoma Avenue to Montgomery Drive	69
	Montgomery Drive to 4th Street	69

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Fountaingrove Parkway	Brush Creek Road to Chanate Road	66
	Chanate Road to Thomas Lake Harris Drive	61
	Thomas Lake Harris Drive to Stagecoach Road/Parker Hill Road	63
	Stagecoach Road/Parker Hill Road to Bicentennial Way	67
	Bicentennial Way to Old Redwood Highway	67
	Old Redwood Highway to US Highway 101	74
Frances Street/ Range Avenue	Cleveland Avenue to Guerneville Road	61
	Guerneville Road to Steele Lane	65
	Steele Lane to Bicentennial Way	68
	Bicentennial Way to Piner Road	70
Franklin Avenue/ Humboldt Street	Poppy Drive to Chanate Road	64
Fulton Road	SR 12 to Occidental Road	72
	Occidental Road to 3rd Street	70
	3rd Street to College Avenue	71
	College Avenue to Guerneville Road	71
	Guerneville Road to Piner Road	70
	Piner Road to Wood Road/ Francisco Avenue	71
	North of Wood Road/Francisco Avenue	71
Guerneville Road	Steele Lane to Range Avenue	67
	Range Avenue to Coffey Lane	69
	Coffey Lane to Dutton Avenue	70
	Dutton Avenue to Marlow Road	69
	Marlow Road to Fulton Road	67
	West of Fulton Road	67
Hall Road	West of Fulton Road	60
Healdsburg Avenue	B Street to Mendocino Avenue	61
Hearn Avenue	Santa Rosa Avenue to Corby Avenue	73
	Corby Avenue to Dowd Drive	70
	Dowd Drive to Dutton Avenue	67
	Dutton Avenue to Burbank Avenue	63
	Burbank Avenue to Stony Point Road	58
Hoen Avenue	Summerfield Road to Yulupa Avenue	65
	Yulupa Avenue to Cypress Way	67
	Cypress Way to Farmers Lane	60
	Farmers Lane to Sonoma Avenue	53
Hoen Frontage Road	Farmers Lane to Hoen Avenue	67
Hopper Avenue	Cleveland Avenue to Coffey Lane	66
	Coffey Lane to Barnes Road	56

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Kawana Springs Road	Santa Rosa Avenue to Petaluma Hill Road	62
	Petaluma Hill Road to Brookwood Avenue	62
	East of Brookwood Avenue	57
Ludwig Avenue	Stony Point Road to Wright Road	62
Maple Avenue	Brookwood Avenue to E Street	73
	E Street to Santa Rosa Avenue	72
Marlow Road	College Avenue to Guerneville Road	68
	Guerneville Road to Steele Lane	65
	Steele Lane to Piner Road	65
Mendocino Avenue	4th Street to College Avenue	59
	College Avenue to Pacific Avenue	70
	Pacific Avenue to Steele Lane	70
	Steele Lane to Chanate Road	67
	Chanate Road to Bicentennial Way	70
	Bicentennial Way to Fountaingrove Parkway	68
Middle Rincon Road	Sonoma Highway to Montecito Boulevard	65
	Montecito Boulevard to Badger Road	60
Mission Boulevard	Montgomery Drive to Sonoma Highway	65
	Sonoma Highway to Montecito Boulevard	66
Montecito Boulevard	Calistoga Road to Middle Rincon Road	67
	Middle Rincon Road to Mission Boulevard	67
	Mission Boulevard to Brush Creek Road	66
Montgomery Drive	East of Mission Boulevard	67
	Mission Boulevard to Summerfield Road	68
	Summerfield Road to Farmers Lane	68
	Farmers Lane to 3rd Street	60
North Street	College Avenue to Pacific Avenue	61
	North of Pacific Avenue	56
Northpoint Parkway	Stony Point Road to Corporate Center Parkway	66
	West of Corporate Center Parkway	58
Occidental Road	Stony Point Road to Wright Road	71
	West of Wright Road	65
Old Redwood Highway	North of Fountaingrove Parkway	72
Olive Street/Railroad Street	South of Sebastopol Road	68
	North of Sebastopol Road	66
Pacific Avenue	Montecito Avenue to North Street	65
	North Street to King Street	61
	King Street to Mendocino Avenue	63

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Parker Hill Road	Chanate Road to Fountaingrove Parkway	59
Petaluma Hill Road	South of Yolanda Avenue	64
	Yolanda Avenue to Kawana Springs Road	65
	Kawana Springs Road to Colgan Avenue	66
	Colgan Avenue to Santa Rosa Avenue	65
Pine Meadows Drive/ Barnes Road	Coffey Lane to Hopper Avenue	54
	North of Hopper Avenue	58
Piner Road	Cleveland Avenue to Range Avenue	69
	Range Avenue to Coffey Lane	69
	Coffey Lane to Marlow Road	70
	Marlow Road to Fulton Road	66
	West of Fulton Road	65
Santa Rosa Avenue	South of Todd Road	69
	Todd Road to Bellevue Avenue	68
	Bellevue Avenue to Yolanda Avenue	69
	Yolanda Avenue to Hearn Avenue	69
	Hearn Avenue to Kawana Springs Road	68
	Kawana Springs Road to Colgan Avenue	68
	Colgan Avenue to Petaluma Hill Road	70
	Petaluma Hill Road to SR 12	71
	SR 12 to Sonoma Avenue	66
	Sonoma Avenue to 3rd Street	63
Sebastopol Road	Olive Street to Dutton Avenue	62
	Dutton Avenue to Burbank Avenue	68
	Burbank Avenue to Stony Point Road	65
	Stony Point Road to Corporate Center Parkway	69
	Corporate Center Parkway to Wright Road	67
Sonoma Avenue	Summerfield Road to Yulupa Avenue	63
	Yulupa Avenue to Farmers Lane	65
	Farmers Lane to Brookwood Avenue	66
	Brookwood Avenue to E Street	64
	E Street to Santa Rosa Avenue	65

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Sonoma Highway/4th Street	East of Calistoga Road	70
	Calistoga Road to Middle Rincon Road	70
	Middle Rincon Road to Mission Boulevard	70
	Mission Boulevard to Brush Creek Road	71
	Brush Creek Road to Farmers Lane	71
	Farmers Lane to Bryden Lane	68
	Bryden Lane to College Avenue	67
	College Avenue to Brookwood Avenue	65
	Brookwood Avenue to E Street	64
	E Street to Mendocino Avenue	56
	Mendocino Avenue to B Street	59
Standish Avenue	Todd Road to Robles Avenue	62
Steele Lane	Mendocino Avenue to US Highway 101	70
	US Highway 101 to Guerneville Road	74
	Guerneville Road to Coffey Lane	64
	Coffey Lane to Marlow Road	62
Stony Point Road	South of Todd Road	69
	Todd Road to Bellevue Avenue	69
	Bellevue Avenue to Hearn Avenue	69
	Hearn Avenue to Northpoint Parkway	69
	Northpoint Parkway to Sebastopol Road	67
	Sebastopol Road to SR 12	71
	SR 12 to 3rd Street	69
	3rd Street to College Avenue	69
Summerfield Road	Bethards Drive to Horseshoe Drive/Santa Rosita Court	64
	Horseshoe Drive/Santa Rosita Court to Hoen Avenue	64
	Hoen Avenue to Sonoma Avenue	63
	Sonoma Avenue to Montgomery Drive	64
Tachevah Drive	Bennett Valley Road to Yulupa Avenue	62
	Yulupa Avenue to Bethards Drive	56
Thomas Lake Harris Drive	East of Cross Creek Road	61
	West of Cross Creek Road	57
Todd Road	Stony Point Road to Standish Avenue	67
	Standish Avenue to US Highway 101	69
	US Highway 101 to Santa Rosa Avenue	68
	East of Santa Rosa Avenue	59
Wallace Road	North of Badger Road	57
Wiljan Court/Dowd Drive	Bellevue Avenue to Hearn Avenue	61

TABLE 4.12-8 EXISTING NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA
Roadway	Segment	Existing (2019)
Wilson Street	3rd Street to 9th Street	66
Wright Road	Ludwig Avenue to Sebastopol Road	63
	Sebastopol Road to SR 12	69
Yolanda Avenue	US Highway 101 to Petaluma Hill Road	61
Yulupa Avenue	Bennett Valley Road to Bethards Drive	64
	Bethards Drive to Tachevah Drive	66
	Tachevah Drive to Creekside Road	65
	Creekside Road to Hoen Avenue	65
	Hoen Avenue to Sonoma Avenue	63
	Sonoma Avenue to Montgomery Drive	59
	North of Montgomery Drive	64

Source: Illingworth and Rodkin, 2023.

Aircraft Noise

The Charles M. Schulz-Sonoma County Airport is located more than two miles northwest of the EIR Study Area. The future 2030 noise exposure map provided in the Sonoma County General Plan 2020 is shown on Figure 4.12-3, *Charles M. Schulz Sonoma County Airport 2030 Noise Contours*. As shown on Figure 4.12-3, the EIR Study Area falls outside the Airport Land Use Compatibility Referral Area, which is considered to be the area of influence with regard to aircraft noise.

Railroad Noise

Railroad operations in the EIR Study Area from the SMART rail and the Northwest Pacific Railroad (NWPRR) rail line are a substantial source of noise in areas nearest railroad crossings. Day-night average noise levels vary throughout the community depending on the number of trains operating along a given rail line per day, the timing and duration of train pass-by events, and whether or not trains must sound their warning whistles near "at-grade" crossings.

To the west of US Highway 101, the NWPRR rail line runs north-south through the EIR Study Area. The SMART Project Supplemental EIR (SMART EIR) states that the proposed NWPRR's freight service would add up to six freight train pass-bys per day between Novato and Santa Rosa. The six pass-bys per day would be generated by three North Coast Railroad Authority freight trains: two with two locomotives and up to 60 rail cars, and one train of up to 25 rail cars. The SMART EIR also states that freight train speeds would be limited to 25 mph in some areas. Weekday commuter rail passenger service would involve 12 round trips per day with a service frequency of 30 minutes in peak periods and weekend passenger rail

service would involve four round trips per day.[5] Estimates in the SMART EIR indicate that the cumulative noise exposure levels from passenger and six freight pass-bys per day running at 25 mph would be around 56 dBA L_{dn} at 100 feet from the track centerline.[6] This estimate assumes that the freight operations do not occur at night (between the hours of 10:00 p.m. and 7:00 a.m.). With one nighttime freight train, noise level would increase to "over 68 L_{dn} within 50 feet of the tracks." Considering that most of the passenger train operations would occur during the daytime (i.e., 7:00 a.m. to 10:00 p.m.), some nighttime freight operations could be expected along this rail line.

When railroad trains approach a passenger station or at-grade crossing, they are required to sound their warning whistle within 0.25 miles. Trains are required to sound a long signal followed by a short signal when approaching stations, curves, or other points where view may be obscured, and when approaching passenger or freight trains. When passing a standing train, the moving train is required to sound two long signals followed by a short signal followed by a long signal, the same requirement when signaling for at-grade crossings.

Information provided in the SMART EIR indicates that the train horns could produce maximum noise levels of approximately 100 dBA at 100 feet from the track, and the engines of passing trains can produce maximum noise levels of up to 85 dBA at 100 feet from the track.[7] As tracks have been reconstructed to prepare for SMART use, at-grade crossings between Guerneville Road in Santa Rosa and downtown San Rafael have been upgraded with special crossing gates and traffic islands required for Quiet Zones[8] to keep motorists from being able to drive onto the train tracks.

Stationary Source Noise

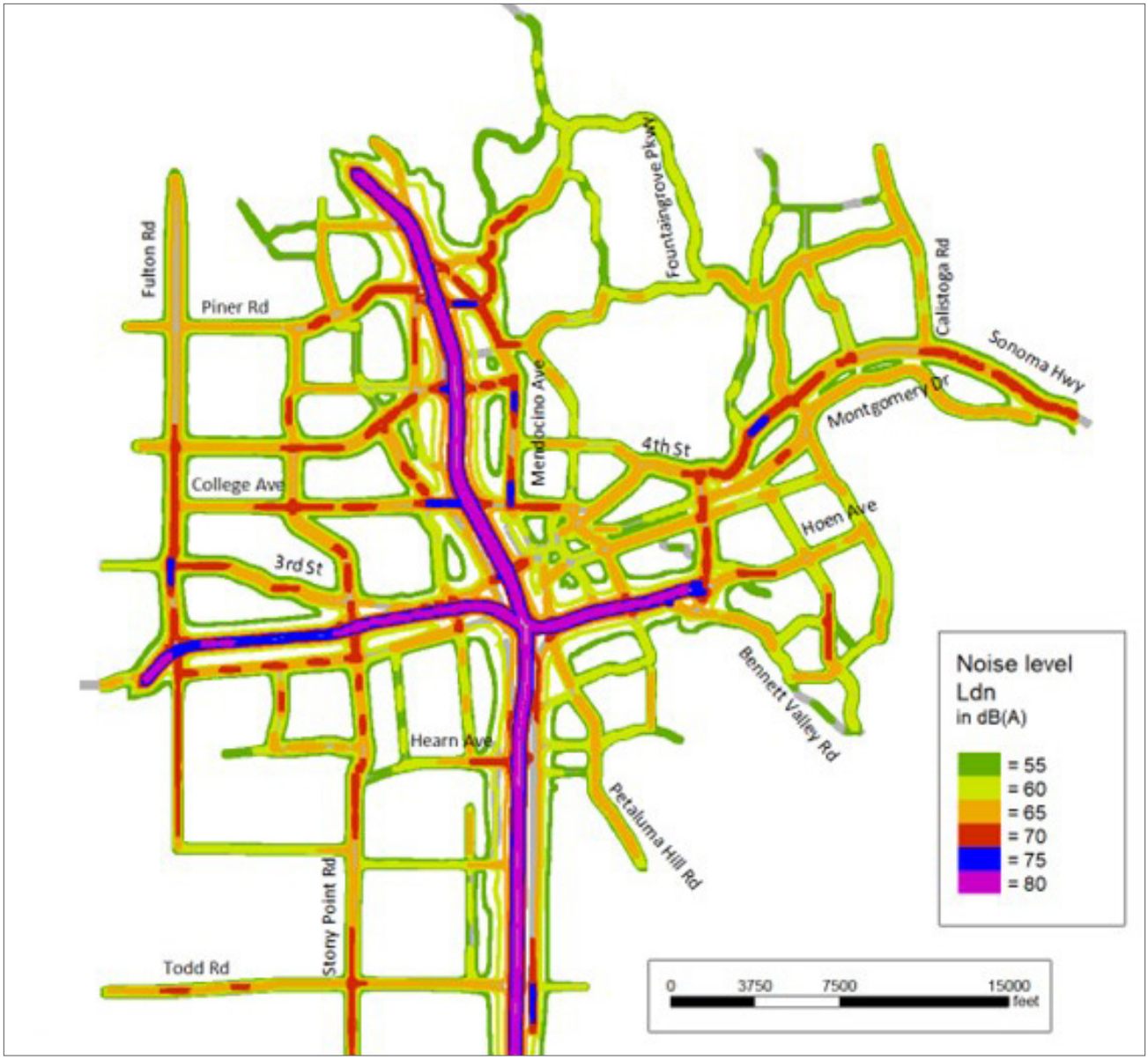
Stationary sources of noise may occur on all types of land uses. Residential uses generate noise from landscaping, maintenance activities, and air conditioning systems. Commercial uses generate noise from HVAC systems, loading docks, and other sources. Industrial uses may generate HVAC systems, loading docks, and possibly machinery. Noise generated by residential or commercial uses are generally short and intermittent. Industrial uses may generate noise on a more continual basis due to the nature of the activities. Nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool and hot tub pumps, school playgrounds, athletic and music events, and public parks are other common noise sources. Emergency backup generators are also a common outdoor noise source.

[5] Sonoma-Marin Area Rail Transit Commission, certified *Sonoma-Marin Area Rail Transit Draft Supplemental Environmental Impact Report (Approval of: (1) the Initial Operating Segment (IOS) Project; and (2) the Grade Crossing Improvement Project)*, (July 2008), State Clearinghouse Number 2002112033. Information is from the March 2008 Draft Supplemental EIR.

[6] Sonoma-Marin Area Rail Transit Commission, certified *Sonoma-Marin Area Rail Transit Draft Supplemental Environmental Impact Report (Approval of: (1) the Initial Operating Segment (IOS) Project; and (2) the Grade Crossing Improvement Project)*, (July 2008), State Clearinghouse Number 2002112033. Information is from the March 2008 Draft Supplemental EIR.

[7] Sonoma-Marin Area Rail Transit Commission, certified *Sonoma-Marin Area Rail Transit Environmental Impact Report* (June 2006), State Clearinghouse Number 2002112033. Information is from the November 2005 Draft EIR.

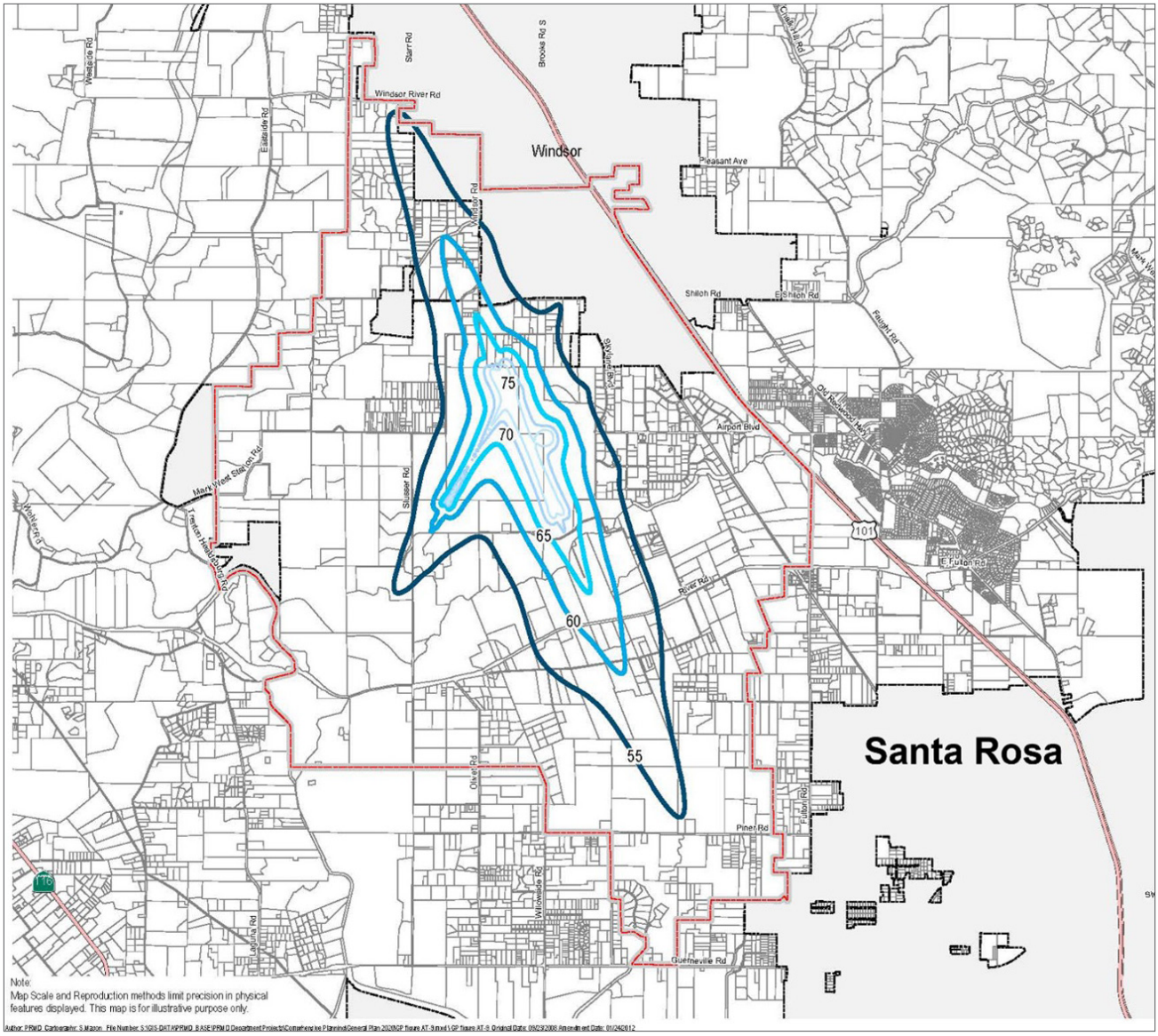
[8] Quiet Zones are segments of rail lines where crews are exempt from regularly sounding the train horns at grade crossings



Source: Illingworth & Rodkin Inc, 2023.

0 150,000
Scale (Feet)

Figure 4.12-2
Traffic Noise Contours for the Existing (2019) Scenario



Source: Sonoma County, 2012.

0 8,000
Scale (Feet)

2030 Noise Contours
Community Noise Equivalent Level (CNEL) measured in decibels (dB)
55
60
65
70
75
ALUC Referral Area

Base Map Data
Highways
City Boundaries
Parcels

Figure 4.12-3
Charles M. Schulz Sonoma County Airport 2030 Noise Contours

Existing Vibration

Existing sources of operational vibration in the EIR Study Area include vehicle traffic on roadways and the NWPRR and SMART rail. Caltrans has studied the effects of propagation of vehicle vibration on sensitive land uses and notes that "heavy trucks, and quite frequently buses, generate the highest earthborn vibrations of normal traffic." Caltrans further notes that the highest traffic-generated vibrations are along freeways and state routes. The Caltrans study finds that "vibrations measured on freeway shoulders (five meters from the centerline of the nearest lane) have never exceeded 0.08 in/sec, with the worst combinations of heavy trucks and poor roadway conditions (while such trucks were moving at freeway speeds). This level coincides with the maximum recommended safe level for ruins and ancient monuments (and historic buildings)."[9]

4.12.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant noise impact if it would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Generate excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.
4. In combination with past, present, and reasonably foreseeable projects, results in a cumulative impact with respect to noise and vibration.

4.12.2.1 CITY OF SANTA ROSA NOISE LIMITS

Construction Noise

As discussed in Section 4.12.1.2, *Regulatory Framework*, under the subheading "Santa Rosa City Code" the SRCC does not define allowable construction hours or establish construction noise thresholds that limit the noise level from construction activity. While the SRCC Section 17-16.120 states that it is unlawful for the operation of machinery and equipment, which could include construction equipment, to exceed 5 dBA over the ambient levels summarized in Table 4.12-5, a daytime limit of 60 dBA at residential uses would not be realistic for most construction activities. Accordingly, the FTA *Transit Noise and Vibration Impact Assessment Manual*, which provides daytime construction noise limits of 80 dBA L_{eq} at residential land uses and 90 dBA L_{eq} at commercial and industrial land uses[10] is the threshold applied to this Draft EIR.

[9] Caltrans, 2013, *Transportation and Construction Vibration Guidance Manual*.

[10] Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment Manual*, FTA Report No. 0123.

Stationary Noise

SRCC Section 17-16.125 states that noise produced by machinery, equipment, pumps, fans, HVAC, and similar mechanical devices is not to exceed the ambient base noise level (listed in Table 4.12-5) by more than 5 dB at receiving properties. SRCC Section 17-16.170 regulates hours of operation for sound-amplifying equipment and sets a noise level threshold of 15 dB above the ambient base noise level. Additionally, SRCC Section 17-16.040 provides a list of qualitative variables to take into account when determining whether a noise disturbs the peace and quiet of a neighborhood, including background noise levels, proximity to residences, time of day, and duration.

Vehicular Noise

A project will normally have a significant effect on the environment related to mobile noise sources such as traffic if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually undetectable. A change of 5 dBA is readily audible to most people in an exterior environment. Based on this, the following thresholds of significance are used to assess mobile noise impacts from traffic at sensitive receptor locations:

- Greater than 1.5 dBA increase for ambient noise environments of 65 dBA L_{dn} and higher
- Greater than 3 dBA increase for ambient noise environments of 60 to 64 dBA L_{dn}
- Greater than 5 dBA increase for ambient noise environments of less than 60 dBA L_{dn}

4.12.2.2 FEDERAL TRANSIT ADMINISTRATION VIBRATION LIMITS

As described in Section 4.12.1.1, *Noise and Vibration Fundamentals*, there are two types of vibration-related impacts: vibration annoyance to people (human reaction) and vibration damage to buildings (effects on buildings). The City does not have specific limits or thresholds for vibration. Therefore, the FTA standards described herein are applied to this analysis.

Vibration Damage

The FTA provides criteria for acceptable levels of groundborne vibration for various types of buildings identified as Category I, II, and III buildings based on the type of materials they are constructed from. These criteria, used for this analysis, are shown in Table 4.12-9, *Groundborne Vibration Criteria: Architectural Damage*. For Category III, nonengineered timber and masonry buildings (typical residential structures), a threshold of 0.20 in/sec PPV would apply.

TABLE 4.12-9 GROUNDBORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.50
II. Engineered concrete and masonry (no plaster)	0.30
III. Nonengineered timber and masonry buildings	0.20
IV. Buildings extremely susceptible to vibration damage	0.12

Note: PPV = peak particle velocity; in/sec = inches per second.
Source: Federal Transit Administration (FTA) 2018. *Transit Noise and Vibration Impact Assessment Manual*.

Vibration Annoyance

For vibration annoyance from operational sources, the FTA recommends the criteria shown in Table 4.12-10, *FTA Groundborne Vibration Impact Criteria*, for frequent events.

TABLE 4.12-10 FTA GROUNDBORNE VIBRATION IMPACT CRITERIA

	Impact Levels (VdB re 1 micro-inch/sec)		
Land Use Category	Frequent Events [a]	Occasional Events [b]	Infrequent Events [c]
I. Buildings where vibration would interfere with interior operations	65 VdB [d]	65 VdB [d]	65 VdB [d]
II. Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB [e]
III. Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Notes:
a. "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
c. "Infrequent Events" is defined as fewer than 30 vibration events per day. This category includes most commuter rail systems.
d. This limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.
e. The 80 VdB equivalent to the FTA impact significance criteria of 0.01 inches per second root-mean square vibration velocity.
Source: United States Department of Transportation Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment Manual*.

4.12.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

NOI-1	**Implementation of the proposed project could generate a substantial temporary but not a permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Construction

Since this is a programmatic EIR, project-level conclusions of construction noise would be speculative and are therefore not presented in this analysis. Potential future impacts from construction noise are addressed qualitatively and include program-level mitigating policies.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time.

Major noise-generating construction activities associated with new projects would include removal of existing pavement and structures, site grading and excavation, installation of utilities, the construction of building foundations, cores, and shells, paving, and landscaping. The highest noise levels are typically generated during the demolition of existing structures when impact tools are used (e.g., jackhammers, hoe rams) and during the construction of building foundations when impact pile driving may be required to support the structure. Site grading and excavation activities would also generate high noise levels, as these phases often require the simultaneous use of multiple pieces of heavy equipment, such as dozers, excavators, scrapers, and loaders. Lower noise levels result from building construction activities when these activities move indoors and require less heavy equipment to complete the tasks.

Construction equipment would typically include, but would not be limited to, earth-moving equipment and trucks, pile-driving rigs, mobile cranes, compressors, pumps, generators, paving equipment, and pneumatic, hydraulic, and electric tools. Construction noise levels would vary by phase and vary within phases based on the amount of equipment in operation and the location of operational equipment. Typical construction noise levels at a distance of 50 feet are shown in Table 4.12-11, *Typical Ranges of Noise Levels at 50 feet from Construction Sites (dBA L_{eq})*, and Table 4.12-12, *Construction Equipment 50-foot Noise Emission Limits*.

TABLE 4.12-11 TYPICAL RANGES OF NOISE LEVELS AT 50 FEET FROM CONSTRUCTION SITES (DBA L_{EQ})

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Notes:
I – All pertinent equipment present at site.
II – Minimum required equipment present at site.
Source: United States Environmental Protection Agency, 1973, Legal Compilation on Noise, Vol. 1, p. 2-104.

TABLE 4.12-12 CONSTRUCTION EQUIPMENT 50-FOOT NOISE EMISSION LIMITS

Equipment Category	Lmax Level (dBA) [a, b]	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor [c]	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous

TABLE 4.12-12 CONSTRUCTION EQUIPMENT 50-FOOT NOISE EMISSION LIMITS

Equipment Category	Lmax Level (dBA) [a, b]	Impact/Continuous
Grinder Saw	90	Impact
Horizontal Boring Hydro Jack	90	Impact
Hydra Break Ram	105	Impact
Impact Pile Driver	84	Continuous
In-situ Soil Sampling Rig	85	Impact
Jackhammer	90	Impact
Mounted Impact Hammer (hoe ram)	85	Impact
Paver	85	Continuous
Pneumatic Tools	77	Continuous
Pumps	85	Continuous
Rock Drill	85	Continuous
Scraper	82	Continuous
Slurry Trenching Machine	80	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 horsepower	85	Continuous

Notes:
a. Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.
b. Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.
c. Portable air compressor rated at 75 cfm or greater and that operates at greater than 50 psi.
Source: Illingworth and Rodkin, 2023.

Table 4.12-11 shows the average noise level range by construction phase and Table 4.12-12 shows the maximum noise level range for different construction equipment. Noise levels included in Table 4.12-11 are consistent with construction noise levels calculated for the project in the FHWA Roadway Construction Noise Model, including the anticipated equipment that would be used for each phase of the project. Typical hourly average construction-generated noise levels are about 77 to 89 dBA L_{eq} measured at a distance of 50 feet from the site during busy construction periods. Large pieces of earth-moving equipment, such as graders, scrapers, and dozers, generate maximum noise levels of 85 to 90 dBA L_{max} at a distance of 50 feet. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment on site and the location of the activity. Construction noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. Intervening structures or terrain would result in lower noise levels at distant receptors.

Implementation of the proposed project anticipates an increase in development intensity to accommodate new population and employment growth. As described, construction noise levels are highly variable and dependent on the specific locations, site plans, and construction details of individual projects. Significant noise impacts may occur from operation of heavy earth-moving equipment and truck haul operations associated with construction of individual development projects, particularly if construction techniques such as impact or vibratory pile driving are proposed. The time of day that construction activity is conducted would also determine the significance of each project, particularly during the more sensitive nighttime hours. However, construction would be localized and would occur intermittently for varying periods of time.

In most cases, construction of individual developments associated with implementation of the proposed project would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. The implementation of construction best management practices throughout the entire active construction period would also help to ensure that construction noise is minimized to the extent feasible. Some common construction best management practices include requiring individual projects to implement the following:

- Construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, unless permission is granted with a development permit or other planning approval.
- Utilize the best-available noise suppression devices and techniques during construction activities.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise source and noise-sensitive receptors nearest the project site during all project construction.
- Limit construction traffic—to the extent feasible—to haul routes approved in advance of issuing building permits by the City.
- Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.
- Prohibit construction workers’ music/radios or other unnecessary exterior noise sources at the construction site.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of “noisy” construction activities to the adjacent land uses and nearby residences.

- For larger projects, generally over one acre, designate a "disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler or the like) and require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.
- If receptors adjoin the project site, construct a solid plywood fence along the shared property line, where feasible. A temporary noise barrier tall enough to block direct line-of-sight with ground-level receptors would provide about 5 dBA attenuation for adjacent noise-sensitive receptors when construction activities occur at the ground level.
- To reduce vibration impacts from paving, use a static roller in lieu of a vibratory roller; for grading and earthwork activities, use off-road equipment limited to 100 horsepower or less; and if impact pile driving is proposed, implement one or more of the following alternate methods:
  - Use caisson drilling (drill piles), vibratory pile drivers, oscillating or rotating pile installation methods, pile pressing, "silent" piling, and jetting or partial jetting of piles into place using a water injection at the tip of the pile, or if geological conditions permit, cast-in-drilled-hole foundation systems shall be used instead of impact pile driving.
  - Foundation pile holes shall be pre-drilled to minimize the number of impacts required to seat the pile. Pre-drilling foundation pile holes is a standard construction noise-control technique. Pre-drilling reduces the number of blows required to seat the pile.
  - Temporary noise-control blanket barriers shall shroud pile drivers or be erected in a manner to shield the adjacent land uses. Such noise-control blanket barriers can be rented and quickly erected. If the hammer is shrouded, about 3 to 5 dBA of noise reduction could be expected, and more reduction could be achieved with the inclusion of a property line barrier. If a noise-control blanket is erected on the receiving buildings, 5 to 10 dB of noise reduction could be achieved depending on how much shielding can be reasonably achieved.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider noise-related impacts, including during construction. The following proposed General Plan 2050 goal, policy, and actions would minimize potential adverse construction noise-related impacts:

- Goal 5-7: Protect the community from adverse noise impacts that can decrease quality of life.
  - Policy 5-7.1: Maintain and enforce the City's Noise Ordinance to protect the health and comfort of people living, working, going to school, and recreating in Santa Rosa.
    - *Action 5-7.1: Continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards.
    - *Action 5-7.2: Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify mitigation during the project approval process.

- ***Action 5-7.10:** Update the Noise Ordinance to incorporate construction best management practices to minimize construction noise.

Due to the unknown nature of project-level details and the combination of construction equipment used, the temporary program-level construction noise impacts associated with implementation of the proposed project are considered potentially *significant.*

Impact NOI-1a: Construction activities associated with potential future development could expose sensitive receptors to excessive noise from construction equipment.

Significance with Mitigation: Significant and unavoidable. In most cases, construction of individual developments associated with implementation of the proposed project would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. The policies and actions of the proposed General Plan 2050 would minimize the effects of construction noise. Specifically, proposed *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts, and *Action 5-7.2 and *Action 5-7.10 would mitigate noise impacts by requiring the City to use the noise and vibration thresholds based on the Federal Transit Administration's criteria for acceptable levels of construction noise and vibration to evaluate and mitigate impacts, and adopt construction best management practices, respectively. However, because construction activities associated with any individual development may occur near noise-sensitive receptors and because—depending on the project type, equipment list, time of day, phasing, and overall construction durations—noise disturbances may occur for prolonged periods of time, during the more sensitive nighttime hours, or may exceed 80 dBA L_{eq} at residential land uses even with future project-level mitigation, construction noise impacts associated with implementation of the proposed project are considered *significant and unavoidable*. Due to the programmatic nature of this EIR, project-level conclusions of construction noise would be speculative; however, the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the noise thresholds.

Operational

Vehicular Noise

Potential future development over the 2050 buildout horizon would cause increases in vehicle traffic along local roadways. As described in Section 4.12.1.3, *Existing Conditions*, the traffic noise contours were calculated for the Existing (2019), Existing (2019) plus Project, and Future plus Project (2050 with proposed project) traffic conditions specific to the proposed project along major roadways in the EIR Study Area were estimated using the SoundPLAN Version 8.2, a three-dimensional ray-tracing computer program. Existing (2019), Existing (2019) plus Project, and Future plus Project (2050) peak-hour traffic data and traffic speeds provided by the traffic consultants (W-Trans) were input into the model for local roadways and expressways. A truck mix of 1 percent was used along the local roadways, while the truck

mix along US Highway 101 and SR 12 were obtained from the Caltrans website.[11] Through Santa Rosa, heavy and medium trucks consist of 3 percent each along US Highway 101 and consist of 1 percent and 2 percent, respectively, along SR 12. Figure 4.12-4, *Traffic Noise Contours for the Existing Plus Project Scenario*, and Figure 4.12-5, *Traffic Noise Contours for the Future Plus Project (2050) Scenario*, provide the traffic contours for Existing plus Project and Future plus Project (2050) scenarios, respectively.

Table 4.12-13, *Existing, Existing Plus Project, and Future Plus Project Noise Levels in the EIR Study Area*, summarizes the Existing, Existing plus Project, and Future plus Project L_{dn} noise levels, as measured at a distance of 75 feet from the centerline of the roadway. For all receptors along US Highway 101 and SR 12, 75-foot distances were measured from the centerline of the nearest through lane.

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
US Highway 101	South of Todd Rd	81	81	82	0	1
	Todd Rd to Yolanda Ave	81	81	82	0	1
	Yolanda Ave to Baker Ave	81	82	82	1	1
	Baker Ave to SR 12	82	82	82	0	0
	SR 12 to 3rd St	81	81	82	0	1
	3rd St to College Ave	82	82	82	0	0
	College Ave to Steele Ln/ Guerneville Rd	82	82	82	0	0
	Steele Ln/Guerneville Rd to Bicentennial Way	82	82	82	0	0
	North of Bicentennial Way	80	80	81	0	1
SR 12	Farmers Ln to Brookwood Ave	78	79	79	1	1
	Brookwood Ave to Hwy 101	79	79	79	0	0
	Hwy 101 to Dutton Ave	79	79	79	0	0
	Dutton Ave to Stony Point Rd	78	78	78	0	0
	West of Stony Point Rd	75	76	76	1	1
3rd St	Brookwood Ave to E St	57	59	58	2	1
	E St to Santa Rosa Ave	60	60	60	0	0
	Santa Rosa Ave to B St	64	64	64	0	0
	B St to Hwy 101	72	73	73	1	1
	Hwy 101 to Olive St/ Railroad St /Wilson St	73	74	74	1	1
	Olive St/Railroad St/ Wilson St to Dutton Ave	65	65	65	0	0
	Dutton Ave to Stony Point Rd	65	65	65	0	0
	Stony Point Rd to Fulton Rd	67	67	67	0	0

[11] Caltrans Traffic Census Program. https://dot.ca.gov/programs/traffic-operations/census

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Administration Dr	West of Mendocino Ave	59	61	61	1	1
Aston Ave/ Allan Way	Petaluma Hill Rd to Brookwood Ave	61	62	62	1	1
B St	South of 3rd St	64	64	64	0	0
	3rd St to Healdsburg Ave/Mendocino Ave	62	63	63	1	1
Badger Rd	Calistoga Rd to Wallace Rd	55	56	57	1	2
Bellevue Ave	East of Dutton Ave	65	68	68	3	**3**
	Dutton Ave to Stony Point Rd	62	64	65	2	**3**
Bennett Valley Rd	Santa Rosa Ave to E St	73	73	73	0	0
	E St to Brookwood Ave	73	74	74	1	1
	Brookwood Ave to Farmers Lane	71	70	70	-1	-1
	Farmers Lane to Tachevah Dr	67	67	67	0	0
	Tachevah Dr to Bethards Dr	64	64	64	0	0
	Bethards Dr to Yulupa Ave	53	54	54	1	1
	East of Yulupa Ave	55	54	55	-1	0
Bethards Dr	Bennett Valley Rd to Yulupa Ave	63	63	63	0	0
	Yulupa Ave to Creekside Rd	59	60	60	1	1
	Creekside Rd to Summerfield Rd	61	62	62	1	1
Bicentennial Way	Fountaingrove Parkway to Mendocino Ave	68	69	69	1	1
	Mendocino Ave to Hwy 101	70	71	71	1	1
	Hwy 101 to Range Ave	72	73	73	1	1
Brookwood Ave	Kawana Springs Rd to Linwood Ave	57	57	57	0	0
	Aston Ave to SR 12	62	61	61	-1	-1
	SR 12 to Sonoma Ave	67	68	68	1	1
	Sonoma Ave to 3rd St	66	67	67	1	1
	3rd St to College Ave	67	68	68	1	1
Brush Creek Rd	Sonoma Hwy to Fountaingrove Parkway	60	61	62	1	2
	Fountaingrove Parkway to Badger Rd	61	62	61	1	0
Bryden Ln	4th St to Montecito Ave	65	65	65	0	0
Burbank Ave	Hearn Ave to Sebastopol Rd	59	60	61	1	2
Calistoga Rd	Sonoma Hwy to Montecito Boulevard	64	65	65	1	1
	Montecito Boulevard to Badger Rd	67	67	67	0	0
	North of Badger Rd	66	67	67	1	1

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Chanate Rd	Mendocino Ave to Franklin Ave	66	66	66	0	0
	Franklin Ave to Parker Hill Rd	66	66	66	0	0
	Parker Hill Rd to Fountaingrove Parkway	63	64	64	1	1
Cleveland Ave	9th St to College Ave	67	68	68	1	1
	College Ave to Frances St/Range Ave	71	71	72	0	1
	Frances St/Range Ave to Guerneville Rd	73	73	73	0	0
	Guerneville Rd to Bicentennial Way	71	71	71	0	0
	Bicentennial Way to Piner Rd	74	74	75	0	1
	Piner Rd to Hopper Ave	68	69	69	1	1
Coffey Ln	Guerneville Rd to Steele Lane	59	60	61	1	2
	Steele Lane to Piner Rd	59	59	59	0	0
	Piner Rd to Pine Meadows Dr/Barnes Rd	66	67	67	1	1
	Pine Meadows Dr/Barnes Rd to Hopper Ave	60	61	61	1	1
	North of Hopper Ave	58	59	59	1	1
Colgan Ave	Santa Rosa Ave to Petaluma Hill Rd	61	62	62	1	1
College Ave	4th St to Brookwood Ave	65	66	65	1	0
	Brookwood Ave to E St	68	68	68	0	0
	E St to Mendocino Ave	69	69	69	0	0
	Mendocino Ave to Hwy 101	71	71	71	0	0
	Hwy 101 to Cleveland Ave	74	75	75	1	1
	Cleveland Ave to Dutton Ave	72	73	72	1	0
	Dutton Ave to Stony Point Rd	68	68	68	0	0
	Stony Point Rd to Fulton Rd	66	67	67	1	1
Corby Ave	Bellevue Ave to Hwy 101 southbound ramps	78	79	79	1	1
	Hwy 101 southbound ramps to Hearn Ave	69	70	70	1	1
	North of Hearn Ave	67	68	69	1	2
Corporate Center Parkway	Northpoint Parkway to Sebastopol Rd	65	65	65	0	0
Cross Creek Rd	North of Thomas Lake Harris Dr	59	63	63	4	**4**
Cypress Way	Hoen Ave to Creekside Rd	58	59	59	1	1

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Dutton Ave	South of Bellevue Ave	60	65	65	5	**5**
	North of Bellevue Ave	57	60	60	3	**3**
	Hearn Ave to Sebastopol Rd	62	62	62	0	0
	Sebastopol Rd to SR 12	68	68	68	0	0
	SR 12 to 3rd St	72	72	72	0	0
	3rd St to College Ave	62	64	64	2	2
	College Ave to Guerneville Rd	69	70	70	1	1
E St	Maple Ave to Sonoma Ave	62	63	63	1	1
	Sonoma Ave to 3rd St	62	62	62	0	0
	3rd St to 4th St	65	65	65	0	0
	4th St to College Ave	62	63	63	1	1
Farmers Ln	Bennett Valley Rd to SR 12	68	68	68	0	0
	SR 12 to Hoen Ave	70	71	71	1	1
	Hoen Ave to Sonoma Ave	70	70	70	0	0
	Sonoma Ave to Montgomery Dr	69	70	69	1	0
	Montgomery Dr to 4th St	69	69	69	0	0
Fountaingrove Parkway	Brush Creek Rd to Chanate Rd	66	67	67	1	1
	Chanate Rd to Thomas Lake Harris Dr	61	64	64	3	**3**
	Thomas Lake Harris Dr to Stagecoach Rd/Parker Hill Rd	63	65	65	2	2
	Stagecoach Rd/Parker Hill Rd to Bicentennial Way	67	70	70	3	**3**
	Bicentennial Way to Old Redwood Hwy	67	70	70	3	**3**
	Old Redwood Hwy to Hwy 101	74	75	75	1	1
Frances St/ Range Ave	Cleveland Ave to Guerneville Rd	61	61	61	0	0
	Guerneville Rd to Steele Lane	65	66	66	1	1
	Steele Lane to Bicentennial Way	68	69	69	1	1
	Bicentennial Way to Piner Rd	70	70	70	0	0
Franklin Ave/ Humboldt St	Poppy Dr to Chanate Rd	64	65	65	1	1
Fulton Rd	SR 12 to Occidental Rd	72	73	74	1	2
	Occidental Rd to 3rd St	70	71	71	1	1
	3rd St to College Ave	71	71	72	0	1
	College Ave to Guerneville Rd	71	71	72	0	1
	Guerneville Rd to Piner Rd	70	71	71	1	1
	Piner Rd to Wood Rd/ Francisco Ave	71	72	73	1	2
	North of Wood Rd/Francisco Ave	71	71	72	0	1

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Guerneville Rd	Steele Lane to Range Ave	67	68	68	1	1
	Range Ave to Coffey Lane	69	70	70	1	1
	Coffey Lane to Dutton Ave	70	72	72	2	2
	Dutton Ave to Marlow Rd	69	70	70	1	1
	Marlow Rd to Fulton Rd	67	67	67	0	0
	West of Fulton Rd	67	68	68	1	1
Hall Rd	West of Fulton Rd	60	61	64	1	**3**
Healdsburg Ave	B St to Mendocino Ave	61	62	61	1	0
Hearn Ave	Santa Rosa Ave to Corby Ave	73	73	74	0	1
	Corby Ave to Dowd Dr	70	71	71	1	1
	Dowd Dr to Dutton Ave	67	68	68	1	1
	Dutton Ave to Burbank Ave	63	64	64	1	1
	Burbank Ave to Stony Point Rd	58	55	55	-3	-3
Hoen Ave	Summerfield Rd to Yulupa Ave	65	65	65	0	0
	Yulupa Ave to Cypress Way	67	67	67	0	0
	Cypress Way to Farmers Lane	60	62	62	2	2
	Farmers Lane to Sonoma Ave	53	54	54	1	1
Hoen Frontage Rd	Farmers Lane to Hoen Ave	67	68	68	1	1
Hopper Ave	Cleveland Ave to Coffey Lane	66	68	68	2	2
	Coffey Lane to Barnes Rd	56	58	58	2	2
Kawana Springs Rd	Santa Rosa Ave to Petaluma Hill Rd	62	63	63	1	1
	Petaluma Hill Rd to Brookwood Ave	62	62	62	0	0
	East of Brookwood Ave	57	57	57	0	0
Ludwig Ave	Stony Point Rd to Wright Rd	62	63	63	1	1
Maple Ave	Brookwood Ave to E St	73	73	73	0	0
	E St to Santa Rosa Ave	72	72	72	0	0
Marlow Rd	College Ave to Guerneville Rd	68	69	69	1	1
	Guerneville Rd to Steele Lane	65	66	66	1	1
	Steele Lane to Piner Rd	65	66	66	1	1

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Mendocino Ave	4th St to College Ave	59	61	62	2	3
	College Ave to Pacific Ave	70	70	70	0	0
	Pacific Ave to Steele Lane	70	71	71	1	1
	Steele Lane to Chanate Rd	67	69	69	2	2
	Chanate Rd to Bicentennial Way	70	71	71	1	1
	Bicentennial Way to Fountaingrove Parkway	68	69	69	1	1
Middle Rincon Rd	Sonoma Hwy to Montecito Boulevard	65	65	66	0	1
	Montecito Boulevard to Badger Rd	60	61	62	1	2
Mission Boulevard	Montgomery Dr to Sonoma Hwy	65	66	66	1	1
	Sonoma Hwy to Montecito Boulevard	66	67	67	1	1
Montecito Boulevard	Calistoga Rd to Middle Rincon Rd	67	67	67	0	0
	Middle Rincon Rd to Mission Boulevard	67	68	68	1	1
	Mission Boulevard to Brush Creek Rd	66	67	67	1	1
Montgomery Dr	East of Mission Boulevard	67	68	68	1	1
	Mission Boulevard to Summerfield Rd	68	68	69	0	1
	Summerfield Rd to Farmers Lane	68	68	68	0	0
	Farmers Lane to 3rd St	60	62	62	2	2
North St	College Ave to Pacific Ave	61	62	63	1	2
	North of Pacific Ave	56	57	57	1	1
Northpoint Parkway	Stony Point Rd to Corporate Center Parkway	66	67	67	1	1
	West of Corporate Center Parkway	58	59	60	1	2
Occidental Rd	Stony Point Rd to Wright Rd	71	71	71	0	0
	West of Wright Rd	65	65	66	0	1
Old Redwood Hwy	North of Fountaingrove Parkway	72	73	73	1	1
Olive St/Railroad St	South of Sebastopol Rd	68	68	68	0	0
	North of Sebastopol Rd	66	68	68	2	2
Pacific Ave	Montecito Ave to North St	65	65	65	0	0
	North St to King St	61	61	61	0	0
	King St to Mendocino Ave	63	63	63	0	0
Parker Hill Rd	Chanate Rd to Fountaingrove Parkway	59	61	61	2	2

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Petaluma Hill Rd	South of Yolanda Ave	64	65	66	1	2
	Yolanda Ave to Kawana Springs Rd	65	65	65	0	0
	Kawana Springs Rd to Colgan Ave	66	66	66	0	0
	Colgan Ave to Santa Rosa Ave	65	66	66	1	1
Pine Meadows Dr/ Barnes Rd	Coffey Lane to Hopper Ave	54	55	56	1	2
	North of Hopper Ave	58	59	60	1	2
Piner Rd	Cleveland Ave to Range Ave	69	70	70	1	1
	Range Ave to Coffey Lane	69	70	69	1	0
	Coffey Lane to Marlow Rd	70	71	71	1	1
	Marlow Rd to Fulton Rd	66	67	67	1	1
	West of Fulton Rd	65	65	66	0	1
Santa Rosa Ave	South of Todd Rd	69	69	70	0	1
	Todd Rd to Bellevue Ave	68	68	68	0	0
	Bellevue Ave to Yolanda Ave	69	70	70	1	1
	Yolanda Ave to Hearn Ave	69	69	69	0	0
	Hearn Ave to Kawana Springs Rd	68	68	68	0	0
	Kawana Springs Rd to Colgan Ave	68	68	68	0	0
	Colgan Ave to Petaluma Hill Rd	70	70	70	0	0
	Petaluma Hill Rd to SR 12	71	72	72	1	1
	SR 12 to Sonoma Ave	66	66	66	0	0
	Sonoma Ave to 3rd St	63	63	63	0	0
Sebastopol Rd	Olive St to Dutton Ave	62	65	65	3	**3**
	Dutton Ave to Burbank Ave	68	68	68	0	0
	Burbank Ave to Stony Point Rd	65	65	65	0	0
	Stony Point Rd to Corporate Center Parkway	69	69	69	0	0
	Corporate Center Parkway to Wright Rd	67	67	67	0	0
Sonoma Ave	Summerfield Rd to Yulupa Ave	63	64	64	1	1
	Yulupa Ave to Farmers Lane	65	65	66	0	1
	Farmers Lane to Brookwood Ave	66	67	67	1	1
	Brookwood Ave to E St	64	65	65	1	1
	E St to Santa Rosa Ave	65	66	66	1	1

TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Sonoma Hwy/4th St	East of Calistoga Rd	70	71	71	1	1
	Calistoga Rd to Middle Rincon Rd	70	70	71	0	1
	Middle Rincon Rd to Mission Boulevard	70	70	70	0	0
	Mission Boulevard to Brush Creek Rd	71	71	71	0	0
	Brush Creek Rd to Farmers Lane	71	72	72	1	1
	Farmers Lane to Bryden Lane	68	69	69	1	1
	Bryden Lane to College Ave	67	67	67	0	0
	College Ave to Brookwood Ave	65	65	65	0	0
	Brookwood Ave to E St	64	64	64	0	0
	E St to Mendocino Ave	56	57	58	1	2
	Mendocino Ave to B St	59	60	60	1	1
Standish Ave	Todd Rd to Robles Ave	62	63	63	1	1
Steele Ln	Mendocino Ave to Hwy 101	70	70	70	0	0
	Hwy 101 to Guerneville Rd	74	74	74	0	0
	Guerneville Rd to Coffey Lane	64	64	64	0	0
	Coffey Lane to Marlow Rd	62	62	62	0	0
Stony Point Rd	South of Todd Rd	69	70	71	1	2
	Todd Rd to Bellevue Ave	69	70	71	1	2
	Bellevue Ave to Hearn Ave	69	69	70	0	1
	Hearn Ave to Northpoint Parkway	69	68	69	-1	0
	Northpoint Parkway to Sebastopol Rd	67	68	69	1	2
	Sebastopol Rd to SR 12	71	71	71	0	0
	SR 12 to 3rd St	69	70	70	1	1
	3rd St to College Ave	69	70	70	1	1
Summerfield Rd	Bethards Dr to Horseshoe Dr/Santa Rosita Court	64	64	64	0	0
	Horseshoe Dr/Santa Rosita Court to Hoen Ave	64	64	64	0	0
	Hoen Ave to Sonoma Ave	63	64	64	1	1
	Sonoma Ave to Montgomery Dr	64	65	65	1	1
Tachevah Dr	Bennett Valley Rd to Yulupa Ave	62	62	62	0	0
	Yulupa Ave to Bethards Dr	56	56	56	0	0
Thomas Lake Harris Dr	East of Cross Creek Rd	61	63	64	2	**3**
	West of Cross Creek Rd	57	63	63	6	**6**

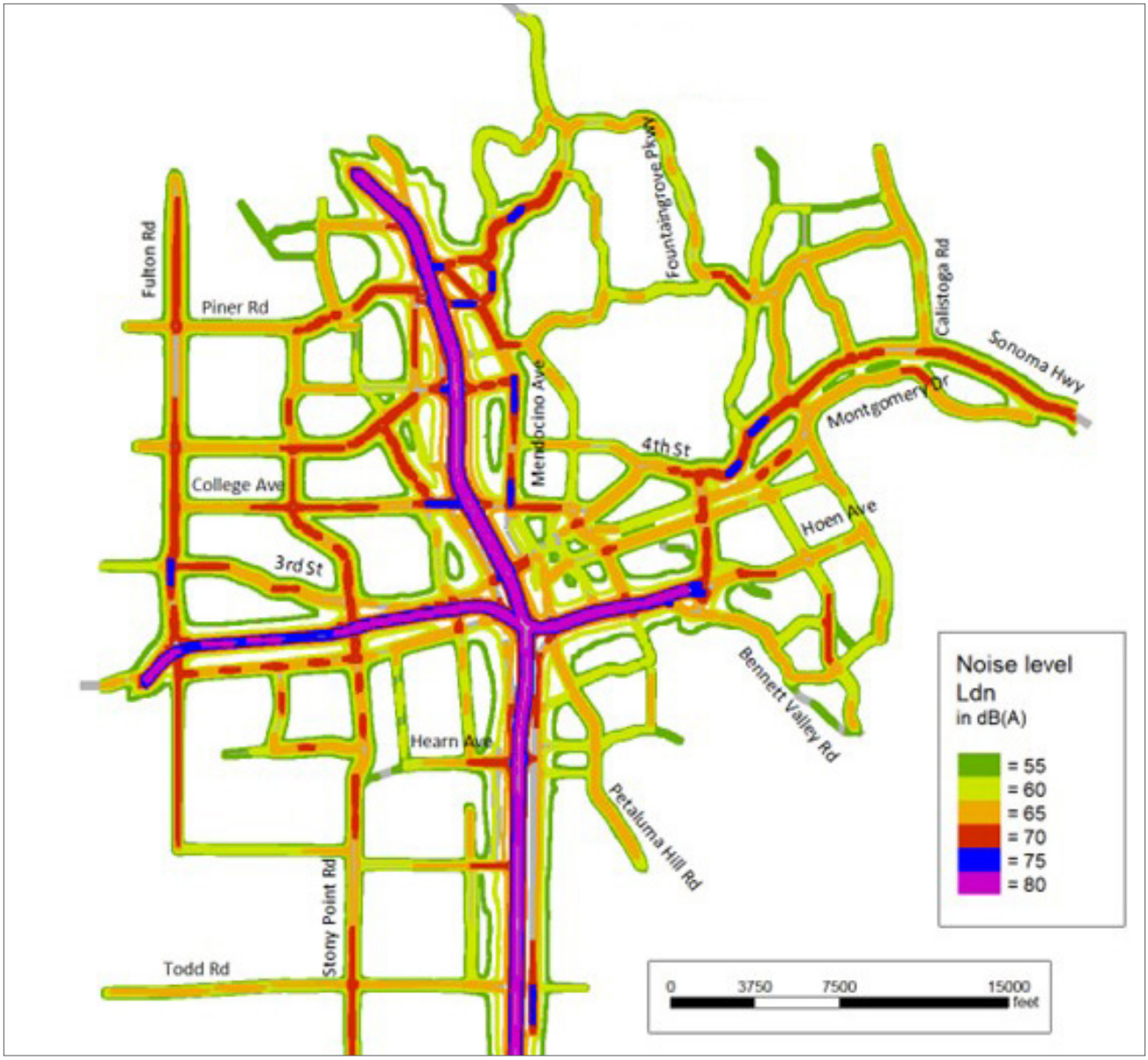
TABLE 4.12-13 EXISTING, EXISTING PLUS PROJECT, AND FUTURE PLUS PROJECT NOISE LEVELS IN THE EIR STUDY AREA

		L_{dn} at 75 feet, dBA			Change over Existing (2019)	
Roadway	Segment	Existing (2019)	Existing Plus Project [a]	Future Plus Project (2050)	Existing Plus Project [a]	Future Plus Project (2050) [b]
Todd Rd	Stony Point Rd to Standish Ave	67	66	68	-1	1
	Standish Ave to Hwy 101	69	69	69	0	0
	Hwy 101 to Santa Rosa Ave	68	68	68	0	0
	East of Santa Rosa Ave	59	59	66	0	**7**
Wallace Rd	North of Badger Rd	57	58	60	1	**3**
Wiljan Court/ Dowd Dr	Bellevue Ave to Hearn Ave	61	62	62	1	1
Wilson St	3rd St to 9th St	66	67	67	1	1
Wright Rd	Ludwig Ave to Sebastopol Rd	63	65	66	2	**3**
	Sebastopol Rd to SR 12	69	69	70	0	1
Yolanda Ave	Hwy 101 to Petaluma Hill Rd	61	62	62	1	1
Yulupa Ave	Bennett Valley Rd to Bethards Dr	64	64	64	0	0
	Bethards Dr to Tachevah Dr	66	67	67	1	1
	Tachevah Dr to Creekside Rd	65	65	65	0	0
	Creekside Rd to Hoen Ave	65	65	64	0	-1
	Hoen Ave to Sonoma Ave	63	63	63	0	0
	Sonoma Ave to Montgomery Dr	59	60	60	1	1
	North of Montgomery Dr	64	64	64	0	0

Notes.
a. The Existing plus Project scenario assumes the full buildout of the project would occur in the year 2019 and is therefore shown for informational purposes only.
b. Impact assumptions are based on the Future plus Project scenario. Text shown in bold represents a significant impact.
Source: Illingworth and Rodkin, 2023.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider noise-related impacts from transportation. In addition to the goal, policies, and actions identified under impact discussion NOI-1, the following goal, policy, and actions would further minimize potential adverse noise-related impacts from traffic:

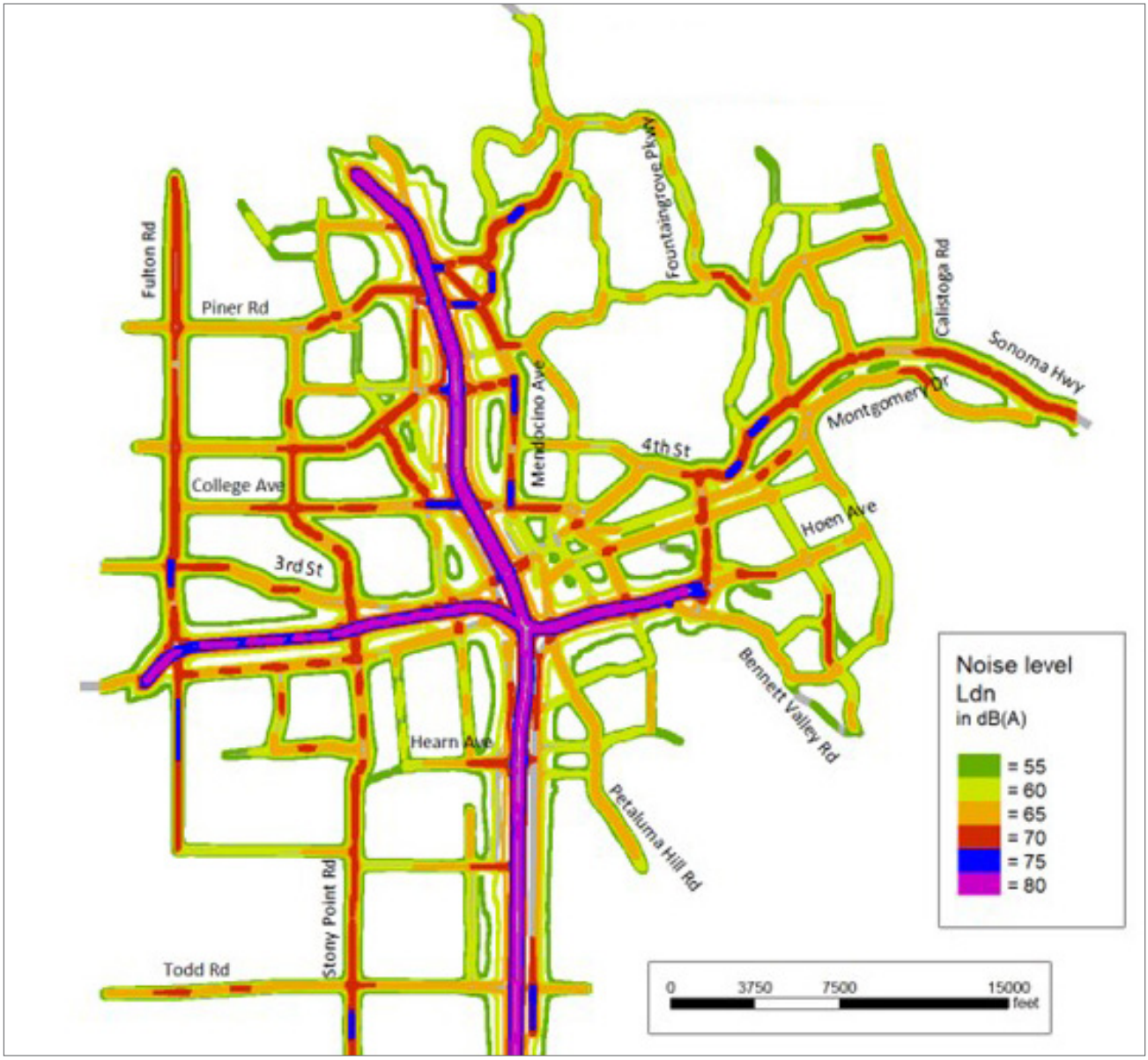
- Goal 5-7: Protect the community from adverse noise impacts that can decrease quality of life.
  - Policy 5-7.1: Maintain and enforce the City's Noise Ordinance to protect the health and comfort of people living, working, going to school, and recreating in Santa Rosa.
    - *Action 5-7.3: Require conditions of approval or mitigation to reduce noise exceeding normally acceptable levels as identified in Figure 5-13, unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens.



Source: Illingworth & Rodkin Inc, 2023.

0 150,000
Scale (Feet)

Figure 4.12-4
Traffic Noise Contours for the Existing Plus Project Scenario



Source: Illingworth & Rodkin Inc, 2023.

0 150,000
Scale (Feet)

Figure 4.12-5
Traffic Noise Contours for the Future Plus Project (2050) Scenario

- Action 5-7.4: Work with private parties to reduce or eliminate noise exceeding allowed levels from industrial and commercial sources that impact nearby residential areas.
- Action 5-7.5: Consider ways to reduce roadway noise to normally acceptable levels in areas where noise standards may otherwise be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed-use development).
- Action 5-7.6: Consider updating the Municipal Code to require new development to provide buffers other than sound walls and allow sound walls only when other techniques would not prevent projected noise levels from exceeding adopted land use compatibility standards.
- *Action 5-7.7: Work with Caltrans to evaluate and develop traffic noise mitigation programs along Highway 101 and State Route 12.
- *Action 5-7.9: Use conditions of approval to achieve measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.

As shown in Table 4.12-13, traffic noise increases along some roadway segments would exceed the increase thresholds of greater than 1.5 dBA increase for ambient noise environments of 65 dBA L_{dn} and higher; greater than 3 dBA increase for ambient noise environments of 60 to 64 dBA L_{dn}; and greater than 5 dBA increase for ambient noise environments of less than 60 dBA L_{dn}. As a result, the traffic noise increase associated with implementation of the proposed project would result in a potentially *significant* impact.

Impact NOI-1b: Operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project.

Significance with Mitigation: Significant and unavoidable. Implementation of proposed General Plan 2050 *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts. Proposed *Action 5-7.2 requires the City to apply the Federal Transit Administration's vibration thresholds to assess impacts to surrounding land uses. Proposed *Action 5-7.3 requires conditions of approval or mitigation to reduce noise exceeding normally acceptable levels unless the activities are specifically exempted by the City Council on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. Proposed *Action 5-7.7 requires the City to work with Caltrans to evaluate and develop traffic noise mitigation programs along US Highway 101 and State Route 12. Furthermore, proposed *Action 5-7.9 requires conditions of approval to achieve measures to reduce noise impacts primarily through site planning and avoid engineering solutions for noise mitigation, such as sound walls, if possible. Since project-specific details are unknown and future conditions of approval may not be feasible or reduce vehicle traffic noise below significance thresholds in all cases, this impact is conservatively considered *significant and unavoidable*. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the noise thresholds.

Railroad Noise

As described in Section 4.12.1.3, *Existing Conditions*, to the west of US Highway 101, the NWPRR rail line runs north to south through the EIR Study Area and these tracks currently and will continue to carry freight and SMART trains under future conditions. There are no plans for an increase in freight traffic on this line as a result of the proposed project or otherwise. Therefore, future rail noise levels are anticipated to be similar to those under existing conditions, and impacts would be *less than significant*.

Stationary Source Noise

Stationary sources of noise may occur on all types of land uses. Residential uses generate noise from landscaping, maintenance activities, and air conditioning systems. Commercial uses generate noise from HVAC systems, loading docks, and other sources. Industrial uses may generate noise from HVAC systems, loading docks, and possibly machinery. Noise generated by residential or commercial uses is generally short and intermittent. Industrial uses may generate noise on a more continual basis. Nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool pumps, school playgrounds, athletic and music events, and public parks are other common noise sources. The proposed General Plan 2050 includes proposed Action 5-8.2 that addresses impacts from stationary sources and requires the City to consider updates to the Noise Ordinance to identify noise mitigation measures and other strategies to allow the establishment, growth, and/or continuation of music, sports, and entertainment venues. Proposed Action 5-8.2 also encourages and allows these uses with appropriate noise thresholds. Some operational noise sources used for emergency purposes shall be exempt from City noise limits. Such activities would include emergency vehicle sirens, emergency medical helicopter operations, operation of emergency generators during emergency power outages, etc. Stationary noise sources are controlled by SRCC Chapter 17-16, which would ensure that potential future projects would not exceed the City's established thresholds (see Table 4.12-5). Accordingly, impacts would be *less than significant*.

Land Use Compatibility

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of the proposed General Plan 2050 aims to limit the exposure of the community to excessive noise levels by guiding decisions concerning land use in relation to substantial noise sources. While the City has not adopted its own noise and land use compatibility guidelines, it uses the State of California's guidelines, previously shown in Table 4.12-4 in Section 4.12.1.4, *Regulatory Framework*, as a tool to gauge the compatibility of land uses relative to existing and future noise level.

As a result of the Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478), December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, though the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources on land use compatibility as a result of the proposed General Plan 2050 buildout is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required with the exception of certain school projects, projects affected

by airport noise, and projects that would exacerbate existing conditions (i.e., projects that would have a significant operational impact). However, over the course of the buildout horizon there is the potential for proposed development to increase noise beyond the City's established thresholds and to generate noise that would be incompatible with existing uses in the vicinity of the proposed development; thus impacts could be potentially significant.

Impact NOI-1c: Operational noise increases could exceed the City's significance thresholds and could be incompatible with existing uses.

Significance with Mitigation: Less than Significant. Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of the proposed General Plan 2050, requires local planning and development decisions to consider noise and land use compatibility. Specifically, proposed Policy 5-7.1 requires the City to maintain and enforce the City's Noise Ordinance to protect the health and comfort of people living, working, going to school, and recreating in Santa Rosa. Proposed *Action 5-7.1 directs the City to continue to require acoustical studies prepared by qualified acoustical consultants in accordance with Santa Rosa City Code standards. Proposed *Action 5-7.3 requires conditions of approval or mitigation to reduce noise exceeding normally acceptable levels unless the activities are specifically exempted by the City Council on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens. Proposed Action 5-7.5 requires the City to consider ways to reduce roadway noise to normally acceptable levels in areas where noise standards may otherwise be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed-use development). Proposed Action 5-7.6 requires the City to consider updating the Municipal Code to require new development to provide buffers other than sound walls and allow sound walls only when other techniques would not prevent projected noise levels from exceeding adopted land use compatibility standards. Proposed *Action 5-7.9 requires the City to use conditions of approval to achieve measures to reduce noise impacts primarily through site planning and avoid engineering solutions for noise mitigation, such as sound walls, if possible. Accordingly, implementation of the proposed policies and actions of the General Plan 2050, noise and land use compatibility would be a factor in project approval decisions, to verify that the proposed development would not increase noise beyond the City's established thresholds and that it would not generate noise that would be incompatible with existing uses in the vicinity of the proposed development. Accordingly, impacts associated with land use compatibility would be *less than significant.*

NOI-2 Implementation of the proposed project could result in the generation of excessive groundborne vibration or groundborne noise levels.

Construction

Construction of future projects in the EIR Study Area would generate varying degrees of ground vibration that may cause human reactions (annoyance) and effects on buildings (damage), depending on the construction procedures and equipment. The use of construction equipment generates vibration that spreads through the ground and diminishes with distance from the source. The effect on sensitive buildings in the vicinity of a construction site varies depending on soil type, ground strata, and the type of construction equipment used. The effects of vibration can range from no perceptible effects at the lowest

vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures but can achieve the audible and perceptible ranges in buildings close to a construction site. Table 4.12-14, *Reference Vibration Source Levels for Construction Equipment*, lists typical vibration levels for construction equipment in PPV and VdB.

TABLE 4.12-14 REFERENCE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment		Approximate Vibration Level at 25 feet (PPV in/sec) [a]	Approximate Vibration Level at 25 feet, VdB re 1 micro-in/sec [b]
Pile Driver (impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Clam Shovel Drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Notes:
a. Peak Particle Velocity (PPV) = The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
b. Vibration Decibel (VdB) = A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is one microinch per second ($1x10^{-6}$ in/sec).
Source: United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, October 2018, *Transit Noise and Vibration Impact Assessment*.

As described in Section 4.12.2.2, *Federal Transit Administration Vibration Limits,* the City does not have established thresholds for construction groundborne vibration and the FTA vibration thresholds of significance were applied to this analysis for architectural damage or for buildings where vibration could interfere with interior operations of off-site receptors. As shown in Table 4.12-14, vibration generated by construction equipment has the potential to be substantial, since it has the potential to exceed the FTA criteria for architectural damage (i.e., 0.12 in/sec PPV for fragile or historical resources, 0.20 in/sec PPV for nonengineered timber and masonry buildings, and 0.30 in/sec PPV for engineered concrete and masonry).

Potential future development over the buildout horizon of the proposed General Plan 2050 could cause vibration induced impacts and the temporary program-level construction vibration impacts associated with implementation of the proposed General Plan 2050 are considered potentially *significant.*

Impact NOI-2a: Construction activities associated with potential future development under the proposed General Plan 2050 could generate excessive short-term vibration levels during project construction.

Significance with Mitigation: Less than significant. As described under impact discussion NOI-1, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider noise impacts, including those from vibration. Specifically, proposed *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts. Proposed *Action 5-7.2 requires the City to use the Federal Transit Administration's (FTA) construction and noise vibration thresholds to assess impacts to surrounding land uses. Proposed *Action 5-7.10 requires the City to adopt construction best management practices to reduce vibration caused from construction equipment. In most cases of individual developments associated with implementation of the proposed project, construction that requires the use of vibration-causing construction equipment, such as pile driving, caisson drilling, vibratory roller, or a large bulldozer, would temporarily increase the ambient noise environment in the vicinity of the individual project, potentially affecting existing and future nearby sensitive users. The use of alternate methods/equipment for construction required in proposed *Action 5-7.10 throughout the entire active construction period would help to ensure that construction noise from vibration is minimized to the extent feasible. Some common alternate methods/equipment used for construction include, but are not limited to:

- For pile driving, the use of caisson drilling (drill piles), vibratory pile drivers, oscillating or rotating pile installation methods, pile pressing, "silent" piling, and jetting or partial jetting of piles into place using a water injection at the tip of the pile.
- For paving, use of a static roller in lieu of a vibratory roller.
- For grading and earthwork activities, off-road equipment limited to 100 horsepower or less.

Proposed *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts and proposed *Action 5-7.2 requires the City to use vibration thresholds based on the FTA criteria for acceptable levels of groundborne vibration for various types of construction equipment. Should the FTA criteria be exceeded, a list of alternate methods/equipment can be used, as provided above. This would ensure that construction vibration impacts would remain less than significant because alternate methods/equipment with less or no vibration, such as those shown in Table 4.12-14, *Reference Vibration Source Levels for Construction Equipment*, would meet the thresholds. The potential vibration impacts associated with demolition and construction activities would be reduced to a *less-than-significant* level by establishing safe limits to protect structures from potential damage and would minimize vibration impacts.

Operational

Commercial and industrial operations in the EIR Study Area would generate varying degrees of ground vibration, depending on the operational procedures and equipment. Such equipment-generated vibrations would spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the vibration source varies depending on soil type, ground strata, and receptor-

building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. In addition, future sensitive receptors could be placed within close proximity to the existing railroad line through buildout in the EIR Study Area.

According to the SMART Project Draft EIR,[12] "groundborne noise and vibration levels at distances greater than approximately 100 feet from the tracks, would be lower than the level generally perceptible to humans. At distances between 20 feet and 100 feet from the tracks, vibration levels may be perceptible; however, they are expected to be less than the applicable FTA impact significance criteria of 0.01 inches per second root-mean square (RMS) vibration velocity." Vibration levels of 0.01 in/sec RMS velocity is equivalent to 80 VdB. Based on worst-case future usage of the NWPRR tracks, fewer than 30 train events per day are assumed along the tracks through the EIR Study Area, and the proposed project would not increase the number of train events. The 30 train events per day fall within the infrequent usage category for the FTA thresholds. Depending on the type of noise-sensitive receptor, thresholds range from 65 to 83 VdB.

Potential future development over the buildout horizon of the General Plan 2050 could cause vibration induced impacts, and the long-term program-level vibration impacts associated with implementation of the proposed General Plan 2050 are considered potentially *significant.*

Impact NOI-2b: Operational activities associated with potential future development under the proposed General Plan 2050 could generate excessive long-term vibration levels.

> Significance with Mitigation: Less than significant. Implementation of proposed General Plan 2050 *Action 5-7.1 requires the preparation of acoustical studies prepared by qualified acoustical consultants to evaluate and mitigate impacts and *Action 5-7.2 requires the City to use vibration thresholds based on the Federal Transit Administration's (FTA) groundborne vibration for various types of construction equipment. As described in Section 4.12.2.2, *Federal Transit Administration Vibration Limits*, the FTA establishes vibration limits from operational activities for impacts to be less than significant on a project-by-project basis. For vibration annoyance from operational sources, the FTA recommends criteria for frequent, occasional, and infrequent events. Furthermore, proposed *Action 5-7.9 requires conditions of approval to achieve measures to reduce noise impacts primarily through site planning, and avoid engineering solutions for noise mitigation, such as sound walls, if possible. As part of the project approval process, future project applicants would be required to comply with the FTA thresholds and the City would review all development proposals to verify that the proposed development would not significantly increase noise beyond the City's established thresholds. Therefore, with implementation of the proposed General Plan 2050 *Action 5-7.1, *Action 5-7.2, and *Action 5-7.9, vibration impacts from operation are considered *less than significant*.

[12] Sonoma-Marin Area Rail Transit Commission, June 2006, *Sonoma-Marin Area Rail Transit Environmental Impact Report*, State Clearinghouse Number 2002112033. Information is from the November 2005 Draft EIR.

NOI-3 Implementation of the proposed project would not expose people residing or working within two miles of a private airstrip or airport to excessive noise levels.

The Charles M. Schulz-Sonoma County Airport is a public-use airport located more than two miles northwest of the city of Santa Rosa. As discussed in Section 4.12.1.3, *Existing Conditions*, the city boundaries lie outside the 55 dBA CNEL/L_{dn} contour line (see Figure 4.12-3). Because the proposed project would not cause a direct increase in flights and all residences are outside of the 55 dBA L_{dn} noise contours, impacts from future potential projects in the EIR Study Area would be *less than significant*.

Significance without Mitigation: Less than significant.

NOI-4 Implementation of the proposed project could result in cumulative noise impacts in the area in combination with past, present, and reasonably foreseeable projects.

The analysis of the proposed project addresses cumulative impacts with regard to noise, groundborne noise, and vibration. Although multiple simultaneous nearby noise sources may, in combination, result in higher overall noise levels, this effect is captured and accounted for by the ambient noise level metrics that form the basis of the thresholds of significance for noise analysis. Any measurement of sound or ambient noise, whether for the purpose of evaluating land use compatibility, establishing compliance with exterior and interior noise standards, or determining point-source violations of a noise ordinance, necessarily will incorporate noise from all other nearby perceptible sources.

Additionally, although noise attenuation is influenced by a variety of topographical, meteorological, and other factors, noise levels decrease rapidly with distance, and vibration impacts decrease even more rapidly. Therefore, site-level cumulative noise or vibration impacts across city boundaries occur only infrequently. Santa Rosa shares borders with other development in unincorporated Sonoma County, which makes cross-border cumulative noise and vibration impacts possible. Nevertheless, given the proposed General Plan 2050 goals, policies, and actions and SRCC requirements, it is unlikely that stationary source noise would, in combination with noise sources from adjacent communities, result in cumulative noise impacts. Additionally, because any noise measurements taken in conjunction with the proposed General Plan 2050 goals, policies, and actions or SRCC requirements would necessarily account for noises received from outside the boundaries of Santa Rosa, the ongoing implementation of these goals, policies, actions, and regulations under the proposed project would prevent site-based cumulative noise impacts.

Similarly, the noise contours and traffic-related noise levels developed for the proposed project include and account for regional travel patterns as they affect traffic levels in Santa Rosa. Noise contours were based on both existing and projected future traffic volumes that incorporate cumulative regional effects and trends. Existing noise contours were derived from traffic volumes based on counts of current traffic, and these traffic counts inherently include cumulative traffic, as generated by regional trips. With regard to future noise, projected noise contours were determined using projected 2050 traffic volumes; these data account for growth in Santa Rosa under the proposed project as well as anticipated regional growth. The future noise modeling that served as the foundation for the overall project analysis was therefore

based on future, cumulative conditions. As described under impact discussion NOI-1, construction activities may occur near noise-sensitive receptors and because noise disturbances may occur for prolonged periods of time, during the more sensitive nighttime hours, or may exceed the applicable FTA thresholds even with implementation of proposed General Plan 2050 *Action 5.7-2. Further, operational vehicle traffic noise increases could exceed the City's significance thresholds even with implementation of proposed *Action 5-7.1, *Action 5-7.2, *Action 5-7.3, *Action 5-7.7, and *Action 5-7.9 Therefore, cumulative impacts with respect to construction and transportation related noise would be potentially *significant*.

Impact NOI-4: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative noise impacts, with respect to generation of construction- and transportation related noise.

Significance with Mitigation: Significant and unavoidable. Construction activities associated with potential future development could expose sensitive receptors in close proximity to a construction site to excessive noise from construction equipment (see Impact NOI-1a). Implementation of proposed General Plan 2050 *Action 5-7.1, *Action 5.7-2, and *Action 5-7.10 would help reduce construction-related noise impacts. In addition, operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project and expose sensitive receptors in close proximity to new development-generated roadway noise to excessive levels (see Impact NOI-1b). As with construction noise, implementation of proposed *Action 5-7.1, *Action 5.7-2, and *Action 5-7.10 would help reduce transportation-related noise impacts along with *Action 5-7.3, *Action 5-7.7, and *Action 5-7.9. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available. As such, the cumulative noise impact is considered *significant and unavoidable* at the program level.

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4.13 POPULATION AND HOUSING

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to population and housing associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to population and housing, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

4.13.1 ENVIRONMENTAL SETTING

4.13.1.1 REGULATORY FRAMEWORK

State Regulations

California Housing Element Law

California Housing Element Law[1] includes provisions related to the requirements for Housing Elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, to ensure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, this section of the Government Code calls for local jurisdictions to plan for and allow the construction of a share of the region's projected housing needs, known as the Regional Housing Needs Allocation (RHNA). The City of Santa Rosa needs to accommodate 4,685 residences in total. The City's 2023-2031 Housing Element was adopted on February 14, 2023.

Regional Regulations

Plan Bay Area

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, Metropolitan Transportation Commission (MTC) and Association of Bay Area Government (ABAG) adopted *Plan Bay Area 2050* on October 21, 2021.[2] *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related greenhouse gas (GHG) reduction goals of the Sustainable Communities and Climate Protection Act (SB 375). The current *Plan Bay Area* projects growth and development patterns through 2050.

As described in Chapter 4.0 of this Draft EIR, *Plan Bay Area* designates Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the region. PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill

[1] Government Code Section 65580-65589.8.

[2] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed July 21, 2023.

development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within 0.5 miles around a major transit stop such as a transit center or rail line.

Plan Bay Area 2050 distributes future growth across the San Francisco Bay Area region to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including General Plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area 2050* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in PDAs. In addition to funding transportation and planning projects in PDAs, *Plan Bay Area 2050* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other State legislation.[3]

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to population and housing in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to population and housing are in Title 21, *Development Requirements*, as follows:

- Chapter 21-02, Inclusionary Housing. This chapter aims to enhance the public welfare and assure the compatibility between future housing development and the housing element of the Santa Rosa general plan through increasing the production of housing units affordable to households of lower and moderate incomes. It is the purpose of this chapter to meet Santa Rosa general plan goals to expand the supply of housing available to lower and moderate-income households. The inclusionary requirements of this chapter apply to all residential developments within the City. Section 21-02.090, *Establishment, payment, and use of the housing impact and commercial linkage fees*, requires residential development projects be assessed a housing impact fee as an alternative to provision of on-site allocated units and commercial development projects be assessed a commercial linkage fee to mitigate the impact of the additional demand for affordable housing caused by such activity. All housing impact and commercial linkage fees paid to the City shall be used by the City's Housing Authority only for the development of housing situated within the City limits that is affordable to households of lower and moderate incomes. Housing assisted with such fees shall be subject to a minimum 55-year affordability agreement with the Housing Authority.

[3] Association of Bay Area Governments and Metropolitan Transportation Commission, 2023, Frequently Asked Questions: Does *Plan Bay Area* override local land use control?, https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851, accessed March 10, 2023.

- Chapter 21-03, *Growth Management*. This chapter provides provisions necessary to protect, and will promote the public health, safety and welfare by balancing new residential development with: the City's ability to provide the public facilities and services necessary for such development; the protection of social and economic values in existing residential neighborhoods and in commercial and industrial areas; the conservation of vital open spaces and natural resources; the achievement of decent housing for all income categories; the attainment of community goals for the overall size and character of the City; and the attainment of a stable, moderate growth rate sufficient to support a healthy business economy. Section 21-03.060, *Procedure*, describes the procedure for allotment issuance by the Directory or Community Development and Section 21-03.070, *Requirements for allotments*, lists the requirements for allotments from specific reserves. Section 21-03.150, *Administration*, grants the City Council the authority to adopt procedures, policies, rules and requirements, including the adoption of a processing fee, to implement and administer the provisions of this chapter.

4.13.1.2 EXISTING CONDITIONS

This section describes existing population and housing conditions in Santa Rosa, as well as Sonoma County, to provide context for the implications for the proposed project. The following text provides an overview of population and housing in Santa Rosa and the Sonoma County region.

Population

Santa Rosa is the largest city in Sonoma County, making up 25 percent of the county's population. According to the California Department of Finance, the population of Santa Rosa grew from 167,820 in 2010 to 174,890 in 2019.[4] As shown in Table 4.13-1, *Total Population, 2010 to 2019*, the city's population grew by approximately 4 percent; this growth was higher than the level of population growth in Sonoma County as a whole, which was 3 percent during the same period.

TABLE 4.13-1 TOTAL POPULATION, 2010 TO 2019

	2010	2019	Total Change	Total Percentage Change
Santa Rosa City Limits	167,820	174,890	7,070	4%
Unincorporated Sonoma County	145,360	139,910	5,450	-4%
Total Sonoma County	**483,880**	**495,920**	**12,040**	**3%**

Notes: Numbers are rounded from original sources.
Source: State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State — 2011-2020 with 2010 Census Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/, accessed March 10, 2023.

[4] State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State — 2011-2020 with 2010 Census Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/, accessed March 10, 2023.

Housing

Between 2010 and 2019, Santa Rosa experienced a steady housing growth. As shown in Table 4.13-2, *Housing Units, 2010 to 2019*, the city's number of housing units grew by approximately 2 percent; this growth was higher than the level of housing growth in Sonoma County as a whole, which was less than 1 percent during the same period.

TABLE 4.13-2 HOUSING UNITS, 2010 TO 2019

	2010	2019	Total Change	Total Percentage Change
Santa Rosa City Limits	67,400	68,930	1,530	2%
Unincorporated Sonoma County	67,970	64,810	3,160	-5%
Total Sonoma County	**204,570**	**204,980**	**410**	**Less than 1%**

Notes: Numbers are rounded from original sources.
Source: State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State — 2011-2020 with 2010 Census Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/, accessed March 10, 2023.

Priority Development Areas

As discussed in Chapter 4.0, *Environmental Analysis*, and shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas,* of this Draft EIR, the EIR Study Area has six PDAs, including the Mendocino Avenue/Santa Rosa Avenue Corridor, North Santa Rosa Station, Downtown Station Area, Sebastopol Road Corridor, Roseland, and Santa Rosa Avenue PDAs. Because *Plan Bay Area 2050* anticipates the majority of growth in the Bay Area will occur in PDAs, all of these PDAs are anticipated to experience growth through the proposed project's 2050 horizon year.

Regional Housing Needs Allocation

As the San Francisco Bay Area's regional agency, MTC/ABAG calculates the RHNA for jurisdictions in Sonoma County, including Santa Rosa. Table 4.13-3, *Santa Rosa Regional Housing Needs Allocation*, shows the 6th Housing Cycle RHNA for the current planning period, which is the number of housing units the City of Santa Rosa would need to accommodate by 2031. As shown in Table 4.13-3, the housing unit allocations are categorized by household size and income. The household income categories are as follows:

- Very Low Income: Households making less than 50 percent of the area median income.
- Low Income: Households making between 50 and 80 percent of the area median income.
- Moderate Income: Households making between 80 and 120 percent of the area median income.
- Above Moderate Income: Households making more than 120 percent the area median income.

Household median income is calculated based on household size. In 2019, the median income in Sonoma County for a single-person household was $65,300. The median income in Sonoma County for a family of three in 2019 was $83,950, and $108,250 for a family of six.[5]

TABLE 4.13-3 SANTA ROSA REGIONAL HOUSING NEEDS ALLOCATION

	Dwelling Units by Income Category				
RHNA Planning Period	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Total
2023 to 2031	1,218	701	771	1,995	4,685

Note: RHNA = Regional Housing Need Allocation
Source: City of Santa Rosa, February 2023, *2023-2031 Housing Element*, https://www.santarosaforward.com/files/managed/Document/762/SANTA%20ROSA_2023-2031%20Housing%20Element_Adopted_2.14.23.pdf, accessed March 10, 2023.

4.13.2 STANDARDS OF SIGNIFICANCE

The implementation of the proposed project would result in significant population and housing impacts if it would:

1. Induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to population and housing.

4.13.3 IMPACT DISCUSSION

POP-1 Implementation of the proposed project would not induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

The proposed General Plan 2050 is a high-level policy document that will replace the current General Plan 2035 as the overarching policy document that defines a vision for future change and sets the land use and policy framework for growth for Santa Rosa. The proposed project considers growth over an approximately 25-year horizon but does not include specific development proposals. The General Plan is the policy document that plans ahead to accommodate the amount of reasonably foreseeable growth

[5] California Department of Housing and Community Development, May 6, 2019, *State Income Limits for 2019*, https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/income-limits-2019.pdf, accessed March 10, 2023.

given past growth trends and the ability of existing services and infrastructure to support future growth. Therefore, the proposed project would not directly induce growth, but rather is a response to growth that is likely to occur whether the proposed project is adopted or not. Because the proposed General Plan 2050 also includes recommendations for future roadway and infrastructure extension, as it is required to do by State law, it has the potential to indirectly induce growth. However, the proposed General Plan 2050 itself is the City's effort to adequately plan for this growth.

As shown in Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR, the EIR Study Area has a population of approximately 197,980, with 75,850 housing units as of 2019. The proposed project estimates an overall increase of 24,090 housing units and 65,760 residents in the EIR Study Area by 2050. As shown in Table 4.13-4, *Proposed General Plan 2050 Growth Projections,* this equates to a 33 percent increase in total population and 32 percent increase in housing units over the 25-year horizon of the proposed project.

TABLE 4.13-4 PROPOSED GENERAL PLAN 2050 GROWTH PROJECTIONS

	Existing Conditions 2019	Proposed General Plan 2050	Santa Rosa Projected Growth 2019 to 2050 (Proposed Project)	Total Percent Change
Population	197,980	263,740	65,760	33%
Housing Units	75,850	99,940	24,090	32%

Note: Numbers are rounded from original sources.
Source: Sonoma County Transportation Authority and W-Trans, 2023, *Santa Rosa General Plan 2050 Travel Demand Model*.

Approximately 19 percent of the projected residential growth for the proposed project comes from the City's 2023–2031 RHNA allocation of 4,685 units,[6] which is dictated by the California Housing Law and not by the City. The 4,685 units required for the 2023-2031 Housing Element represent an 8 percent decrease over the 2015-2022 RHNA, which was 5,083 units. Although the RHNA allocation is not a requirement to build units, the State legislature has enacted increasingly stringent requirements on cities to ensure they are doing everything possible to remove common barriers to housing construction. Furthermore, pursuant to Senate Bill 166, Housing Elements are required to include a "buffer" of additional sites to ensure that if the sites listed in the housing opportunity sites inventory are developed without housing, or are developed with less than the full amount of housing claimed in the inventory, there is remaining capacity to ensure an ongoing supply of sites for the full RHNA during the eight years of the Housing Element cycle. The California Department of Housing and Community Development recommends a buffer of least 15 to 30 percent, but many jurisdictions provide a buffer of up to 50 percent. The proposed land use map, as shown in Figure 3-3, *Proposed General Plan 2050 Land Use Map*, in Chapter 3 of this Draft EIR, includes enough land designated for housing to fulfill the City's 2023-2031 RHNA as well as future buffer sites identified through the 2023-2031 Housing Element.

[6] City of Santa Rosa, February 2023, *2023-2031 Housing Element*, https://www.santarosaforward.com/files/managed/Document/762/SANTA%20ROSA_2023-2031%20Housing%20Element_Adopted_2.14.23.pdf, accessed March 10, 2023.

However, the proposed project extends beyond the end of the 6th Cycle RHNA of the recently adopted Housing Element. Assuming continued eight-year RHNA cycles, and that the proposed General Plan 2050's expected life cycle is until 2050, the proposed General Plan 2050 should designate sufficient residential land to accommodate the future 7th Cycle (2031–2039), the 8th Cycle (2039–2047), and some of the 9th Cycle (2047–2055). The scale of future housing allocations is unknown and difficult to predict. If the 7th Cycle RHNA uses the same percentage change as the 5th to 6th Cycle RHNA, it would call for approximately 4,455 new units. If the 8th and 9th Cycles continue that trend, it could be expected to call for an additional 4,380 new units by 2047 and an additional 4,430 new units by 2055, for a combined total of around 17,950 new units over the 7th through 9th Cycles, covering the years 2031 to 2055. This does not include any additional buffer for the three future RHNA cycles. Table 4.13-5, *Santa Rosa Projected Regional Housing Needs Allocation*, summarizes the projected RHNA for Santa Rosa through 2055.

TABLE 4.13-5 SANTA ROSA PROJECTED REGIONAL HOUSING NEEDS ALLOCATION

Housing Cycle	Regional Housing Needs Allocation (RHNA)
6th Cycle (2023-2031)	4,685
7th Cycle (2031–2039)	4,455
8th Cycle (2039–2047)	4,380
9th Cycle (2047–2055)	4,430
Total Housing Unit Needs	**17,950**

Note: The 7th through 9th Cycle RHNA is unknown at this time. The numbers provided are rounded estimates based on past RHNA for the City of Santa Rosa based on the assumption that the percentage change from the 5th Cycle to 6th Cycle would not change.
Source: PlaceWorks, 2023.

The Santa Rosa 2023-2031 Housing Element that was recently adopted in February 2023 includes goals, policies, and actions that address population and housing growth over the next eight years. Furthermore, Chapter 2, *Land Use and Economic Development,* of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts from potential future growth. The following goal, policies, and actions would serve to minimize impacts related to population growth:

- Goal 2-1: Ensure that growth and change serve community needs, protect the environment, improve the City's fiscal stability, and enhance quality of life for all members of the community.
  - Policy 2-1.2: Facilitate future annexations with a thoughtfully designed and transparent strategy that ensures the City's ongoing fiscal health and supports a high quality of life for community members.
    - Action 2-1.5: Prepare a specific plan prior to annexation of land in south Santa Rosa, south from the current City boundary to the Urban Growth Boundary, including both the east and west sides of Highway 101 to identify and accommodate needs related to City services, such as fire and police, water, wastewater, stormwater, transportation, and parks.
    - Action 2-1.7: Allow annexations or City utility connections only if they do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- Action 2-1.8: Work with LAFCO to require all proposed annexations within a county island to prepare a sentiment survey of all property owners in the island to determine the feasibility of annexing the full county island.

- Policy 2-1.4: Ensure that City policy, codes, programming, and practices support a range of land uses.
  - Action 2-1.21: Update the Zoning Code to:
    1. Rezone parcels to ensure consistency with the General Plan.
    2. Rezone Planned Development communities into appropriate zoning districts consistent with General Plan land uses.
    3. Create development standards for Missing Middle Housing types.

Furthermore, the proposed project would accommodate future growth by providing for infrastructure and associated public services to accommodate the projected growth of the city (see also Chapter 4.14, *Public Services, Parks, and Recreation*, Chapter 4.15, *Transportation*, and Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR). All potential future development would be required to comply with any required site-specific infrastructure improvements and to pay any project-specific impact fees.

As discussed, the proposed General Plan 2050 is the policy document that plans ahead to accommodate the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth. Additionally, buildout of the proposed project would be able to accommodate the next three RHNA cycles. Consequently, while buildout in accordance with the proposed project would serve to accommodate expected population, housing, and job growth in the city, this growth would not represent unplanned population growth for which inadequate planning has occurred, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

POP-2 Implementation of the proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Buildout under the proposed project is expected to result in an increase of approximately 24,090 housing units in the EIR Study Area over an approximately 25-year horizon. One of the purposes of the proposed project is to adequately plan and accommodate future growth through the distribution, location, balance, and extent of land uses. Implementation of proposed General Plan 2050 would accommodate population growth through land use designations, goals, policies, and actions that provide a vision and guide growth in the city. Land use changes under the proposed land use map would increase opportunities for housing in the city. The proposed land use map would provide land use designations for a variety of housing types and provide for additional residential opportunities throughout Santa Rosa.

Furthermore, Chapter 2, *Land Use and Economic Development,* of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts from potential future growth. The goal, policies, and actions listed under impact discussion POP-1 would

also serve to minimize potential adverse impacts related to population and housing displacement. Therefore, implementation of the proposed project would not displace existing people or housing or necessitate the construction of replacement housing elsewhere and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

POP-3 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to population and housing.

The context for the cumulative population and housing impacts would be potential future development under the proposed project combined with development on lands adjacent to the EIR Study Area. As described under impact discussions POP-1 and POP-2, implementation of the proposed project would not induce a substantial amount of unplanned population growth or growth for which inadequate planning has occurred, or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The proposed General Plan 2050 goals, policies, and actions would provide adequate planning to accommodate the proposed new increase in growth in the EIR Study Area. Therefore, the proposed project would not result in a cumulatively considerable impact to population and housing, and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

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4.14 PUBLIC SERVICES, PARKS, AND RECREATION

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to public services (fire protection, police services, and schools), parks, and recreation associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to public services, parks, and recreation, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts.

The analysis in this chapter is based on the *Existing Conditions Report* prepared on behalf of the City of Santa Rosa in December 2020 and updated information from the police and fire department as well as.[1]

4.14.1 FIRE PROTECTION SERVICES

4.14.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

California Government Code

Section 65302 of the California Government Code requires General Plans to include a Safety Element, which must include an assessment of wildland and urban fire hazards. The Safety and Resilience Element of the existing General Plan and the proposed General Plan 2050 satisfies this requirement.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. In addition to fire-fighting services for land in State Responsibility Arees (SRAs), CAL FIRE staff, or a designee, reviews building permit applications, parcel maps, and use permits for construction or development in SRAs and Local Responsibility Areas (LRA). The City of Santa Rosa is made up of all LRA lands.

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations (CCR), commonly referred to as the California Building Code (CBC). The CBC is in Part 2 of Title 24. The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are

[1] City of Santa Rosa, December 2020, *Existing Conditions Report*, https://www.santarosaforward.com/ECR.

plan-checked by local City building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings and other facilities; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction in high fire hazard severity zones; requirements for smoke-detection systems and exiting requirements; and the clearance of debris.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council. Like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The City of Santa Rosa regularly adopts each new CFC update under SRCC Chapter 18-44, *2022 California Fire Code*. This is the official Fire Code for the State and all political subdivisions. It is found in CCR Title 24, Part 9 and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions.

The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

The Mello-Roos Communities Facilities Act of 1982

The Mello-Roos Community Facilities Act, Government Code Section 53311 *et seq.*, provides an alternative method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish Community Facilities Districts (CFDs) to levy special taxes for facilities such as fire protection facilities.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts resulting from fire. The SRCC is organized by title, chapter, and section, and in some cases, articles. Provisions related to fire protection and reducing fire-related impacts are in Title 9, *Health and Safety*; Title 18, *Buildings and Construction*; Title 19, *Subdivisions*; and Title 20, *Development Requirements*, as follows:

- Chapter 9-08, *Weeds and Rubbish*. Section 9-08.020, *Nuisance Determination*, requires that all weeds growing upon the streets or sidewalks or upon or in front of private property within the City which bear seeds of a wingy or downy nature, or attain such a large growth as to become a fire menace when dry, or which are otherwise noxious or dangerous, may be declared to be a public nuisance by the City Council and may thereafter be abated as provided by this chapter.

- Chapter 18-22, *California Residential Code*. This chapter establishes guidelines for building improvements and construction in Santa Rosa. Some areas of the chapter that pertain to fire are fire sprinklers, roof covering materials in very high fire hazard severity zones, and fire-retardant shingles and shakes.
- Chapter 18-44, *California Fire Code*. The City of Santa Rosa regularly adopts each new CFC update under this chapter of the SRCC. The CFC is a model code that regulates minimum fire safety regulations for new and existing buildings; facilities; storage; processes, including emergency planning and preparedness; fire service features; fire protection systems; hazardous materials; fire flow requirements; and fire hydrant locations and distribution.
- Chapter 19-60, *Reservations of Land*. This chapter states as a condition of tentative map approval, the subdivider shall reserve sites, appropriate in area and location, for parks, recreational facilities, fire stations, libraries, or other public uses according to the standards and formula contained in Section 19-60.020, *Standards and formula for reservation*. The reserved area must be of such size and shape as to permit the balance of the property within which the reservation is located to develop in an orderly and efficient manner.
- Chapter 21-04, *Capital Facilities Fees*. This chapter creates a capital facilities fee (CFF), which is used to alleviate the cost of certain public infrastructure facilities required to serve new development in the City of Santa Rosa. Out of the five account areas, public safety will have 12.8 percent of the revenue from each CFF.
- City Charter, Section 22, *Chief of the Fire Department*. This section of the City Charter establishes appointment proceedings for the Chief of the Santa Rosa Fire Department (SRFD). The Fire Chief has charge and supervision over all matters relating to the prevention and extinction of fires, and of all measures necessary to guard and protect all impaired property.

Emergency Operations Plan

The Santa Rosa Emergency Operations Plan (EOP), adopted June 2017, outlines how the City coordinates their response to major emergencies and disasters.[2] The EOP identifies operational strategies and plans for managing complex and potentially catastrophic events. It addresses the four phases of emergency management: preparedness, response, recovery, and mitigation. The EOP is organized into three parts, along with supporting plans. Part I, *Basic Plan*, presents the planning assumptions, policies, and concept of operations that guide the responsibilities for emergency preparedness, response, recovery, and mitigation for the City. Part II, *Hazard Annexes*, and Part III, *Functional Annexes*, provide additional detail and guidance for specific hazards, functions, or operations.

[2] City of Santa Rosa, June 2017, *City of Santa Rosa Emergency Operations Plan*, https://www.srcity.org/DocumentCenter/View/16434/Emergency-Operation-Plan, accessed March 22, 2023.

Hazard Mitigation Plan

On December 7, 2021, the Santa Rosa City Council adopted the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), which also provides an update to the City's Local Hazard Mitigation Plan (LHMP).[3] The MJHMP consists of two volumes. Volume 1 includes all federally required elements of a disaster mitigation plan as they apply to the entirety of Sonoma County. Volume 2 is made up of Annexes (chapters) for each local agency and special district participating in the MJHMP. The City of Santa Rosa Annex, which serves as a five-year update to the LHMP, is found in Volume 2, Chapter 3. The LHMP identifies the natural hazards faced by the city, assesses vulnerabilities to these hazards, and identifies mitigation strategies that can be taken to reduce or alleviate the loss of life, personal injury, and property damage that otherwise might result from said natural hazards. Mitigation actions are suggested and carried out by various City departments. A description of the mitigation actions for wildfires include:

- In accordance with the adaptation strategies of the Climate Action Plans, integrate climate change adaptation into future updates of the Zoning Code, Building Code, General Plan, Urban Water Management Plan, and other related documents.
- Continue to update the City's emergency planning documents every five years to ensure consistency with State and federal law, local conditions, best practices, and the most recent science.
- Prepare a Zoning Code update to identify vegetation management requirements in the Wildland-Urban Interface (WUI) zone for existing and new development.
- Retrofit, replace, or relocate critical facilities that are shown to be vulnerable to damage in natural disasters prioritizing those structures that have experienced repetitive losses and/or are in a high or medium ranked hazard.
- Work with residents and property owners to develop an incentive program to replace shake roofs in the WUI.
- Continue to implement improvements to water flow capacity in the WUI.
- Continue to tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.
- Pursue Type 1 HazMat Team status.
- Prepare a comprehensive Hazardous Materials Area Response Plan update.
- Conduct microgrid feasibility study.
- Secure redundant power supply for City-owned and leased facilities and infrastructure that lack adequate back-up power.
- Relocate/update emergency operations center (EOC) to City-owned facility that can accommodate use and renovation to permanent warm/hot EOC with appropriate equipment for communication and situational awareness.

[3] City of Santa Rosa, 2021, *Local Hazard Mitigation Plan*, https://www.srcity.org/540/Local-Hazard-Mitigation-Plan, accessed March 9, 2023.

- Implement actionable items identified within the Santa Rosa Community Wildfire Protection Plan.
- Actively participate in the annual maintenance protocols outlined in Volume I of the MJHMP.
- Support the county-wide initiatives identified in Volume I of the MJHMP.
- Integrate the LHMP into other plans, ordinances, and programs that dictate land use decisions in the community, including the General Plan, Specific Plans, and the City Code.
- Develop a plan for expediting the repair and functional restoration of water and wastewater systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water/Wastewater Agency Response Network (WARN). Communicate that plan to local governments and critical facility operators.
- Explore the feasibility of resilience hubs in the city.

The MJHMP has identified the types and levels of fire responsibility areas for the EIR Study Area, as shown on Figure 4.18-1, *Fire Hazard Severity Zones*, in Chapter 4.18, *Wildfire*, of this Draft EIR.

Community Wildfire Protection Plan

This plan was developed for the SRFD and its purpose it to enhance protection of human life safety and reduce the wildfire threat to community assets, such as homes, commercial structures, critical infrastructure, businesses, and natural and historic resources in the city.[4] The five main goals of the plan are:

- Minimize the wildfire threat to life safety.
- Reduce the wildfire threat to values/assets at risk.
- Develop priorities to mitigate risks and hazards identified.
- Determine potential impacts of climate change on the local fire environment and how these impacts may influence wildfire hazard and risk in the mid-twenty-first century.
- Establish a plan to track and monitor implementation of action items identified in the plan.

Santa Rosa Fire Department Strategic Plan

The Santa Rosa Fire Department developed a community-driven Strategic Plan (2024-2029), identifying the following key goals:

- Revitalize the fire department's workforce through innovative recruitment strategies to maximize organizational effectiveness.
- Improve physical resources to ensure the highest level of safety and service for our community and personnel.
- Enhance the overall technical readiness and communication infrastructure of the fire department to ensure efficient emergency response and personnel safety.

[4] City of Santa Rosa, 2020, *Community Wildfire Protection Plan*, https://srcity.org/DocumentCenter/View/30136/City-of-Santa-Rosa-Community-Wildfire-Protection-Plan-CWPP_91820, accessed November 8, 2022.

- Strengthen community engagement, safety, and preparedness through active community collaboration, communication, and outreach to create a more prepared community.

Assembly Bill 337 (Bates Bill)

In response to the Oakland Hills fire of 1991, Assembly Bill (AB) 337, also known as the Bates Bill, was passed in 1992. Pursuant to this law, all new construction that is in any fire hazard zone in Santa Rosa must follow brush clearance requirements and use fire-resistant roof material.

Existing Conditions

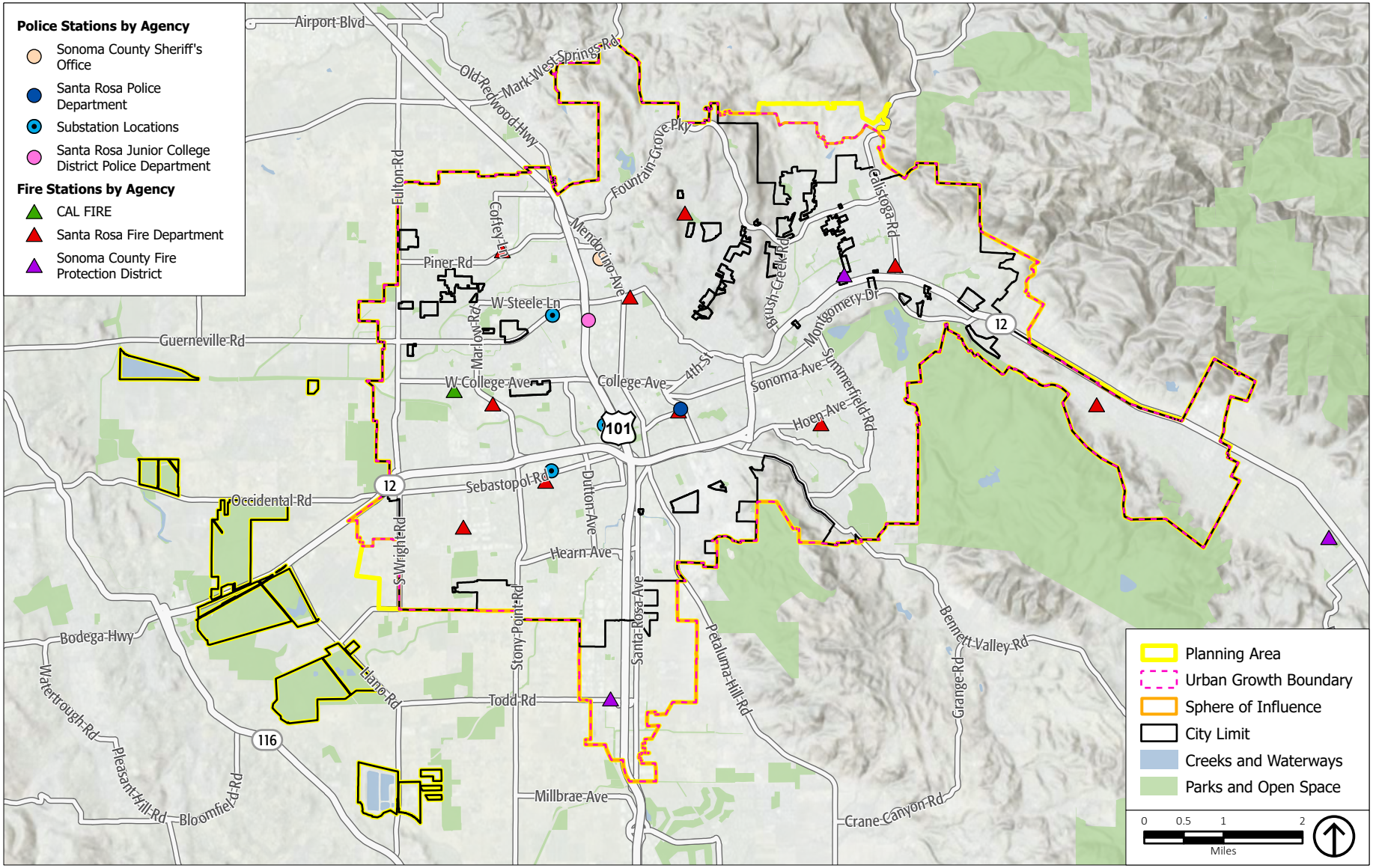
Fire services in the EIR Study Area are provided by SRFD and the Sonoma County Fire Protection District (SCFPD). SRFD has primary responsibility for areas within the city limits. Mutual-aid agreements between these agencies allow for joint responses to emergencies that call for additional personnel. Figure 4.14-1, *Fire and Police Stations,* shows the fire station locations in the EIR Study Area.

Santa Rosa Fire Department

The City of Santa Rosa provides fire protection services within city boundaries, serving approximately 41 square miles within the service area, which includes a population of 173,628 residents. SRFD serves as an all-risk fire department that responds in a variety of emergency situations, including medical emergencies, physical entrapment, fires, and releases of hazardous materials.

SRFD has 169 employees and is organized into four branches: Operations Bureau, Administration Bureau, Prevention Bureau, and Emergency Management. The Operations Bureau is organized into a Training and Safety Division, a Support Services Division, a Suppression Battalion Division, and an Emergency Medical Services (EMS) Division. In 2020, SRFD created a Pandemic Response Unit to respond to high-risk calls while minimizing potential COVID-19 exposure to the department and community. The unit is no longer in service. In 2024, the Fire Department staffed new paramedic squads. These are the first new units the SRFD has placed into service full time since 2009.

The Operations Bureau consists of one fire chief, three battalion chiefs, three division chiefs, one training captain, one EMS captain, 36 captains, 42 engineers, and 54 firefighters, as well as a Hazardous Materials Response Team (HMRT). The HMRT is a State of California Type 2 team consisting of 45 highly trained members who participate in rigorous ongoing training to maintain their HazMat Technician/Specialist certifications. Duties of the HMRT include chemical sampling and identification, spill and leak control, life-saving decontamination, and response to calls for chemical leaks or spills. Based at Fire Station 10, the HMRT is available 24 hours a day, 365 days a year. The EMS Division, also housed within the Operations Bureau, ensures that all SRFD personnel are trained to the Emergency Medical Technician (EMT) level and each shift has a Field Training Officer (FTO), or experienced personnel, to regularly interface with paramedics.



Source: City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.14-1
Fire and Police Stations

The Prevention Bureau reviews, updates, and enforces fire-related codes and ordinances. This branch consists of a fire marshal, three assistant fire marshals, six fire inspectors, one fire plans examiner, two community outreach specialists and administrative personnel. The activities enforced by the Prevention Bureau include code compliance inspections, construction inspections, investigation of fires and environmental crimes, public education programs, regulation of business-related hazardous waste, vegetation management inspections, and enforcement of the weed abatement program.

Facilities and Equipment

The City operates 10 fire stations distributed throughout the city to expedite response times. In addition, SRFD has an automatic-aid agreement with the SCFPD and Sonoma Valley Fire District (SVFD), which integrates their stations into the citywide response matrix. Each SRFD fire station houses an engine company and is staffed 24 hours per day. Additionally, Station 1 and Station 2 each house a truck company. Station 3 and Station 8 house paramedic squads. SRFD administrative headquarters is at 2373 Circadian Way.

Station 8, formerly serving the Roseland Fire Protection District, was annexed into SRFD in 2019 in the southwest Santa Rosa area and is at 830 Burbank Avenue. The City plans to move this station to a new location near Hearn Avenue and Dutton Avenue. In addition, the City plans for several new fire stations in south Santa Rosa and east Santa Rosa, which will further improve coverage and response time in this area.

SRFD has 10 engines, each with a captain, engineer, and firefighter, two truck companies with a captain, two engineers, and a firefighter, and two squads with firefighter paramedics. SRFD also owns and deploys several reserve engines, two ladder trucks, one reserve ladder truck, one water tender, heavy rescue, hazardous materials unit and several command response vehicles as needed.

Response Times and Performance

As of 2023, SRFD responds to approximately 30,000 calls per year for fire, emergency medical, rescue, operations-level hazardous materials response, fire prevention, and life safety services. In 2023, the SRFD responded to 30,035 incidents which is higher than other similar-sized urban fire departments across the nation. In 2016, the City Council set a goal for SRFD to respond to 80 percent of all calls for service within 4 minutes or less, to 90 percent of all calls for service within 5 minutes or less, and to all calls for service within 6 minutes or less. According to SRFD 2016 Strategic Plan, which includes SRFD's goals and strategies to provide fire protection services, SRFD's response times are at 5 minutes 55 seconds, 90 percent of the time. Of all incidents warranting an emergency response from SRFD in 2018, it responded to 90 percent in 6 minutes, 5 seconds or less.

In 2016, SRFD was upgraded from a Class 3 rating to a Class 1 rating by the Insurance Service Office (ISO). The rating, based on local department staffing levels and training, station proximity, water availability, communication system quality, and community outreach, gauges whether fire departments are prepared to put out fires in that community. The ISO evaluates over 40,000 fire departments nationwide, with only 178 earning the Class 1 rating in 2016.

Funding

The Santa Rosa General Fund supports essential City services, including fire protection. In fiscal year 2020/2021, fire services accounted for roughly one quarter of the City's General Fund expenditures, which included funding for employee salaries, purchasing of fire suppression equipment, and various other basic needs. In 2024/2025, fire services expenditures are anticipated to be 26.7 percent.

Additional expenses are paid for by Special Revenue Funds, which includes Measure O funds—a 20-year sales tax extension and increase approved by voters in 2004—established for special fire services, SRFD personnel, including paramedic fire operations staff and an EMS battalion chief, construction of existing and future fire stations, and necessary fire apparatus. In addition, the Capital Improvements Program (CIP) provides funds to support long-range capital needs to maintain infrastructure health. In the fiscal year 2020/2021, the CIP supported the rebuild of Fire Station 5, previously demolished in the 2017 Tubbs Fire. In 2024/2025, the CIP includes funds for the Fire Training Center Improvements and a new fire Station in South Santa Rosa.

On July 26, 2022, the City Council unanimously placed a measure on the November 8, 2022, ballot to renew the existing local 1/4 cent sales tax that provides dedicated public safety and violence prevention funding. The measure passed and secured funding.

In 2023, SRFD established an Apparatus Replacement Fund, an ongoing funding source for new apparatus purchases, by budgeting apparatus lease payments into the replacement fund as they expire. The citywide replacement program will aim to replace engines every 12 years and ladder trucks every 15 years by building a fund balance for future purchases.

SRFD charges administrative, operational, and construction permit fees related to development and fire activities, such as fire alarm installation and modification, fire plan check, vegetation management plan review and field inspection, and weed abatement inspection.

Sonoma County Fire District & Sonoma Valley Fire District

Both Districts have stations that provide fire protection, emergency medical services, and hazard mitigation, and each station has at least one staffed engine that is able to respond through automatic and mutual aid to the SRFD.

4.14.1.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact related to fire protection services if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
2. In combination with past, present, and reasonably foreseeable projects, result in a cumulative fire protection service impact.

4.14.1.3 IMPACT DISCUSSION

PS-1 **Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

New development in the city would be served by the SRFD. A significant impact to the SRFD would result if, in order for the SRFD to adequately serve the area, increased demand in the city limit would require the construction of new facilities or the expansion of existing facilities, the construction or operation of which would cause significant environmental impacts. The SRFD has a 'Standards of Coverage' that was adopted in 2005. A new plan will be developed and in place by 2025 to aid in the determination of new station and apparatus locations.

Implementation of the proposed project would allow for increased development within the EIR Study Area, which would increase the service population of the SRFD above existing conditions. Potential future development over the buildout horizon of the proposed project would include new housing and nonresidential development, with associated increases to resident and employee population. As discussed in Section 4.14.1.1, *Environmental Setting*, the City is moving Station 8 to a new location on Hearn Avenue near Dutton Avenue. In addition, the City plans for new fire stations in East Santa Rosa and South Santa Rosa which will further improve coverage and response time. The CIP would also continue to provide funds to support long-range capital needs to maintain infrastructure health.

Potential future development that may occur due to implementation of the proposed project would be required to comply with Title 24 of the CCR as adopted in SRCC Chapter 18-44, as outlined in Section 4.14.1.1, *Environmental Setting*. Compliance with the State's Title 24 would ensure any new development proposed in the EIR Study Area meets the most current building and fire codes, thereby increasing safety of the buildings, and reducing the likelihood of a fire emergency, subsequently reducing demand on SRFD fire services. Potential future development under the proposed project would also be required to pay CFFs, as required by SRCC Chapter 21-04. In addition, Chapter 5, S*afety, Climate Resilience, Noise, and Public Services and Facilities,* of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on fire protection service facilities. The following goal, policy, and actions would serve to reduce impacts to fire protection service facilities and services in the EIR Study Area:

- Goal 5-11: Provide efficient and effective police and fire services for all members of the community.
  - Policy 5-11.1: Increase investments in community safety.
    - Action 5-11.1: Maintain an efficient, well-trained, and adequately equipped police and fire personnel.

- Action 5-11.2: Increase and maintain a staffing model, station construction schedule, and apparatus/equipment purchasing program that enables a ratio of at least 1 career firefighter per 1,000 population per National Fire Protection Association recommendations.
- Action 5-11.3: Periodically review and update the Fire Department Strategic Plan and Standards of Coverage, and the Police Department Strategic Plan to address the following needs:
  - Staffing levels
  - Station location/placement
  - Equipment needs
  - Training requirements
  - Response time criteria
  - Areas lacking adequate service
  - Projection of future emergency service needs
- Action 5-11.4: Continually update first responder training requirements to meet local, State, and federal standards.
- Action 5-11.5: Identify and provide necessary enhancements and/or resource needs to achieve a response time of under six minutes anywhere in the service area.
- Action 5-11.6: Pursue infrastructure improvements, including new police and fire stations (outside of high hazard risk areas) and new emergency vehicles and equipment.
- Action 5-11.7: Enhance workplace equity and expand the diversity of emergency personnel to better reflect the makeup of the city.
- Action 5-11.8: Enhance employee wellness and mental health support to enable better service to the community by all personnel.
- Action 5-11.9: Coordinate with Sonoma County on police and fire services to achieve cost-effective improvements to service levels.
- Action 5-11.10: Ensure all properties have visible street addresses and signage to ensure effective emergency response activities.

In addition to the goal, policy, and actions listed here, see Chapter 4.18, *Wildfire*, of this Draft EIR, for a complete list of goals, policies, and actions that would minimize risk of wildfire, thereby reducing demand on SRFD fire services.

While the proposed project would increase demand on fire protection services, growth would most likely occur incrementally over the lifetime of the project, and it would be unlikely that the magnitude of increased demands as a result of the full buildout potential of the proposed General Plan 2050 would be placed on facilities within the immediate timeframe or all at once. Individual project plan review by the SRFD, continuation of the CIP, consistency with the proposed General Plan 2050 goals, policies, and actions identified above, and compliance with the regulations described under Section 4.14.1.1, *Environmental Setting*, would ensure that the SRFD is involved as potential future development occurs in the EIR Study Area. Furthermore, future construction of new fire stations would be subject to separate project-level environmental review pursuant to the California Environmental Quality Act (CEQA), as required, to identify potential environmental impacts and mitigation measures as needed and would also

be subject to the mitigation measures contained throughout this Draft EIR to reduce potential environmental impacts. Therefore, impacts on fire protection facilities would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-2 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative fire protection services impact.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR takes into account growth from potential future development under the proposed project within the city combined with the estimated growth in the service areas of each service provider. In the case of fire protection, this would be the service area of the SRFD. As discussed in Section 4.14.1.1, *Environmental Setting*, the SRFD has a mutual-aid agreement with SCFPD and SVFD allowing for joint responses to emergencies that call for additional personnel. As described under impact discussion PS-1, the SRFD plans for the relocation and addition of fire stations to provide better coverage or service. As the SRFD requires new equipment or staffing, the funds for such improvements would be provided through the special revenue funds, the annual budget process, and/or would rely on the General Fund. Other funding opportunities, such as State and federal grants, may also be available.

Compliance with State and local regulations described under Section 4.14.1.1, *Environmental Setting*, and the proposed General Plan 2050 goals, policies, and actions identified under impact discussion PS-1, would ensure that fire protection services continue to adequately serve the EIR Study Area. Potential future development that may occur within and adjacent to the EIR Study Area would occur incrementally over the proposed General Plan 2050's approximately 25-year buildout horizon, and therefore is not anticipated to substantially increase the population, thereby avoiding reduction of SRFD, SVFD, and SCFPD's ability to adequately serve residents. Further, because the proposed project is program level, and because potential future development would be required to undergo project review at the time of project application, each potential future development would be assessed for impacts to fire protection services. With adequate planning in place in both the city limit and the unincorporated Sonoma County service area, the proposed project would not result in a cumulatively considerable impact to fire protection services and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.14.2 POLICE SERVICES

4.14.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

The Mello-Roos Communities Facilities Act of 1982

The Mello-Roos Community Facilities Act, Government Code Section 53311 et seq., provides an alternative method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish CFDs to levy special taxes for facilities such as police service facilities.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives around police services. The SRCC is organized by title, chapter, and section, and in some cases, articles. Provisions related to police services are in Title 10, *Public Peace, Morals and Welfare*; Title 11, *Vehicles and Traffic*; and Title 21, *Development Requirements*, as follows:

- Section 10-38.050, *Police Department enforcement*. This section outlines how the owner or lessee of any business premises shall submit a written policy governing the grounds for expulsion from the premises before the police department can enforce any laws provided in this chapter.
- Section 11-08.030, *Police Chief.* This section establishes the responsibilities of the police chief in terms of traffic regulations and enforcing the California Vehicle Code.
- Chapter 21-04, *Capital Facilities Fees*. This chapter creates a CFF, which is used to alleviate the cost of certain public infrastructure facilities required to serve new development in the City of Santa Rosa. Out of the five account areas, public safety will have 12.8 percent of the revenue from each CFF.
- City Charter, Section 21, *Chief of Police*. This section of the City Charter establishes appointment proceedings for the Chief of Police of the Santa Rosa Police Department. The Chief of Police acts to preserve the public peace and to suppress riots, tumults, and disturbances.

Emergency Operations Plan

The Santa Rosa EOP, adopted June 2017, outlines how the City coordinates their response to major emergencies and disasters.[5] The EOP identifies operational strategies and plans for managing complex and potentially catastrophic events. It addresses the four phases of emergency management: preparedness, response, recovery, and mitigation. The EOP is organized into three parts, along with

[5] City of Santa Rosa, June 2017, *City of Santa Rosa Emergency Operations Plan*, https://www.srcity.org/DocumentCenter/View/16434/Emergency-Operation-Plan, accessed March 22, 2023.

supporting plans. Part I, *Basic Plan*, presents the planning assumptions, policies, and concept of operations that guide the responsibilities for emergency preparedness, response, recovery, and mitigation for the City. Part II, *Hazard Annexes*, and Part III, *Functional Annexes*, provide additional detail and guidance for specific hazards, functions, or operations.

Existing Conditions

Police services in the EIR Study Area are provided by the SRPD, the Sonoma County Sheriff's Office, and the California Highway Patrol. SRPD has primary responsibility for areas within the city limits. The Sonoma County Sheriff's Office provides services to unincorporated areas within the EIR Study Area, and the California Highway Patrol provides traffic enforcement on state and local freeways. Mutual-aid agreements between these agencies allow for joint responses to emergencies that call for additional personnel.

Santa Rosa Police Department

SRPD has 264 employees working within the community to provide public safety services, of which, 184 are sworn officers. SRPD employees work from one headquarters station and three substations, as depicted on Figure 4.14-1. SRPD also has 18 volunteers serving in the Volunteers in Police Services program and five student interns. SRPD currently has 1.05 sworn officers per 1,000 residents. This is well below the state average and lower than the stated needs of SRPD. Increased mandates and workloads have also impacted the ability of the Records and Evidence division to complete work in a timely manner.

Facilities

There is one main SRPD police station, which is at 965 Sonoma Avenue, directly adjacent to SRFD Station 1 and east of Downtown Santa Rosa. Together, this complex is commonly referred to as the Public Safety Building. SRPD has a fleet of 150 vehicles. SRPD reports that the Public Safety Building is aging and in need of extensive repairs and required updates, and it no longer meets SRPD's needs. Based on current conditions and anticipated growth, SRPD has stated its needs for a larger facility with an on-site training center in the next 10 years and two additional substations, one in east Santa Rosa and one in the Roseland neighborhood to replace a temporary substation, to reach SRPD's goal to provide better coverage of the entire city.

Response Times and Call Volumes

In 2023, SRPD processed 234,684 calls, of which, 72,301 were 911 calls. The average response time for emergency calls (Priority 1) was 6:57 minutes, the average response time for urgent calls (Priority 2) was 11:571 minutes, and the average response time for routine calls (Priority 3) was 25:36 minutes. Response time to calls for service from SRPD varies depending on the activity level at the time the call is received. Priority 1 calls require an immediate response because there may be an immediate threat to life. SRPD's goal is a response time of less than six minutes for Priority 1 calls, similar to the average goals of the largest northern and southern California cities of 5.4 minutes and 5.7 minutes, respectively. The increase in calls for service and the reporting/documentation requirements has extended these times. Funding

The budget for the SRPD for Fiscal Year 2023-2024 is $72,913,865, which includes the addition of two Downtown Enforcement officers and two Field & Evidence Technician positions. Additionally, the Public Safety Prevention Tax Measure H (formerly Measure O) budget was $7,330,550, which includes the addition of one Sergeant position for the reinstated Gang Crimes Team and $2.2 million for the purchase of the SRPD Roseland Substation. The budget is used for hiring additional sworn and civilian employees, , training, equipment, supplies, infrastructure, and anything else needed to enhance services to the community. The budget breakdown is shown as follows:

- Field Services: 50 percent
- Special Services: 15 percent
- Administration: 14 percent
- Technical Services: 12 percent
- Public Safety Prevention Tax Measure O/H: 9 percent

Santa Rosa Police Department Strategic Plan

The Santa Rosa Police Department is currently developing a community-driven Strategic Plan (2025-2029), identifying the following key goals:

- Goal 1: Foster Community Safety and Reduce Crime.
- Goal 2: Achieve Organizational Excellence.
- Goal 3: Enhance Technology / Innovation.
- Goal 4: Wellness.
- Goal 5: Facilities and Equipment.
- Goal 6: Community Engagement.

Santa Rosa Junior College District Police

The Santa Rosa Junior College District Police Department provides 24-hour law enforcement protection on all Santa Rosa Junior College (SRJC) campus sites. As shown on Figure 4.14-1, the headquarters are in Pedroncelli Center at the intersection of Elliott Avenue and Armory Drive in Santa Rosa. The District serves all students, staff, and faculty with 13 sworn police officers, 6 police dispatchers, 6 non-sworn community service officers, and 15 to 30 cadets, depending on the semester. District police officers have full peace officer status and receive the same law enforcement training as police officers employed at other full-service, fully certified, police agencies in California. Officers investigate crimes; respond to reports of burglary; suspicious people and incidents; and answer police, medical, and fire calls on the SRJC campuses.

Sonoma County Sheriff and California Highway Patrol

The Sonoma County Sheriff's Office provides law enforcement in unincorporated areas of Sonoma County, apart from traffic enforcement, traffic complaints, vehicular accidents, and auto theft investigations. Traffic and automobile-related incidents are primarily the responsibility of the California Highway Patrol. The Sheriff's Main Office is in Santa Rosa and houses the Sheriff's administrative staff, Investigations Bureau, Civil Bureau, Central Information Bureau, Dispatch Bureau, the Crime Scene Investigation Laboratory, and is where the majority of patrol staff work. The Sheriff's Office provides security for the Superior Courts, the Main Adult Detention Facility, and the North County Detention Facility in Santa Rosa. The County Coroner's Office, under jurisdiction of the Sheriff's Office, is also in Santa Rosa.

4.14.2.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact to police services if it would:

3. Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
4. In combination with past, present, and reasonably foreseeable projects, result in a cumulative police services impact.

4.14.2.3 IMPACT DISCUSSION

PS-3	**Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

New development in the city would be served by the SRPD. A significant impact would result if increased demand in the city limits would require the construction of new facilities or the expansion of existing facilities for the SRPD to adequately serve the city, the construction or operation of which would cause significant environmental impacts.

Buildout of the proposed project is projected to occur over an approximately 25-year horizon. While an increase in demand for police protection services would be gradual and is in line with incremental population growth, which would occur with or without adoption of the proposed project. As previously described, the SRPD staffing ratios of 1.05 sworn officers to 1,000 residents is below the national staffing average of 2.0 sworn personnel per 1,000 residents. Physical expansion of SRPD facilities may be needed to accommodate increases in staffing.

Potential future development that may occur due to implementation of the proposed project would be required to comply with SRCC Chapter 21-014, which requires new development in Santa Rosa to pay a fee that will be used on certain public infrastructure facilities required to serve the new development. The payment of fees would be based on the fees that are adopted at the time of future project approval for new residential, retail, office, institutional, and industrial development. In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains policies and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on police service facilities. In addition to the goal, policies, and actions listed under impact discussion PS-1, the following goal, policy, and actions would also serve to reduce impacts to SRPD facilities and services in the EIR Study Area:

- Goal 5-11: Provide efficient and effective police and fire services for all members of the community.
  - Policy 5-11.2: Focus policing efforts on community-based solutions.
    - Action 5-11.11: Assist neighborhoods and increase community contact through the Community-Oriented Policing Program.
    - Action 5-11.12: Enhance and explore ways to expand mental health support partnerships with police to provide a high level of mental health support to the community.
    - Action 5-11.13: Enhance police services using innovative technology and an equitable approach for resource allocation.
    - Action 5-11.14: Prioritize violent crime reduction and traffic safety solutions through innovative strategies and partnerships with key stakeholders.

Similar to impact discussion PS-1, while the proposed project would increase demand on police protection services, growth would most likely occur incrementally over the lifetime of the project, and it would be unlikely that the magnitude of increased demands as a result of the full buildout potential of the proposed project would be placed on facilities within the immediate timeframe or all at once. Payment of capital facilities fees, consistency with the proposed General Plan goals, policies, and actions discussed above, and compliance with the regulations described under Section 4.14.2.1, *Environmental Setting*, would ensure that the SRPD is involved as potential future development occurs in the EIR Study Area. Furthermore, future construction of new police stations would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed and would also be subject to the mitigation measures contained throughout this EIR to reduce potential environmental impacts. Therefore, impacts on police service facilities would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-4 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative police services impact.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, this EIR takes into account growth from potential future development under the proposed project in the city combined with the estimated growth in the service areas of each service provider. In the case of police, this would be the service area of the SRPD. As described under impact discussion PS-3, the proposed project encourages efficient and effective police services for all members of the community. This includes the proposed General Plan 2050 goals, policies, and actions, discussed under impact discussion PS-3, for assessing staffing levels, facility, and equipment needs of police services as the city grows; and focusing on community-based solutions. Compliance with State and local regulations described under Section 4.14.2.1*, Environmental Setting*, and the proposed General Plan 2050 goals, policies, and actions, would ensure that police services continue to adequately serve the EIR Study Area.

Potential future development that may occur within and adjacent to the EIR Study Area would happen incrementally over the General Plan 2050's approximately 25-year buildout horizon, and therefore is not anticipated to substantially increase the population, thereby avoiding reduction of SRPD and Sonoma County Sheriff's Office's ability to adequately serve residents. Further, because the proposed project is program level, and because potential future development would be required to undergo project review at the time of project application, each future development would be assessed for impacts to police services. With adequate planning in place in both the city and the unincorporated Sonoma County service area, the proposed project would not result in a cumulatively considerable impact to police services, and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.14.3 SCHOOLS

4.14.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

Senate Bill 50

Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. In setting the fees, school districts must prepare nexus studies to demonstrate a reasonable connection between new development and the need for school improvements. The fees may only be used to finance the construction or modernization of school facilities. The application level depends on whether State funding is available, the school district is eligible for State funding, and the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

California Government Code, Section 65995(b), and Education Code Section 17620

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. According to California Government Code Section 65995(3)(h), the payment of statutory fees is "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities." The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Mitigation Fee Act (California Government Code Sections 66000-66008)

Enacted as AB 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put.[6] The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This Act became enforceable on January 1, 1989.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives to ensure public schools are adequate to serve school-age children in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to public schools are included in Title 19, *Subdivisions,* as follows:

- Chapter 19-72, *School Impact Fees.* This chapter is enacted to provide a new and improved method of financing for interim school facilities necessitated by new residential development within the city. Section 19-72.050, *Amount of land or fee*, provides that every owner or developer of a residential development situated in or served by an attendance area where conditions of overcrowding exist, shall dedicate land, pay fees in lieu thereof, or a combination of both, for classroom and related facilities for elementary and/or high schools, as a condition to the approval of a residential development.
- Charter of the City, Section 29, *The Santa Rosa City School Districts*. This section provides guidance on what types of schools will be offered in the City of Santa Rosa, the boundaries of these school districts, the government structure of the school districts, and of the Board of Education.

Existing Conditions

The EIR Study Area is served by 8 public school districts, 1 community college, and 27 private schools, ranging from nursery/preschool to college (see Figure 4.14-2, *Schools in the EIR Study Area*). The eight public school districts cover the entire EIR Study Area, and private schools are sprinkled throughout the community offering alternative religious, special-needs, and specialized programs. Schools range from nursery/pre-kindergarten through high school in both public-school districts and private schools, and SRJC offers continuing education.

The information in this section is presented in a variety of formats because every school district reports data differently. In particular, information about school capacity, projected enrollment, budget, and facility improvements may be shown by school or by district, depending on each school district's standard.

[6] California Legislative Information, California Law, Code Section Group, Government Code Sections 66000-66008, https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=1.&title=7.&part=&chapter=5.&article= accessed April 8, 2020.

Table 4.14-1, *Santa Rosa School District's Student Enrollment and School Capacity,* gives an overview of all the school districts in the EIR Study Area and their enrollment and capacity numbers. Overall, school districts in the area are operating below capacity.

TABLE 4.14-1 SANTA ROSA SCHOOL DISTRICT'S STUDENT ENROLLMENT AND SCHOOL CAPACITY

School Districts	Student Enrollment	School Capacity	Student Enrollment of School Capacity
Bellevue Union School District	1,612	1,875	86%
Bennett Valley School District	1,015	1,040	98%
Kenwood School District	137	160	86%
Piner-Olivet School District	1,265	2,230	57%
Rincon Valley Unified School District	3,075	3,654	84%
Roseland School District	2,915	3,700	79%
Santa Rosa City School District	15,570	18,061	85%
Wright Elementary School District	1,481	2,400	62%
Private Schools	2,155	---	----
Total Students	**27,070 [a]**	**33,120 [a]**	**62% [a]**

Note:
a. Private schools were not counted in the total due to limited information about student capacity.

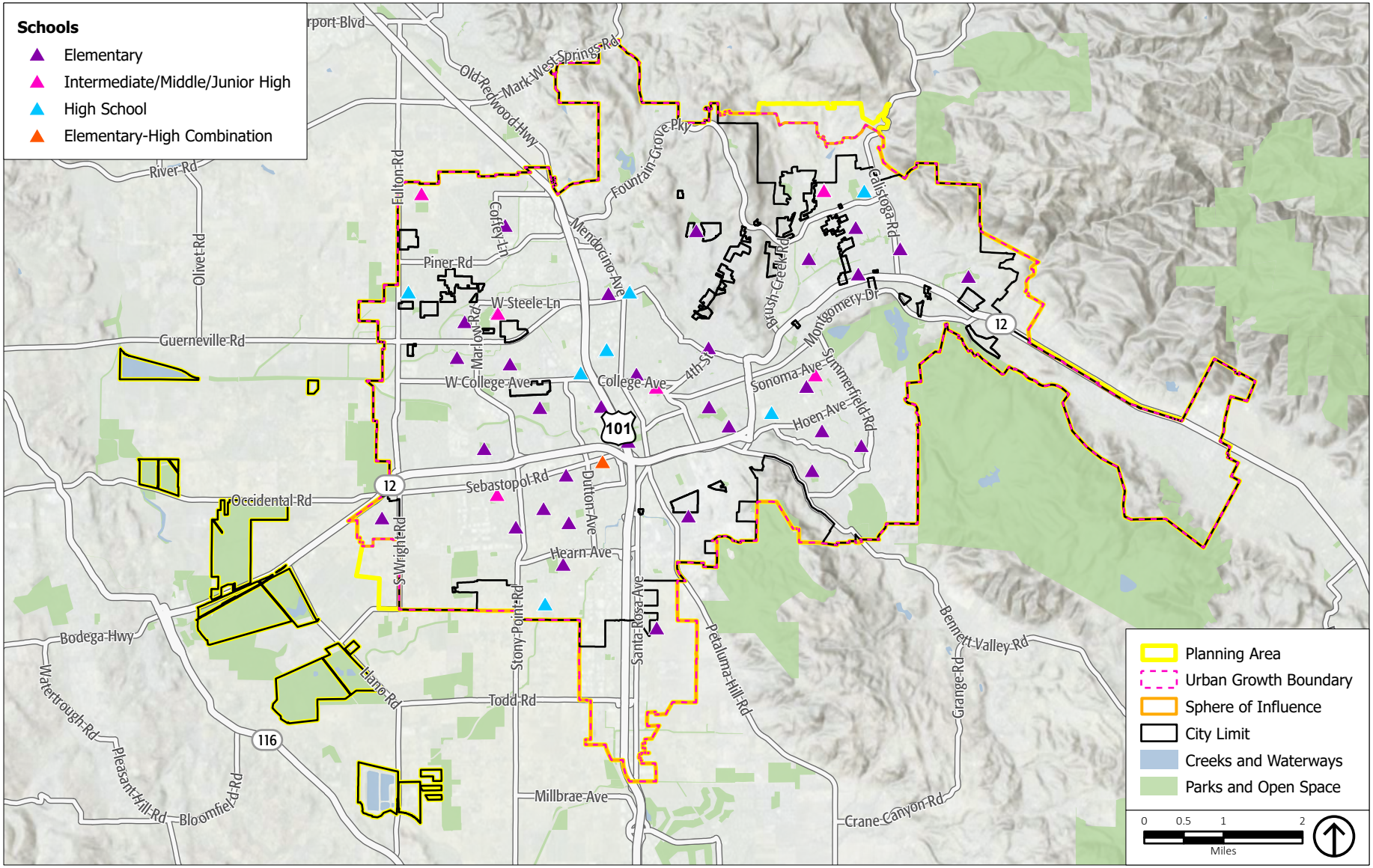
Bellevue Union School District

Bellevue Union School District (BUSD) mainly serves students who reside in south Santa Rosa and consists of four elementary schools. Geographically, it is one of the largest elementary school districts in Sonoma County. BUSD reported 1,612 students enrolled for the 2019 to 2020 school year. Enrollment and capacity for each school is shown in Table 4.14-2, *Bellevue Union School District Student Enrollment and School Capacity*; all schools are currently operating below capacity.

TABLE 4.14-2 BELLEVUE UNION SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Bellevue Elementary School (K-6)	3223 Primrose Avenue	426	500	85%
Kawana Elementary School (K-6)	2121 Moraga Drive	334	375	89%
Meadow View Elementary School (K-6)	2665 Dutton Meadow Avenue	411	500	82%
Lorena Falasco Elementary School (K-6)	1210 Bellevue Avenue	441	500	88%
	Total Bellevue Union School Students	***1,612***	***1,875***	**86%**

Source: Alexander, David (Superintendent, Bellevue Union School District), 2020, July 27. Personal communication with PlaceWorks.



Source: Cal OES, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.14-2
Schools in the EIR Study Area

Projected Enrollment

Overall, enrollment in BUSD is projected to slightly decline over the next few years. Given the current uncertainty around what that academic programming will entail and the resulting impacts on enrollment, the BUSD set a continued baseline enrollment decline of 30 students per academic year, continuing prior trends into the 2020/2021 fiscal year. BUSD has approximately 180 employees, which are reportedly adequate to meet the demands for district services. Average daily attendance is also projected to drop in proportion to the projected enrollment decrease. With enrollment projected to minimally decrease for these schools, they will continue to operate below capacity.

Budget

Overall, BUSD reports inadequate funding for provision of district services. Recovery from the pandemic is uncertain at this time, and economic impacts are not fully realized. It is anticipated that school districts and the State will recover in the long-term from this unprecedented setback, and upon analysis of the State's budget revisions, BUSD has opted to hold revenue projections static with regular-year projections while anticipating the need for future adjustments. The most substantial impact to BUSD revenue projections are the deferments in apportionments by the State in subsequent fiscal years. For the 2019/2020 fiscal year, BUSD has anticipated a 20-percent increase in operating expenditures to anticipate costs related to COVID-19. With this adjustment, there is a budget deficit of $24 million for the 2020/2021 fiscal year.

Revenue is anticipated to come from the Local Control Funding Formula (LCFF), federal revenue, State revenue, and local revenue.[7] Property tax revenue, enrollment rates, attendance rates, and cost-of-living changes that contribute to these revenue sources are anticipated to be lower for the next few years. BUSD anticipates needing to dip into reserves but presumes full budget recovery within a few years. In addition, BUSD shares a portion of developer fees with Santa Rosa City School District (SRCSD); the developer fee arrangement between the two school districts are currently 70 percent for BUSD and 30 percent for the high school component of SRCSD. Based on this arrangement and the total fees, the developer fee for BUSD is $2.65 per square feet for residential construction and $0.43 per square feet for commercial/industrial construction.

Planned Improvements

BUSD does not have plans to construct new school facilities or expand existing facilities, though it reports existing facility deficiencies. Prior to the COVID-19 pandemic, BUSD had minor improvements planned for each school, including, but not limited to, updates to exterior surfaces for school beautification, complete structural repairs, playground improvements, and landscape irrigation improvements and grass leveling on physical education (PE) fields. In addition, BUSD planned to construct a new kitchen at Kawana

[7] The LCFF, enacted through legislation in 2013, is California's school funding formula and establishes uniform grade span grants, replacing previous K–12 funding streams. The LCFF source derives approximately 70 percent from local property taxes and 30 percent from State tax revenues. The 30 percent State tax revenues are referred to as State Aid LCFF revenue, which only some districts receive based on whether local property taxes are high enough to meet the State-minimum level of funding for school districts.

Elementary School. Given the change to the economic outlook, BUSD is currently planning to "do more with less" and has delayed nonessential and discretionary expenditures. BUSD plans to develop a priority "add-back" list as the budget recovers, at which time, the nonessential planned improvements will be revisited.

Bennet Valley School District

Bennett Valley School District (BVSD) serves students who reside in southeast Santa Rosa, nestled in quiet residential neighborhoods. BVSD consists of two elementary schools with a preschool housed within one of the campuses. Table 4.14-3, *Bennett Valley School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each school.

TABLE 4.14-3 BENNETT VALLEY SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Yulupa Elementary School (K-3)	2250 Mesquite Drive	610	620	98%
Strawberry Elementary School (4-6)	2311 Horseshoe Drive	405	420	96%
Total Bennett Valley School Students		**1,015**	**1,040**	**98%**

Source: Field, Sue (Superintendent, Bennett Valley School District), 2020, July 21. Personal communication with PlaceWorks.

BVSD reported 1,015 students enrolled for the 2019 to 2020 school year. As shown in Table 4.14-3, both schools are currently operating close to full capacity.

Yulupa Elementary serves kindergarten through third grade students and offers an on-site preschool. The preschool has been run by the Community Child Care Council as part of the Bennett Valley Child Development Center. Strawberry Elementary serves fourth through sixth graders. Both schools have on-site childcare run by the YMCA.

Projected Enrollment

About half of the students in BVSD attend using an inter-district transfer. As a result, BVSD maintains stable enrollment, and this is expected to remain the same over time.

Budget

Of all school districts analyzed, BVSD has the lowest total revenue and lowest total expenditures per average daily attendance. BVSD notes that about 30 percent of their students come from low-income and/or non-English-speaking households and/or are in foster care. These students make the school eligible for additional State and federal revenue, but this percentage is relatively low compared to other districts. Therefore, BVSD does not qualify for much in federal income or most grants, which cater to districts with pupils from low-income households.

BVSD has a considerable number of special education students, which are notably the most expensive students to educate. As a basic aid district, BVSD does not receive property tax revenue above its State revenue allocation, unlike other nearby school districts, because BVSD's local property taxes exceed the

State-established threshold. Approximately 90 percent of BVSD's revenue is determined by the State and State revenues are determined by the economy.

Planned Improvements

BVSD does not have plans to construct new school facilities or expand existing facilities.

Kenwood School District

Kenwood School District (KSD) is a one-school district serving Santa Rosa students in kindergarten through sixth grade. There is also an accompanying preschool and after-school center adjacent to the campus. Table 4.14-4, *Kenwood School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of the KSD school.

TABLE 4.14-4 KENWOOD SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Kenwood Elementary School (K-6)	230 Randolph Avenue	137	160	86%
Total Kenwood School Students		**137**	**160**	**86%**

Source: Bogart, Suzanne (School Secretary, Kenwood School District), 2020, August 20. Personal communication with PlaceWorks.

KSD reported 137 students enrolled for the 2019 to 2020 school year. As shown in Table 4.14-4, the school is currently operating below capacity. Each class has one dedicated teacher and an instructional aide to support the teacher during focused instructional time.

Projected Enrollment

Enrollment is anticipated to decline slightly over time due to projected reductions. For the 2020/2021 school year, KSD expects to have one class for each grade level with 140 students total. By the 2023 to 2024 school year, enrollment is anticipated to drop to 138 students. KSD's projected enrollment is consistent with historic projections over time.

Budget

KSD acknowledges that State revenue has fallen drastically due to shelter-in-place orders, which will likely result in funding cuts to schools across the state. For the 2020/2021 fiscal year, KSD had a budget of $442,067. As the 2020/2021 fiscal year unfolds, staff will update the budget but KSD's current revenues and reserves are projected to be sufficient to cover anticipated expenses for the next four fiscal years. KSD no longer collects a mitigation fee for new or expanded construction within school district boundaries like most other school districts. Existing monies in this fund are slated for expansion or improvement of school facilities in the event of increased residential student enrollment.

Planned Improvements

KSD does not have plans to expand or implement major improvements to existing facilities.

Piner–Olivet School District

Piner-Olivet School District (POSD) serves students who reside in northwest Santa Rosa, south of the Charles M. Schulz–Sonoma County Airport and north of the city limits. POSD consists of three elementary schools and two secondary schools, with all but one elementary school operating as a charter school. Table 4.14-5, *Piner-Olivet School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each school.

TABLE 4.14-5 PINER-OLIVET SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Jack London Elementary School (K-6)	2707 Francisco Avenue	261	400	65%
Olivet Elementary Charter School (K-6 Charter)	1825 Willowside Road	338	470	72%
Schaefer Charter School (K-6, Charter)	1370 San Miguel Avenue	347	600	58%
Northwest Prep Charter School (K-6, Charter)	2590B Piner Road	109	550	20%
Piner-Olivet Charter School (7-8, Charter)	2707 Francisco Avenue	210	210	100%
	Total Piner-Olivet School Students	**1,265**	**2,230**	**57%**

Note: Enrollment estimates are for the 2019 to 2020 school year, while capacity estimates were obtained most recently in 2017.
Sources: Koha, Felicia (Chief Business Official, Piner-Olivet Union School District), 2020, July 28. Personal communication with PlaceWorks.
Piner-Olivet 2017 Facility Master Plan, http://www.pousd.org/uploads/1/2/6/4/12649520/governing_board_packet_for__august_2_2017__2_.pdf, accessed July 23, 2020.

POSD reported 1,265 students enrolled for the 2019 to 2020 school year; all schools are currently operating below or near capacity. Existing staff levels are at approximately 135 people and are sufficient to meet current demands.

Projected Enrollment

POSD total enrollment is expected to increase this year and then gradually decline through 2026 due to a low number of births in the district boundaries, student migration patterns, and residential development patterns. Therefore, enrollment is anticipated to decline to 1,415 in the 2026 to 2027 school year. Despite these projected enrollment decreases, POSD schools are generally experiencing capacity deficits. POSD's 2017 Facility Master Plan identifies solutions to provide appropriate facilities for its students into the future.

Budget

POSD reports a lack of funding to meet annual automatic increases to salaries, benefits, retirement funds and pensions, utility costs, and more. Over the years, POSD reports that their budget has been impacted by increasing costs and declining enrollment resulting in current and projected deficit spending. The economic uncertainty induced by the COVID-19 pandemic will also impact the budget, and $1.9 million in expenditure cuts over the next three years will balance budget deficits anticipated in the 2020/2021 fiscal year. Reductions have been attained through a targeted hiring freeze; reduced music, PE, after school

sports, software, and library programs; field trip postponement; supplies reductions; and diversion of fees from the Deferred Maintenance Fund. In addition, POSD reported an unanticipated influx in Basic Aid Supplemental Revenue from the 2019 to 2020 school year, which will help offset expenditure reductions required to align with projected revenues. Therefore, the budget total for the 2020/2021 school year is approximately $13.6 million, down from the $14.9 million expended in the 2019 to 2020 school year.

POSD is supported by Measure L as approved by voters in 2010 to issue $20 million in General Obligation bonds over time. The bond supports academic achievement, General Fund sustainability, and the school sites by improving their appearance and functionality. In addition, POSD collects developer fees to assist in funding facility needs at its sites.

Planned Improvements

Given the current funding constraints exacerbated by the COVID-19 pandemic, POSD does not have near-term plans to expand or implement major improvements to existing facilities. However, the 2017 Facility Master Plan identified the following improvements to meet the needs of twenty-first century curriculum requirements over the next 10 years:

- Replace portable classrooms over 20 years old with permanent structures as funding becomes available.
- Relocate the Piner-Olivet Charter School to create a less-crowded environment on the site currently shared with Jack London Elementary School.
- Consider, develop, and adopt educational specifications for all school sites.
- Explore joint-use projects with community groups and organizations, city government agencies, and other resources.

Rincon Valley Unified School District

The Rincon Valley Unified School District (RVUSD) is in the eastern part of Santa Rosa and is made up of eight elementary schools and one charter school for seventh and eighth grade students housed on two campuses. In the 2019 to 2020 school year, RVUSD had 3,241 students from transitional kindergarten through eighth grade. Table 4.14-6, *Rincon Valley Unified School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each school. As shown, the total enrollment for RVUSD schools that serve Santa Rosa in the 2019 to 2020 school year is 3,075; all schools are currently operating below capacity.

TABLE 4.14-6 RINCON VALLEY UNIFIED SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Austin Creek Elementary School (K-6)	1480 Snowy Egret Drive	379	432	88%
Binkley Elementary Charter School (K-6, Charter)	4965 Canyon Drive	372	432	86%
Madrone Elementary School (K-6)	4550 Rinconada Drive	411	451	91%
Matanzas Elementary Charter School (4-6, Charter)	1687 Yulupa Avenue	191	290	66%
Spring Creek Elementary Charter (K-3, Charter)	4675 Mayette Avenue	258	330	78%

TABLE 4.14-6 RINCON VALLEY UNIFIED SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Rincon Valley Charter School – Matanzas Campus (7-8, Charter)	1687 Yulupa Avenue	171	180	95%
Rincon Valley Charter School – Sequoia Campus (7-8, Charter)	5305 Dupont Drive	148	180	82%
Sequoia Elementary School (K-6)	5305 Dupont Drive	435	504	86%
Village Elementary Charter (K-6, Charter)	900-1000 Yulupa Avenue	349	430	81%
Douglas L. Whited Elementary Charter (K-6, Charter)	4995 Sonoma Highway	361	425	85%
Total Rincon Valley Unified School District Students		*3,075*	*3,654*	**84%**

Source: Mendenhall, Cindy (Assistant to the Superintendent, Rincon Valley Unified School District), 2020, July 31. Personal communication with PlaceWorks.

RVUSD operates 10 school programs on eight campuses, and seven programs are organized as district-operated charter schools. RVUSD has 400 employees and reports that this is adequate. Each school is provided with a site administrator, an office manager, office support staff, a bilingual family liaison, a support coordinator to manage intervention programs, a dedicated counselor, and a counselor intern. In addition to the physical classes, RVUSD offers home school. For the 2020/2021 school year, the enrollment for home school was at capacity at 145 students.

Projected Enrollment

As established in 2016, the elementary school student generation rate for RVUSD is 0.187 students and 0.016 students per housing unit for elementary and secondary schools, respectively. However, devastation from the 2017 Tubbs Fire increased housing prices and instigated a familial migration out of the RVUSD boundaries. Enrollment has decreased by approximately 15 percent from the 2014 to 2015 school year to the 2019 to 2020 school year, and this trend is anticipated to continue.

Budget

The RVUSD adopted budget for the 2019 to 2020 school year is over $39 million, which provides resources to educate; transport; provide food service, day care, and other ancillary programs; and build new, and maintain and modernize existing, facilities. RVUSD charges a parcel tax, renewed in 2018, of $99 per parcel with an annual increase of $3. RVUSD also collects development impact fees, which fund improvements and new facilities to mitigate impacts from new development. RVUSD collects developer fees of $2.84 per square foot for residential and $0.46 per square foot for commercial development.

With a trend of declining student enrollment, RVUSD finances are expected to become unsustainable in the short-term future due to losing millions of dollars in State funding. Therefore, RVUSD is identifying feasible options to ensure that solutions to reaching financial stability are implemented in a manner with the least impact to students. Some options include reconfiguration of campuses, as discussed below.

Planned Improvements

Due to declining school enrollment trends, RVUSD is seeking two potential campus reconfigurations to minimize costs of school programs across various sites while maintaining student quality of life. The potential reconfigurations would either expand Spring Creek Elementary School to accommodate students in grades four through six,or merge the two existing secondary schools into one larger campus. The Matanzas Campus students would be moved to Spring Creek Elementary School, with facility modifications, if the first option is chosen. The Matanzas Campus of Rincon Valley Charter School would be expanded to accommodate Sequoia Campus students if the middle schools were merged. Upon analysis and school reconfiguration, student body transitions would occur gradually over time to ensure the community is preserved and maintained.

In addition, RVUSD recently purchased a parcel of land, termed the Oak Park property, in anticipation of rising land costs and future expansion needs. While RVUSD does not currently need to develop additional sites, purchase of a large land site in 15 to 25 years would be financially infeasible. The Oak Park property will serve as a long-term investment in school district expansion. If enrollment continues to decline over the next decade, RVUSD would consider selling the property rather than develop a new school. There are no plans to construct new school facilities to accommodate additional enrollment at this time.

Roseland School District

Roseland School District (RSD) is in the southwest area of the city in the Roseland neighborhood. This school district consists of six schools, although one was relocated outside school district boundaries in 2017. Table 4.14-7, *Roseland School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each RSD school.

TABLE 4.14-7 ROSELAND SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Roseland Creek Elementary School (K-6)	1683 Burbank Avenue	490 [a]	800	61%
Roseland Elementary School (PK-6)	950 Sebastopol Road	575	850	68%
Sheppard Elementary School (K-6)	1777 West Avenue	600	700	86%
Roseland Accelerated Middle School (7-8, Charter)	1777 West Avenue	360[1]	360	100%
Roseland Collegiate Preparatory School [b] (7-12, Charter)	90 Ursuline Road	400	500	80%
Roseland University Prep (9-12, Charter)	1931 Biwana Drive	490	490	100%
Total Roseland School District Students		*2,915*	*3,700*	79%

Notes:
a. Beginning in September 2020, a new middle school is being constructed on the Roseland Creek Elementary School Campus to house all students currently at Roseland Accelerated Middle School. At full build-out, the Roseland Creek Elementary School/Roseland Accelerated Middle School Campus will have approximately 840 enrolled students, accommodated through new and expanded facilities.
b. This school campus moved to a new location outside the RSD boundaries starting in the 2019 to 2020 school year. This school is still considered part of the district despite relocation, so it is included in the table.
Source: Jones-Kerr, Amy (Superintendent, Roseland School District), 2020, July 27. Personal communication with PlaceWorks.

RSD reported 2,915 students enrolled for the 2020/2021 school year. Most schools are currently operating below capacity; both Roseland Accelerated Middle School and Roseland University Prep are at full capacity.

RSD is currently constructing new facilities at Roseland Creek Elementary School to transition the Roseland Accelerated Middle School students to a new, expanded campus. Roseland University Prep's campus was completed in 2017, and the school has adequate facilities to meet student demand at capacity. RSD reports that Roseland Elementary School and Sheppard Elementary School each have some empty portable classrooms, but the portables are old. The Roseland Collegiate Preparatory School campus, located outside the school district boundary but considered part of RSD, was partially damaged in the 2017 Tubbs Fire, and students were subsequently relocated to a temporary campus. Following renovations, the campus re-opened for the 2019 to 2020 school year.

RSD has a staff of over 250 employees. RSD reports utilizing existing staffing levels to their full capacity, but that it would benefit from more staff to enhance efforts at each school.

Projected Enrollment

RSD has declining enrollment, reflecting the regional trend. However, residential development is being constructed throughout the district, which may affect student enrollment rates in future years. RSD has not completed a demographic study to project enrollment trends in over three years and the most recent study was not indicative of significant trends.

Budget

In the 2018 to 2019 school year, RSD had close to $35 million in revenue and $32 million in expenditures. When compared to total enrollment, RSD expends $23,769 per average daily attendance, which is relatively high per student and indicates that students have more resources for school success. RSD passed Measure D in 2019 to authorize $9.4 million in bonds for the modernization and renovation of facilities, replacement or repair of roofs, land acquisition, and health and safety improvements. RSD's board is interested in purchasing additional property to plan for potential increased enrollment due to many housing developments under construction nearby. RSD reports many facility needs that will exhaust these funds quickly.

Planned Improvements

In recent years, RSD has constructed a new District Office building; a new award-winning high school facility at Roseland University Prep; a new preschool at Roseland Elementary School; and a relatively new (2012) elementary school, Roseland Creek Elementary. RSD commenced construction on a new facility for Roseland Accelerated Middle School (RAMS) in September 2020. In addition, RSD purchased the former Ursuline High School campus at 80 Ursuline Road to serve as the new Roseland Collegiate Prep campus, but it was severely damaged during the 2017 Tubbs Fire. The school was repaired and reopened for the 2019 to 2020 school year, but it needs additional improvements. RSD needs a second gymnasium for secondary students, reporting that over 1,300 middle school and high school students currently share one gym on the former Ursuline campus as the second gym was destroyed in the 2017 Tubb Fire. During

construction of the new secondary school on the Roseland Creek Campus, plans for a new gym were removed due to high construction costs. RSD is in the early stages of siting a large field for physical education and sports. RSD has plans for a new gym and preliminary interest in a new field but does not yet have the funding to carry them out.

Sheppard Elementary School and Roseland Elementary School both have aging portable classrooms. There is not adequate funding currently to replace or rebuild old portables, despite reports of deterioration. While RSD would like to construct additions to existing buildings, rather than repair portables, they are open to the replacement of portables as feasible to accommodate students.

Santa Rosa City School District

SRCSD includes 14 elementary schools, including four charter schools. SRCSD also includes five middle schools, five high schools, and continuing education schools. Table 4.14-8, *Santa Rosa City School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each school.

TABLE 4.14-8 SANTA ROSA CITY SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Abraham Lincoln Elementary School (K-6)	850 West Ninth Street	299	458	65%
Albert F. Biella Elementary School (K-6)	2140 Jennings Avenue	328	517	63%
Brook Hill Elementary School (K-6)	1850 Vallejo Street	390	525	74%
Helen Lehman Elementary School (K-6)	1700 Jennings Avenue	503	618	81%
Hidden Valley Elementary School (K-6)	3435 Bonita Vista Lane	522	624	84%
James Monroe Elementary School (K-6)	2567 Marlow Road	390	517	75%
Luther Burbank Elementary School (K-6)	203 A Street	311	480	65%
Proctor Terrace Elementary School (K-6)	1711 Bryden Lane	395	506	78%
Steele Lane Elementary School (K-6)	301 Steele Lane	400	541	74%
Herbert Slater Middle School (7-8)	3500 Sonoma Avenue	702	787	89%
Hilliard Comstock Middle School (7-8)	2750 West Steele Lane	402	521	77%
Lawrence Cook Middle School (7-8)	2480 Sebastopol Road	406	659	62%
Rincon Valley Middle School (7-8)	4650 Badger Road	788	921	86%
Santa Rosa Middle School (7-8)	500 E Street	550	741	74%
Elsie Allen High School (9-12)	599 Bellevue Avenue	1,020	1,390	73%
Maria Carrillo High School (9-12)	6975 Montecito Boulevard	1,460	1,540	95%
Montgomery High School (9-12)	1250 Hahman Drive	1,675	1,853	90%
Piner High School (9-12)	1700 Fulton Drive	1,375	1,401	98%
Ridgway High School (Continuation) (9-12)	325 Ridgway Avenue	268	268	100%
Santa Rosa High School (9-12)	1235 Mendocino Avenue	1,900	1,909	100%

TABLE 4.14-8 SANTA ROSA CITY SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Santa Rosa Accelerated Charter School (5-6, Charter)	4650 Badger Road	128	128	100%
Santa Rosa Charter School for the Arts (K-8, Charter)	2230 Lomitas Avenue	408	448	91%
Santa Rosa French-American Charter School (K-6, Charter)	1350 Sonoma Avenue	489	517	95%
Cesar Chavez Language School (K-1, Charter)	2480 Sebastopol Road	461	492	94%
Total Santa Rosa City School Students		*15,570*	*18,061*	**85%**

Source: Edson, Rick (Deputy Superintendent, Santa Rosa City School District), 2020, July 27. Personal communication with PlaceWorks.

In the 2019 to 2020 school year, the elementary schools had a total of 5,024 elementary school students from kindergarten through eighth grade. In the 2019 to 2020 school year, the high schools had a total of 14,323 high school students from ninth to twelfth grade. SRCSD employs approximately 975 certificated employees and 650 classified employees.

Projected Enrollment

SRCSD projects the number of students generated per household at 0.147 students per household for kindergarten through sixth grade and a seventh through twelfth grade rate of 0.148 students per household.

SRCSD updated their Facilities Master Plan (FMP) in 2016, which plans for sufficient facility capacity for projected enrollment through 2025. The FMP anticipated that total SRCSD enrollment would rise from 11,138 in the 2015 to 2016 school year to 11,817 in the 2025 to 2026 school year. However, trends have reversed since 2016, due in part to the 2017 Tubbs Fire and aftermath, and enrollment has reportedly declined. In addition, SRCSD is projecting an additional 2 percent decrease in annual enrollment as a result of the COVID-19 pandemic.

Despite the decrease in enrollment, SRCSD reports a need for certificated teaching staff in the areas of math, science, and special education. SRCSD also needs additional technology support personnel, classroom instructional assistants, and childcare workers to anticipate future student needs.

Budget

For the 2020/2021 school year, SRCSD has a budget of $185 million, which amounts to over $13,000 per average daily attendance. Approximately 75 percent of revenue comes from LCFF funding. SRCSD receives State aid because the local property taxes are not high enough to meet the State-minimum level of funding for school districts.

In addition, Measure I and L, general obligation bonds passed in 2014, provide supplementary funding primarily focused on providing warm, safe, and dry school facilities and technology for staff and students. These funds cannot be used for adding personnel in other areas of need. SRCSD collects residential

developer fees for elementary and secondary schools at a rate of $3.34 per square foot and $1.87 per square foot, respectively. If the development is in both the elementary and secondary school district boundaries, future residential developers would be subject to the total fee of $5.21 per square foot. Commercial development is collected at a rate of $0.51 per square foot. In addition, SRCSD shares development fees with its feeder elementary school districts. The developer fee arrangement between the school districts assigns 30 percent of fees charged to SRCSD. As of 2018, the developer fee for SRCSD is $1.14 per square foot for residential construction and $0.18 per square foot for commercial/industrial construction.

In early 2020, SRCSD devised a deficit plan to erase $13 million over three years through service reductions and job cuts. Long-term financial implications caused by the COVID-19 pandemic in subsequent months have created a greater need for budget cuts for the indefinite future. As of 2020, the SRCSD anticipates maintaining reserves, but borrowing on a line of credit, allowing temporary transfers of cash between funds, and potentially taking out Tax Revenue Anticipation Notes to manage cash flow during the economic downturn.

Planned Improvements

SRCSD plans to construct a new two-story classroom building at Montgomery High School to replace old and failing portable/modular classrooms. All other construction, at this time, will be for maintenance and upkeep (i.e., roofing and heating, ventilation, and air conditioning [HVAC] repairs). Other school sites need replacement of old, failing buildings/classrooms to address long-standing issues, as identified in the 2016 FMP but not necessarily for expansion purposes.

Wright Elementary School District

Wright Elementary School District (WESD) is in southwest Santa Rosa, west of the Roseland neighborhood. WESD consists of three elementary schools and one preschool provided through Sonoma Community Childcare Council. Table 4.14-9, *Wright Elementary School District Student Enrollment and School Capacity*, lists the name, address, grades served, enrollment, and capacity of each school.

TABLE 4.14-9 WRIGHT ELEMENTARY SCHOOL DISTRICT STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment	Capacity	Student Enrollment of School Capacity
Wright Charter School (K-8)	4389 Price Avenue	454	600	76%
Robert L. Stevens School (K-6)	2345 Giffen Avenue	526	600	88%
J.X. Wilson Elementary School (K-6)	246 Brittain Lane	463	600	77%
Wright Start Preschool (PK)	950 South Wright Road	38	600	6%
Total Wright Elementary School District Students		**1,481**	**2,400**	**62%**

Source: Landa, Linda (Personnel Coordinator, Wright Elementary School District), 2020, August 3. Personal communication with PlaceWorks.

WESD reported 1,481 students enrolled for the 2019 to 2020 school year. As shown in Table 4.14-9, all schools are currently operating below capacity.

Projected Enrollment

WESD school enrollment declined by 128 students from the 2013 to 2014 school year to the 2019 to 2020 school year. The charter schools experienced a similar decrease of 76 students since the 2016 to 2017 school year.

Budget

WESD had a budget of approximately $19 million in the 2019 to 2020 school year. Due to the COVID-19 pandemic, the WESD budget has been cut to $17.3 million for the 2020/2021 school year. Despite reductions, the budget deficit for the 2020/2021 school year is projected at $1.8 million, primarily due to a 10-percent reduction in LCFF revenue to account for the economic downturn and revenue reductions announced in the Governor's May Revision. The LCFF revenue accounts for 79 percent of total WESD revenue, signaling major impacts to school facilities, staffing, and resources for the foreseeable future. The multi-year projection shows that WESD will not have reserve minimums required through 2023.

Planned Improvements

All schools have received an "exemplary" ranking of school facility conditions, and few repairs or actions for improvement have been identified. WESD reported that Robert L Stevens School needs a new roof and upgraded HVAC system, and Wright Charter School needs HVAC units in 20 classrooms.

Private Schools

As mentioned previously, there are 27 private schools in Santa Rosa ranging from nursery/preschool to high school. A summary of private schools including name, location, grades instructed, and enrollment for the 2019 to 2020 school year, is shown in Table 4.14-10, *Private Schools Student Enrollment and School Capacity*. Due to the limited information on private schools, only 22 schools are listed in Table 4.14-10.

TABLE 4.14-10 PRIVATE SCHOOLS STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment
Anova Center for Education (K-12)	2911 Cleveland Avenue	91
Bethlehem Children's Center and Kindergarten (PK-K)	1300 Saint Francis Road	103
Brush Creek Montessori (PK-6)	1569 Brush Creek Road	76
Cardinal Newman High School (9-12)	50 Ursuline Road	624
College Oak Montessori School (PK-K)	1925 W College Avenue	101
Discoveries West (PK-K)	28 Maxwell Court	21
Lattice Educational Services (Nursery/PK)	3273 Airway Drive, Suite A	18
Montessori School Bennett Valley (Nursery/PK)	2810 Summerfield Road	55
New Directions School (6-12)	3650 Standish Avenue	26
New Hope Baptist Church (2-9)	3200 Dutton Avenue, Suite 226	8
New Horizon School and Learning Center (6-12)	827 3rd Street	19
North Valley School (4-12)	3164 Condo Court	51
Rhio's Casa Dei Bambini Montessori School (Nursery/PK)	2427 Professional Drive	33

TABLE 4.14-10 PRIVATE SCHOOLS STUDENT ENROLLMENT AND SCHOOL CAPACITY

Schools	Address	Enrollment
Rincon School (10-12)	429 Speers Road	5
St. Eugene's Cathedral School (PK-8)	300 Farmers Lane.	329
St. Luke Preschool (Nursery/PK)	905 Mendocino Avenue	45
St. Michael's Orthodox (1-8)	1545 Rose Avenue	12
Sierra School of Sonoma County (1-12)	4580 Bennett View Drive	41
Sonoma Academy (9-12)	2500 Farmers Lane	330
Stuart Preparatory School (K-9)	431 Humboldt Street	37
Victory Christian Academy (K-12)	4585 Badger Road	82
Woodside West School (PK-K)	2577 Guerneville Road	48
Total Private School Students		*2,155*

Source: Privateschoolreview.com, accessed July 20, 2020.

Santa Rosa Junior College

SRJC, established in 1918, offers associate degrees in a variety of fields, as well as other academic programming. The college serves approximately 61,997 students with a main campus in central Santa Rosa and satellite campuses in southwest Santa Rosa, Petaluma, Windsor, and Forestville. Classes are held in the day and evening in a variety of formats, including on-campus and online, to accommodate students' diverse schedules.

The Santa Rosa Campus of SRJC is at 1501 Mendocino Avenue, north of Downtown Santa Rosa. This campus offers general education courses, job training in computer applications, and training for a variety of vocational programs. In addition to its state-of-the art classroom facilities, laboratories, and conference winning athletic programs, the campus houses a Planetarium, an Art Gallery, Summer Repertory Theatre, and the Jesse Peter Native American Museum.

4.14.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant schools impact if it would:

5. Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
6. In combination with past, present, and reasonably foreseeable projects, result in a cumulative schools impact.

4.14.3.3 IMPACT DISCUSSION

PS-5 **Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

A significant impact would result if, in order for the school districts in Santa Rosa to adequately serve residents in the EIR Study Area, increased school enrollment would require the construction of new facilities or the expansion of existing schools, the construction or operation of which would cause significant environmental impacts.

Increased growth over the buildout horizon of the proposed project would cause an increase in the student population over the next approximately 25 years. The projected increase in students across the EIR Study Area would likely be gradual for the duration of the proposed project as more housing units are incrementally added to the EIR Study Area. The school districts that serve the EIR Study Area would continue to collect the development impact fees, which each district has adopted, throughout implementation of the proposed project. Therefore, potential future development would incrementally pay for any needed facility upgrades and expansions, which, pursuant to SB 50, has been deemed sufficient to provide full and complete school facilities mitigation for the impacts from the proposed project, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. Additionally, in the case of proposed subdivisions, which tend to generate families with school-aged children, SRCC Chapter 19-72 requires the subdivider to offer a school site or the payment of fees, or a combination of both, for classroom and related facilities for elementary, intermediate, or high school purposes. Any future construction of new schools would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed, and would also be subject to the mitigation measures contained throughout this Draft EIR to reduce potential environmental impacts.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on school service facilities. The following goal, policy, and actions would serve to reduce impacts to schools and education services in the EIR Study Area:

- Goal 5-10: Help provide superior and lifelong educational opportunities for all community members.
  - Policy 5-10.1: Continue City/school partnerships to support a safe learning environment and high-quality educational opportunities for all members of the community, especially children, youth, and seniors.

- Action 5-10.1: Work with schools to locate sites and facilities to serve all neighborhoods and the educational needs of all sectors of the population, including:
  - Safe pedestrian and bicycle access and traffic-management planning and traffic-calming measures in the vicinity
  - Attractive design that contributes to neighborhood identity and pride
  - Greening to mitigate extreme heat and provide shaded, vegetated areas that facilitate healthy living, learning, and play
- Action 5-10.2: Continue cooperation with providers of higher education to improve accessibility and quality of services.
- Action 5-10.3: Partner with schools to use school spaces for community uses, such as local sports activities.
- Action 5-10.4: Engage school administrators in conversations regarding new development that could substantially impact student enrollment and the need for additional infrastructure.
- Action 5-10.5: Work with school administrators to increase and better coordinate school transit options and ensure that all students have access to high-speed internet.

In addition to the mandatory payment of developer impact fees for new development pursuant to SB 50, the proposed General Plan goal, policy, and action listed work to ensure there are adequate school facilities during the buildout horizon of the proposed General Plan 2050. Future construction of new schools would also be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed and would also be subject to the mitigation measures contained throughout this EIR to reduce potential environmental impacts. Accordingly, impacts to the public-school districts that serve the EIR Study Area would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-6 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative schools impact.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, this cumulative analysis takes into account growth from development in the service area of the school districts in the EIR Study Area. As described under impact discussion PS-5, the proposed project would contribute to an increased population that is served by various school districts. Through the proposed General Plan goal, policy, and actions listed under impact discussion PS-5, the payment of school impact fees, and standard environmental review procedures for future school improvement projects, the proposed project would not result in a significant impact to schools. Payment of school fees and project-level review of school projects to identify potential environmental impacts and mitigation measures as needed would similarly

reduce potential impacts from cumulative development. Therefore, cumulative impacts related to school facilities would be *less than significant*.

Significance without Mitigation: Less than significant.

4.14.4 LIBRARIES

4.14.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

Mello-Roos Community Facilities Act of 1982

The Mello-Roos Community Facilities Act, Government Code Section 53311 et seq., provides an alternative method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish CFDs to levy special taxes for facilities such as libraries.

California Business and Professions Code, Sections 6300–6363

The California Business and Professions Code, Section 6300 et seq. requires each county have a law library, governed by a board of trustees, to provide free access to legal materials to all persons interested in the law. The collection, services, and operation of county law libraries varies by county. Given the general requirement that county libraries provide the public with access to legal materials, interested persons do not need to be a resident of the county to access the library's services. Sonoma County's law library is in Santa Rosa.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives to minimize adverse impacts to library facilities. The SRCC is organized by title, chapter, and section, and in some cases, articles. Provisions related to community services are in Title 19, *Subdivisions,* as follows:

- Chapter 19-60, *Reservations of Land*. This chapter states as a condition of tentative map approval, the subdivider shall reserve sites, appropriate in area and location, for parks, recreational facilities, fire stations, libraries, or other public uses according to the standards and formula contained in Section 19-60.020, *Standards and formula for reservation*. The reserved area must be of such size and shape as to permit the balance of the property within which the reservation is located to develop in an orderly and efficient manner.
- City Charter, Section 33, *Public Library.* This section establishes the City's right to provide a free public library through a joint-powers agreement with other public entities.

Existing Conditions

Sonoma County Library

The Sonoma County Library (SCL) consists of the Central Library, which includes 10 branches, 2 rural stations, and 1 temporary site to serve the population of Sonoma County. It also encompasses three special collections: the Sonoma County Wine Library, the History and Genealogy Annex, and the Petaluma History Room. Of these locations, four are in the EIR Study Area: Central Library, Northwest Santa Rosa Library, Rincon Valley Library, and Roseland Community Library. In 2015, SCL served almost two million visitors; circulated more than 3.5 million books, audiobooks, DVDs, and electronic resources; and answered over 250,000 reference questions.

SCL facilities are critical to supporting public education, supplementing local school library resources, and providing access to a digital branch that provides 24-hour access to resources and information with chat, text, and email reference services. SCL provides access to the internet for members of the public, including those who may lack those resources at home. SCL completed a Facilities Master Plan in 2016 that recommends specific projects for each library, prioritizing projects based on the number of improvements needed per facility. Northwest Santa Rosa Library and Roseland Library are both ranked as high-priority locations. Northwest Santa Rosa Library needs to be brought into compliance with current building code and ADA requirements, in addition to needing an interior and exterior library refresh and building system replacements. Roseland Library, which has been operating on a temporary site, is set to be relocated to a permanent space in the same neighborhood in 2021 and will require a renovation to provide adequate services in its new location. Central Library has improvements ranked at a medium priority, but its improvements will require replacing or relocating the existing facility. Rincon Valley Library improvements are identified as a low priority.
The 2015 to 2020 Strategic Plan guides the vision of the SCL system. The five goals of the current Strategic Plan focus on outstanding customer experience, education and discovery, innovation, community engagement, and financial sustainability. SCL's top priority is to meet the needs of all residents with an outstanding, personalized service in a welcoming space.

SCL employs approximately 200 people in public service and support functions across all branches. Staffing levels support current demands for library services. SCL reports that hiring and recruiting new staff is challenging due to the high cost of living and specialized skills required, and they anticipate future hiring and staffing challenges due to demographic shifts in response to the COVID-19 pandemic.

SCL is funded primarily through property taxes, using a formula set in 1978 through Proposition 13 implementation. SCL does not assess developer impact fees. In 2016, a super majority of Sonoma County voters passed Measure Y to provide SCL with an additional funding source by increasing sales taxes by an eighth of a cent. Due to economic impacts from COVID-19, library funding will likely be diminished in the coming years, regardless of consistent operations and maintenance cost increases. Overall, SCL anticipates a 10 to 15 percent reduction in revenue for at least two fiscal years with full recovery long-term. SCL will continue to follow sound financial practices, improve work processes for greater efficiency, and grow community-based fundraising to support ongoing viability – with a goal of addressing the need to restore lost hours and services and prevent further funding cuts.

Santa Rosa Junior College Library

SRJC offers library services at the Frank P. Doyle Library on its Santa Rosa campus. The four-story facility has amenities including a Media Service, Tutorial Center, the Robert F. Agrella Art Gallery, Research Desk, and Tech Gear Desk. Completed in 2006, the library offers over 99,000 square feet of space with 1,045 seats for students, wireless technology, 280 computer workstations, a laptop checkout program, and other features. While these services are reserved primarily for students, SRJC has a prominent role and impact in the Santa Rosa community, and relatively low barriers to entry to become an SRJC student suggest that many community members can access these resources if so desired.

Sonoma County Law Library

The Sonoma County Law Library (SCLL) is a State government agency, separate from Sonoma County government. Sonoma County is required by statute to provide the law library space, utilities, and maintenance. SCLL is a public library and is mandated to provide public access to legal materials. Under the current 2018 to 2023 Strategic Plan, it is governed by a Board of Trustees, and committed to broadening their staffing, services, and collections to better meet the needs of ethnic minorities, seniors, low-income households, homeless individuals, and other special populations of the community in the coming years.

SCLL estimates that approximately half of library users are not attorneys, as SCLL provides vital resources for county residents seeking legal information. The library offers a collection of over 26,000 books, CDs, and other material with one full-time director and one part-time library technician. Public use of the library currently averages 43 patrons per week, and legal professional use averages 51 patrons per week. Public use of the library has increased since the late 1990s in response to the cost and complexity of legal representation. The library intends to increase visibility in the Santa Rosa community with strategies including hosting a Lawyers in the Library program, partnering with local legal advocacy organizations, expanding outreach to community groups and schools, and providing law library information to SCL, county agencies, local courts, and more.

SCLL is funded mainly through civil filing fees, and it does not receive General Fund revenue from the City or County. The long-term viability of the library is uncertain due to financial constraints. Filing fee revenue is declining statewide due to legal trends, and the State is currently exploring alternative funding sources, such as revenue from criminal cases, small-claims court filings, or property tax revenue.

4.14.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact to libraries if it would:

7. Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
8. In combination with past, present, and reasonably foreseeable projects, result in a cumulative libraries impact.

4.14.4.3 IMPACT DISCUSSION

PS-7 **Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

A significant impact would result if, in order for the library system to adequately serve the city, increased demand in the EIR Study Area would require the construction of new facilities or the expansion of existing library facilities, the construction or operation of which would cause significant environmental impacts. It is projected that by 2050, the horizon year of the proposed project, 24,090 new housing units would be developed, and the population would increase by 65,760 new residents. New residents would utilize library services, which could impact library facilities.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on library facilities. The following goal, policy, and actions would serve to reduce impacts to library facilities and services in the EIR Study Area:

- Goal 5-10: Help provide superior and lifelong educational opportunities for all community members.
  - Policy 5-10.2: Support the ability of physical library facilities and online platforms to meet the needs of the community.
    - Action 5-10.6: Continue to work with County library officials to provide a wide range of library services through a strong central facility plus local branches that equitably serve a growing and diverse population.
    - Action 5-10.7: Support the development of additional library facilities, especially where needed to serve Equity Priority Populations, and assist the library administration in attempts to secure State and federal funds for facilities and services.

Based on the increased projected buildout and population growth of Santa Rosa by 2050, SCL branches located within the EIR Study Area would likely need to expand to accommodate potential new users. As discussed in Section 4.14.4.1, *Environmental Setting*, both Northwest Santa Rosa Library and Roseland Library are ranked as high-priority locations for improvement. Future construction of new libraries would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed and would also be subject to the mitigation measures contained throughout this EIR to reduce potential environmental impacts.

It is expected that new growth under the proposed project would most likely occur incrementally over the next approximately 25 years and not all at once. The potential need for future library facility expansions would be assessed as development occurs. Adherence to the proposed General Plan 2050 goal, policy,

and actions listed, as well as mitigation measures for potential future development under the proposed project included throughout this EIR, would ensure that there is a *less-than-significant* impact relating to the provision of new or physically altered library facilities.

Significance without Mitigation: Less than significant.

PS-8	**Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative libraries impact.**

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, this EIR takes into account growth from potential future development under the proposed project in the city combined with the estimated growth in the service areas of each service provider. As described in Section 4.14.4.1, *Environmental Setting*, SCL has branches throughout Sonoma County, including four branches in the EIR Study Area. New development in the EIR Study Area would be served by SCL from the existing library services throughout Sonoma County and in Santa Rosa, including online services. Similar to development in Santa Rosa, the Sonoma County General Plan has a number of policies and programs that would help limit potential impacts related to the construction of needed County Library facilities. Similar growth in incorporated cities throughout the county would also be subject to their own local policies for ensuring a reduction of impacts to library facilities. For potential future development in Santa Rosa, compliance with the proposed General Plan 2050 goal, policy, and actions listed under impact discussion PS-7 would ensure that library services are adequate to serve the EIR Study Area. With adequate planning in place in both the city and the unincorporated Sonoma County service area, the proposed project would not result in a cumulatively considerable impact to library services and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.14.5 PARKS AND RECREATION

4.14.5.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

The Quimby Act

The Quimby Act of 1975 authorizes cities and counties to pass ordinances requiring developers of residential projects to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act sets a standard park space to population ratio of up to 3 acres of park space per 1,000 persons. Cities with a ratio of higher than 3 acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland. A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the

public need for a recreation facility or park land, and the type of development project upon which the fee is imposed.[8]

Public Resources Code

The State Public Park Preservation Act (Public Resources Code, Sections 5400 to 5409) is the primary instrument for protecting and preserving parkland in California. Under the act, cities and counties may not acquire any real property that is in use as a public park for any nonpark use unless compensation or land or both are provided to replace the parkland. This ensures no net loss of parkland and facilities.

Public Resources Code Section 5076 requires counties and cities to consider trail-oriented recreational use demands in developing specific open space programs during the development of a general plan. Cities are also required to consider the feasibility of integrating their trail routes with appropriate segments of the state system.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives to minimize adverse impacts to parks and recreational facilities. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions of the SRCC related to park and recreational facilities are in Title 11, *Vehicles and Traffic*; Title 13, *Streets, Sidewalks and Public Places;* and Title 19, *Subdivisions*, as follows:

- Chapter 11-46, *City Parks*. This chapter outlines park user fees, metered parking, and unlawful meter practices. Section 11-46.030, *Park user fees*, requires City Council to establish park user fees by resolution. Section 11-46.050, *Park user fees and permits*, allows the Director of Recreation and Parks to establish rules and regulations for use of park permits and collect park fees in accordance with the fee schedule established by City Council.
- Chapter 13-24, *Parks*. This chapter goes over the regulations that are associated with recreational activities in parks as well as specific motor vehicle regulations and collecting money for Doyle Park. Article I outlines regulations such as using bodies of water in parks, camping, and equestrian uses. Article II goes into depth about the types of motor vehicles allowed into parks. Article III describes how money received by the City from the trustee of the late Frank P. Doyle will only be used for park improvements associated with Doyle Park.
- Chapter 19-60, *Reservations of Land*. This chapter states as a condition of tentative map approval, the subdivider shall reserve sites, appropriate in area and location, for parks, recreational facilities, fire stations, libraries, or other public uses according to the standards and formula contained in Section 19-60.020, *Standards and formula for reservation*. The reserved area must be of such size and shape as to permit the balance of the property within which the reservation is located to develop in an orderly and efficient manner.

[8] State of California, 2022. California Legislative Information, Assembly Bill No. 1191. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1191, accessed March 15, 2022.

- Chapter 19-70, *Park and Recreation Land and Fees*. This chapter outlines the requirements for the dedication of land or payment of fees for park and recreational services and land for public right-of-access. Under Section 19-70.030, *Park acreage standard*, the standard of 6.0 acres of property per 1,000 people was set and accounts for park land and park development, usable open space, and school recreational land. Under Section 19-70.090, *Requirement, formula for park impact fees*, a fee shall be paid for park development by the developer of each new dwelling unit irrespective of whether the developer is required to dedicate land or pay fees in lieu of land dedication. This fee shall be used to pay for improvements, including landscaping and installation of recreational facilities. The fee shall be determined by the residential formula listed under Section 19-70.040, *Formula for dedication of land*, which is based on the goal of 6 acres per 1,000 persons. When a fee is to be paid in lieu of land dedication, the amount of the fee shall be based on the fair-market value of the amount of land which would otherwise be required by dedication pursuant to Section 19-70.040, plus 20 percent toward costs of off-site improvements, such as extension of utility lines. The formula is the number of dwelling units multiplied by the population per dwelling units plus 20 percent.

Santa Rosa Recreation and Parks Business and Strategic Action Plan

The 2008 Santa Rosa Recreation and Parks Business and Strategic Action Plan was adopted to identify and assess current and anticipated parks and recreation needs. The plan establishes parkland needs and priorities, provides practical and strategic direction for meeting these needs, and prepares a financial plan for the financing and funding of parks and recreation. This plan outlines several goals that are relevant to the proposed project:

- Goal 1- Park Development Standards
  - Strategy 1.2: Pursuant to the General Plan, apply the standard of six acres of parkland per 1,000 residents to all development projects and ensure the following allocation is met:
    - 3.5 acres of parkland designated as city parks,
    - 1.4 acres of parkland as accessible school recreational land, and
    - 1.1 acres of public-serving open space.
  - Strategy 1.3: Redefine access to park and public spaces for all residents to meet the following:
    - Within 0.25 mile to public plazas and gathering spaces,
    - Within 0.50 mile to neighborhood parks, and
    - Within 1 mile to community parks.
- Goal 4- Facilities
  - Strategy 4.2: Continue ongoing efforts to locate new facilities throughout the community and not concentrated in one planning area.
  - Strategy 4.3: Provide a balance of new facility types in all recreation and park planning areas.
- Goal 5 - Connectivity
  - Strategy 5.1: Add trails and pathways to connect destinations throughout the city, such as schools, libraries, and parks.
  - Strategy 5.3: Integrate corridors and pathways into overall community design, planning, and development decisions.
  - Strategy 5.4: Encourage new development to include a system of internal trails and pathways within developments and identify opportunities to connect with established trails and pathways.

Citywide Creek Master Plan

The Santa Rosa Citywide Creek Master Plan is a blueprint for the restoration, preservation, and improved accessibility for the entirety of the creek trail network. The creek plan includes a set of policies, recommendations, and strategies for site-specific improvements for over 100 miles of creeks. The plan's goals are not only to protect and restore the waterways and riparian habitats along the creeks, but to also develop a network of trails alongside the creeks. The trails are proposed as both an option for active transportation commuting and as a recreational resource.

Measure M

Measure M, approved by Sonoma County voters in 2018, collects a one-eighth-cent sales tax on all sales in Sonoma County. Measure M, commonly known as "Parks for All," provides dedicated funding to regional and city parks until its sunset in 2028. Funds are dedicated to the maintenance, protection, and operation of parks. The City of Santa Rosa will receive an estimated $1.9 million per year through 2028.

Measure O

Measure O, approved by Santa Rosa voters in 2004, imposed a special transaction and use tax to generate revenue for police, fire, and gang prevention and intervention. Measure O funds are presided over by a Citizens Oversight Committee. A portion of these funds are used for year-round special recreational programming that supports the mission of the gang prevention and intervention program.

Existing Conditions

Parkland

Parkland in Santa Rosa that contribute to the City's parkland standard of 6 acres per 1,000 residents are categorized as neighborhood parks, community parks, trail parks, and open space parks.

- Neighborhood parks serve the daily recreational and social needs of people within one-half mile, or a 10-minute walk, and provide a mix of amenities, such as picnic areas, community gardens, exercise equipment, and children's play areas. Neighborhood parks generally support stays of one hour or less, do not typically have restrooms, limit lighting to security lights, and there is no off-street to promote walkable communities.
- Community parks are intended to offer a variety of passive and active recreational opportunities that attract users of all ages, especially within one-mile, or a 20-minute walk uninterrupted by barriers to access. They often include fields and courts for organized sports, support programming with community-wide participation, and are venues for cultural and social gatherings including farmer's markets and concerts. These parks are at least 10 acres, but 20-acres or more is preferred, and can accommodate stays of four or more hours, within amenities including parking, restrooms, and lighting for recreation areas, parking areas, and paths. Community parks must also consider bicycle and pedestrian access for nearby neighbors, and public transit access and links to local and regional trail systems for community members living farther away.

- Trail parks vary in scale and acreage but are typically linear parklands used for both active and passive recreation and provide multipurpose, paved paths and minimal amenities generally limited to benches, waste receptacles, wayfinding and interpretive signage, and lighting to support walking, biking, hiking, jogging, and wildlife viewing. They can also be used as a safe, active transportation network that connects people and places locally and regionally and may provide a variety of other benefits, including visual enjoyment, natural resource conservation, water quality protection, flood control, fire management, and transportation corridors.
- Open space parks are areas of land that are essentially unimproved and support passive outdoor recreation such as viewing and experiencing natural areas that are always open to the public. While paved trails are not expected, amenities may include benches, trails, shared use paths, waste receptacles, and interpretive signage.

Other parkland offered that do not contribute to the City's parkland standard include recreational center sites, special purpose parks, and civic spaces:

- Recreation center sites are buildings and related amenities that provide space for community programs, classes, services, events, and sports. They may include gymnasiums, aquatic centers, community centers, senior centers, or similar facilities.
- Special purpose parks are park buildings and associated lands that typically serve a single purpose or specific user group (e.g., golf courses; historic sites; cultural sites; or social sites such as museums, botanical gardens, amphitheaters, performing arts centers, and cemeteries). They include golf courses, historic sites, cultural sites, or socials sites such as botanical gardens, museums, amphitheaters, performing arts centers, and cemeteries. Because of their uniqueness, special purpose parks do not share any general characteristics, instead they vary in size and area served, types of amenities, and typical length of stay.
- Civic spaces are urban parks, generally less than two acres, that provide flexible, publicly accessible space for a range of cultural and recreational activities to residents living within one-quarter mile. They include multipurpose plazas for community gathering, events, or recreation; rooftop green spaces; and pocket parks.

The Santa Rosa Recreation and Parks Department (SRRPD) manages a total of 1,032.93 acres of parkland. [9] Of these, approximately 689.93 acres consist of recreation center sites, community parks, and neighborhood parks. The remaining 148 acres belong to open space parks, trail parks, and civic spaces.

Within the EIR Study Area, there are 52 neighborhood parks totaling approximately 157 acres and 12 community parks totaling approximately 488 acres. Table 4.14-11, *Existing Neighborhood and Community Parks and Acreages*, lists each neighborhood and community park and its acreage.

[9] This parkland total includes proposed parks that are undeveloped but are in the planning process or have been approved. The total represents all acreage that is owned and maintained by SRRPD.

TABLE 4.14-11 EXISTING NEIGHBORHOOD AND COMMUNITY PARKS AND ACREAGES

Park Name	Acres	Park Name	Acres	Park Name	Acres
A Place to Play Park	77.16	DeMeo Park	0.96	Olive Park	0.87
Doyle Community Park	21.76	DeTurk Park	0.96	Pearblossom Park	3.05
Finley Community Park	12.21	Dutch Flohr Park	2.38	Peter Springs Park	1.24
Franklin Community Park	13.36	Eastside Park	0.40	Peterson Lane Park	3.99
Galvin Community Park	23.37	Finali Park	2.76	Pioneer Park	4.53
Howarth Memorial Park	137.39	Fir Ridge Park	1.06	Prince Gateway Park	0.50
Nagasawa Community Park	33.23	Flat Rock Park	5.42	Rae Street Park	0.83
Northwest Community Park	35.07	Frances Nielsen Ranch Park	6.04	Railroad Depot Park	0.26
Rincon Valley Community Park	18.87	Fremont Park	1.71	Red Hawk Park	0.44
Skyhawk Community Park	20.78	Harvest Park	3.34	Rincon Ridge Park	1.83
Southwest Community Park	19.75	Haydn Village Park	0.11	Rinconada Park	2.17
Youth Community Park	73.80	Hidden Valley Park	8.23	Sonoma Ave Park	1.75
Airfield Park	3.10	Humboldt Park	0.53	South Davis Park	1.34
Bayer Park and Gardens	5.95	Jacobs Park	6.94	Steele Lane Park	2.43
Bellevue Ranch Park	3.51	Jennings Park	6.56	Strawberry Park	5.80
Bicentennial Park	5.34	Juilliard Park	9.09	Tanglewood Park	7.80
Brendon Park	1.40	Live Oak Park	4.86	Trailhead Park	4.21
Brush Creek Park	2.20	Martin Luther King Jr. Park	5.38	Triangle Park	0.11
Coffey Park	5.85	Matanzas Park	1.10	Village Green Park	1.96
Colgan Creek Park	2.77	Mesquite Park	3.96	Westgate Park	2.40
Cook School Park	0.85	North Park	0.96		
Dauenhauer Park	2.52	Oaklake Green Park	3.73		
Total Neighborhood and Community Parks					*644.23 Acres*

An additional 6.7 acres are in the planning process to become neighborhood parks, owned and maintained by SRRPD. An additional six neighborhood parks are proposed and in varying stages of the Santa Rosa development review process. These six parks are Jack London Park, Kawana Tokay Park (part of the proposed Kawana Springs Community Park discussed below), Lower Colgan Creek Park, Meadows Park, Piedra Park, and Tenth Street Park.

An additional 39 acres of community parkland are owned and maintained by SRRPD and are in the development review process to become new community parks. The 39 acres are split between two proposed community parks:

- The proposed Kawana Springs Community Park would introduce 19.2 acres of parkland in southeast Santa Rosa, featuring a community garden, multiuse turf area, children's play area, pump track for biking, dog park, and areas of riparian oak woodland along Kawana Springs Creek.
- The proposed Roseland Creek Community Park would introduce 19.5 acres of parkland in southwest Santa Rosa with a nature center, outdoor classroom, community garden, picnic areas, shade structure, multiuse turf area, play area, sports court, and network of trails.

Additional parkland in the EIR Study Area includes:

- Nine recreation center sites totaling approximately 15 acres.
- Four special purpose parks totaling approximately 171 acres.
- Thirteen open space parks totaling approximately 115 acres.
- Five civic spaces totaling approximately 9 acres.
- Six trail parks totaling approximately 33 acres.

Using Santa Rosa's existing population of 197,980 residents and approximately 833 acres of existing parkland, the City currently provides 4.2 acres of parkland per 1,000 residents.[10] Factoring in the proposed parks that are undeveloped but are in the planning process or have been approved, the City would provide 5.2 acres of parkland per 1,000 residents.[11]

Regional Open Space and Trails

Open space areas of various sizes are integrated into many of the city's parks and contribute to the overall preservation of recreational land in the EIR Study Area. Open space parks purposely have minimal improvements to preserve the natural setting. The limited improvements include benches, picnic tables, and garbage cans.

Larger open space areas in the EIR Study Area are generally developed in association with the Sonoma County Agricultural Preservation and Open Space District and the Sonoma County Water Agency under joint acquisition and maintenance agreements. These spaces allow some public access for hiking and wildlife viewing.

Spring Lake Regional Park, in northeast Santa Rosa, is operated by Sonoma County Regional Parks. It has 320 acres for walking, hiking, bicycling, horseback riding, swimming, boating, fishing, camping, access to picnic areas, and access to the Environmental Discovery Center. Trione-Annadel State Park is operated by the California Department of Parks and Recreation. It has 5,000 acres of open space and offers bike trails, hiking trails, horseback riding, fishing, interpretive exhibits, vista points, nature and wildlife viewing, picnic areas, and an environmental learning and visitor center. The park is adjacent to Spring Lake Regional Park and provides connections to the Sonoma County Regional Park system. A third open space area, Taylor Mountain Regional Park and Open Space Preserve, is in the southeast portion of the EIR Study Area and is operated by Sonoma County Regional Parks. The Taylor Mountain Park offers 1,100 acres of grassy hillsides, oak woodlands, and creeks. The park has 5.5 miles of trails for hiking, biking, and horseback riding as well as an 18-hole disc golf course.

The EIR Study Area has numerous trails. Hiking and walking trails are provided in all regional open space and in many of the community parks. Urban trails consist of separated bike paths or trails that parallel creeks. Two popular paths in central Santa Rosa are the Santa Rosa Creek and the Prince Memorial Greenway trails, which connect to several additional trails on each end. The Santa Rosa Creek trail begins

[10] 197,980 residents/1,000 residents = 197.98; 833.23 acres of parkland / 197.98 = 4.2 acres per 1,000 residents

[11] 197,980 residents/1,000 residents = 197.98; 1032.93 acres of parkland (in the proposed parks that are undeveloped but are in the planning process or have been approved) / 197.98 = 5.2 acres per 1,000 residents

to the west of downtown Santa Rosa and travels west along the Santa Rosa Creek and joins the Prince Memorial Greenway Trail in the downtown. Both trails feature artwork, tree-shaded corridors, and views of Santa Rosa Creek. The Brush Creek Trail in northeast Santa Rosa is a 2.2-mile paved trail that borders Brush Creek and is owned by Sonoma Water. The southern end of the Brush Creek Trail meets Flat Rock Neighborhood Park and extends east along Santa Rosa Creek as Hampton Woods Trail Park. A separated bike path along Fountaingrove Parkway in northeastern Santa Rosa extends from Nagasawa Park to Parker Hill Open Space Park. The Joe Rodota Regional Trail, operated by Sonoma County Regional Parks, is an 8.5-mile, paved, off-road trail that links Sebastopol to downtown Santa Rosa. Trail access is available at several points along the length of the trail. The Joe Rodota Trail terminates at the intersection of the Santa Rosa Creek and the Prince Memorial Greenway trails.

Recreational Programming

The SRRPD manages programming for all ages and hosts special events year-round. Such programming and events include:

- Active adults programming is meant for seniors in the community and includes fitness classes, ukulele lessons, crafting, educational courses, language learning classes, photography, games, and book clubs. Activities and classes are offered at two facilities: the Person Senior Wing at the Finley Recreation Complex and the Steele Lane Community Center. A membership program is available for seniors and includes reduced class prices, free legal clinics, free guest speaker series, a newsletter, and free coffee and tea.
- Aquatic sports are offered at two year-round swim facilities: the Ridgway Swim Center and Finley Aquatic Center. In addition to recreational swimming, SRRPD offers swim lessons, water fitness classes, safety training, therapeutic classes, a master swim training program, and water polo. Santa Rosa residents are also able to rent the pool for birthday parties and other events.
- Youth camps are offered in the winter, spring, and summer and include day camps, specialty camps, art camps, and sports camps for children ages 3.5 to 14.
- Neighborhood Services is a division of the SRRPD that provides innovative youth development programming to serve at-risk, low-income, and homeless youth and families. The programs provide safe spaces for young people to participate in recreational, social, and athletic activities without the fear of gangs, drugs, or negative influences. Neighborhood Services additionally assists families in high-need neighborhoods with improving their quality of life by connecting them to available services and fostering a stronger community.
- Special events in Santa Rosa include the FairyTale Ball, St. Patrick's Day lunch for seniors, a 5k run, Arbor Day Tree Planting, a Senior Expo, Kids to Parks Day Scavenger Hunt at Howarth Park, Kids Fishing days, Movies in the Park on Friday evenings in the summer, Oktoberfest for seniors, a Bingo Party for seniors, a Floating Pumpkin Patch, Halloween, a Handmade Holiday Crafts Fair, and a Holiday Choral Concert.
- Recreation programs and events for special populations are offered year-round to meet the needs of children, teens, adults, and seniors with disabilities. Programs include the Differently Abled Adults Dances and Youth Summer Camps.

- Sports programs serve youth and adults in Santa Rosa. Youth sports include tennis, basketball, soccer, and softball. Adult programs include tennis and softball. Sports courts and fields are also offered for solo use or can be rented for birthday parties or larger events.
- General adult programs are offered in arts and crafts, business and technologies, dance, education, fitness and wellness, and gardening.

4.14.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact to parks and recreation facilities if it would:

9. Result in substantial adverse physical impacts associated with the provision of new or physically altered parks facilities, need for new or physically altered parks facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
10. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
11. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact.

4.14.5.3 IMPACT DISCUSSION

PS-9	**Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks facilities, need for new or physically altered parks facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

As discussed in Section 4.14.5.1, *Environmental Setting*, the City currently provides 4.2 acres of parkland per 1,000 residents, which is below the adopted standard of providing 6.0 acres of parkland per 1,000 residents. However, if including the proposed parks that are undeveloped but are in the planning process or have been approved, the park acreage standard would be 5.2 acres of parkland per 1,000 residents, which is closer to the City's adopted standard. Implementation of the proposed project could introduce up to 65,760 new residents, which would increase the demand for parks and recreational facilities. To meet the standard of 6.0 acres of parkland per 1,000 residents, the City would need a total of 1,582 acres of parkland to serve the projected buildout population of 263,740 total residents by 2050.[12] The City currently has approximately 833 acres of developed parkland which means approximately 749 net new acres needed.[13] The City would need to provide approximately 550 acres in addition to the approximately 200 acres that are undeveloped but are in the planning process or have been approved.

[12] 263,740 residents/1,000 = 263.74; 6 x 263.74 = 1,582.44 acres
[13] 1,582.44 acres – 833.23 acres = 749.21 acres

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, and Chapter 6, *Health, Equity, Environmental Justice, and Parks*, of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on available parkland and the quality of facilities. The following goals, policies, and actions would reduce impacts to parks, recreation, and open space in the EIR Study Area:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.1: Maximize the benefits of open space, including by supporting passive recreation and conservation.
    - Action 3-5.1: Give priority to multi-benefit recreational projects that maximize pollution reduction and adaptation, carbon sequestration, heat-island reduction, stormwater capture that increases infiltration, habitat protection and biodiversity, and/or community health improvements.
    - Action 3-5.2: Coordinate with public and private entities to locate new shared use paths and public access paths to parks, open spaces, and drainage ways in and near the city
    - Action 3-5.3: Coordinate with regional partners to connect the city's open space system with Sonoma Water access roads and the Bay Area Ridge Trail.
  - Policy 3-5.8: Encourage multiple uses of waterways, including:
    - Flood mitigation and storage;
    - Groundwater recharge;
    - Opportunities for restoration and stewardship;
    - Climate adaptation;
    - Wildlife habitats;
    - Passive recreational open space uses;
    - Nature study;
    - Pedestrian and bicycle circulation; and
    - Other compatible outdoor uses.
- Goal 6-7: Create a safe, accessible, equitable Recreation and Parks System for all users.
  - Policy 6-7.1: Ensure adequate funding to keep parks safe, attractive, and responsive to community needs, including funding for park acquisition, planning, capital improvements, lifecycle replacement of amenities, recreation programming, recreation centers, and maintenance operations.
    - Action 6-7.1: Seek ongoing operating funding for recreation and maintenance that keeps pace with population growth.
    - Action 6-7.2: Evaluate park development impact fees annually to address projects that that meet the Quimby Act guidelines, as well as those for projects that do not meet Quimby Act guidelines, to ensure sufficient funds for park acquisition, development, and maintenance from developers.
    - Action 6-7.3: Use the Parks Condition Assessment and Prioritization Report's data-driven evaluation of park assets to develop a replacement schedule for park amenities and plan for future budgetary needs.

- Action 6-7.4: Explore funding strategies that go beyond park development impact fees, grants, and tax measures, to support replacement of park amenities and achieve the General Plan Park Standard of 6 acres of parkland per 1,000 residents, such as public-private partnerships, tax districts, and general obligation bonds.
- Action 6-7.5: Adopt protocols to ensure that recreation programming is financially sustainable.

- Policy 6-7.2: Provide equitable access to park resources across the city.
  - Action 6-7.6: Develop and maintain a five-year capital improvement plan for acquisition, development, and replacement that considers equity by providing opportunities for public input and prioritizing investment in the parks and recreation center sites in areas of the city where need is greatest.
  - Action 6-7.7: Invest in recreation centers and provide access to recreational services to all Santa Rosa residents, especially those in Equity Priority Areas and Areas of Change.
- Policy 6-7.3: Preserve the basic function of City-owned parks as public open spaces and prevent parkland conversion to other land uses.
  - Action 6-7.8: When diversion or disposal of parkland is determined to be in the public interest, acquire additional parklands to replace those lands, preferably within the same quadrant of the city.
- Policy 6-7.4: Plan for and provide an equitable supply and variety of parkland to serve the city's current and future residents.
  - Action 6-7.9: Develop a Recreation and Parks System Master Plan, to be updated every 10 years, that studies existing parks and recreation assets, resources, and operations and provides a framework to strategically and equitably improve, protect, and expand the City's Recreation and Parks System (to replace the Recreation & Parks Business and Strategic Action Plan).
  - Action 6-7.10: Use the Recreation and Parks System Master Plan as the basis for updating the Capital Improvement Program.
  - Action 6-7.11: Generate master plans and management plans for parks that lack them, which reflect user group needs, development priorities, development and maintenance costs, program opportunities, financing strategies, and community input.
  - Action 6-7.12: Improve parks and recreation center sites in accordance with adopted master plans.
  - Action 6-7.13: Continue to implement the general recommendations for each type of park, as defined by the Recreation and Parks System Master Plan.
  - Action 6-7.14: Acquire and develop new parkland, and expand existing parks, to achieve the citywide standard of 6 acres of parkland per 1,000 residents.
  - Action 6-7.15: Achieve an equitable distribution of quality parks across the city by prioritizing new park acquisition and development in:

- More densely populated neighborhoods with limited parkland;
- Areas that are more than a half mile from a neighborhood or community park;
- Areas where substantial new housing growth is expected, based on the forecasts of the General Plan; and
- Areas where social and economic conditions compel a greater investment in parks to improve health, public safety, and community well-being.

- Action 6-7.16: Update the City Code to require dedication of new parkland or recreation center sites when redevelopment of a developed site results in increased residential densities that create a need for such facilities.
- Action 6-7.17: Facilitate equitable, authentic community engagement in recreation and parks planning to identify the needs and priorities of all segments of the community, including individuals in Equity Priority Areas and those unable to attend public meetings.

Furthermore, SRCC Section 19-70.090 would continue to require residential subdivisions to either provide parkland or pay in-lieu fees for the City to dedicate parkland elsewhere. This would result in the incremental addition of parkland if a residential subdivision is proposed in the city. Additionally, as described in Section 4.14.5.1, *Environmental Setting*, there are three regional open spaces near the EIR Study Area that contribute to the overall preservation of recreational land.

As indicated above, new residents from potential future development in the EIR Study Area would increase the demand for recreational facilities, and recreational facility standards would require the construction of new or expanded recreation facilities. The estimated timing or location of such facilities or the exact nature of these facilities are not known, so project-specific environmental impacts that would occur from their construction and operation cannot be determined at this time. However, depending on the type, size, and location of new parks, the construction of new parks would be subject to environmental review and the mitigating policies and mitigation measures described in this EIR to ensure impacts from construction would be less than significant. The construction of project-specific parks would require permitting and review in accordance with City standards, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Therefore, the impact is considered *less than significant*.

Significance without Mitigation: Less than significant.

PS-10 Implementation of the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Future development in Santa Rosa would result in increased population, which would increase demands for parks and recreational facilities in the EIR Study Area and regional parks in the larger Sonoma County Area, and could cause physical deterioration of park facilities. The proposed General Plan 2050 goals, policies, and actions identified under impact discussion PS-9 would support parkland goals, and SRCC Section 19-70.090 would continue to require residential subdivisions to either provide parkland or pay in-

lieu fees for the City to dedicate parkland elsewhere, helping to ensure that individual park and recreation facilities are not overburdened by use. While potential future development under implementation of the proposed project would result in an increased population with an increased demand for parks and recreational facilities, buildout would occur incrementally throughout the next approximately 25 years, and future development would be subject to the proposed General Plan 2050 goals, policies, and actions listed under impact discussion PS-9, as well as SRCC Section 19-70.090; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-11 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative parks and recreation impact.

As discussed in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, this EIR takes into account growth from potential future development under the proposed project combined with the estimated growth in the service areas of each service provider. Parks and recreation services in the EIR Study Area are provided by the City, and regional parks are provided by the Sonoma County Regional Parks, California Department of Parks and Recreation, and the Sonoma County Agricultural Preservation and Open Space District and the Sonoma County Water Agency under joint acquisition and maintenance agreements. Future growth in the EIR Study Area would result in increased demand for park and recreational facilities throughout the city and region. As a result, and as described under impact discussions PS-9 and PS-10, the City would need to expand and construct additional parks and other recreational facilities to meet the increased demand and maintain existing service levels. State law allows jurisdictions to require additional development to fund park improvements, and the City requires new residential development to pay development impact fees to help fund parks and recreation. Proper implementation of the proposed General Plan 2050 goals, policies, and actions listed under impact discussion PS-9 would also help ensure the provision of adequate parklands along with new development. The final location and size of additional facilities would be determined as part of future development activity, and as specific parkland expansion or improvement projects are identified, additional project-specific environmental analysis would be completed. As a result, the proposed project would not result in a cumulatively considerable impact to park and recreational facilities and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

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4.15 TRANSPORTATION

This chapter of the Draft Environmental Impact Report (EIR) describes the potential transportation impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential transportation impacts, and identifies proposed General Plan 2050 goals, policies, and actions, as well as feasible mitigation measures, that would minimize any potentially significant impacts.

4.15.1 ENVIRONMENTAL SETTING

4.15.1.1 TERMINOLOGY

Following are definitions for select terms used in this chapter.

- Vehicle Miles Traveled (VMT). A measure of circulation network use or efficiency that accounts for the number of daily vehicle trips generated, multiplied by the length or distance of those trips. VMT represents a number of daily miles driven and can be expressed in different ways including total VMT, which is an aggregate value measured in miles, and VMT per capita or VMT per employee, both of which are performance metrics measured in the number of miles driven per person.
- Greenhouse gases (GHG). Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect. As shown in Table 4.8-5, *Existing Greenhouse Gas Emissions Inventory in the EIR Study Area,* in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR, the transportation sector is the largest emitter of GHG emissions.

4.15.1.2 REGULATORY FRAMEWORK

Federal Regulations

Applicable federal regulations pertaining to transportation are addressed in other chapters of this Draft EIR, including Chapter 4.3, *Air Quality*; Chapter 4.8, *Greenhouse Gas Emissions*; and Chapter 4.9, *Hazards and Hazardous Materials*. The federal Clean Air Act, the Fixing America's Surface Transportation Act, and the Americans with Disabilities Act may have some relevance or influence for individual projects or actions as part of potential future projects in the EIR Study Area. Additionally, the Federal Highway Administration is the agency of the United States Department of Transportation responsible for the federally funded roadway system, including the interstate highway network and portions of the primary state highway network.

State Regulations

Senate Bill 743

Senate Bill (SB) 743, signed into law in 2013, required California Environmental Quality Act (CEQA) lead agencies to shift away from using traditional level of service standards and automobile delay to determine significant traffic impacts. As a result of SB 743, the State Office of Planning and Research (OPR) updated

CEQA guidelines and criteria to use VMT as the metric for evaluating the significance of traffic impacts. Pursuant to Public Resources Code Section 21099(b)(2), "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment." OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory), published in December 2018, provides guidance on VMT assessment, methodologies, and suggested metrics.[1] A key environmental aspect of VMT is its relationship to GHG emissions, and the recommended VMT significance thresholds included in the Technical Advisory are based on mandated GHG emissions reduction targets established by the State.

California Complete Streets Act of 2008

The Complete Streets Act (Assembly Bill [AB] 1358) requires city and county general plans to include policies that support the development of facilities for a multimodal transportation network. Complete Streets principles should be incorporated into street design to meet the needs of all users—drivers, bicyclists, pedestrians, and transit riders—regardless of age or physical ability. Jurisdictions that undertake updates of their general plan must plan for a balanced multimodal transportation network that meets the needs of all users, incorporating appropriate goals, policies, and actions into the mandatory circulation element.[2]

California Department of Transportation

The California Department of Transportation (Caltrans), as a responsible agency under CEQA, reviews topics in environmental documents pertaining to State highway facilities including State Route (SR) 12 and SR 116, and the associated interchanges for these facilities in the EIR Study Area. The following Caltrans procedures and directives are relevant to the proposed General Plan 2050, particularly to state roadway facilities:

- Vehicle Miles Traveled–Focused Transportation Impact Study Guide. The Caltrans *Vehicle Miles Traveled–Focused Transportation Impact Study Guide* (TISG), dated May 20, 2020, addresses Caltrans's review of VMT impact analysis for land use projects and land use plans. Caltrans seeks to reduce single-occupancy vehicle trips, provide a safe transportation system, reduce per capita VMT, increase accessibility to destinations via cycling, walking, carpooling, and transit, and reduce GHG emissions. The TISG reiterates that automobile delay is no longer considered a significant impact on the environment within CEQA transportation analysis and that Caltrans has shifted focus from level of service to VMT. With respect to VMT significance thresholds, Caltrans refers to guidance provided in the OPR Technical Advisory.
- Deputy Directive 64-R1: Complete Streets: Integrating the Transportation System. In 2001, Caltrans adopted Deputy Directive 64, a policy directive related to nonmotorized travel throughout the state, and in October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states, "The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing

[1] Governor's Office of Planning and Research, April 2018, *Technical Advisory on Evaluating Transportation Impacts in CEQA*.
[2] California Government Code Section 65302(b)(2).

safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: 'Improving Mobility across California.'"

- Director's Policy 22. Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all state highways, was adopted by Caltrans in November of 2001. The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced nonmotorized travel and visual quality." The policy acknowledges that addressing these needs will ensure that transportation solutions meet more than just traffic and operational objectives.

Caltrans District 4 Bike Plan

Caltrans District 4, which covers the nine-county Bay Area, was the state's first Caltrans District to develop a bike plan. The plan's focus is on identifying and addressing the need for improved access and safety along and across the 1,400 miles of state highways in the region.

Caltrans recognizes four classifications of bicycle facilities.

- Class I. Commonly referred to as a bike path or bikeway, Class I facilities are separated from automobile traffic for the exclusive use of bicyclists.
- Class II. Commonly referred to as bike lanes, Class II facilities are dedicated for bicyclists immediately adjacent to automobile traffic.
- Class III. Commonly referred to as bike routes, Class III facilities are on-street routes where bicyclists and automobiles share the road.
- Class IV. Commonly referred to as cycle tracks or protected bike lanes, Class IV facilities combine elements of Class I and Class II facilities to offer an exclusive bicycle route immediately adjacent to a roadway, similar to a Class II facility, but include a physical separation from traffic with raised curbs, plastic delineators, or parked automobiles.

High priority projects identified in the plan include grade-separated crossings of highways, which are often barriers to pedestrian and bicycle mobility. Key projects in Santa Rosa include a pedestrian bicycle bridge over US Highway 101 near Santa Rosa Junior College and the reconstruction of the US Highway 101 interchange at Hearn Avenue.

Caltrans State Route 12 Concept Report

The Caltrans 2014 *State Route 12 (West) Transportation Concept Report* provides an evaluation of the existing and projected conditions along SR 12 and a vision for future development along the corridor. The Transportation Concept Report was developed with goals of increasing safety, improving mobility, providing stewardship, and meeting community and environmental needs along the corridor. The report adopted a multimodal perspective and considered the context of the land uses present along the corridor, which includes the segments of freeway and highway traversing Santa Rosa.

Regional Regulations

Metropolitan Transportation Commission / Association of Bay Area Governments

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including Sonoma County. It also functions as the federally mandated metropolitan planning organization (MPO) for the region. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

The passage of AB 32 and the associated State commitment to reducing statewide GHG emissions has placed a new emphasis on accommodating new housing production as a condition of securing transportation grant funding. Subsequent to adoption of AB 32, the State adopted the Sustainable Communities and Climate Protection Act (SB 375) as the means for achieving regional transportation-related GHG targets. Among the requirements of the Sustainable Communities and Climate Protection Act (SB 375) is the creation of a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the RTP must be consistent with one other, including action items and financing decisions. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission.

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, MTC and ABAG adopted *Plan Bay Area* 2050 on October 21, 2021.[3] *Plan Bay Area* 2050 is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of the Sustainable Communities and Climate Protection Act (SB 375). Strategies to reduce GHG emissions include focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes. To achieve *Plan Bay Area*'s sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDA)[4] and Transit Priority Areas (TPA).[5] PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within 0.5 miles around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4.0 of this Draft EIR, the EIR Study Area has six PDAs and three TPAs—the Mendocino Avenue/Santa Rosa Avenue Corridor PDA, North Santa Rosa Station PDA and TPA, Downtown Station Area PDA and TPA, Sebastopol Road Corridor PDA, Roseland PDA, Santa Rosa Avenue PDA, and Santa Rosa Transit Mall TPA. Development in PDAs and TPAs leverage existing infrastructure and therefore can minimize development in greenfield (undeveloped) areas and maximize growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions.

[3] Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, accessed July 21, 2023, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

[4] PDAs are transit-oriented, infill development opportunity areas within existing communities.

[5] TPAs are half-mile buffers surrounding major transit stops or terminals.

The MTC has established its policy on Complete Streets in the Bay Area. The policy states that projects funded all, or in part, with regional funds (e.g., federal, State Transportation Improvement Program, and bridge tolls) must consider the accommodation of bicycle and pedestrian facilities, as described in Caltrans Deputy Directive 64. These recommendations do not replace locally adopted policies regarding transportation planning, design, and construction. Instead, these recommendations facilitate the accommodation of pedestrians, including wheelchair users, and bicyclists into all projects where bicycle and pedestrian travel is consistent with current adopted regional and local plans.

In 2021, the MTC the Blue Ribbon Task Force established 27 specific near-term actions to re-shape the region's transit system into a more connected, more efficient, and more user-focused mobility network across the entire Bay Area. This set of actions forms the cornerstone of a formal *Bay Area Transit Transformation Action Plan*, adopted by the Commission in fall 2021.

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA), created in 1990, is governed by a 12-member Board of Directors representing the nine Sonoma County cities and the County. The SCTA serves as the entity responsible for coordinating planning and prioritization of transportation improvement projects at a county-wide level. SCTA is also responsible for managing the voter-approved Measure M, which is a quarter cent sales tax used to maintain local streets for all modes of transportation. In 2020, voters approved Go Sonoma which extends the Measure M sales tax through March of 2045 to continue to provide funding for local transportation projects. Measure M (soon to be Go Sonoma funding) is used in Santa Rosa for projects such as the Hearn Avenue Regional Multimodal Interchange, the Santa Rosa Avenue Corridor Improvement project, the Fulton Road Widening project, transit service expansion, free/reduced transit fare programs, first/last mile connection to transit, among others.

As the regional transportation authority, the SCTA prepares the Comprehensive Transportation Plan (CTP) for Sonoma County. *Moving Forward 2050*, September 2021, is the most recent CTP approved by the SCTA, and establishes goals and objectives for improving mobility on Sonoma County's streets, highways, transit systems and bicycle/pedestrian facilities. Projects in the CTP are included in the RTP adopted by MTC. SCTA also maintains the Sonoma County Travel Model (SCTM) that is used to forecast future travel patterns and demand based on changes to the transportation system, land use, and demographics, using and updating the model during development of the CTP.

SCTA has a role in coordinating and planning alongside local transit agencies and elevated its work on transit integration with the development of the Transit Integration and Efficiency Study (TIES) in 2019. The Future of Transit Ad Hoc, established in fall 2020, continued to lead implementation of TIES for the three local bus operators—Santa Rosa CityBus, Sonoma County Transit, and Petaluma Transit—and became a venue to coordinate locally on regional work led by MTC's Blue Ribbon Transit Recovery Task Force. Building off the 2019 TIES study, SCTA led a Service Planning Study with the overarching goal to increase the efficiency of delivering high-quality transit service.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives pertaining to transportation. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to transportation impacts are in Title 11, *Vehicles and Traffic,* Title 18, *Buildings and Construction,* and Title 20, *Zoning*, as follows:

- Title 11, *Vehicles and Traffic*. This title sets forth the laws and policies governing the regulation and enforcement of specific vehicles and traffic-related matters within the city.
  - Chapter 11-20, *Stopping, Standing and Parking*. This chapter outlines what is prohibited in terms of stopping, standing, or parking.
  - Chapter 11-24, *Parking: Metered and Unmetered Locations*. This chapter sets forth laws about different parking facilities and describes the City's powers in regard to parking meters.
  - Chapter 11-28, *Commercial Vehicles and Truck Routes*. This chapter outlines laws regarding commercial vehicles and trucks including weight limits, parking restrictions, and truck routes.
  - Chapter 11-44, *Residential Parking Permits.* This chapter was enacted to create parking regulations restricting unlimited parking by non-residents and to provide the opportunity for residents to park near their homes and the increased use of public mass transit facilities available now and in the future.
- Chapter 18-44, *California Fire Code*. This chapter adopts prescriptions regulating governing conditions hazardous to life and property from fire or explosion. This includes the 2019 Fire Code, which consists of portions of the 2018 International Fire Code as amended by the California Building Standards Commission. This title includes building regulations related to the fire resistance of buildings with amendments to the 2019 Fire Code, enforcing greater restrictions than those required by the State. This chapter requires roads be maintained to provide adequate space for emergency vehicle access. Future development in designated Wildland Urban Interface areas is subject to additional requirements and review.
- Title 20, *Zoning*. Section 20-10.020, *Purposes of Zoning Code*, describes that zoning code implements the goals and policies of the Santa Rosa General Plan by classifying and regulating the uses of land and structures within the City of Santa Rosa. As such, the zoning code includes several zoning districts that support the reduction of VMT and therefore the reduction of GHG emissions by locating commercial and residential land uses in close proximity to one another and high-quality transit and other non-automobile forms of transportation. These zoning districts are listed in Section 20-22.020, *Purposes of the Residential Zoning Districts,* and Section 20-23.020, *Purposes of Commercial Zoning Districts*, as follows:
  - TV-R (Transit Village-Residential) District. The TV-R zoning district is applied to areas within approximately one-half mile of a transit facility that is appropriate for mixed use development. Development should transition from less intense uses at the outlying edges to higher intensity uses near the transit facility. Residential uses are required, and ground floor neighborhood serving retail and live-work uses are encouraged. The maximum allowable density ranges from 25 to 40

dwellings per acre. The TV-R zoning district is consistent with and implements the Transit Village Medium land use classification of the General Plan.

- CMU (Core Mixed Use) District. The CMU zoning district is applied to areas within downtown Santa Rosa to foster a mix of residential and nonresidential uses to activate the greater Old Courthouse Square area and key transit corridors. The principal objectives of the CMU designation are to strengthen the role of this area as a business, governmental, retail, tourism, entertainment, and cultural hub for the region, and to accommodate significant new residential development. New residential development will serve as a catalyst for increased activity and create a built-in market for retail, service, and entertainment uses. High-rise development in all residential or mixed-use buildings is envisioned in a walkable, bikeable environment with public gathering places such as plazas, courtyards, or parks and easy access to public transit. The CMU zoning district implements and is consistent with the Core Mixed Use land use classification of the General Plan.
- TV-M (Transit Village-Mixed) District. The TV-M zoning district is applied to areas within approximately one-quarter mile of a transit facility outside of the Downtown Station Area that are appropriate for a mix of higher density residential, office and commercial uses. Development is designed and oriented to create a central node of activity at or near the transit facility. The minimum allowable density is 40 dwellings per acre; there is no maximum density. The TV-M zoning district is consistent with and implements the Transit Village Mixed Use land use classification of the General Plan.

Chapter 20-31, *Density Bonus and other Development Incentives*, outlines the eligibility requirements for Supplemental Density Bonuses in excess of the State Density Bonus (i.e., California Government Code Section 65915). An eligible project may qualify for a Supplemental Density Bonus of up to, but not greater than, 100 percent above the maximum residential density permitted in the applicable Land Use Designation pursuant to the provisions in this section. Some Density Bonus' are awarded based on proximity to a major transit stop. As defined in Section 20-31.020, *Definitions*, "located within one-half mile of a Major Transit Stop" means that any point on a proposed development, for which an applicant seeks a Density Bonus, other incentives or concessions, waivers or reductions of development standards, or a vehicular parking ratio pursuant to this chapter, is within one-half mile of any point on the property on which a major transit stop is located, including any parking lot owned by the transit authority or other local agency operating a major transit stop. A different definition of "located within one-half mile of a major transit stop," found in SRCC Section 20-70.020, *Definitions of Specialized Terms and Phrase*, may apply if the project falls under certain provisions of Government Code Section 65915, subdivision (p), paragraph (2) pertaining to moderate income projects. In addition, a Major Transit Stop, also defined in SRCC Section 20-70.020, however, for the purposes of this chapter, a major transit stop also includes major transit stops that are included in the applicable regional transportation plan.

Santa Rosa CityBus Short Range Transit Plan 2016-2025

The *Santa Rosa CityBus Short Range Transit Plan 2016-2025* includes near-term goals, objectives, and standards for the transit system. Key performance standards include ensuring that 90 percent of transit-supportive areas are within one-quarter mile of a bus stop and providing weekday service headways of 15 to 30 minutes on trunk routes and 30 to 60 minutes on local routes. In 2017, CityBus implemented a 15-

minute service on high-ridership corridor, more direct routes, more two-way service to help reduce travel time and a bus system more convenient and useful for riders following the Phase I recommendations contained in *Reimagining CityBus*, September 2016. Phase I established 15-minute frequencies from Downtown Santa Rosa for Route 1 and 2/2B along Mendocino Ave and Sebastopol Road including segments of Bicentennial Way, Range Avenue, West Third Street, and Santa Rosa Avenue. Phase II focuses on increasing service levels, including improving Mendocino Avenue to 10-minute frequency and potentially upgrading infrastructure on this route to implement a Rapid Bus corridor. Phase II details either service expansion or increased frequencies to Santa Rosa Avenue south, the Roseland area, Cleveland Avenue to Coddingtown Mall, Sonoma Avenue, and Rincon Valley. Phase II also includes transit signal priority corridors, improved late night and weekend service.

Bicycle and Pedestrian Master Plan Update 2018

The policies included in the 2018 *Bicycle and Pedestrian Master Plan* (BPMP) focus on improving access, user comfort, and safety for bicycling and walking. Goals of the plan include increasing the share of people walking and bicycling to work to five percent and reducing the number of severe injury and fatal collisions to zero by 2030. The BPMP's recommendations would more than double the number of miles of bikeways in the city, including over 40 miles of multi-use paths which offer users greater levels of protection from vehicle traffic. Other key themes in the BPMP include using the plan as a tool to promote public health and ensuring that the benefits of the BPMP are distributed equitably to target all of Santa Rosa's neighborhoods. The BPMP is updated approximately every 5 to 8 years. The City of Santa Rosa began an update, to be renamed the Active Transportation Plan, in 2023. Anticipated adoption is March 2025.

Street Design Standards

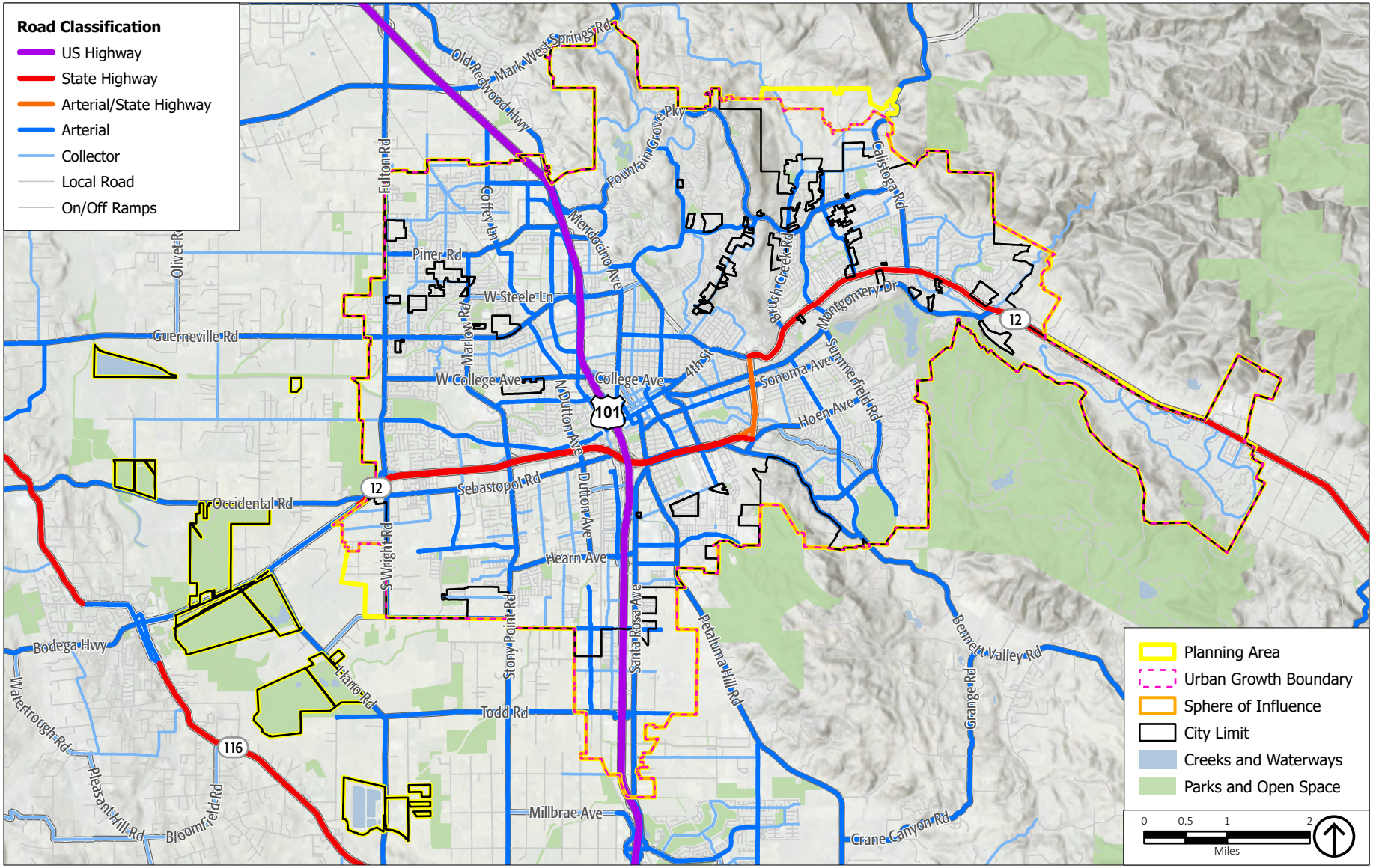
Adopted in January 2004, the *Street Design and Construction Standards* establishes standards to be used for the design and construction of all private and public streets and for flat-land streets and hillside streets.[6] Standards and requirements are provided for street design, alignment, grades, intersections, pavement design, transit infrastructure and emergency access during construction. These standards are considered minimum and deviations from these standards may be granted by approval of the City Engineer.

4.15.1.3 EXISTING CONDITIONS

Roadway Network

The city's roadway network serves as the primary channel for all modes of travel. Roadways are organized using a hierarchical system, whereby individual roadways are classified by their intended function within the overall roadway network. These classifications—freeways, highways, arterials, collectors, and local streets—define the desired functional and operational characteristics of a roadway, such as traffic volume capacity and level of service. Figure 4.15-1, *Roadway Network,* depicts the roadway network in Santa Rosa.

[6] City of Santa Rosa, January 13, 2004, Street Design and Construction Standards, https://www.srcity.org/DocumentCenter/View/9812/Street-Design-and-Construction-Standards, accessed April 7, 2023.



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2023.

Figure 4.15-1
Roadway Network

Highways

Highways supplement the local roadway system by carrying long-distance traffic to and through Santa Rosa. US Highway 101 is the primary transportation spine running through Sonoma County as well as Marin County to the south and Mendocino County to the north. It is access-controlled within Santa Rosa, with interchanges at Mendocino Avenue/Old Redwood Highway, Bicentennial Way, Hopper Avenue, Steele Lane/Guerneville Road, College Avenue, Downtown, SR 12, Baker Avenue/Colgan Avenue, and Hearn Avenue/Yolanda Avenue. SR 12 is a major east-west route through the city and has four travel lanes, except for the far eastern portion of Santa Rosa where the highway narrows to two lanes at Melita Road. It is access-controlled between Fulton Road and Farmer's Lane, with interchanges at Stony Point Road, Dutton Avenue, US Highway 101, and South E Street. A portion of SR 12 runs on Farmers Lane, and the segment between Farmers Lane and the eastern city limits is sometimes referred to as Sonoma Highway. US Highway 101 and SR 12 are the responsibility of Caltrans, not the City of Santa Rosa, though the City operates the traffic signals along Farmers Lane and at many of the US Highway 101 interchanges.

Arterials

Boulevards and parkways connect town centers to the greater region. Boulevards and parkways are essential for combining motorized and nonmotorized traffic in safe, efficient, welcoming environments. Since the success of commerce and traffic circulation depends on effective street design, attention must be paid to the balanced movement of all transportation modes on boulevards and parkways. On these streets passenger vehicles, delivery trucks, emergency responders, and transit must operate with high levels of efficiency. Pedestrians and bicyclists must also be welcomed and are in greater need of support, due to higher vehicle speeds and volumes of traffic. The Regional Streets category includes the following street types:

- Boulevards provide multi-lane access to commercial and mixed-use buildings and also carry regional traffic. Boulevards have medians, bike lanes, and may have sections with parking to support adjacent commerce, parks, schools, and other attractions.
- Parkways provide connections between outlying areas to more developed parts of the city or carry traffic through natural areas. Parkways are not designed to accommodate adjoining development. Roadway speeds may be higher, but when Parkways enter denser parts of the city, speeds are reduced. Bike lanes are typically included in Parkways although bike facilities may also be separated.

Collectors

Collector streets connect residential neighborhoods to commercial centers and service commercial districts. Avenues and main streets are collector roadways. In addition to providing access, they carry larger and more diverse types of traffic. Avenues and main streets host deliveries and facilitate efficient emergency responses. They anchor neighborhood commerce, serve bicyclists and pedestrians, and accommodate transit operations. Collector streets must operate at low to moderate speeds since many people live, work, shop, and play within these street environments. Parking is found on many, but not all avenues and main streets. The Collector Streets category includes the following street types:

- Avenues. Avenues connect neighborhoods to town centers, commercial centers, and other neighborhoods. A raised center median is preferred, allowing for a triple canopy of street trees. Avenues are richly landscaped since they are civic spaces that serve as gateways to town centers. Since avenues serve as the transitions between neighborhoods and commercial districts, speeds should be kept low. Avenues may also serve as major transit routes.
- Main Streets. Main streets provide access to neighborhood commercial and mixed-use buildings and districts. On-street parking is in demand and typically provided. Low speeds are desirable to protect pedestrians and enhance commercial activity.

Local Streets

Local streets, which form the heart of neighborhoods, function primarily to provide access to neighborhood destinations and make connections within neighborhoods. All local streets provide vehicle, pedestrian, and utility access. Traffic speeds of not more than 25 mph are appropriate for such streets. A measure of how successful a local street is performing its intended function is how well it adds to the quality of the neighborhood by offering access, parking, tranquility, and safety. Local streets should provide indirect connection between Collector or Arterial Streets, since long and straight local street connections may encourage "shortcut" traffic through neighborhoods. The Local Streets category includes the following street types:

- Neighborhood Streets. Neighborhood streets are the most common type of access road in healthy neighborhoods. This is the preferred street to service residential areas when the street does not exceed 100 homes or 1,000 average daily trips. Streets are short, terminating in two to six blocks.
- Lanes. These narrow roads (typically 16 to 20 feet wide) are useful in accessing small numbers of homes (up to approximately 12). Parking, when needed, can be on one side or in parking bays. One-way lanes can operate around parks or nature preserves. They also work well as two-way facilities in many other contexts. Landscaping and sidewalks fill the remainder of the available public right-of-way.

Vehicle Miles Traveled

Many factors affect VMT, including the average distance people commute to work, school, and shopping, as well as the proportion of trips that are made by nonautomobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile modes of travel, including transit, tend to generate lower VMT than auto-oriented suburban areas. VMT is typically an output from travel demand models, such as the SCTM19 model maintained and operated by the SCTA.

For the Santa Rosa General Plan update transportation analysis, the following three VMT metrics were assessed:

- Household VMT per capita. VMT per capita is analyzed for residential uses and measures all home-based automobile VMT, including travel to work, school, or shopping, divided by the number of residents.
- Employment VMT per employee. VMT per employee is analyzed for employment-based uses such as offices and includes all home-based commute VMT made by motor vehicles between homes and workplaces, divided by the number of workers.

- **Total VMT per service population.** VMT per service population includes the total VMT generated by all uses (including uses other than residential and employment such as retail, hospitality, and recreation). This total VMT is divided by the sum of residents and workers that comprise the "service population." This performance metric is sometimes used in land use plan assessments since it broadly captures the total VMT effects created by all land uses and their interactions.

The SCTA's Travel Demand Model (SCTM19, revised December 2021) was used to estimate the VMT associated with the proposed General Plan update. Custom runs of the model were used to produce project-specific VMT data. The model estimates the VMT associated with the aggregate land uses in each of the model's traffic analysis zones (TAZ) in consideration of countywide land use patterns and transportation infrastructure, and accounts for travel occurring beyond the county's boundary. The area analyzed in "project" scenarios corresponds to the EIR Study Area and is encompassed by 319 different TAZs in the SCTA model. Table 4.15-1, *Existing VMT Performance Metrics*, presents a summary of the existing VMT characteristics in the City of Santa Rosa and County of Sonoma, as projected by the SCTM19 travel demand model.

TABLE 4.15-1 EXISTING VMT PERFORMANCE METRICS

Jurisdictional Area	Residential VMT per Capita	Employment VMT per Employee	Total VMT per Service Population
City of Santa Rosa	13.4	9.2	23.9
County of Sonoma	16.4	12.3	29.9

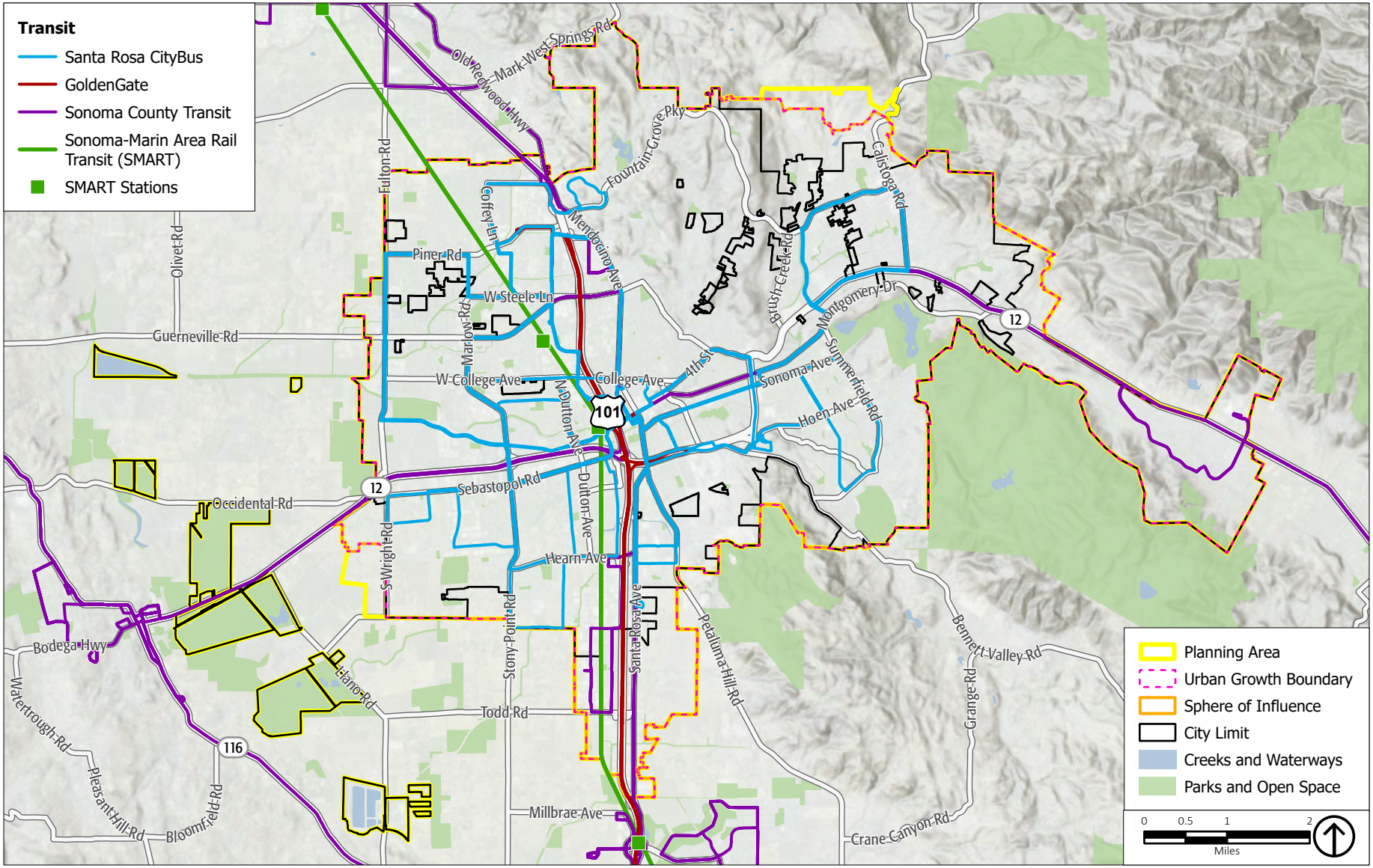
Source: SCTM19 Travel Demand Model, W-Trans, 2023.

Transit

Santa Rosa is served by several bus transit providers (Santa Rosa CityBus, Sonoma County Transit, Golden Gate Transit and Mendocino Transit, Amtrak) and Sonoma-Marin Area Rail Transit (SMART) offering local transportation within the city, as well as connections throughout Sonoma County and regional connections to other cities in Sonoma County, Marin County, Mendocino County, San Francisco and Contra Costa County. As the City has placed a growing emphasis on providing multimodal mobility options, the network continues to be refined through local and regional coordination efforts with an eye toward creating a network that serves the broadest possible range of users. The Santa Rosa Transit Mall is the busiest Transit Hub in the North Bay served by five operators and provides an affordable, accessible and sustainable connection to jobs, education, shopping and recreation for the region. A map showing existing transit routes and providers in Santa Rosa is shown in Figure 4.15-2, *Existing Transit Providers and Routes*.

Rail Service

Sonoma-Marin Area Rail Transit (SMART) operates seven days a week, with a weekday focus on peak hour commute service. There are two stations in Santa Rosa: Downtown and North Santa Rosa. Schedules generally favor commuters originating in Sonoma County and traveling southbound during the morning peak hour and northbound in the evening peak hour. San Rafael is a primary destination, along with Larkspur, which provides a connection via the Larkspur Ferry to San Francisco.



Source: ESRI, 2022; W-Trans, 2023; PlaceWorks, 2024.

Figure 4.15-2
Existing Transit Providers and Routes

Connectivity to the Amtrak national rail network is provided via a bus (Route 7) connection at the Coddingtown Transit Hub in Santa Rosa that travels between Arcata and the Martinez rail station in northern Contra Costa County.

Regional Bus Service

The following transit services provide regional bus service in the EIR Study Area.

- Golden Gate Transit (GGT) operates two routes in Santa Rosa. US Highway 101 connects Santa Rosa and other communities in Sonoma County to Marin County and San Francisco, operating seven days a week, with buses departing every 60 minutes from 4 a.m. to 10 p.m. Route 172 serves cities in Sonoma County along the US Highway 101 corridor, operating only during peak commute hours on weekdays. Golden Gate Transit provides paratransit service to people who are unable to use the fixed route transit system due to a disability or health-related condition. Service is available for locations within three-quarters of a mile of fixed route transit service.
- Sonoma County Transit (SCT) operates eleven local routes within and between towns in Sonoma County plus eight routes that serve Santa Rosa, with stops within the city limits as well as connections to cities, towns, and unincorporated areas throughout the County. SCT's local stops include major destinations such as the Transit Mall, SMART stations, and Santa Rosa Junior College. Routes along lower activity corridors generally operate hourly or less frequently. Routes 20 (to Sebastopol and west to Villa Grande) and 60 (to Cloverdale and Healdsburg) operate at greater frequencies during peak times. Most routes operate seven days a week. Sonoma County Transit provides paratransit service to people who are unable to use the fixed route transit system due to a disability or health-related condition. Service is available for locations within three-quarters of a mile of fixed route transit service.
- Mendocino County Transit (MTA) provides service along two routes between Santa Rosa and destinations in Mendocino County. Route 65 serves Ukiah, Hopland, Willits, and Fort Bragg, while Route 95 operates along Highway 1 to communities including Gualala and Point Arena.

Santa Rosa CityBus

Local bus service in Santa Rosa is provided by CityBus, which operates 16 routes throughout the city. Ridership on CityBus is within the top ten transit providers in the Bay Area. The system is oriented around five main transfer centers, with nearly all routes stopping at the downtown transit mall, radiating out to the city's neighborhoods and residential areas. This system provides affordable, accessible, and sustainable connections to jobs, education, shopping, and recreation for the region. While the majority of CityBus routes currently operate at 30- to 60-minute headways, two routes serving core areas provide high-frequency service, as follows:

- Route 1 operates along the Mendocino Avenue corridor at 15-minute intervals on weekdays and 30-minute headways on weekends, serving major stops at the downtown transit mall, Mendocino Avenue/ Pacific Avenue, Bicentennial Way/Ventura Avenue, and Coddingtown Mall.
- Route 2/2B operates along the Sebastopol Road corridor at 15-minute intervals on weekdays, 30-minute intervals on Saturdays, and 45-minute intervals on Sundays. The route includes major stops at the downtown transit mall, Sebastopol Road/West Avenue, Stony Point Road/Sebastopol Road, Corporate Center Parkway/Mercury Way, and Finley Road/Wright Road.

The City of Santa Rosa provides paratransit service to people who are unable to use the fixed route transit system due to a disability or health-related condition. Service is available for locations within three-quarters of a mile of fixed route transit service.

Bicycle Facilities

Santa Rosa has over 100 miles of designated bike lanes, including multi-use paths as well as on-street facilities where bicyclists mix with vehicle traffic. The network was designed with the intent of providing coverage citywide to enable residents to use bicycles throughout the city. As the City has placed a growing emphasis on providing multimodal mobility options, the network has expanded, and the 2018 *Bicycle and Pedestrian Master Plan* provides a framework to continue developing new facilities, with an eye toward creating a network that serves the broadest possible range of users. The existing bicycle facilities network is shown on Figure 4.15-3, *Existing Bicycle Facilities*.

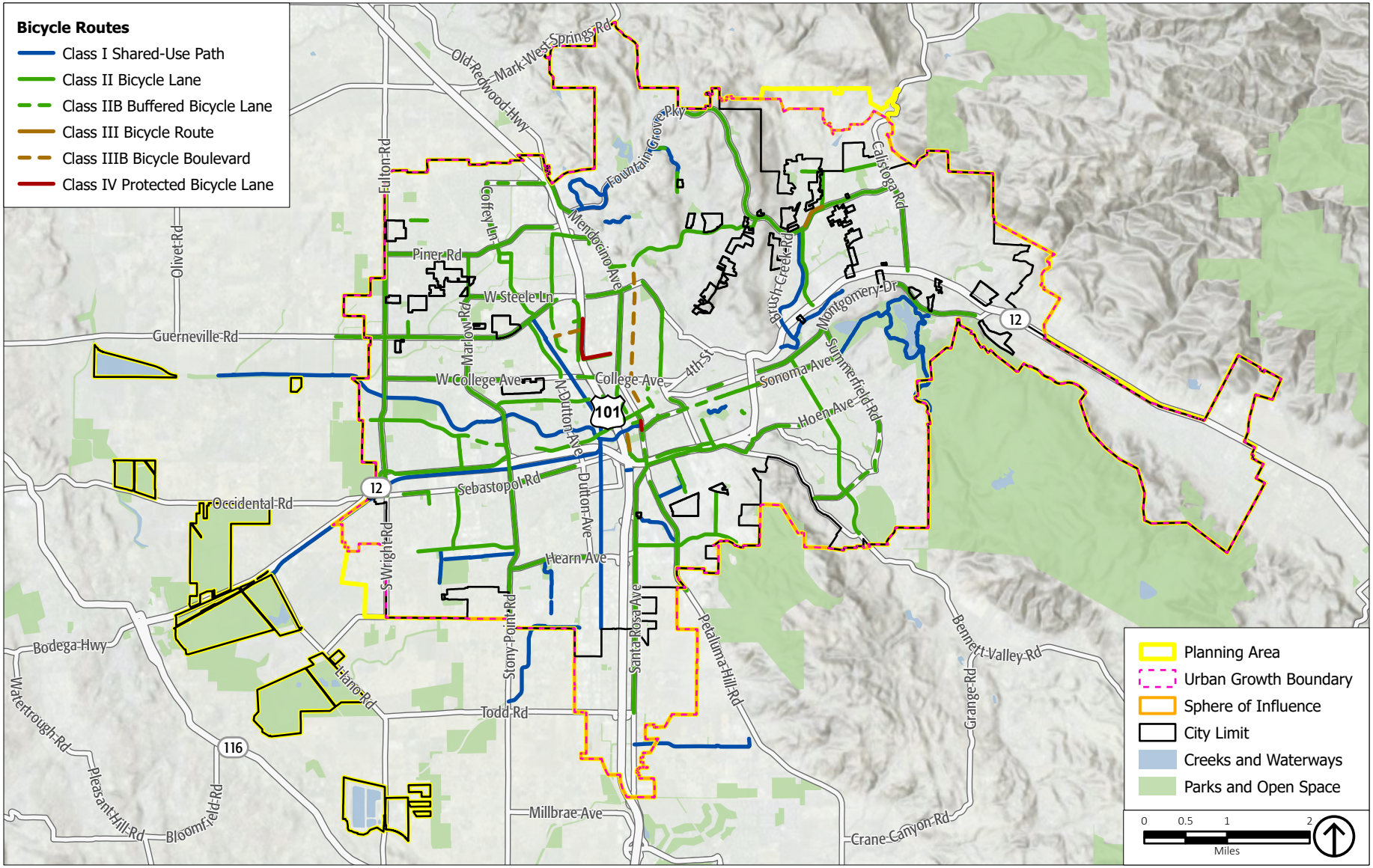
Bicycle Facilities Network

Santa Rosa expanded its bike lane mileage by over 40 percent between 2010 and 2018. This growth has been primarily through the increase in miles of trails and new bike lanes, some of which represented an upgrade of existing bike lanes to make them less stressful for riders. Since limited rights of-way are available for trails, most of the bicycle network is located along the City's street network as Class II facilities with Class IV lanes gaining in popularity.

Santa Rosa's Class I trails include routes that serve as major spines to the regional trail system. The SMART Trail, which is partially complete, is planned to ultimately extend from Larkspur to Cloverdale, a distance of 70 miles, of which over 54 miles is planned to be a Class I facility. The Joe Rodota Trail runs parallel to SR 12, connecting the SMART Trail to Sebastopol. Creek corridors also provide opportunities to develop trails, such as the existing Santa Rosa Creek Trail, which connects neighborhoods in west Santa Rosa to Downtown via the Prince Memorial Greenway.

Bike lanes are generally located along major transportation corridors with moderate to heavy traffic because these streets tend to provide access to desirable destinations such as commercial corridors. Bike routes are typically located along low-volume streets but provide connectivity within the network.

While designated bicycle facilities provide a framework for navigating the city, bicycles are also permitted on the rest of the City's streets, which include the majority of the street network. Based on street and traffic characteristics, the BPMP conducted a citywide "Level of Traffic Stress" analysis and determined that 74 percent of streets are considered comfortable for an average adult rider. Streets rated as low-stress tend to have low traffic volumes and slow speeds. Arterial streets, which are the major travel routes and provide access to most of the major destinations in the city, carry more traffic at higher speeds and can be intimidating for many bicyclists.



Source: ESRI, 2022; City of Santa Rosa, 2024; PlaceWorks, 2024.

Figure 4.15-3
Existing Bicycle Facilities

Pedestrian Facilities

Santa Rosa has a wide range of land uses, including a downtown business district, older residential neighborhoods, lower density suburbs, and rural areas. The infrastructure provided for pedestrians varies based on the proximity to transit, density, redevelopment projects, character of the neighborhood and the historical development of each area. The pedestrian network is critical to the local and regional transit and rail network, providing both the first mile/last mile pedestrian connection as well as the bus stop infrastructure. Pedestrian traffic is typically highest in and around areas that feature a dense concentration and mix of land use types – such as Downtown or neighborhood business districts – where people can live and meet basic needs such as employment, grocery shopping, and entertainment in proximity to one another. High volumes of pedestrians can also be found near large single-use locations such as schools, major employment sites, regional trails, and rail stations or major bus transfer points.

Downtown and in other centrally located neighborhoods the sidewalk network is generally complete on both sides of streets. There are also locations that are not required to provide sidewalks in more rural parts of the city, as well as areas including much of Roseland that have been annexed from unincorporated Sonoma County and currently have limited existing sidewalks. In many cases, discontinuities in the sidewalk network can be eliminated through redevelopment, as incoming projects are required to provide facilities to meet contemporary standards and provide access for pedestrians. These gaps in the sidewalk network can be especially challenging to navigate for people with disabilities. At a citywide scale, there are also several barriers that affect pedestrian circulation and mobility, including US Highway 101, SR 12, the SMART railroad tracks, and creeks.

The city's multiuse paths serve as spines for the local network for all nonmotorized users, particularly the Joe Rodota Trail, SMART Trail, and creek paths such as the Santa Rosa Creek Trail and Prince Memorial Greenway.

4.15.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant impact related to transportation if it would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), relating to VMT. Further information on the application of VMT significance standards in Santa Rosa follows below.
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to transportation.

4.15.2.1 SANTA ROSA VMT STANDARDS OF SIGNIFICANCE

VMT standards of significance for this analysis were established based on guidance provided in the *Vehicle Miles Traveled (VMT) Guidelines Final Draft*, prepared by the City of Santa Rosa in June 2020.[7] These guidelines are generally consistent with those provided by the California Office of Planning and Research (OPR) in the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA* and those used by Caltrans.[8] The City of Santa Rosa specifies that VMT performance criteria, including VMT per capita and VMT per employee, shall be compared to baseline levels corresponding to the County of Sonoma average.

In addition to applying standards of significance for residential VMT per capita and employment VMT per employee, the analysis also includes a standard based on total VMT per service population. This third performance metric was chosen to ensure that the VMT effects of all land use changes envisioned in the proposed General Plan 2050 (not just residential and employment) are considered. The applied VMT significance standards are as follows.

A significant VMT impact would occur if the proposed project would result in:

- Residential VMT per capita exceeding 13.9 miles, which corresponds to 15 percent below the existing Countywide average VMT per capita; or
- Employment VMT per employee exceeding 10.5 miles, which corresponds to 15 percent below the existing Countywide average VMT per employee; or
- Total VMT per service population exceeding 25.4 miles, which corresponds to 15 percent below the existing Countywide average VMT per service population.

4.15.2.2 TRAVEL DEMAND MODELING

Land Use Assumptions

The transportation demand modeling performed in the SCTM19 model reflects implementation of the proposed project, including land use growth consistent with the proposed General Plan land use designations as well as modifications to vehicular and multimodal transportation networks.

Circulation Network Assumptions

The proposed project also includes new and improved circulation infrastructure. Many of the circulation modifications reflected in the proposed General Plan 2050 are also identified in the recent *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan*.[9] A summary of the improvements reflected in the modeling and analysis is shown in Table 3-4, *Major Planned Roadway Circulation Improvements*, and Table 3-5, *Major Planned Multimodal Circulation Improvements*, in Chapter 3, *Project Description*, of this Draft EIR.

[7] City of Santa Rosa, June 2020, *Vehicle Miles Traveled (VMT) Guidelines Final Draft.* See Appendix C, *2020 VMT Guidelines, of* this Draft EIR.

[8] California Office of Planning and Research, December 2018, *Technical Advisory on Evaluating Transportation Impacts in CEQA.*

[9] Sonoma County Transit Authority, 2021, *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan.*

4.15.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as a means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

TRAN-1 Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Potential future development occurring in Santa Rosa over the buildout horizon of the proposed project would increase the number of persons walking, bicycling, and using transit on the citywide transportation network. The proposed General Plan 2050 calls for the City to implement the Santa Rosa 2018 *Bicycle and Pedestrian Master Plan* (currently being updated and renamed the Active Transportation Plan (ATP), *Reimagining CityBus,* and the *Short-Range Transit Plan* (as well as future updates to these plans), all of which identify prioritized lists of projects for the City to implement.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050, contains goals, policies, and actions intended to improve and expand upon facilities for non-auto users, providing safe and convenient options to driving and playing an important role in reducing regional VMT. The following goals, policies, and actions would directly and indirectly result in improving non-auto networks in Santa Rosa, consistent with adopted plans:

- Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.
  - Policy 3-1.1: Work with partner agencies to reduce VMT using existing techniques and explore feasibility of new techniques as they arise.
    - Action 3-1.4: Coordinate transportation plans with those of Sonoma County, MTC, and the State of California, to support interregional travel improvements, particularly connections to public and active transportation modes.
  - Policy 3-1.2: Promote a citywide mode shift away from single-occupancy vehicles to support ambitious VMT and GHG reduction goals.

- Action 3-1.5: Develop a process that invests in and prioritizes non-automobile modes of transportation in capital improvement projects to reduce VMT and GHGs, prioritizing, in order:
  1. Active transportation modes, including walking, bicycling, and rolling.
  2. Public transportation, including inter-city and regional systems.
  3. Other shared vehicles such as carpool, vanpool, and rideshare/transportation network companies.
- Action 3-1.7: Prioritize transportation alternatives such as active and public transportation, that reduce demand on existing facilities in lieu of widening roadways and further impacting the natural environment.
- Action 3-1.8: Work with regional partners to develop mobility hubs as locations for multi-modal transportation, specifically accommodating active and public transportation modes.

- Policy 3-1.3: Promote land use, development, and transportation demand management (TDM) strategies that reduce VMT and dependence on single- occupancy vehicle trips.
  - Action 3-1.11: Update the Zoning Code to discourage cul-de-sac design and require any new developments with cul-de-sacs or other limited street connectivity layouts to provide enhanced connectivity for pedestrians and bicyclists to sites adjacent to or behind the new developments.
  - Action 3-1.12: Work with developers to ensure new development improves multimodal transportation infrastructure in front of, and adjacent to the development, with effective connections to existing infrastructure or the means to accommodate future connections.
  - Action 3-1.13: Work with developers in the beginning phases of project conception to install Class I and Class IV bicycle lanes, wherever feasible.
  - Action 3-1.14: Provide information on funding opportunities and other incentives designed to encourage developers of sites in Transit Priority Areas and Priority Development Areas to integrate transit-supportive components, such as unlimited pass programs, transit-serving pedestrian infrastructure, and/or transit subsidies, as appropriate.
  - Action 3-1.15: Continue to implement State guidelines to reduce or eliminate vehicle parking requirements, specifically in the downtown and in Transit Priority Areas.
  - Action 3-1.16: Periodically update City impact fees to require that development projects pay a fair share of costs for multimodal transportation systems improvements.

- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.1: Ensure that the active transportation network remains in good condition by maintaining facilities, tracking the state of infrastructure, and managing the network in a way that serves all users.
    - Action 3-2.2: Use mapping to identify gaps in the active transportation network, and complete those gaps, except where it may be infeasible due to lack of City right-of way.

- Action 3-2.3: Update the City Code to include sidewalk standards for all applicable zoning districts.
- Action 3-2.4: Improve connections in the active transportation network to ensure that all who choose to walk, roll, or ride have adequate access to public transportation amenities, especially in Equity Priority Areas and Areas of Change.
- Action 3-2.5: Provide street lighting that is energy-efficient, attractive, and appropriate to the character and scale of the neighborhood or district, and that contributes to pedestrian, bicycle, and vehicular safety.
- Action 3-2.6: Ensure that major arterials have active transportation infrastructure that accommodates all road users and does not present a barrier to regional travel for any mode.
- Action 3-2.7: Improve active transportation crossings of major transportation barriers, such as the SMART rail lines, Highway 101, and Highway 12.
- Action 3-2.8: Support efforts to acquire local, regional, State, and federal funding for transportation improvements.

- Policy 3-2.2: Continue to expand and improve the active transportation network toward completing a safe, continuous, convenient, and attractive network of designated routes that connect all neighborhoods and that is equitably accessible for all ages and abilities.
  - Action 3-2.9: Implement and update the City's Active Transportation Plan, as appropriate, recognizing that:
    - The Active Transportation Plan will create a blueprint for the City to construct a low-stress active transportation network for all ages and abilities.
    - The Active Transportation Plan will prioritize separating network users in time and space to increase user safety and comfort.
    - Each update of the Active Transportation Plan will result in a General Plan Amendment and will therefore become policy and action incorporated into the General Plan.
  - Action 3-2.10: Use the Urban Streets Design Guide and the Urban Bikeways Design Guide created by the National Association of City Transportation Officials (NACTO) as guides to update City Street Design and construction standards and implement a low-stress network for all ages and abilities, specifically through protected and separated bicycle lanes.
  - Action 3-2.11: Support pedestrians and bicyclists by incorporating their needs and interests into regular planning activities for all City projects, including, at a minimum, any project on the Capital Improvements Project list.
  - Action 3-2.12: Identify and analyze arterial corridors and improve them by preparing and implementing corridor plans to address all transportation modes, specifically active transportation, focusing on separated or protected facilities for all ages and abilities.

- Action 3-2.13: Ensure that there are no physical barriers to bicyclists or pedestrians as they cross high traffic roadways at intersections of Class I or Class IV facilities through improvements such as crosswalks and beacon lights.
- Action 3-2.14: Ensure that improvements to the active transportation network include amenities that enhance the user experience, such as lighting, trashcans, benches, and traffic-calming enhancements.
- Action 3-2.15: Ensure that the needs of seniors, children, people with disabilities, and those using strollers are addressed through sufficient and continuous sidewalks, crosswalks, and reasonable crossing distances.
- Action 3-2.16: Continue to upgrade curb ramps and other pedestrian infrastructure in compliance with the Americans with Disabilities Act.
- Action 3-2.17: Support Safe Routes to Schools programs to ensure all students can safely travel to and from school using any mode of transportation, with emphasis on active modes.
- Action 3-2.18: Prioritize addressing active transportation deficiencies in Equity Priority Areas.
- Action 3-2.19: Continue to look for opportunities to install High-Intensity Activated Crosswalks and Rectangular Rapid Flashing Beacons to increase pedestrian safety.

- Policy 3-2.3: Encourage local and interregional active transportation travel.
  - Action 3-2.21: Prioritize bicycle and pedestrian pathways in areas that connect to, or enhance, regional active transportation facilities such as the Joe Rodota Trail and Santa Rosa Creek Trail.
  - Action 3-2.22: Integrate shared use paths along creek corridors, railroad rights-of-way, and include them in park master planning and design.
  - Action 3-2.23: Work with the County of Sonoma and Caltrans on the development of the planned Class I shared use path along Highway 12 to provide a regional connection to the City of Sonoma.
  - Action 3-2.24: Work with the County of Sonoma, SMART, and other stakeholders to ensure all Class I shared use paths are regularly maintained and kept open for active transportation uses.

- Goal 3-3: Transition away from single-occupancy vehicles.
  - Policy 3-3.1: Continue to offer and improve TDM programs that incentivize a shift away from single-occupancy vehicles.

- Action 3-3.1: Work with local employers and existing residential and commercial development to expand TDM and related efforts to help meet employee transportation needs through modes that reduce VMT from single-occupancy automobile trips less than five miles, such as:
  - Unlimited free access to transit service (CityBus, Sonoma County Transit, and SMART).
  - Funding for increased transit frequency.
  - Paid incentives to active transportation and micromobility users, including a transportation allowance and secure on-site bicycle parking, lockers, showers, and other facilities that support bicycling commuting to and from work.
  - Programs and incentives to expand carpooling, vanpooling, and car sharing.
  - Staggered work shifts, flex time (e.g., 9/80 work schedule), and telecommuting.
  - Paid-parking disincentives for single-occupant vehicles and/or parking cash-out incentives.
- Action 3-3.2: Implement a TDM program for City employees—potentially in partnership with other local governments, public agencies, and transit providers—and promote the program as a model for larger local employers.
- Action 3-3.3: Provide or require additional bicycle parking at key destinations and in plain sight to support a car-free environment in high-density areas.
- Action 3-3.4: Work with developers to ensure bicycle-friendly design, such as visible and secure bicycle parking and shower and changing facilities.
- Action 3-3.5: Plan for e-bicycles, including publicly available charging and secure parking locations.

- Policy 3-3.2: Bolster outreach, marketing, and education about non-automobile modes of transportation, especially. Outreach should pay for Equity Priority Areas and Priority Development Areas.
  - Action 3-3.6: Provide educational materials to increase driver awareness and understanding of bicyclist and pedestrian needs.
  - Action 3-3.7: Continue to promote events, such as Bike to Work Day, and look for new opportunities to engage with the public.
  - Action 3-3.9: Encourage ridership on public transit systems through marketing and promotional efforts and incentives.
- Policy 3-3.3: Encourage transit ridership to reduce GHG emissions and provide convenient and efficient public transportation to workplaces, shopping, and other destinations.
  - Action 3-3.10: Identify first-/last-mile challenges citywide and work with transit and rideshare companies to provide solutions.
  - Action 3-3.11: Explore expanding paratransit to include on-demand services.
  - Action 3-3.12: Continue to require transit-supportive TDM measures for new development, including CityBus/Sonoma County Transit/SMART pass products.

- Policy 3-3.4: Provide convenient, efficient transit routes to major employment, education, recreation, community, and shopping centers throughout the city, SMART stations, and shopping centers.
  - Action 3-3.13: Continue to implement and periodically update Transit Master Plans, such as Reimagining CityBus and the Short-Range Transit Plan, and work with MTC and other agencies on regional transit-supporting initiatives.
  - Action 3-3.14: Require new development to provide transit improvements, including:
    - Direct, paved pedestrian access to transit stops.
    - Bus turnouts and weather-protected shelters.
    - Bus-ready travel lanes.
  - Action 3-3.15: Improve the reliability, efficiency, frequency, and travel time of transit service to meet or exceed performance standards of the most recent Santa Rosa CityBus Short Range Transit Plan and improve transit service along corridors where increased densities are planned.
  - Action 3-3.16: Work with local and regional transportation agencies to coordinate multimodal connections throughout the city, including timed transfers connecting different transit routes and future rail service, bicycle parking and lockers at transit centers, and transit stops at park-and-ride lots.
  - Action 3-3.17: Identify opportunities to improve pedestrian, bicycle, micromobility (such as bicycle or scooter share), and bus transit connections between existing transit stations, to SMART stations, and to future mobility hubs.
  - Action 3-3.18: Coordinate plans for transit system changes and expansions with local land use planning to ensure consistency.
  - Action 3-3.20: Expand the hours of transit service, including during nights and weekends.
- Policy 3-3.5: Work with SCTA and MTC to promote Safe Routes to Transit projects and programs and submit applications for funding of local Safe Routes to Transit projects and programs.
  - Action 3-3.21: Explore ways to ensure that transit hubs in the city, especially the Transit Mall, Downtown SMART Station, and North SMART Station, are active, safe, and efficiently accessed by local transit.
  - Action 3-3.22: Integrate the provision of passenger information, real-time arrival, fare structures, and service planning.
- Policy 3-3.6: Ensure that the transit system serves all members of the community equitably, especially in Equity Priority Areas.
  - Action 3-3.23: Evaluate local transit services to identify and address accessibility barriers.
  - Action 3-3.24: Reduce the cost of transit, especially for low-income individuals, by expanding the unlimited Pass Program that serves students through grade 12, Santa Rosa Junior College students, City employees, paratransit users, and veterans.

- Action 3-3.25: Develop an accumulator transit pass that reduces the cost burden for frequent riders.
- Action 3-3.26: Work with SCTA and local transit operators to explore financial incentives, reduced fares for public transportation, and a subregional or countywide universal basic mobility program.
- Action 3-3.27: Identify strategies to increase residents' access, especially in low-income areas, to transit hubs, jobs, and areas with goods and services, such as by enhancing existing transit hubs, constructing new transit hubs, and/or providing new first-/last-mile services.
- Action 3-3.28: Preserve options for future SMART rail stations by zoning land in proximity to the potential station sites for higher residential densities and/or mixed-use development.
- Action 3-3.29: Support efforts to promote SMART for commuting and tourism and to provide and maintain convenient and accessible routes to transit, including shared use paths.

- Goal 3-4: Mitigate the traffic-related impacts of new land uses.
  - Policy 3-4.1: Ensure that new development does not impede efficient, safe, and free-flowing circulation for all traffic modes.
    - Action 3-4.1: Require traffic studies for development projects that may have a substantial impact on the circulation system and use traffic study findings to define improvements that would also support active and public transportation.

The proposed General Plan 2050 integrates planned non-auto facilities identified in the City's 2018 *Bicycle and Pedestrian Master Plan* (currently being updated and renamed the Active Transportation Plan (ATP)), and transit plans and contains an extensive list of goals, policies, and actions intended to ensure that multimodal networks in Santa Rosa are improved and extended to support non-auto travel. The proposed General Plan 2050 therefore does not conflict with programs, policies, or plans addressing the transit, roadway, bicycle, and pedestrian facilities. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

TRAN-2	**Implementation of the proposed project could conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).**

Land Use VMT

The VMT modeling results produced by the SCTM19 travel demand model indicate that residential uses in Santa Rosa would on average generate 13.6 VMT per capita under Existing plus Project conditions and 15.0 VMT per capita under Future plus Project conditions. While the Existing plus Project residential metric of 13.6 VMT per capita would be below the 13.9 standard of significance, the Future plus Project metric of 15.0 VMT per capita would exceed it.

Employment VMT modeling results indicate that employment-based uses in Santa Rosa would on average generate 8.6 home-based commute VMT per employee under Existing plus Project conditions and 8.0 VMT per employee under Future plus Project conditions. Both of these employment-based VMT performance metrics fall below the 10.5 home-based VMT per employee standard of significance.

The total VMT per service population performance metric captures both work and non-work-related trips, as well as visitor and non-home-based trips, including those associated with retail/commercial, community-serving, lodging, and recreational uses. The total VMT per service population in Santa Rosa is forecast to average 22.4 under Existing plus Project conditions and 23.5 under Future plus Project conditions. These levels are a decrease from the existing average of 23.9 VMT per service population and fall below the applied significance standard of 25.4 VMT per service population.

Table 4.15-2, *Daily VMT Performance Metrics for the EIR Study Area*, summarizes the VMT assessment discussed above, including comparison of the VMT efficiency metrics to countywide averages and standards of significance.

TABLE 4.15-2 DAILY VMT PERFORMANCE METRICS FOR THE EIR STUDY AREA

	Residential VMT per Capita	Employment VMT per Employee	Total VMT per Service Population
Geographic Averages and Standards of Significance			
City of Santa Rosa Existing Average	13.4	9.2	23.9
County of Sonoma Existing Average	16.4	12.3	29.9
Standard of Significance [a]	13.9	10.5	25.4
Proposed Project			
Existing plus Proposed General Plan 2050	13.6	8.6	22.4
Future with Proposed General Plan 2050	15.0	8.0	23.5
Significant Impact?	**Yes**	No	No

Source: SCTM19 Travel Demand Model, W-Trans, 2023.
Notes: a. Standard of Significance is set at 15 percent below the existing Sonoma countywide average; Bold values exceed standard of significance

With implementation of the proposed project, total VMT per service population would decrease from the City's current levels both under Existing plus Project and Future plus Project conditions and would be more than 20 percent below the current countywide average for Sonoma County. The reduction in citywide total VMT per service population below existing levels is a positive indicator that the land use and circulation changes associated with the proposed project will, overall, reduce the amount of VMT generated by each person living or working in Santa Rosa. A similar trend can be seen in the partial VMT performance metric associated with employment-based uses, with home-based commute VMT per employee in Santa Rosa decreasing from current levels with implementation of the proposed project.

The partial VMT performance metric of residential home-based VMT per capita is projected to increase over current levels with implementation of the proposed project. While residential VMT would remain below the Sonoma countywide average, it would not achieve the applicable standard of significance under Future plus Project conditions, resulting in a significant impact. While VMT is influenced by a highly complex set of interacting factors, one that may be particularly influential is that the proposed General Plan 2050 maintains current residential land use designations on the periphery of the City where trip

lengths and per capita VMT levels are high. Increased development in these outer areas causes the citywide average VMT per capita to increase. The land use changes contained in the proposed General Plan 2050 counter these effects by emphasizing residential growth in the downtown and core activity areas where trip lengths are lower and many trips can be made by non-auto modes; without this fundamental principal incorporated by the proposed General Plan 2050, residential VMT per capita would have been higher.

As required by CEQA and consistent with the City of Santa Rosa's VMT Guidelines (see Appendix C, *2020 VMT Guidelines*, of this Draft EIR), individual residential development projects that are subject to VMT analysis shall be required to achieve a standard of 15 percent below the countywide average residential VMT per capita. For individual residential development projects that do not achieve this standard, applicants shall be required to contribute to a VMT mitigation bank as referenced in proposed General Plan 2050 Action 3-1.2, or contribute to offsite improvements intended to reduce VMT, such as those referenced in proposed Action 3-3.12 and Action 3-3.14.

Residential project VMT reduction techniques would vary depending on the location and context of each development site, though utilization of TDM strategies would play an important role in most cases. Following are examples of TDM and other strategies that may be applied:

- Subsidize resident transit passes;
- Provide or participate in established ride-matching program(s);
- Provide information, educational, and marketing resources for residents and visitors managed by a TDM Coordinator;
- Complete bus stop improvements or implement on-site mobility hubs;
- Construct off-site pedestrian and/or bicycle network improvements, particularly those that fill gaps and/or connect the project and surrounding neighborhood to transit;
- Reduce parking supply at projects;
- Unbundle parking costs (sell or lease parking separately from the housing unit);
- Provide or participate in car-sharing, bike sharing, or scooter sharing program(s).

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider VMT impacts. In addition to the proposed General Plan 2050 goals, policies, and actions identified under impact discussion TRAN-1 to promote non-auto modes of transportation, the following goal, policy, and actions directly relate to VMT reduction strategies that would help to reduce potential VMT impacts:

- Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of VMT and transportation-related GHG emissions.
    - Policy 3-1.1: Work with partner agencies to reduce VMT using existing techniques and explore feasibility of new techniques as they arise.
        - *Action 3-1.1: Require an analysis of projected VMT and mitigation, as necessary, as part of the project review process for projects with the potential to increase VMT.

- Action 3-1.2: Work with SCTA and other local and regional partners to explore developing a VMT mitigation bank alternative for eligible projects to fund VMT reduction efforts.
- Action 3-1.3: Continue to participate in discussions addressing regional through-traffic with SCTA, the County of Sonoma, MTC, and other municipalities, prioritizing investments that will reduce VMT and GHG emissions.
- Action 3-1.4: Coordinate transportation plans with those of Sonoma County, MTC, and the State of California, to support interregional travel improvements, particularly connections to public and active transportation modes.

Implementation of these proposed General Plan 2050 goals, policies, and actions would reduce the VMT impacts associated with potential future development projects, as well as the overall VMT generated in Santa Rosa. However, because the Future plus Project residential metric of 15.0 VMT per capita would exceed the 13.9 standard of significance, impacts would be potentially *significant*.

Impact TRAN-2a: Implementation of the proposed project could result in a significant vehicle miles traveled (VMT) impact for residential VMT per capita.

Significance with Mitigation: Significant and unavoidable. Implementation of the proposed General Plan 2050 goals, policies, and actions would reduce the VMT generated by all development including residential uses. In support of proposed General Plan 2050 Policy 3-1.1 to reduce VMT, proposed *Action 3-1.1 requires an analysis of project VMT and mitigation as part of the project review process. Proposed Action 3-1.2 requires the City to work with other local and regional partners to explore developing a VMT mitigation bank. Proposed Action 3-1.3 and Action 3-1.5 supports prioritizing investments that will reduce VMT and GHG emissions.

If all individual development projects achieve the required residential VMT per capita through mitigation, use of a bank, or implementation of offsite measures, impacts would be reduced to a less-than-significant level. There are, however, two important aspects that introduce uncertainty as to whether these reductions can consistently be achieved. First, the proposed General Plan 2050 is a programmatic plan. Specific development plans defining the size, configuration, and characteristics of residential projects affect VMT projections, but site-specific information about future development projects is not available at this time. Because VMT performance is sensitive to these factors, it is not currently possible to conclusively determine VMT performance metrics and the effectiveness of VMT reduction strategies for individual sites. Second, there is uncertainty about the ability of all residential development projects to achieve the required VMT reductions—particularly projects in suburban locations in the outer areas of Santa Rosa where it may be infeasible to provide new or more frequent transit service and very few VMT reduction strategies are viable. Programs such as VMT mitigation exchanges or banks may provide a viable mitigation mechanism for developments, but the timing of when such programs may become available is unknown.

Given the programmatic nature of the proposed project, uncertainties as to whether individual development projects will be able to successfully meet VMT standards even with mitigation, and uncertainties as to the availability of other mitigation strategies such as VMT exchanges or banks, the impact is considered *significant and unavoidable*. Note that this impact conclusion does not preclude

the finding of less than significant at the project level for future projects over the 2050 buildout horizon.

Roadway Network VMT

The VMT associated with transportation projects must be considered in CEQA evaluations. Roadway projects that substantially increase vehicular capacity, particularly on arterial roadways, highways, and freeways, have been shown to increase VMT through induced demand and should be analyzed quantitatively pursuant to guidance contained in the OPR *Technical Advisory*. A transportation project that results in an increase in VMT is considered to have a significant impact. The OPR *Technical Advisory* provides a list of transportation project types that would not likely lead to a substantial or measurable increase in vehicle travel, indicating that such improvements would not require induced travel analyses and may be presumed to result in less-than-significant VMT impacts. The types of transportation projects that may result from implementation of the proposed project include (but are not limited to):

- Safety projects that do not add motor vehicle capacity;
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic;
- Addition of roadway capacity on local or collector streets;
- Conversion of existing general-purpose lanes to managed lanes or transit lanes;
- Installation, removal, or reconfiguration of traffic control devices;
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow;
- Installation of roundabouts;
- Installation or reconfiguration of traffic calming devices;
- Initiation of new transit service;
- Removal or relocation of off-street or on-street parking spaces;
- Rehabilitation and maintenance projects that do not add motor vehicle capacity;
- Addition of new or enhanced bike or pedestrian facilities;
- Installation of publicly available alternative fuel/charging infrastructure.

The phenomenon of induced VMT is influenced by behavioral variables that are not typically addressed by travel demand models including SCTM19. For this reason, the induced VMT was calculated using a tool developed by the National Center for Sustainable Transportation,[10] which is based on substantial research that analyzed the elasticities of VMT in relation to vehicle lane miles.

The proposed General Plan 2050 identifies several arterial streets on which vehicle lanes would be added or removed. While reductions in vehicle lanes (typically associated with “road diet” projects) would have no adverse VMT impacts, roadway projects that add new lanes and capacity on arterial and highway streets may result in long-term induced vehicle travel. Accordingly, an induced demand assessment was completed. The net increase in vehicle lane miles associated with the proposed project was assessed considering the list of arterial segments on which vehicle lanes would be added or removed, as shown in Table 4.15-3, *Changes in Arterial Lane Miles*.

[10] National Center for Sustainable Transportation, California Induced Travel Calculator, University of California, Davis, https://travelcalculator.ncst.ucdavis.edu/, accessed March 28, 2022.

TABLE 4.15-3 CHANGES IN ARTERIAL LANE MILES

Arterial Roadway Segment	Change in Lane Miles
Segments with Increased Lane Miles	
Baker Avenue freeway overcrossing	0.4
Bellevue Avenue freeway overcrossing	0.4
College Avenue (west of Stony Point Rd)	0.2
Dutton Avenue Extension	0.8
Dutton Meadow Extension	0.6
Farmers Lane Extension	7.2
Fulton Road (Piner Rd to Guerneville Rd)	1.2
Hearn Avenue (east of Dutton Ave)	0.6
SR 12 (Melita Rd to Pythian Rd)	6.3
Mendocino Avenue overcrossing	0.4
Northpoint Parkway Extension	0.8
Piner Road (Marlow Rd to Fulton Rd)	1.5
Sebastopol Road (Lombard Ln to Fulton Rd)	1.1
Stony Point Road (Hearn Ave to Bellevue Ave)	1.4
Yolanda Avenue (Petaluma Hill Rd to Santa Rosa Ave)	0.5
Total Increased Arterial Lane Miles	*23.4*
Segments with Decreased Lane Miles	
B Street/Healdsburg Avenue (Tenth St to Seventh St)	-0.1
Cleveland Avenue (Piner Rd to Guerneville Rd)	-1.6
College Avenue (Fulton Rd to Halyard Dr)	-0.6
Dutton Avenue (College Ave to W Third St)	-1.4
Fourth Street (Brookwood Ave to Bryden Ln)	-1.2
Mendocino Avenue (College Ave to Fourth St)	-0.3
Santa Rosa Avenue (Third St to Maple Ave)	-0.9
Total Decreased Arterial Lane Miles	*-6.1*
Total Change in Arterial Lane Miles	**17.3**

Source: W-Trans, 2023.

The proposed project would increase arterial lane miles in Santa Rosa by 17.3 miles. Applying the criteria used in the National Center for Sustainable Transportation calculator, the associated induced VMT is estimated to be 57.9 million additional VMT per year, or approximately 158,630 daily VMT.

Caltrans' publication *Transportation Analysis under CEQA* addresses the topic of induced VMT associated with roadway capacity-increasing projects.[11] Caltrans acknowledges that the measures resulting in the largest VMT decreases are generally off-system (in other words, not directly tied to the roadway facility itself), including authority of land uses and TDM strategies. The proposed General Plan 2050 has

[11] California Department of Transportation, 2020, *Transportation Analysis Under CEQA,* first edition.

incorporated land use strategies by focusing development intensification in the downtown core area and in focused activity areas that have non-auto travel options and a diversity of land uses, as well as TDM strategies aimed at reducing VMT. Caltrans also acknowledges the need for cost-effective, feasible, and proportional VMT mitigation measures such as those possible with a VMT credit or banking and exchange system operated by Caltrans, an MPO, RTP agency, or another entity. The proposed project also emphasizes this approach, with proposed General Plan 2050 Action 3-1.2 calling for the City to work with SCTA and other partners to develop a VMT mitigation bank to fund VMT reduction efforts. The proposed General Plan 2050 includes additional goals, policies, and actions that have been structured to reduce VMT, as previously discussed above.

The largest capacity-increasing projects included in the proposed project would also incorporate facilities for non-auto travel or complement planned non-auto project improvements. These include the Farmers Lane extension, which includes new sidewalks, bike lanes, and accommodations for future transit service, as well as widening along SR 12, which is adjacent to the planned Sonoma Valley Trail running between Santa Rosa and the Springs communities in unincorporated Sonoma County. Also important to note is the approximately 6.1-mile *reduction* in lane miles associated with future roadway projects included in the proposed project; in all cases these lane reductions would entail reallocating roadway width in order to provide more robust non-auto facilities, including bike lanes, thereby facilitating reductions in VMT.

However, because the proposed project would induce approximately 158,630 daily VMT associated with the proposed increase in arterial lane miles, impacts would be potentially *significant.*

Impact TRAN-2b: Implementation of the proposed project could result in a significant roadway network vehicle miles traveled (VMT) impact associated with increasing the capacity of the arterial street network.

> Significance with Mitigation: Significant and unavoidable. Implementation of the proposed General Plan 2050 goals, policies, and actions listed under impact discussions TRAN-1 and TRAN-2 would improve the active transportation network, work with partner agencies to reduce VMT, encourage development in TPAs and PDA, amongst other to reduce VMT generated by all development. Specifically, proposed *Action 3-1.1 requires an analysis of project VMT and mitigation as part of the project review process. Even with implementation of the proposed General Plan 2050 goals, policies, and actions related to VMT reduction, the effectiveness of VMT-reduction strategies and availability of alternative mitigation strategies such as VMT exchanges or banks is not certain. As such, the impact on roadway network VMT is considered *significant and unavoidable*.

TRAN-3 Implementation of the proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Any potential new transportation facilities built over the buildout horizon of the proposed project, whether constructed as part of private developments or by agencies, including the City of Santa Rosa, to improve circulation, would be designed and constructed to local, regional, and federal standards. These include, but are not limited to, the *California Manual on Uniform Traffic Control Devices*, the Caltrans *Highway Design Manual*, and the City of Santa Rosa's *Street Design and Construction Standards*, all of which have been developed to minimize the potential for safety conflicts and hazards. As such, construction of new transportation facilities in Santa Rosa would not be expected to introduce any hazardous design features.

While the designs of individual development projects that would be potentially built following adoption of the proposed project are not known at this time, for many projects vehicular access is anticipated to take place via the existing public street network. Where new roads or access points are required, specific access schemes would be determined during project design and would undergo review for compliance with safety and design standards by the City of Santa Rosa. During such reviews, routine assessments include consideration of the potential need for traffic control or turn lane improvements to maintain safety, the potential for queueing conditions that could lead to safety concerns, and safety related to site accessibility for non-auto modes.

Some potential development areas are located on or adjacent to SR 12, which is a Caltrans facility. The memorandum *Traffic Safety Bulleting 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner's Guidance* provides guidance on how jurisdictions and practitioners may assess transportation safety topics associated with local development projects.[12] The memorandum states that the interim guidance is "intended to apply to proposed land use projects and plans affecting the State Highway System. Specific effects may include but are not limited to adding new automobile, bicycle, or pedestrian trips to state roadways; modifying access to state roadways; or affecting the safety of connections to or travel on state roadways." The memorandum further explains that the guidance "does not establish thresholds of significance for determining safety impacts," and reiterates that "Automobile congestion or delay itself does not constitute a significant environmental impact (Public Resources Code, Section 21099(b)(2)), and traffic safety should not be used as a proxy for road capacity." As noted above, development proposals would be reviewed by the City of Santa Rosa, which, as part of standard procedures, would also refer projects located on the State Highway System to Caltrans for review. Site-specific safety assessments and required improvement measures would be established during such reviews, ensuring that project design features do not create safety hazards.

[12] California Department of Transportation, 2020, *Traffic Safety Bulleting 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner's Guidance.*

In summary, development projects in the City of Santa Rosa would be reviewed during standard entitlement processes for conformance with applicable design standards and regulations, ensuring that developments will not substantially increase transportation hazards. Similarly, new transportation facilities constructed by new development or by jurisdictions including the City of Santa Rosa would be designed to be compliant with applicable design standards. Accordingly, implementation of the proposed project would not substantially increase hazards due to a design feature or incompatible uses that may have a significant impact on the environment, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

TRAN-4 Implementation of the proposed project would not result in inadequate emergency access.

As a programmatic plan, the proposed General Plan 2050 does not contain detailed information pertaining to how individual properties within the EIR Study Area would be developed over time (such as site and access configurations). Potential future development over the buildout horizon of the proposed project would be subject to the requirements contained in the City's *Design and Construction Standards*, which include requirements for emergency access, and would be reviewed by public safety officials as part of the City's entitlement process. In addition, SRCC Chapter 18-44 requires that roads be maintained to provide adequate space for emergency vehicle access. Future development in areas designated Wildland-Urban Interface Fire Area is subject to additional requirements and review. See impact discussion HAZ-6 in Chapter 4.9, *Hazards and Hazardous Materials*, and impact discussion WF-1 in Chapter 4.18, *Wildfire*, of this Draft EIR for further discussions related to emergency evacuation.

Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of proposed General Plan 2050 contains goals, policies, and actions intended to balance the mobility needs of all users. The following goal, policy, and actions would serve to minimize impacts related to emergency access:

- Goal 3-2: Provide a safe and accessible active and public transportation network that emphasizes active transportation connections and service to Equity Priority Areas and Areas of Change.
  - Policy 3-2.5: Address traffic volumes and speeds in neighborhoods to reduce cut-through traffic and promote use of existing low-stress streets for active transportation travel.
    - Action 3-2.29: Reduce neighborhood traffic in all areas of the city by ensuring arterial and collector streets can accommodate all modes of transportation.
    - Action 3-2.30: Improve the safety and efficiency of arterial and collector streets by revising the Street Design and Construction Standards to:
      - Reduce the number of driveways and intersections to limit conflict points.
      - Avoid unnecessary residential access.
      - Install and facilitate timing of traffic signals.
      - Ensure continuous sidewalks and bicycle lanes where feasible.
      - Implement design best management practices from guidelines such as NACTO's Urban Streets Design Guide and the Urban Bikeway Design Guide, to ensure facilities are as low stress as possible.

- Action 3-2.31: Implement traffic-calming measures, where appropriate, to improve neighborhood livability and preserve low-stress active transportation routes, such as:
  - Narrowing street widths.
  - Adding curb extensions to reduce crossing distances for pedestrians.
  - Adding or removing on-street parking, depending on feasibility and right-of-way.
  - Adding chicanes, chokers, or diverters to slow traffic.
  - Creating rough-paved crosswalks to increase visibility and encourage slow vehicle movement.
  - Adding rumble strips or speed tables with bicycle cutouts to slow vehicles but allow for seamless bicycle passage.
  - Adding planted islands.
- Action 3-2.32: Include active transportation network improvements and traffic calming in regular paving and maintenance projects unless infeasible due to engineering or conflict with emergency access.
- Action 3-2.33: Construct or require roundabouts in lieu of stop/signal-controlled intersections, where appropriate, to improve safety, reduce delay and idling time, and lower vehicle emissions.

Additionally, the proposed General Plan 2050 circulation network includes strategic roadway widenings on key arterials and highways, including SR 12, Fulton Road, and Stony Point Road, that will facilitate access by emergency responders, providing additional space for drivers to slow or pull over to allow emergency vehicles to pass. The extension of Farmers Lane identified in the proposed General Plan 2050 will also improve emergency access by allowing responders to travel between the southern and eastern areas of Santa Rosa more quickly and efficiently. The proposed circulation network also includes modifications to existing roadways related to adding bicycle and pedestrian facilities and improving roadway safety. Roadway modifications will be designed consistent with applicable regulations to accommodate emergency vehicles, including turns at intersections. All modifications to roadways are subject to review by various City divisions, including the Santa Rosa Fire Department, who will ensure that improvements will effectively accommodate circulation and access by emergency responders. The proposed General Plan 2050 is a program-level plan that does not directly address project-level components that will be required to provide adequate emergency access. Considering the proposed project's accommodation of emergency vehicles in existing and future streets, and the established procedures for reviewing project-level emergency access needs and compliance with State and local law as part of the entitlement process, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

TRAN-5 Implementation of the proposed project could, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to transportation.

The context of the impact evaluation described under impact discussions TRAN-1 through TRAN-4 are described in the cumulative context of the region and no further discussion of cumulative impacts is required. As described, impacts related to bus transit, bicycle and pedestrian facilities, and roadways in the EIR Study Area would be less than significant, as would those associated with emergency access and roadway hazards. As described under impact discussion TRAN-2, potential development over the buildout horizon would have a residential VMT per capita that is above the significance standard, and roadway capacity projects identified in the proposed project would result in induced VMT. Therefore, the cumulative impact on VMT would be *significant and unavoidable*.

Impact TRAN-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in significant cumulative impact with respect to vehicle miles traveled (VMT).

Significance with Mitigation: Significant and unavoidable. Even with the proposed General Plan 2050 goals, policies, and actions described under impact discussion TRAN-2, including proposed *Action 3-1.1, the effectiveness of VMT-reduction strategies is not certain. As such, the cumulative impact on VMT is considered *significant and unavoidable.*

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4.16 TRIBAL CULTURAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to tribal cultural resources (TCR) associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential impacts to TCRs, and identifies proposed General Plan 2050 goals, policies, and actions that would minimize any potentially significant impacts. A general discussion of cultural resources, which includes archeological resources and human remains that could be associated with Native Americans, is included in Chapter 4.5, *Cultural Resources*, of this Draft EIR, which may be referenced in this chapter.

4.16.1 ENVIRONMENTAL SETTING

4.16.1.1 REGULATORY FRAMEWORK

Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (US Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Native American lands.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (US Code, Title 15, Section 1996) recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional Native American practices; beliefs; sites, including the right of access; and the use of sacred objects shall be protected and preserved. It does not include provisions for compliance.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 (US Code, Title 25, Sections 3001 et seq.) protects Native American remains, including Native American graves on federal and tribal lands, and recognizes tribal authority over the treatment of unmarked graves. This act prohibits the selling of Native American remains and provides guidelines for the return of Native American human remains and cultural objects from any collection receiving federal funding, such as museums, universities, or governments. Noncompliance with this act can result in civil and criminal penalties.

State Regulations

California Environmental Quality Act

California Environmental Quality Act (CEQA) Section 21083.2 and CEQA Guidelines Section 15126.4 specify lead agency responsibilities in determining whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code (PRC) also details required mitigation if unique archaeological resources are not preserved in place. CEQA defines a unique archeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered during a project or activity, and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native American descendants, if any, as identified by the NAHC. Under certain circumstances, the lead agency (or applicant), is required to develop an agreement with the Native American descendants for the treatment and disposition of the remains. In addition to the mitigating provisions pertaining to accidental discovery of human remains, CEQA Guidelines Section 15064.5(f) also requires that a lead agency make provisions for the accidental discovery of historical or archaeological resources. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a Historical Resource or Unique Archaeological Resource, avoidance measures should be implemented, or appropriate mitigation should be available.

Native American Historic Resource Protection Act

The Native American Historic Resource Protection Act, commonly referred to as it's legislative bill number Assembly Bill (AB) 52, passed in 2014 and amended CEQA to address California Native American tribal concerns regarding how cultural resources of importance to tribes are treated under CEQA and created the new TCR category. CEQA identifies a TCR as a separate and distinct category of resource, separate from a historical resource or archaeological resource. CEQA specifies that a project that may cause a substantial adverse change in the significance of a TCR (as defined in CEQA Statute or PRC Section 21074[a]) is a project that may have a significant effect on the environment. To help determine whether a project may have such an effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of the proposed project. According to AB 52, tribes may have expertise in tribal history and "tribal

knowledge about land and TCRs at issue should be included in environmental assessments for projects that may have a significant impact on those resources."

CEQA Section 21074.3(a) defines a TCR as a site, feature, place, or cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources, or if the City of Santa Rosa, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. Because these criteria also meet the definition of a historical resource under CEQA, a TCR may also require additional consideration as a historical resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

CEQA Section 21080.3.2 provides that the tribal consultation process includes, but is not limited to, discussing the type of environmental review necessary, the significance of TCRs, the significance of the project impacts on TCRs, and alternatives and mitigation measures recommended by the tribe. If the California Native American tribe requests consultation to include project alternatives, mitigation measures, or significant effects, the consultation would be required to cover those topics. PRC Section 21082.3 provides that any mitigation measures agreed upon during this consultation "shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring program" if determined to avoid or lessen a significant impact on TCRs. Consultation is considered concluded when (1) the parties agree to measures to avoid or reduce a significant impact on a TCR, if such a significant impact exists, or (2) when a party concludes that mutual agreement cannot be reached. If no formal agreement on the appropriate mitigation has been established, mitigation measures that avoid or substantially lessen potential significant impacts should be implemented.

Health and Safety Code Sections 7052 and 7050.5

Health and Safety Code Section 7052 states that the disturbance of Native American cemeteries is a felony. Section 7050.5(b) of the Health and Safety Code specifies protocol when human remains are discovered during activities involving ground disturbance. If human remains are discovered or identified in any location other than a dedicated cemetery, there should be no further disturbance or excavation nearby until the county coroner has determined the area is not a crime scene that warrants further investigation into the cause of death and made recommendations to the persons responsible for the work in the manner provided in PRC Section 5097.98. This section, which applies to both State and private lands, provides guidance for proceeding when human remains associated with Native American burials and associated items are encountered. This act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resources Code Section 5097

PRC Section 5097.5(a) specifies that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, or archaeological sites, which can include fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. As used in this section, "public lands" means lands owned by, or under

the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof. County and city lands are exempt from this provision, except for parklands larger than 100 acres.

California Code of Regulations

Archaeological resources, on lands administered by the California Department of Parks and Recreation, are addressed in California Code of Regulations Title 14, Division 3, Chapter 1. Section 4308 of this chapter addresses archaeological features and states that no person shall remove, injure, disfigure, deface, or destroy any object of archaeological or historical interest or value.

Assembly Bill 168

AB 168 was signed in 2020 and extends the responsibility of a development proponent to consult with Native American tribes to streamline ministerial approvals for affordable multifamily housing developments under Senate Bill (SB) 35. A development with streamlined ministerial approval under SB 35 is not subject to CEQA, allowing for such developments to occur without going through a CEQA review or screening process to determine if they would affect TCRs. AB 168 requires a development proponent to submit notice of its intent to apply for streamlined approval to the local government prior to the actual application submittal. The local government is then required to provide formal notice to each California Native American tribe that is culturally affiliated with the geographic area of the proposed development and to engage in a scoping consultation regarding the potential effects the proposed development could have on a potential TCR (California Government Code Section 65913.4(b)). The scoping consultation must commence within 30 days after the proponent submits a notice of intent to apply for ministerial approval and concluded before the proponent can submit the application. AB 168 deems a project ineligible for the streamlined, ministerial approval process and requires it be subject to CEQA if:

- The site of the proposed development is a TCR that is on a national, state, tribal, or local historic register list;
- The local government and the California Native American tribe do not agree that no potential TCR would be affected by the proposed development; or
- The local government and California Native American tribe find that a potential TCR could be affected by the proposed development and the parties do not document an enforceable agreement regarding the methods, measures, and conditions for treatment of those TCRs, as provided.

4.16.1.2 EXISTING CONDITIONS

Information in this section was obtained from the California Historical Resources Information System's Northwest Information Center in Rohnert Park and the files of the City of Santa Rosa by Tom Origer and Associates for the preparation of this Draft EIR. A complete setting, including historic resources and Native

American consultation pursuant to California Government Code Section 65352.3-5, is provided in Chapter 4.5, *Cultural Resources*, of this Draft EIR.[1]

Ethnographic Setting

Linguists and ethnographers tracing the evolution of languages have found that most of the indigenous languages of the California region belong to one of five widespread North American language groups (the Hokan and Penutian phyla, and the Uto-Aztecan, Algic, and Athabaskan language families). The distribution and internal diversity of four of these groups suggest that their original centers of dispersal were outside, or peripheral to, the core territory of California, that is, the Central Valley, the Sierra Nevada, the Coast Range from Cape Mendocino to Point Conception, and the Southern California coast and islands. Only languages of the Hokan phylum can plausibly be traced back to populations inhabiting parts of this core region during the Archaic period, and there are hints of connections between certain branches of Hokan, such as that between Salinan and Seri, that suggest that at least some of the Hokan languages could have been brought into California by later immigrants, primarily from the Southwest and northwestern Mexico.[2]

At the time of Euroamerican settlement, people inhabiting this area spoke Southern Pomo, one of seven mutually unintelligible Pomoan languages belonging to the Hokan language stock. The Southern Pomo's aboriginal territory falls within present-day Sonoma County. To the north, it reaches the divide between Rock Pile Creek and the Gualala River, and to the south it extends to near the town of Cotati. The eastern boundary primarily runs along the western flanks of Sonoma Mountain until it reaches Healdsburg, where it crosses to the west side of the Russian River. Within the larger area that constitutes the Southern Pomo homelands, some bands or tribelets occupied distinct areas.

The Bitagomtara were a tribelet of the Southern Pomo and they occupied the lands south of Mark West Creek, north of Cotati and the boundary of the Coast Miwok, east of the Laguna de Santa Rosa, and west of Sonoma Canyon.[3, 4] Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant.

[1] California Government Code Section 65352.3-5, commonly known by its legislative bill number, SB 18, states that prior to the adoption or amendment of a city or county's general plan, or specific plans, the city or county shall consult with California Native American tribes that are on the contact list maintained by the NAHC.

[2] V. Golla, 2011, *California Indian Languages,* Berkeley and Los Angeles: University of California Press.

[3] R. Milliken, 1995, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810,* Menlo Park, CA: Ballena Press.

[4] O. Stewart, 1943, "Notes on Pomo Ethnogeography", *University of California Publications in American Archaeology and Ethnology* 40, no. 2, pp.29–62.

Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant. There are several ethnographic villages in the EIR Study Area.[5]

The Southern Pomo population was decimated early in the historic period, especially in the southern part of their territory. Ethnic identity was severely impacted in the region of Santa Rosa and Sebastopol; McLendon and Oswalt reported that the few Southern Pomo speakers remaining in 1976 were from north of Healdsburg.[6] In 1992, the Southern Pomo and Coast Miwok established the Federated Indians of Graton Rancheria and were federally recognized in 2000.

Archaeological Resources

Beginning in the early twentieth century, avocational archaeologist Jesse Peter traversed the Santa Rosa area and documented over 100 Native American archaeological sites. Since the enactment of the National Historic Preservation Act of 1966 and the CEQA of 1970, hundreds of surveys have been conducted in the EIR Study Area, which has resulted in the documentation of over 1,000 cultural resources ranging from prehistoric habitation sites to mid-twentieth century developments. Remnants of Native American civilization have been discovered along Santa Rosa Creek and its tributaries, in the adjacent alluvial valleys and surrounding plains, in the hills, in the Trione-Annadel State Park area, in the Laguna de Santa Rosa, and in the Windsor area. The remains of entire settlements, including three former villages, were found in northern Santa Rosa. Given the environmental setting, the archaeologically rich nature of the Santa Rosa area, and the fact that the EIR Study Area has not been entirely surveyed, there is a high potential for finding additional Native American sites in Santa Rosa.

Tribal Cultural Resources and Consultation

Native American Resources

Santa Rosa was a site of Native American habitation beginning approximately 7,000 years ago, and Santa Rosa contains approximately 190 recorded Native American resources.[7] The Santa Rosa Basin, encompassing the EIR Study Area, contains six major drainages: Santa Rosa, Matanzas, Piner, Rincon, Austin, and Brush Creeks. These creeks may hold prehistoric resources because Native American archaeological sites tend to be near waterways as well as along ridge tops, mid-slope terraces, alluvial flats, the base of hills, and near vegetation ecotones.[8] Trione-Annadel State Park, in the southeast corner of the EIR Study Area, was an important obsidian source for Native American tools. Resources may include chert or obsidian flakes, projectile points, mortars, pestles, dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials.

[5] S. Barrett, 1908, *The Ethno-Geography of the Pomo and Neighboring Indians,* University of California Publications in American Archaeology and Ethnology, vol. 6, no. 1, Berkeley, California: University of California Press.

[6] S. McLendon and R. Oswalt, 1978, "Pomo," In *California*, edited by R. Heizer, pp. 274–288, *Handbook of North American Indians*, Vol. 8, W. Sturtevant, general editor, Washington, D.C.: Smithsonian Institution.

[7] Based on a 2001 review of records and literature on file with the California Historical Resources Information System.

[8] Vegetation ecotones are transition areas between different plant communities.

Native American Consultation: Assembly Bill 52

Pursuant to AB 52, on March 14, 2023 the City provided notification of the proposed project and provided an opportunity for comments from representatives of the Federated Indians of Graton Rancheria and Lytton Rancheria as they are traditionally and culturally affiliated with the geographic area and have requested to be notified about projects in the city of Santa Rosa. The City received requests for consultation from the Federated Indians of Graton Rancheria and Lytton Rancheria. The City met with representatives of Federated Indians of Graton Rancheria and with representatives of Lytton Rancheria. In addition to the meetings, the City maintained ongoing communication with representatives from the Federated Indians of Graton Rancheria and Lytton Rancheria.

Additionally, as recommended by the NAHC, the City sent a request to the NAHC for a Tribal Contacts List in April 2019 and due to the ongoing nature of the proposed project a new request was sent in August 2024. As described in Section 4.5.1.3, *Existing Conditions*, under the subheading "Native American Consultation: Senate Bill 18" in Chapter 4.5, *Cultural Resources*, of this Draft EIR, the NAHC identified 36 local Native American representatives from 25 tribes as potentially having local knowledge of Native American places, features, and objects, as defined in PRC Section 5097.9 and PRC Section 5097.993, that are within the EIR Study Area. As of the publication of this Draft EIR, no additional requests for consultation have been received.

As a result of the consultations to date, no TCRs have been identified and as described in Chapter 4.5 of this Draft EIR, only the following requests have been made:

- Work to develop a better communication system for the required AB 52 and Senate Bill 18 consultation between City staff and tribes.
- Tribal acknowledgment to be added to the Housing Element and to be carried forward in the comprehensive General Plan.
- Consider Phase 1 archaeological survey for all projects that involve ground disturbance: allowing potential exceptions where the ground has already been disturbed.
- Develop a threshold for when ministerial projects with ground disturbance can include consultation.
- Expand consideration of projects along waterways to include historical locations and trajectories.
- Ensure the plan includes adequate goals, policies, and actions related to resilience.

Sacred Lands File Search

Concurrently with the request for the Tribal Consultation List in August 2024, a request was sent to the NAHC for a Sacred Lands File search. The NAHC reported on August 30, 2024, that the result of the Sacred Lands File search was negative.

4.16.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts to tribal resources if it would:

1. Cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American

Tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of the PRC Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.

2. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to TCRs.

4.16.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as a means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

TCR-1	**Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: (i) Listed or eligible for listing in the California; (ii) Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or (iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.**

As previously described in Section 4.16.1.1, *Regulatory Framework*, CEQA defines a TCR as a site, feature, place, or cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or if the City of Santa Rosa, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat

the resource as a TCR.[9] Through the consultation process described in Section 4.16.1.2, *Existing Conditions*, no California Native American Tribe has identified the presence of TCRs in the EIR Study Area. However, there is the potential for TCRs to be identified as part of project-specific development over the course of the implementation of the proposed project.

As described in Section 4.16.1.2, *Existing Conditions*, as part of the consultation process, some requests were made by the tribes. Table 4.16-1, *Tribal Consultation Requests and City Responses*, shows the requests presented to the City during the tribal consultation process completed to date and how the request has been responded to as part of the proposed General Plan 2050.

TABLE 4.16-1 TRIBAL CONSULTATION REQUESTS AND CITY RESPONSES

Request	Response
Work to develop a better communication system for the required SB 18 and AB 52 consultation between City staff and tribes.	Proposed General Plan 2050 Policy 4-2.2, *Action 4-2.1, and *Action 4-2.2 require the review of projects, consultation with Native American Tribes as required by State law, and collaboration with the most likely descendants, as identified by the Native American Heritage Commission.
Tribal acknowledgment to be added to the Housing Element and to be carried forward in the comprehensive General Plan.	The Housing Element 2023-2031, adopted on February 14, 2023, includes the Tribal Acknowledgement in Chapter 1, *Introduction*, on page 1-1. The proposed General Plan 2050 includes the Tribal Acknowledgement in Chapter 1, *Introduction*, on page 1-6.
Consider Phase 1 archaeological survey for all projects that involve ground disturbance: allowing potential exceptions where the ground has already been disturbed.	Proposed General Plan 2050 *Action 4-2.1 requires preliminary review of development projects with the California Historical Resources Information System, Northwest Information Center, at Sonoma State University to determine whether project areas contain known archaeological resources, including TCRs. Proposed *Action 4-2.2 requires the review of projects with site-specific investigations.
Develop a threshold for when ministerial projects with ground disturbance can include consultation.	No threshold has been determined as part of the proposed General Plan 2050 project. The City acknowledges this request and will continue to work with the tribes.
Expand consideration of projects along waterways to include historical locations and trajectories.	The proposed General Plan 2050 includes policies and actions to protect historic and cultural resources, including waterways as Native American archaeological sites tend to be located near waterways and these locations may hold prehistoric resources. Proposed General Plan 2050 Policy 4-1.1, Policy 3-5.7, and *Action 3-5.20 require the preservation and enhancement of the city's natural waterways, require construction adjacent to creek channels to be sensitive to the natural environment, and require ecological buffer zones between the waterway and development. These policies and actions protect both natural and cultural resources near waterways in the EIR Study Area.

[9] Public Resources Code Sections 21074(a)(1) and (2).

TABLE 4.16-1 TRIBAL CONSULTATION REQUESTS AND CITY RESPONSES

Request	Response
Ensure the plan includes adequate goals, policies, and actions related to resilience.	The proposed General Plan 2050 includes an update to the State-required safety element, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*. The Climate Resilience section addresses agricultural and ecosystem pests and diseases, droughts, extreme heat and warm nights, other climate-influenced health risks, severe winds and storms, wildfires.

While no TCRs have been acknowledged as part of the consultation process or otherwise, there is the potential to unearth archeological resources or human remains, which could be identified as TCRs upon discovery. The proposed General Plan 2050 Chapter 2, *Land Use and Economic Development;* Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction;* and Chapter 4, *Urban Design, Cultural and Tribal Cultural Resources, Historic Preservation, and Art and Culture*, contains goals, policies, and actions that require local planning and development decisions to consider impacts to TCRs and archaeological resources, which have the potential to be identified as TCRs upon discovery archaeological resources. The following goals, policies, and actions would minimize impacts to TCRs and archaeological resources:

- Goal 2-2: Promote city-centered growth and investment with a neighborhood-focused approach to create complete and connected communities that provide community members' daily needs within easy walking or biking distance.
  - Policy 2-2.2: Encourage a compact, rather than a scattered, development pattern for new development proposals, particularly in Areas of Change.
- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.2: Preserve, enhance, and expand a connected network of open spaces for recreation, natural and cultural resource protection, and mobility of species by way of critical linkages between open space lands.
    - Action 3-5.4: Collaborate with regional agencies and private landowners to link inaccessible open spaces to benefit the protection of special environments and ecosystems, such as wetlands, plant communities, wildlife habitats and corridors, historic resources, and tribal and cultural resources.
  - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
  - Policy 3-5.5: Maintain, restore, and protect the city's waterways.
  - Policy 3-5.7: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.

- *Action 3-5.19: Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation.
- *Action 3-5.20: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

- Goal 4-2: Protect tribal cultural resources in Santa Rosa and enrich the sense of place and understanding of the city's history and prehistory.
  - Policy 4-2.1: Protect Native American heritage, honor the early stewards of this land, and treat Native American remains and resources with sensitivity.
    - *Action 4-2.1: Continue to review proposed developments in conjunction with the California Historical Resources Information System, Northwest Information Center, at Sonoma State University to determine whether project areas contain known archaeological resources, both prehistoric and/or historic-era, and tribal cultural resources, or if they have the potential to hold such resources and if so, implement mitigation to protect the resource.
    - *Action 4-2.2: Work in good faith with interested communities to evaluate proposed development sites for the presence of subsurface historic, archaeological, and tribal cultural resources. These efforts may include:
      - Consideration of existing reports and studies.
      - Consultation with Native American tribes as required by State law.
      - Appropriate site-specific investigative actions.
      - On-site monitoring during excavation if appropriate.
    - *Action 4-2.3: Continue to require that project areas found to contain significant archaeological resources be examined by a qualified consulting archaeologist with recommendations for protection and preservation.
  - Policy 4-2.2: Collaborate with the most likely descendants, as identified by the Native American Heritage Commission.
    - *Action 4-2.4: If tribal cultural resources are encountered during development, halt work to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation and recorded identified tribal cultural resources—which may include animals, structures, landscapes, or plants—and determined suitable mitigation measures.

As described under impact discussion CUL-3 in Chapter 4.5, *Cultural Resources,* of this Draft EIR, compliance with the mandatory regulatory procedures described and the proposed General Plan 2050 goals, policies, and actions, potential impacts related to the potential discovery or disturbance of any human remains accidently unearthed during construction activities associated with future development in the EIR Study Area would be less than significant. However, as described under impact discussion CUL-2 in Chapter 4.5 of this Draft EIR, because future development under the proposed General Plan 2050 may occur where there is the potential for archeological resources, known and unknown, which could be

identified as TCRs upon discovery, impacts from the proposed General Plan 2050 are potentially *significant*.

Impact TCR-1: Impacts to unknown tribal cultural resources (TCR) could occur from potential future development under the proposed General Plan 2050.

Significance with Mitigation: Less than significant. The proposed General Plan 2050 includes goals, policies, and actions that require local planning and development decisions to reduce impacts to archaeological resources that could qualify as TCRs and to conduct consultation with Native American tribes as required by State law. Specifically, proposed Policy 2-2.2 encourages infill development in Areas of Change, which reduces opportunities to unearth potential TCRs and Action 3-5.4 requires the City to collaborate with regional agencies to expand open space that would protect historic and TCRs. Proposed *Action 4-2.1 and *Action 4-2.2 requires the City to continue to review proposed developments to determine if TCRs are present and evaluate proposed development sites for TCRs through consultation with local Native American tribes. Additionally, proposed *Action 4-2.4 requires that if TCRs are encountered during development, work is halted to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative have evaluated the situation, and recorded identified cultural resources, which may include animals, structures, landscapes, and plants and determined suitable site-specific mitigation measures.

The proposed General Plan 2050 also includes policies and actions to protect historic and cultural resources, including waterways as Native American archaeological sites tend to be located near waterways and these locations may hold prehistoric resources. As listed under impact discussion CUL-1 in Chapter 4.5, *Cultural Resources*, of this Draft EIR, proposed General Plan 2050 Policy 4-1.1 requires the preservation and enhancement of the city's natural waterways and landscapes; Policy 3-5.7 requires that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer; and *Action 3-5.19 and *Action 3-5.20 require new development along channelized waterways to establish an ecological buffer zone between the waterway and development.

Compliance with federal and State laws, as described in Section 4.16.1.1, *Regulatory Framework,* and the proposed General Plan 2050 goals, policies, and actions would protect unrecorded TCRs in the EIR Study Area by providing for the early detection of potential conflicts between development and resource protection, and by preventing or minimizing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation. Therefore, impacts to TCRs would be *less than significant*.

TCR-2 Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in less-than-significant cumulative impacts with respect to tribal cultural resources.

Cumulative impacts to TCRs occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands. No TCRs have been identified in the EIR Study Area. Further, in association with CEQA review, future AB 52 consultations with Native American tribes to identify TCRs would be required for projects that have the potential to cause significant impacts to TCRs.

Future development planned for under the proposed project would be primarily within the developed portions of the EIR Study Area (Areas of Change). This, in conjunction with buildout of the city and the region, has the potential to cumulatively impact TCRs impacts. Impacts to TCRs that may be identified as part of project-specific development over the course of the implementation of the proposed project would be less than significant with implementation of the proposed General Plan 2050 goals, policies, and actions. As previously discussed, impacts to TCRs in the EIR Study Area would be less than significant with implementation of the proposed General Plan 2050 goals, policies, and actions described in impact discussion TCR-1 and, with respect to archeological resources that have the potential to be identified as TCRs once unearthed, in impact discussions CUL-1 through CUL-3 in Chapter 4.5, *Cultural Resources*, of this Draft EIR. Additionally, the existing federal, state, and local regulations and the proposed General Plan 2050 goals, policies, and actions described throughout this chapter serve to protect TCRs and archeological resources in the EIR Study Area. Continued compliance with these regulations substantially decreases potential impacts to TCRs to the maximum extent practicable and cumulative impacts would be *less than significant* in this regard.

Significance with Mitigation: Less than significant.

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4.17 UTILITIES AND SERVICE SYSTEMS

This chapter of the Draft Environmental Impact Report (EIR) describes the potential impacts to utilities and service systems associated with the adoption and implementation of the proposed project. This includes impacts on utilities and service systems, including water supply and demand, wastewater (sewage) conveyance and treatment, solid waste collection and disposal systems, storm drainage systems, and energy infrastructure. In each section of this chapter, a summary of the relevant regulatory framework and existing conditions is followed by a discussion of project impacts and cumulative impacts from implementation of the proposed project.

4.17.1 WATER

4.17.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times. The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

America's Water Infrastructure Act of 2018

America's Water Infrastructure Act (AWIA), signed into law on October 23, 2018, authorizes federal funding for water infrastructure projects, expands water storage capabilities, assists local communities in complying with the Safe Drinking Water Act and Clean Water Act (CWA), reduces flooding risks for rural, western, and coastal communities, and addresses significant water infrastructure needs in tribal communities.[1] Additionally, the AWIA requires that drinking water systems that serve more than 3,300 people develop or update risk assessments and emergency response plans. Risk assessments and emergency response plans must be certified by the USEPA within the deadline specified by the AWIA.

[1] John Barasso, October 10, 2018, *Congress Passes America's Water Infrastructure Act*, https://www.barrasso.senate.gov/public/index.cfm/2018/10/congress-passes-america-s-water-infrastructure-act.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, is the basic water quality control law for California. Under this Act, the SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The EIR Study Area is within the jurisdiction of the North Coast RWQCB (Region 1).

SWRCB Division of Drinking Water

The California Division of Drinking Water regulates public water systems within California; oversees water recycling projects; permits water treatment devices; and supports and promotes water system security. The Division of Financial Assistance provides funding opportunities for drinking water system improvements; provides support for small water systems and for improving technical, managerial, and financial capacity; and certifies drinking water treatment and distribution operators. The Field Operations Branch of the Division of Drinking Water is responsible for the enforcement of the federal and California Safe Drinking Water Acts and the regulatory oversight of approximately 7,500 public water systems to ensure the delivery of safe drinking water to all Californians. In this capacity, Field Operations Branch staff perform field inspections, issue operating permits, review plans and specifications for new facilities, take enforcement actions for noncompliance with laws and regulations, review water quality monitoring results, and support and promote water system security.

Urban Water Management Planning Act (Senate Bills 610 and 221)

The California Urban Water Management Planning Act and Section 10620 of the Water Code require that all urban water suppliers in California that provide water to more than 3,000 customers or supply more than 3,000 acre-feet per year (AFY)[2] prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. The act is intended to support efficient use of urban water supplies. It requires the UWMP to 1) compare water supply and demand over the next 20 years for normal years, single dry years, and multiple dry years, 2) describe demand management measures in a water shortage contingency plan as an appendix, 3) report progress toward meeting a 20 percent reduction in per-capita urban water consumption by 2020, and 4) determine current and potential recycled water uses.

The City of Santa Rosa's most recent UWMP was adopted by the City Council on June 8, 2021, and the Amended 2020 Water Shortage Contingency Plan was adopted by the City Council on November 30, 2021[3]. The next UWMP is due to the DWR by July 1, 2026.

[2] One acre-foot is the amount of water required to cover one acre of ground (43,560 square feet) to a depth of one foot.

[3] City of Santa Rosa Urban Water Contingency Plan, https://www.srcity.org/856/Water-Supply-Planning, accessed August 16, 2024.

Senate Bill (SB) 610 and SB 221 were enacted to 1) ensure better coordination between local water supply and land use decisions and 2) confirm that there is an adequate water supply for new development. The following projects that are subject to the California Environmental Quality Act are required to prepare a Water Supply Assessment (WSA):

- Residential developments consisting of more than 500 dwelling units.
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing, or processing plant or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units. The verification must be provided before commencement of construction for the project.

Sustainable Groundwater Management Act of 2014

In the midst of a major drought in 2014, a three-bill legislative package was signed into law, collectively known as the Sustainable Groundwater Management Act (SGMA). The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." Under SGMA, local and regional agencies in groundwater basins that are designated as medium and high priority must form groundwater sustainability agencies (GSA) that oversee the preparation and implementation of groundwater sustainability plans (GSP).

Most of the EIR Study Area is within the Santa Rosa Plain Groundwater Subbasin, which is one of three subbasins within the larger Santa Rosa Valley Groundwater Basin. The two other groundwater subbasins in the EIR Study Area along the eastern edge of the city are the Santa Rosa Valley–Rincon Valley Subbasin and the Kenwood Valley Subbasin. These subbasins are designated as very low priority and are not required to prepare a GSP.

The City of Santa Rosa formed a GSA with Sonoma County Water Agency (Sonoma Water); Sonoma County; the cities of Cotati, Rohnert Park, and Sebastopol; the town of Windsor; Gold Ridge Resources Conservation District; Sonoma Resource Conservation District; and an organized group of mutual water

and public utilities regulated companies (known as Independent Water Systems). The GSP was prepared in December 2021 and was approved by the Department of Water Resources (DWR) in January 2023.[4]

Water Conservation Act of 2009

The Water Conservation Act of 2009 (SB X7-7) requires all urban retail water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards. Demonstration of compliance with this regulation is a required component of each urban water supplier's UWMP. The City of Santa Rosa is in compliance with its target reduction.

2018 Water Conservation Legislation

In 2018, the California Legislature enacted two policy bills (SB 606 and Assembly Bill [AB] 1668) to establish a regulatory framework for "Making Conservation a California Way of Life." The framework addresses both urban and agricultural water use and seeks to implement state-wide, long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California.[5] Overall, the framework is intended to ensure California is resilient to a hotter and drier climate with anticipated periods of water scarcity, and lessen the need for emergency water use reductions that have been previously enacted by SWRCB during periods of drought.

Specific to urban retail water suppliers, DWR and SWRCB were tasked with establishing new water use efficiency standards for:

- Indoor residential water use;
- Outdoor residential water use;
- Commercial, industrial, and institutional water use for landscape irrigation with dedicated meters; and
- Water loss.

The indoor residential water use standard was set in statute with the passage of SB 1157 in 2022. As a result, California Water Code defines a 55-gallon-per-person daily standard for indoor residential use until 2025, at which time it decreases to 47 gallons, and further decreases to 42 gallons by 2030. The outdoor residential water use standard and outdoor commercial water use standard, established as landscape efficiency factors, become progressively more efficient across three timesteps as presented in Table 4.17-1, *Outdoor Water Use Standards for Residential and Commercial Accounts*. The water loss standard is the maximum allowable "real" water loss measured in gallons per connection per day for each supply system

[4] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed August 12, 2023.

[5] California Department of Water Resources, 2021, 2018 Water Conservation Legislation, https://water.ca.gov/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation, accessed August 23, 2023.

in an urban water supplier's service area. Real losses are defined as the volume of annual leakage due to physical water leakage in a supplier's distribution system.

TABLE 4.17-1 OUTDOOR WATER USE STANDARDS FOR RESIDENTIAL AND COMMERCIAL ACCOUNTS

Year	Residential Landscape Efficiency Factors	Commercial Landscape Efficiency Factors
Present – 6/30/2035 [a]	0.80	0.80
7/01/2035 – 6/30/2040	0.63	0.63
7/01/2040 – Onward	0.55	0.45

Note:
a. The outdoor commercial water use standard becomes effective July 1, 2028. Prior to this date, the outdoor commercial water budget is equal to actual annual deliveries made to all accounts with dedicated irrigation meters.
Source: California Department of Water Resources, 2021, 2018 Water Conservation Legislation, https://water.ca.gov/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation, accessed August 23, 2023.

Collectively, the water use efficiency standards and local service are characteristics (such as population and landscape area) that establish individual Urban Water Use Objectives (UWUOs) per urban retail water supplier that cannot be exceeded on an annual basis. Urban retail water suppliers are required to calculate and report their UWUOs alongside their actual usage in an annual water use report. The first reports were due to the SWRCB on January 1, 2024, and are required every January 1 thereafter. The final proposed "Making Conservation a California Way of Life" regulation was published by the SWRCB on July 26, 2024, and is anticipated to become effective January 1, 2025.

The legislation also includes changes to UWMP preparation requirements. These changes include additional requirements for Water Shortage Contingency Plans (WSCPs), expansion of dry year supply reliability assessments to a five-year drought period, and establishment of annual drought risk assessment procedures and reporting.

Mandatory Water Conservation

Following the declaration of a state of emergency on July 15, 2014, due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of statewide water conservation efforts. These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and have all California households voluntarily reduce their water consumption by 20 percent. Urban water suppliers with 3,000 or more service connections were required to report monthly water consumption to the SWRCB.

In January of 2022, following the Governor's proclamation of a drought state of emergency for all counties, the SWRCB adopted the prohibited wasteful water uses emergency regulations. These include the prohibition of the following wasteful water use practices: 1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; 2) the washing of vehicles without an automatic shut-off nozzle; 3) the application of potable water to driveways and sidewalks; 4) the use of potable water in nonrecirculating ornamental fountains; and 5) the application of potable water to outdoor landscapes during and within 48 hours after at least 0.25 inch of rainfall. In June of 2022 additional emergency water conservation regulations were enacted prohibiting the irrigation of non-functional turf at commercial, industrial, and institutional accounts, and the implementation of

conservation actions under Level 2 of urban water suppliers' Water Shortage Contingency Plans. As of June 5, 2024, the emergency regulations expired.

In October of 2023, AB 1572 was signed into law by the Governor, prohibiting the irrigation of non-functional turf at commercial, industrial, and institutional sites (with exceptions for areas irrigated with recycled water or harvested rainwater). The irrigation prohibitions become effective in stages between 2027 and 2031, beginning with state and local government facilities. Under the law, urban water suppliers must adopt the same irrigation prohibitions into their local regulations.

Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act (AB 1881) requires cities and counties to adopt the State of California's Model Water Efficient Landscape Ordinance (MWELO) or a comparable landscape water conservation ordinance that is at least as effective as the State's MWELO in conserving water.

The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. The 2015 revisions to the MWELO increased water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture and by limiting the portion of landscapes that can be covered in turf. Each city and county is required to submit annual reports to DWR that document how the agency is achieving compliance with the State MWELO and how many projects were subject to the ordinance during the annual reporting period. Recently, MWELO went through a round of revisions in 2024 to reduce ambiguity and improve clarity of the requirements as well as reorganize the content to better adhere to the landscape design process. The 2024 revisions did not modify or add new requirements to MWELO.

The City of Santa Rosa adopts its own ordinance in Santa Rosa City Code (SRCC) Title 14, Chapter 14-30, *Water Efficient Landscape*. The ordinance applies to all new and rehabilitated landscape projects that require a building or grading permit, plan check, design review, or utilities certificate.

California Water Code

The Water Code states that the water resources of the State must be put to beneficial use and that waste or unreasonable use of water must be prevented. The code is divided into several sections for provisions regarding water quality, formation of irrigation districts and water districts, safe drinking water, and water supply and infrastructure improvements.

California Plumbing Code

The latest version of the California Plumbing Code was issued in 2022 and became effective as of January 1, 2023. The code is updated on a three-year cycle. It specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems. One of the purposes of the plumbing code is to prevent conflicting plumbing codes within local jurisdictions. Among many topics covered in the code are water fixtures, potable and nonpotable water systems, and recycled water systems. The City of Santa Rosa adopts the California Plumbing Code under SRCC Section 18-24.010, *Citation of California Plumbing Code*.

California Building Code: CALGreen

The California Building Standards Commission adopted the nation's first green building standards in July 2008, the California Green Building Standards Code, also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California. The code establishes building standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent.

CALGreen is updated every three years to allow for consideration and possible incorporation of new low flow plumbing fixtures and water efficient appliances. The mandatory provisions of CALGreen became effective January 1, 2011, and the latest 2022 version became effective on January 1, 2023. The building efficiency standards are enforced through the local building permit process. The City of Santa Rosa has regularly adopted each new CALGreen update under SRCC Section 18-42.010, *Citation of California Green Building Standards Code*.

California Health and Safety Code

A portion of the State Health and Safety Code is dedicated to water issues, including testing and maintenance of backflow prevention devices, coloring of pipes carrying recycled water, and programs addressing cross-connection control by water users.

Regional Regulations

Santa Rosa Plain Subbasin Groundwater Sustainability Plan

Santa Rosa is within the Santa Rosa Plain Subbasin, which has been designated as a medium-priority groundwater basin and is not in critical overdraft.[6] The City of Santa Rosa formed a GSA with Sonoma Water, which prepared the GSP; Sonoma County; the cities of Cotati, Rohnert Park, and Sebastopol; the town of Windsor; Gold Ridge Resources Conservation District; Sonoma Resource Conservation District; and an organized group of mutual water and public utilities regulated companies (known as Independent Water Systems). The GSP was prepared in December 2021 and was approved by the DWR in January 2023.[7] The GSP establishes a standard for sustainability of groundwater management and use and lays out a management process for how the basin will achieve this standard by 2042.[8]

[6] Department of Water Resources, SGMA Data Viewer, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#currentconditions, accessed April 5, 2023.

[7] Santa Rosa Plain Groundwater Sustainability Agency, Groundwater Sustainability Plan, https://santarosaplaingroundwater.org/gsp/, accessed August 12, 2023.

[8] Santa Rosa Plain Groundwater Sustainability Agency and Sonoma Water, December 2021, *Groundwater Sustainability Plan: Santa Rosa Plain Groundwater Subbasin*, http://santarosaplaingroundwater.org/wp-content/uploads/000_Santa_Rosa_GSP_508.pdf, accessed April 5, 2023.

Sonoma Water

Sonoma Water, previously known as the Sonoma County Water Agency, provides water supply, wastewater management, and flood protection to Sonoma County. Sonoma Water is a special district that provides wholesale water supply to several cities and water districts within Sonoma and Marin Counties. Sonoma Water mostly depends on the Russian River for water supply, with groundwater from the Santa Rosa Plain Subbasin as a secondary source (during drought conditions or when supplies from the Russian River are constrained). Sonoma Water delivers water to Santa Rosa under the provisions of the Restructured Agreement for Water Supply (Restructured Agreement), which was executed in June 2006. Sonoma Water has water rights to extract an annual maximum of 75,000 acre-feet from the Russian River, and an annual maximum of about 3,870 acre-feet per year from three groundwater wells in the Santa Rosa Plain. Of this total available supply, Santa Rosa is currently entitled to receive a total annual volume of up to 29,100 acre-feet. This amount of water makes the City the largest consumer of water in the Sonoma Water service area.[9]

In the 2020 UWMP, Sonoma Water states that there will be sufficient water supplies available to meet the demand of its water retailers for normal years and multiple dry years through 2045, with a potential shortage of water starting in 2030 for single dry years due to low water levels in Lake Sonoma and Lake Mendocino.[10]

Local Regulations

Santa Rosa City Code

The SRCC includes various directives to ensure the efficient use of water in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to water supply and conservation are in Title 14, *Potable and Recycled Water*, and Title 18, *Buildings and Construction*, as follows:

- Charter Chapter 26, *Water and Sewer Rates, Connection/Demand Fees; and Miscellaneous Fees and Charges.* The City Council is able to establish water and sewer rate changes as well as rates for connections to the City's utility system. All funds that are collected must be used for providing services and maintenance of the City's water and sewer systems.
- Chapter 14-04, *Potable Water and Recycled Water Service*. This chapter outlines the water services in the City and establishes the water shortage rate structure. The water shortage rate structure is how a water shortage emergency is declared and how emergency charges are implemented.

[9] Sonoma Water, 2021, *2020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

[10] Sonoma Water, 2021, *2020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

- Chapter 14-08, *Potable Water Rates*. This chapter establishes the rates for the delivery of potable water and recycled water as well as the fixed monthly charges. This chapter also specifies the fire line protection service charge for lines that connect to the City's potable water system.
- Chapter 14-12, *Wells*. This chapter provides procedures and regulations for the construction, placement, and destruction of existing and abandoned water wells, test wells, test holes, and excavations. Permits are required for these activities. In addition, all developed parcels in zones of groundwater contamination are required to connect to the City's potable water supply system.
- Chapter 14-25, *Recycled Water Regulations*. This chapter states that all areas served by potable water service within the Recycled Water Project Area are eligible for recycled water service, and the City reserves the right to require customers to use recycled water in lieu of potable water for approved uses. The City maintains and updates a Recycled Water User's Guide that details the requirements and rules for the City's recycled water system. The City also issues a Recycled Water Use Permit to each site, which grants permission to use recycled water in accordance with the rules, regulations, and standards.
- Chapter 14-30, *Water Efficient Landscape*. This chapter establishes the City's Water Efficient Landscape Ordinance (WELO) as required by California's Government Code Section 65591, which requires local agencies to adopt water efficient landscape regulations. The WELO, which initially went into effect January 2010 was most recently updated in 2016. The chapter applies to all new public and private projects with landscaping that require a building or grading permit, plan check, design review, or utilities certificate. This includes office, commercial, industrial, and institutional landscaping; park and greenbelt landscaping; multiple-family residential; and single-family residential developments.
- Chapter 18-24, *California Plumbing Code*. This chapter adopts the California Plumbing Code which specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems, including requirements for water conservation systems.
- Chapter 18-42, *California Green Building Standards Code*. This chapter adopts by reference, with the additions, insertions, deletions and changes listed throughout, the California Green Building Standards Code which establishes building standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent.

Santa Rosa 2020 Water Master Plan Update

The 2020 Water Master Plan (WMP) Update is an update to the 2014 WMP and was triggered by the events during the 2017 Tubbs Fire. The goal of the WMP Update is to develop and implement water reliability measures to minimize loss of service and improve recovery times under emergency operating conditions. The report includes a systemwide fire flow evaluation and methods to improve system reliability in the upper pressure zones, such as the Fountaingrove area, with pump supply and interties between pressure zones. Also included are recommendations for filling the Proctor Heights tanks more quickly. Finally, the Supervisory Control and Data Acquisition reliability and redundancy evaluation provided options for increasing the reliability and response of the system during emergency situations.

Priorities and recommendations for system improvements are provided in Chapter 9.0 of the WMP, *Recommendations and Costs*.[11]

Santa Rosa 2020 Urban Water Management Plan

The City of Santa Rosa adopted its current 2020 UWMP in June 2021 in compliance with the Urban Water Management Planning Act, the Water Conservation Act of 2009, and Sections 10610 to 10656 of the California Water Code.[12] All urban water suppliers are required to prepare, adopt, and file a UWMP with the DWR every five years.

The 2020 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for normal years, single dry years, and multiple dry years. The UWMP also provides water supply contingency planning in case of shortage emergencies, demand management measures to increase water use efficiency, and current and planned water conservation efforts. The UWMP states that there will be sufficient supplies to meet existing and future demands through 2045 for normal years, but that there could be a shortage of water supplies in single-dry years and multiple-dry years under the worst-case scenario.

The City 2020 UWMP has been prepared in accordance with the Urban Water Management Planning Act.[13] The 2020 UWMP addresses the City's water system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. The 2020 UWMP describes water demands, available water supply sources, and supply reliability for its service area in five-year increments for normal years, single-dry years, and multiple-dry years up to year 2045. The 2020 UWMP also provides a water shortage contingency plan, demand management measures to increase water use efficiency, and current and planned water conservation efforts.

The Water Conservation Act of 2009, also known as SBX7-7, requires that urban water suppliers reduce their per capita water use by 20 percent by 2020. As reported in the UWMP, the City met this goal in 2020 with a per capita water demand of 99 gallons per capita per day (gpcd) as compared to the target goal of 126 gpcd.[14]

[11] Santa Rosa Water, February 7, 2022, *2020 Water Master Plan Update: Water System Reliability Study*, https://www.srcity.org/DocumentCenter/View/34912/2020-Water-Master-Plan-Update---Water-System-Reliability-Study, accessed August 24, 2023.

[12] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

[13] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pd, accessed August 9, 2023f.

[14] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

Water Shortage Contingency Plan

The WSCP was adopted as part of the 2020 UWMP in June 2021 and amended in November 2021 to update the Excess Use Penalty structure and revise the demand offset requirements for new construction, which are described in further detail below. The revised requirement is a 1:1 ratio of water demand offset when Stages 5 through 8 of the WSCP are implemented.

The WSCP describes eight shortage levels and the corresponding demand reduction actions which would be taken to reduce water usage by a range from 10 percent to more than 50 percent. Measures include restrictions and prohibitions on end users, increased marketing and outreach to customers, water waste prevention and enforcement, rate structure changes, and aggressive promotion of existing and temporary water conservation programs, incentives, and enhancements to help customers conserve water. These measures have successfully helped the community conserve water during previous droughts, achieving on average 20 to 25 percent reduction in water use. The City has also implemented an Excess Use Penalties program to penalize usage of individual accounts that exceed water allocations. Together, these actions are anticipated to adequately reduce projected demands in a single-dry year scenario to match available supplies.

Water Demand Offset Policy

The water demand offset (WDO) policy was adopted by the City in March 2022 and applies when Stages 5 through 8 of the WSCP are implemented. It requires new construction to offset its water demand to achieve a net zero impact and applies to all new projects that will increase water demand and be subject to new or increased water connection fees. The provisions of the policy apply at the time that an application for a building permit is submitted.[15]

All construction projects must complete and submit to the City a WDO application and pay the WDO Fee, which is based on the type of residential or commercial, industrial, or institutional development. The applicant can also propose an alternative compliance method with a detailed description of how the water demand offsets would be achieved and submit supporting studies, plans, reports, and/or analyses. The City will provide a WDO Agreement that must be notarized and recorded in the Official Records of Sonoma County. Any WDO Fees collected by the City will be used to implement projects or programs to achieve the required water demand offsets, such as bathroom conversions, high efficiency residential clothes washer upgrades, or rebates for ornamental turf conversions at multi-family units or commercial, industrial, or institutional land uses.

Santa Rosa Groundwater Master Plan

The City's Groundwater Master Plan (GMP) was prepared in 2013 prior to enactment and implementation of the SGMA and the preparation of the GSP for the Santa Rosa Plan Subbasin. However, it still provides a comprehensive resource that describes the operation of the City's two production wells, three emergency

[15] City of Santa Rosa, 2022, *Water Demand Offset Policy*.

supply wells, and one landscape irrigation well.[16] The GMP also provides the framework for developing a monitoring well network, development of a groundwater database, and recommended projects and programs to provide emergency groundwater supplies.

Santa Rosa Water Distribution Standard Specifications

Revised in October 2018, the Water Distribution Standard Specifications include construction specifications, standard plans, and the regulations for separation between water mains and non-potable pipelines. Also, the Water Distribution Standard Specifications include distribution system design standards for water mains, connections to water mains, sizing criteria, soil cover, valves, laterals, meters, fire hydrants, and pressure requirements.[17] Established to assist developers and their engineers, the Water Distribution Standard Specifications provides guidelines for the design of water mains, laterals, and connections, and establishes the minimum acceptable design criteria. More stringent requirements may be imposed by Santa Rosa Water based on specific project conditions.

Recycled Water Standards

Revised in October 2018, the Recycled Water Standards include design standards, standard plans, construction specifications, and an engineer's list of approved items.[18] Established to assist developers and their engineers, the Recycled Water Standards provide procedures and guidelines for the design and construction of recycled water mains and connections and establishes the minimum acceptable design criteria. More stringent requirements may be imposed by Santa Rosa Water based on specific project conditions.

Capital Improvement Program

The Capital Projects Engineering Division is responsible for the design and construction of projects to rehabilitate, upgrade, and expand the City's infrastructure, including sewer collection system projects and Laguna Treatment Plant projects. The capital projects are funded primarily through sewer and water rates, development fees, and grants. The City's Capital Improvement Program (CIP) is a five-year financial plan for the maintenance and expansion of the City's infrastructure. The CIP identifies public facility improvements that are needed, provides a design and construction schedule, and identifies funding for these projects.[19] Some of the CIP programs that have currently been approved and are in the planning or construction phase include the following water infrastructure projects:

[16] City of Santa Rosa, September 2013, *Groundwater Master Plan*, https://www.srcity.org/DocumentCenter/View/14031/Groundwater---2013-Master-Plan, accessed August 23, 2023.

[17] City of Santa Rosa, October 18, 2018, Water Distribution Standard Specifications, https://www.srcity.org/DocumentCenter/View/18370/Water-Design-Standards, accessed August 24, 2023.

[18] City of Santa Rosa, October 18, 2018, Recycled Water Standards, https://www.srcity.org/DocumentCenter/View/17624/Recycled-Water-Design-Standards, accessed August 24, 2023.

[19] City of Santa Rosa, 2023, Capital Improvement Program, https://www.srcity.org/690/Capital-Improvement-Program, accessed August 29, 2023.

- Cobblestone Drive Zone R2-R4 Water Main Connection: To improve fire protection in Cobblestone neighborhood.
- Cleveland Avenue and St. Rose District Sewer and Water Improvements.
- Emergency Well Pump Station—A Place to Play: Convert existing test well to emergency groundwater well along with design and construction of a well pump station.
- Geysers-Delta Pond Connection Improvements: Upsize water main to allow higher flows of recycled water to be delivered to Delta Pond.
- Slater Street and Lewrosa Way Sewer and Water Main Replacement Project.
- Terra Linda and Buena Vista Sewer and Water Replacement.
- Emergency Groundwater Supply Development.
- North Trunk Sewer Replacement and Water Main Upgrade.
- Albany, Clement and Malano Sewer and Water Improvements.
- E. Haven Drive Sewer and Water Improvements in Grace neighborhood.
- Controller and Radio Upgrades at Water Pump Stations.
- Emergency Groundwater Wells at Oakmont Treatment Plant and Speers Roads.
- Seismic Upgrades and Improvements at Reservoirs F9A and R16 and Fire Pump Additions.
- Backup Generators at Water and Wastewater Facilities.
- Dotti Farm Recycled Water Pipeline Improvements.

Existing Conditions

Santa Rosa Water is the urban water supplier for the EIR Study Area. Sonoma Water is the wholesale water provider to the City and supplies primarily surface water from the Russian River. The GSAs, including the City and Sonoma Water, have the responsibility and authority to manage groundwater in the EIR Study Area. Santa Rosa Water also coordinates and conducts water conservation programs within the City's service area. A WSA has been prepared for the proposed General Plan 2050 on July 10, 2023, by Santa Rosa Water and is provided in Appendix D, *Water Supply Assessment*, of this Draft EIR. However, information in this section has been updated slightly to reflect minor changes in conditions,

Water Distribution System

Santa Rosa Water operates and maintains a potable water distribution system within the EIR Study Area that consists of 20 booster pump stations, 624 miles of water mains, 24 aboveground reservoirs (tanks), 6 groundwater wells, a well treatment facility, and over 54,000 service connections. The existing water distribution system is shown on Figure 4.17-1, *Water Distribution System*.

Santa Rosa Water also owns, maintains, and operates a recycled water distribution system that provides nonpotable water for landscape irrigation to 32 connections, including multi-family residences, commercial, and institutional/governmental customers.[20] The City's water distribution system is divided into 18 major pressure zones and serviced by 624 miles of water mains ranging in size from 4 to 24 inches.

[20] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

Most connections are served by laterals that branch from 6-inch- to 12-inch diameter-water mains. Pipe materials consist of asbestos cement, polyvinyl chloride (PVC), high-density polyethylene (HDPE), ductile iron, and cement mortar lined and coated steel. Water is delivered to Santa Rosa Water through a transmission and delivery system owned and operated by Sonoma Water, as shown previously on Figure 4.17-1. There are several Sonoma Water aqueducts and pipelines that traverse the EIR Study Area and connect to Santa Rosa Water through a series of turnouts, check valves, and direct connections serving City pump stations. There are 59 physical connections between the City's distribution system and Sonoma Water's system, including 39 pressure-reducing valves, 16 check valves, and 4 pumping stations.[21]

The 2014 WMP provided a hydraulic model of the existing distribution infrastructure and recommended improvements needed for future buildout and to meet fire flow requirements. Many of these improvements have since been implemented through the City's CIP. An update to the WMP was prepared in 2020 and evaluates fire flow performance, system reliability, water quality, and Supervisory Control and Data Acquisition reliability and redundancy.[22] The recommendations include fire flow improvements in areas where the fire flow goals of 1,500 gallons per minute (gpm) at pressures of 20 pounds per square inch for a duration of two hours cannot currently be met and include fire flow facility improvements for tanks and pump stations to meet fire flow goals in four pressure zones. Also included are opportunities to increase the reliability of the distribution system by adding pumps, interties between pressure zones, and utilizing the Proctor Heights Tanks.

Water Supply Sources

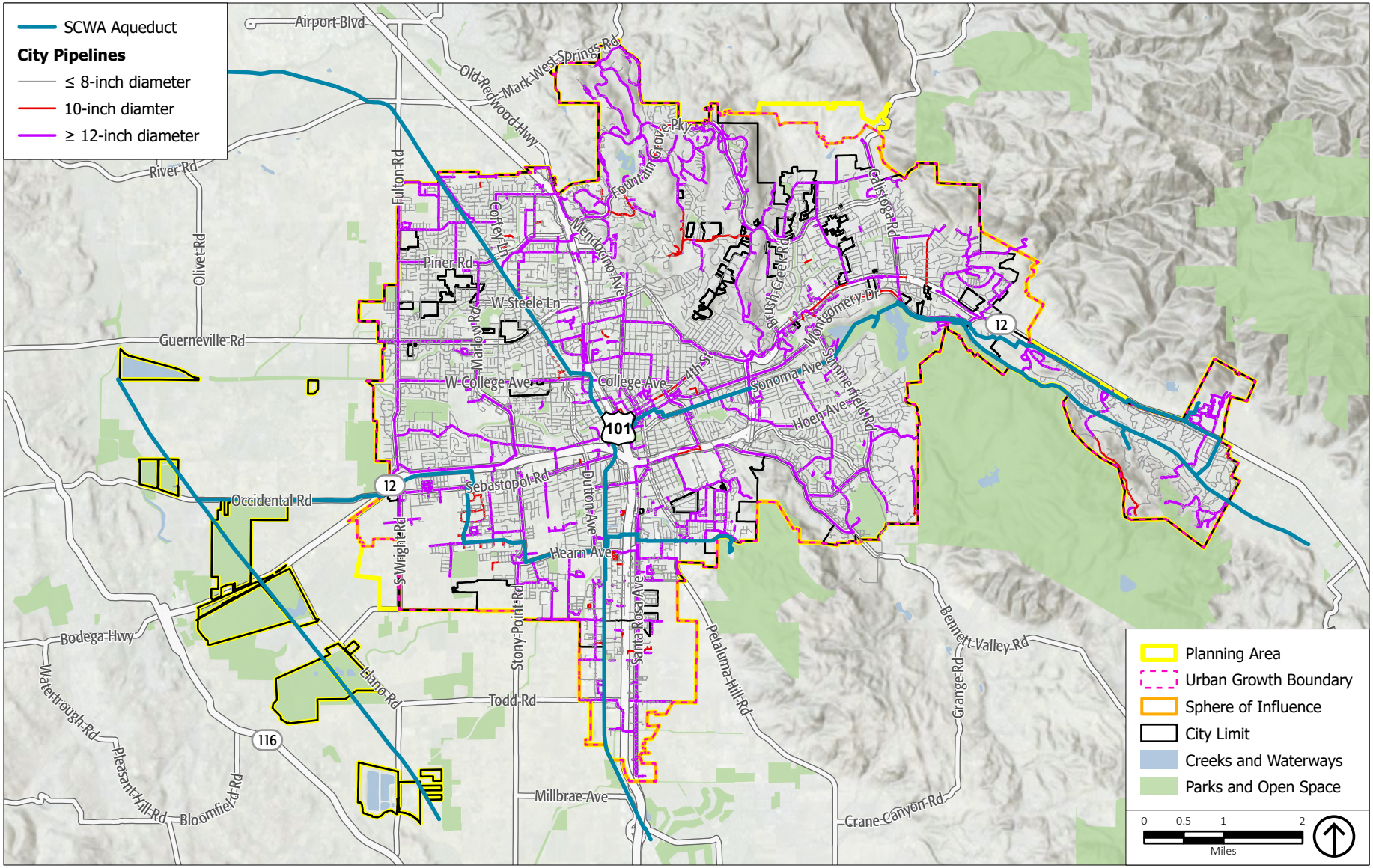
Santa Rosa Water currently has three sources of water supply: 1) potable water from Sonoma Water (a regional water wholesaler); 2) groundwater from the City's wells, and 3) non-potable water (recycled water) from the Santa Rosa Regional Water Reuse System for urban landscape irrigation.[23]

Approximately 93 percent of the City's potable water supply is purchased from Sonoma Water under the provisions of the Restructured Agreement for Water Supply, which was executed in June 2006. Sonoma Water obtains almost all of its water supplies as surface water from the Russian River (approximately 99 percent). The rest of the water supplied by Sonoma Water is pumped from three groundwater wells in the Santa Rosa Plain Subbasin. However, none of the groundwater is delivered to Santa Rosa; it feeds into the Cotati Aqueduct.

[21] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

[22] Santa Rosa Water, February 7, 2022, *2020 Water Master Plan Update: Water System Reliability Study*, https://www.srcity.org/DocumentCenter/View/34912/2020-Water-Master-Plan-Update---Water-System-Reliability-Study, accessed August 24, 2023.

[23] City of Santa Rosa, July 10, 2023, *SB 610 Water Supply Assessment (WSA) for the Santa Rosa General Plan 2050*. See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 4.17-1
Water Distribution System

Santa Rosa Water produces approximately seven percent of its potable water supply from six groundwater wells. Two of the wells are actively pumped (Farmers Lane Wells Nos. W4-1 and W4-2 and three (Carley, Peter Springs, and Leete) are emergency potable supply wells that are operated to provide landscape irrigation to an adjacent park and school landscaping, and augment supplies in Lake Ralphine (Howarth Park). These wells are available and approved by the California Division of Drinking Water to be on standby for emergency potable use. One well (Farmers Lane Well No. 3) is operated to provide minor amounts of landscape irrigation only. A summary of the wells and their status is provided in Table 4.17-2, *Santa Rosa Municipal Groundwater Wells*.

TABLE 4.17-2 SANTA ROSA MUNICIPAL GROUNDWATER WELLS

Well Name/Number	Well Status
Farmers Lane (W4-1)	Active
Farmers Lane (W4-2)	Active
Farmers Lane (W4-3)	Not connected to City's potable water distribution system; used strictly for minor landscape irrigation
Carley (W2-1)	Used for landscape irrigation and on standby for emergency potable water supply
Peter Springs (W2-2)	Used for landscape irrigation and on standby for emergency potable water supply
Leete (W1)	Used for landscape irrigation and on standby for emergency potable water supply

Source: City of Santa Rosa, July 10, 2023, *SB 610 Water Supply Assessment (WSA) for the Santa Rosa General Plan 2050.* See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

Santa Rosa Water also has two additional municipal wells that are either out of service or inactive. The Freeway Well (W3) is out of service due to groundwater contamination and the Sharon Park Well (W6) is inactive due to severe sanding. A state funded study of the Freeway Well contamination issue recommended that the well be formally abandoned to reduce the risk of the well acting as a "conduit" for migration of the contaminant plume. A capital project is proceeding to properly abandon this well consistent with county well ordinance standards. For the past three years, the City has pumped between 1,126 and 1,323 acre-feet per year (AFY) of groundwater for its municipal water supply. The California Division of Drinking Water has permitted the City's groundwater wells for production of up to 2,300 AFY of potable water supply.[24]

Additionally, the City owns and operates the Laguna Treatment Plant Regional System, which provides high quality tertiary treated water that is approved for irrigation of urban landscapes, playgrounds, golf course, public parks, agricultural crops, and vineyards. Most of the recycled water is piped to Sebastopol and Rohnert Park as well as to the Geysers Recharge Project and to farmlands and vineyards outside of the city limits of Santa Rosa. In 2020, the City used approximately 108 AFY of recycled water within its service area and the projected future use of recycled water through 2045 is expected to be about 140 AFY, accounting for less than 1 percent of urban water use.

A summary of the existing and future sources of water for the City is provided in Table 4.17-3*, City of Santa Rosa Existing and Future Water Supplies (acre-feet)*.

[24] City of Santa Rosa, July 10, 2023, *SB 610 Water Supply Assessment (WSA) for the Santa Rosa General Plan 2050*. See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

TABLE 4.17-3 CITY OF SANTA ROSA EXISTING AND FUTURE WATER SUPPLIES (ACRE-FEET)

Water Supply Sources	2020	2025	2030	2035	2040	2045
Surface Water (from Sonoma Water)	18,024	29,100	29,100	29,100	29,100	29,100
Groundwater (from City wells)	1,253	2,300	2,300	2,300	2,300	2,300
Recycled Water (for urban use only)	110	140	140	140	140	140
Total	**19,387**	**31,540**	**31,540**	**31,540**	**31,540**	**31,540**

Source: City of Santa Rosa, July 10, 2023, SB 610 Water Supply Assessment *(WSA) for the Santa Rosa General Plan 2050*. See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

In addition to the existing water supply, in October 2023, the City completed an adaptive Water Supply Alternatives Plan.[25] The first objective identified in the Water Supply Alternatives Plan was to establish a water supply resiliency and reliability goal for Santa Rosa's future, informed by discussions with the City's Water Department staff, an external group of community leaders, the community at large, and the Board of Public Utilities. The City created a goal of expanding and diversifying its potable water supply portfolio to enhance its resiliency and mitigate the potential impacts of future water supply shortages caused by severe and/or prolonged droughts or catastrophic service interruptions. New supplies could augment existing City groundwater production capacity (approximately 1,300 AFY, with an average of 2 million gallons per day over approximately 6.5 months per year). This is an ongoing project that has not been fully studied as of the release of this Draft EIR.

Existing Water Demand

Table 4.17-4, *Santa Rosa 2020 Existing Water Demand*, presents the water demand for 2020, as presented in the 2020 UWMP for the EIR Study Area. Single-family homes represent over half of the 2020 total demand at 51 percent. Multifamily homes account for about 17 percent of the total demand. Commercial, industrial, and institutional/governmental represent a combined 14 percent of total demand.[26] Water losses account for approximately 7 percent of the water demand and the other category includes billed uses, such as fire lines, construction meters, and municipal yard meters, and unbilled uses, such as firefighting and hydrant flushing. In addition, the City of Santa Rosa used 110 acre-feet of recycled water in 2020 for urban irrigation uses.

TABLE 4.17-4 SANTA ROSA EXISTING WATER DEMAND

Land Use	AFY
Single Family	9,863
Multi-Family	3,309
Commercial	2,020
Industrial	304
Institutional/Governmental	308

[25] City of Santa Rosa, Our Water Future, www.srcity.org/OurWaterFuture, accessed June 2024.

[26] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

TABLE 4.17-4 SANTA ROSA EXISTING WATER DEMAND

Land Use	AFY
Landscape	1,991
Losses	1,284
Other	198
Recycled Water	110
Total	**19,387**

Note: AFY = Acre-feet per year
Source: Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

Water agencies must also demonstrate compliance with their established water use targets, pursuant to SB X7-7. The calculated water use target for Santa Rosa is 126 gpcd. The actual 2020 demand was 99 gpcd. Thus, the City successfully met the 2020 target.[27]

Water Supply Reliability

As reported in the 2020 UWMP, Table 4.17-5, *Santa Rosa Projected Normal, Dry, and Multiple Dry Year Supply and Demand (AFY)*, provides the project water demand and supply in the Santa Rosa Water service area for a normal year, single dry year, and multiple dry years from 2025 through 2045.

TABLE 4.17-5 SANTA ROSA PROJECTED NORMAL, DRY, AND MULTIPLE DRY YEAR SUPPLY AND DEMAND (AFY)

	2025	2030	2035	2040	2045
Normal Year					
Supply Total	31,540	31,540	31,540	31,540	31,540
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	9,880	8,457	7,888	7,211	6,443
Single Dry Year [a]					
Supply Total	22,660	20,639	20,937	20,978	21,689
Demand Total	21,660	20,639	20,937	20,978	21,689
Difference	1,000	0	0	0	0
Multiple Dry Years [a]					
First Year					
Supply Total	22,660	24,083	24,652	25,329	26,097
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	1,000	1,000	1,000	1,000	1,000
Second Year					
Supply Total	22,660	24,083	24,652	25,329	26,097
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	1,000	1,000	1,000	1,000	1,000

[27] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

TABLE 4.17-5 SANTA ROSA PROJECTED NORMAL, DRY, AND MULTIPLE DRY YEAR SUPPLY AND DEMAND (AFY)

	2025	2030	2035	2040	2045
Third Year					
Supply Total	22,660	24,083	24,652	25,329	26,097
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	1,000	1,000	1,000	1,000	1,000
Fourth Year					
Supply Total	22,660	24,083	24,652	25,329	26,097
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	1,000	1,000	1,000	1,000	1,000
Fifth Year					
Supply Total	22,660	24,083	24,652	25,329	26,097
Demand Total	21,660	23,083	23,652	24,329	25,097
Difference	1,000	1,000	1,000	1,000	1,000

Note: AFY = Acre-feet per year.
a. Single and multiple dry years assume implementation of WSCP Stage 1 reductions of 10 percent.
Source: Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

As shown in Table 4.17-5, there will be a surplus of water available during normal years, with Sonoma Water supplying 29,100 AFY, the City pumping up to 2,300 AFY of groundwater, and a recycled water supply of 140 AFY. During a single-dry year, Sonoma Water projects that Santa Rosa's water allotment could be reduced by 16 to 19 percent. However, the City would implement the WSCP to reduce customer demands to match available supplies for the years 2030 through 2045. Sonoma Water's 2020 UWMP does not anticipate a reduction in supplies to its retail customers for multiple dry years. Therefore, the City's water supply would not exceed demand and there would be surplus water available through 2045 for multiple dry year events.[28]

4.17.1.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impact to water supply if it would:

1. Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.
2. Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to water supply.

[28] Sonoma Water, 2021, 2*020 Urban Water Management Plan,* https://www.sonomawater.org/media/PDF/Water%20Resources/Water%20Supply/UWMP/Sonoma%20Water%202020%20UWMP_June%202021-ADA.pdf, accessed August 9, 2023.

4.17.1.3 IMPACT DISCUSSION

USS-1 Implementation of the proposed project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.

Implementation of the proposed project would have a significant impact if it would result in the construction of new water treatment facilities or the expansion of existing facilities that would have a significant effect on the environment. With implementation of the proposed project water demand would increase throughout the EIR Study Area due to increases in population and employment.

The current and projected water demands from the 2020 UWMP are provided in Tables 4.17-3 and 4.17-4. Buildout under the proposed project would result in increases in single-family and multifamily residences as well as new retail, commercial, office, industrial, and public/institutional land uses. The net increase in housing units and commercial/industrial/institutional square feet associated with the proposed General Plan 2050 is provided in Table 4.17-6, *Proposed General Plan 2050 Buildout*. The City subsequently prepared a WSA based on the information provided in this table to evaluate the water demand and available supplies with implementation of this project, as discussed in the following section. The WSA is provided in Appendix D, *Water Supply Assessment*, of this Draft EIR.

TABLE 4.17-6 PROPOSED GENERAL PLAN 2050 BUILDOUT

Land Use	Net Increase	Units
Detached Residential	11,810	Dwelling Units
Attached Residential	12,280	Dwelling Units
Retail	945,000	Square Feet
Office	2,100,000	Square Feet
Industrial	1,500,000	Square Feet
Public/Institutional	727,000	Square Feet
Park/Public Landscape	3,092,760	Square Feet
Hotels	69	Rooms
Education	4,797	Students

Source: City of Santa Rosa, Planning & Economic Development, 2023.

Water Demand Analysis

The proposed increase in water demand is summarized in Table 4.17-7, *Water Demand Increase: Proposed General Plan 2050.* The detailed discussion and calculations are provided in Appendix D, *Water Supply Assessment*, of this Draft EIR. The City uses a Residential Equivalency Factor (REF) consistent with the land uses provided in Table 4.17-7. One REF is equivalent to the average water use of one detached residential unit per year, which is estimated to be 65,345 gallons per year. Attached residential water use requires minimal landscape irrigation and averages to be about 70 percent of the detached residential water use.

Non-residential land use categories were converted to REFs based on land use and equivalent water use per the California Water Code 10912(a).

TABLE 4.17-7 WATER DEMAND INCREASE: PROPOSED GENERAL PLAN 2050

Land Use	DUs	Square Feet	Rooms/Students	REF Conversion Factor	REFs
Detached Residential	11,810	-	-	1 REF/unit	11,810
Attached Residential	12,280	-	-	0.7 REF/unit	8,575
Retail	-	945,000	-	1 REF/1000 SF	945
Office	-	2,100,000	-	1 REF/500 SF	4,200
Industrial	-	1,500,000	-	1 REF/1,300 SF	1,154
Public/Institutional	-	727,000	-	I REF/500 SF	1,454
Hotel	-	-	69	0.75 REF/room	52
Education	-	-	4,797	0.11 REF/student	536
Total	**24,090**	**8,364,760**	**-**	**-**	**29,823**
Total - AFY					**6,484**

Notes: AFY = Acre-feet per year; REF = Residential Equivalency Factor.
Source: City of Santa Rosa, July 10, 2023, *SB 610 Water Supply Assessment (WSA) for the Santa Rosa General Plan 2050.* See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

The proposed project would result in a water demand increase of 29,823 REFs x 65,345 gallons per REF, for a total of approximately 5,980 AFY of additional demand. The project water demand should also include non-revenue water, which historically accounts for about 7 percent of total water sales and a small adjustment of 0.8 percent to account for other miscellaneous water sales. Nonrevenue water includes water used for fire protection and training, water system flushing, sewer cleaning, system leaks, and water used by unauthorized connections and meter inaccuracies. Miscellaneous water sales occur through municipal yard meters and temporary water meters (primarily for construction sites). The addition of nonrevenue water (454 AFY) and other sales (50 AFY) increased demand by 504 AFY, bringing the total project demand to 6,484 AFY. Table 4.17-8, *Total Water Demand, 2050*, provides the baseline water demand plus the net increase for buildout of the proposed project to generate the total water demand in 2050.

TABLE 4.17-8 TOTAL WATER DEMAND, 2050

Land Use	AFY
Baseline Water Demand (2019)	17,832
General Plan – Net Increase	6,484
Total 2050 Water Demand	**24,316**

Note: AFY = Acre-feet per year.
Source: City of Santa Rosa, July 10, 2023, *SB 610 Water Supply Assessment (WSA) for the Santa Rosa General Plan 2050.* See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

The projected water demand in 2050 with buildout of the proposed project of 24,316 AFY is less than the projected water demand in the 2020 UWMP of 25,097 AFY for the year 2045 under normal conditions. Therefore, the projected increases in population, housing units, and building construction have been accounted for in the 2020 UWMP. However, to determine long-term reliability of water supplies, the analysis must also consider single dry years and multiple dry years. A detailed analysis of the normal year,

single dry year, and multiple dry year scenarios is presented in the City's WSA, which is provided in Appendix D, *Water Supply Assessment*, of this Draft EIR, and summarized in Table 4.17-9, *Water Supply and Demand with Proposed General Plan 2050 Buildout (AFY)*.

TABLE 4.17-9 WATER SUPPLY AND DEMAND WITH PROPOSED GENERAL PLAN 2050 BUILDOUT (AFY)

	2028	2033	2038	2043
Normal Year				
Supply Total	31,540	31,540	31,540	31,540
Demand Total	20,032	21,269	22,796	24,316
Difference	11,508	10171	8,744	7,224
Single Dry Year				
Supply Total	21,447	20,818	20,962	21,405
Demand Total	20,032	21,369	22,796	24,316
Difference	1,415	*-552*	*-1,834*	*-2,911*
Multiple Dry Years				
Supply Total	23,514	24,424	25,058	25,790
Demand Total	20,032	21,369	22,796	24,316
Difference	3,481	3,055	2,263	1,474

Note: AFY = Acre-feet per year
Source: City of Santa Rosa, July 10, 2023, SB 610 Water Supply Assessment *(WSA) for the Santa Rosa General Plan 2050*. See Appendix D, *Water Supply Assessment*, of this Draft EIR. Note that information summarized here from the WSA has been updated slightly to reflect minor changes in conditions.

While no shortage of water supplies would occur under normal years or a consecutive five-year drought, a shortage is expected to occur under a single dry year scenario beginning in 2031. Water shortages would range from about 3 percent to 12 percent of the water supplies and would easily be addressed by implementing the City's WSCP. Shortage Levels of 1 to 3 would result in a reduction of water use between 10 and 20 percent, which would account for the potential shortage of water supplies in a single dry year. The City may also implement the WDO policy for new construction and the Excess Use Penalties program for excessive water usage. These actions are anticipated to reduce projected demands in a single-dry year scenario to match available supplies. The WSA concludes that the City has adequate existing water supplies to meet the demands of the proposed project plus existing demands with implementation of demand management measures as needed during dry years.

The surface water that the City purchases from Sonoma Water is of high quality and does not require treatment other than the addition of chlorine for residual disinfection and sodium hydroxide to adjust the pH. Sonoma Water pumps water from the Russian River in a process called riverbank filtration. Six collector wells are located beneath the riverbed at depths of about 100 feet below ground surface, and the water is pumped through natural sands and gravels that act as a filtering system. In addition to Sonoma Water's sampling program, Santa Rosa Water collects weekly water quality samples from the City's distribution system for testing. The water supplied to Santa Rosa Water customers meets or exceeds all state and federal drinking water standards.

There are no water treatment plants that supply water to Sonoma Water or Santa Rosa Water; therefore, implementation of the proposed project would not require new water treatment facilities. Also, Sonoma Water and Santa Rosa Water's current water transmission and distribution systems are adequate for meeting the existing and future needs of their respective service areas. In addition, both water providers have robust CIPs to expand and upgrade their distribution systems to accommodate potential future

development. Accordingly, no new water treatment or distribution facilities would be needed, and Santa Rosa Water would monitor and upgrade the water distribution system with projects described in the CIP to accommodate potential future development. As such, no significant impact would occur.

In addition, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require planning and development decisions to consider impacts to water supplies and resources. The following goal, policies, and actions would serve to minimize potential adverse impacts to water supplies with future development:

- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.1: Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents.
    - Action 5-9.1: Continue to use high-quality water from the Sonoma Water aqueduct system as the primary water supply.
    - Action 5-9.2: Continue to require that water supply capacity and infrastructure are in place prior to occupancy of new development.
    - Action 5-9.3: Maintain water, wastewater, and recycled water system integrity and capacity by continuing to prioritize maintenance and preserve funding for maintenance, rehabilitation, and replacement of existing infrastructure.
    - Action 5-9.4: Evaluate cost and other implications of new initiatives to avoid impacting funding and resources needed for proper management of existing infrastructure.
    - Action 5-9.5: Ensure that new programs and infrastructure do not impact funding of existing infrastructure maintenance, rehabilitation, and replacement.
    - Action 5-9.6: Study the impacts of potential future annexations on water delivery and on the collection and treatment of wastewater.
    - Action 5-9.7: Decline requests for extension of water beyond the Urban Growth Boundary, except in cases of existing documented health hazards and in areas where the City has entered into prior contractual agreements to provide services, in collaboration with the County and Local Agency Formation Commission (LAFCO).
    - Action 5-9.8: Evaluate the City's long-term water supply strategies, including development of new sources of water supply, enhanced water-efficiency programs, and implementation of appropriate growth-control measures, if deemed necessary by the City.
    - Action 5-9.9: Work with State agencies to identify water quality issues and apply for remediation funds, as needed.
    - Action 5-9.10: Implement the Water Supply Alternatives Plan to mitigate potential impacts of climate change, drought, and natural or human-caused catastrophic events by enhancing water supply resiliency and reliability.

- Action 5-9.11: Continue working with the Santa Rosa Plain Groundwater Sustainability Agency to implement the Groundwater Sustainability Plan and achieve sustainability of local groundwater resources.

- Policy 5-9.2: Maintain water quality and encourage Santa Rosa Water customers to save water.
  - Action 5-9.12: Regularly monitor water quality to maintain high levels of water quality for human consumption and for other life systems in the region.
  - Action 5-9.13: Require new development projects to provide water-efficient landscaping in accordance with the City's Water Efficient Landscape Ordinance.
  - Action 5-9.14: Continue to comply with statewide regulations for long- term urban water use efficiency.
  - Action 5-9.15: Promote water efficiency through public education, incentives, rebates, technical assistance, and information about indoor and outdoor water use efficiency measures.
  - Action 5-9.16: Provide information and explore incentive opportunities to encourage property owners to install catchment, graywater systems, and other water recycling systems; remove paving; and install low-impact development features, such as permeable pavers, bioswales, and other green infrastructure components.
- Policy 5-9.3: Ensure that water distribution lines are adequate for existing and future populations.
  - Action 5-9.17: Continue to require that developers improve water distribution infrastructure if needed to serve the demands of new development.
  - Action 5-9.18: Continue to identify funding sources for water infrastructure projects on the Capital Improvement Program list.
  - Action 5-9.19: Evaluate both the upfront (capital) and ongoing maintenance cost commitments of new projects and/or programs prior to approval.
  - Action 5-9.20: Evaluate costs and benefits of new and existing water projects before diverting funding/resources needed for proper management of existing infrastructure.
  - Action 5-9.21: Actively maintain an inventory of existing infrastructure and operations and maintenance requirements (staffing and budget) in addition to capital, operations, and maintenance needs of planned infrastructure.
- Policy 5-9.4: Ensure that adequate wastewater capacity is available to serve existing and future needs of the city.
  - Action 5-9.28: Improve stormwater management to increase infiltration, provide treatment, promote groundwater recharge, reduce flood risk, capture trash, and enhance the environment.
  - Action 5-9.29: Implement mitigation measures to mimic the pre-development water balance through infiltration, evapotranspiration, and capture and reuse of stormwater.

- Action 5-9.30: Evaluate stormwater capture and reuse consistent with goals of the Santa Rosa Citywide Creek Master Plan and the MS4 National Pollutant Discharge Elimination System (NPDES) permit to preserve natural conditions of waterways, minimize channelization of creeks, and protect water quality, and identify, educate, and label to promote community awareness that storm drains flow untreated into creeks.
- Action 5-9.32: Employ a multi-benefit "one-water" approach for new capital projects to include stormwater quality (low-impact development features) on a large scale, flood mitigation, creek restoration, and increased groundwater recharge.

- Policy 5-9.6: Identify and work with partners to address impacts from groundwater threats and solid waste.
  - Action 5-9.39: Consult with appropriate regional, State, and federal agencies to monitor water quality and address local sources of groundwater and soil contamination, including underground storage tanks, septic tanks, and industrial uses, as necessary, to achieve State and federal water quality standards.
  - Action 5-9.41: Identify solid waste and hazardous waste facilities that do not comply with standards for preventing contamination of air, water, and soil with hazardous waste, and work with owners to upgrade those facilities to meet those standards, prioritizing facilities in Equity Priority Areas.

In summary, because no new water treatment or distribution facilities would be needed to accommodate potential future development, and compliance with the City's requirements for new construction, water-efficient landscaping, and the proposed General Plan 2050 goal, policies, and actions listed above, impacts would be *less than significant* with respect to the need for new and/or expanded water facilities.

Significance without Mitigation: Less than significant.

USS-2 Implementation of the proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

As previously shown in Table 4.17-8, the water demand for implementation of the proposed project was estimated to be an additional 6,484 AFY. Adding this increase to the existing demand results in a water demand of 24,316 AFY in 2050. This is less than the projected water demand presented in the 2020 UWMP of 24,957 AFY for the year 2045.

To ensure that there would be sufficient water available for implementation of the proposed project, Santa Rosa Water also prepared a WSA, which is provided in Appendix D, *Water Supply Assessment*, of this Draft EIR. The WSA concluded that the City has adequate water supplies to meet existing demands plus the additional demand associated with the proposed project, with the implementation of demand management measures as needed during dry years.

As described under impact discussion USS-1, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to water supplies and resources. The same proposed General Plan 2050 goal, policies, and actions listed under impact discussion USS-1 would also contribute to ensuring sufficient water supplies to serve the proposed project.

Additionally, potential future development over the buildout horizon of the proposed project would be required to implement the water-efficient requirements of the California Plumbing Code (SRCC Chapter 18-24) and CALGreen (SRCC Chapter 18-42) as well as the MWELO (SRCC Chapter 14-30) requirements for water efficient landscaping. Future projects that meet the criteria under California Water Code Section 10912 would be required to prepare a WSA that demonstrates that project water demands would not exceed water supplies. In addition, residential, commercial, and industrial water usage can be expected to decrease in the future as a result of the implementation of water conservation practices. In the case of a water shortage, the City would implement the WSCP, as outlined in the 2020 UWMP. This includes enacting the WDO Policy for new construction when water shortages are at Stages 5 through 8 and Excess Use Penalties for customers that use more than their allocation. The City would continue to implement conservation efforts, demand management measures, and water use restrictions as per the WSCP.

Compliance with the SRCC and proposed General Plan 2050 goals, policies and actions, implementation of the WSCP during dry periods, and continued water conservation efforts would reduce water demand with respect to water supplies. In summary, buildout associated with the proposed project would not result in a shortage of water supplies and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

USS-3 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to water supply.

The area considered for cumulative water supply impacts is the service areas of Sonoma Water and Santa Rosa Water. Future projects within these service areas would result in increases in water demand. However, cumulative water demands would not require building new water treatment facilities. The surface water supplied by Sonoma Water to its retail water purveyors does not require treatment other than chlorination and the addition of sodium hydroxide for pH adjustment.

All new development projects that meet the SB 610 criteria, such as residential projects with more than 500 dwelling units, would be required to prepare WSAs. The water purveyors would review such projects for adequacy of water supply and the water purveyors would update their respective UWMPs every five years to ensure that there are adequate water supplies and contingency plans for future residents and customers. All new developments would require the implementation of water efficiency and water conservation measures, pursuant to CALGreen (SRCC Chapter 18-42) and City's WELO (SRCC Chapter 14-30) irrigation requirements. Water supply deficits in dry years would be met by implementing the WSCPs and other water conservation efforts.

All cumulative projects would require compliance with Sonoma County and City ordinances as well as local, State, and federal regulatory requirements. Existing and future regulations would result in a reduction in per capita water use over time, which would ensure that cumulative impacts with respect to water supply would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.2 WASTEWATER

4.17.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Clean Water Act

The CWA of 1972 regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law that governs water pollution and is implemented by the USEPA. Under the CWA, the USEPA sets wastewater standards and makes it unlawful to discharge pollutants from a point source into any navigable waters without obtaining a permit. Point sources include any conveyances, such as pipes and man-made drainage channels, from which pollutants may be discharged.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a wastewater (sewage) treatment plant.

State Regulations

State Water Resources Control Board

On May 2, 2006 the SWRCB adopted Statewide General Waste Discharge Requirements ([WDRs] Order No. 2006-0003) and a monitoring and reporting program (Order No. WQ-2013-0058-EXEC) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipes. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSO). The WDRs require public agencies that own or operate sanitary sewer systems to develop and implement sewer system

management plans (SSMP) and report all SSOs to the SWRCB's online reporting system. The SWRCB has delegated authority to nine RWQCBs to enforce these requirements within their regions.

2021 Winery Order

The SWRCB recently developed general WDRs for winery process water for activities that generate winery waste and discharge it to land for reuse or disposal. Winery Order No. WQ 2021-002-DWQ was adopted in January 2021 and is applicable statewide. Facilities that produce wine or grape juice and generate between 10,000 and 15 million gallons of process water per year that is discharged to land for irrigation or through a septic-subsurface disposal system are required to enroll in the Winery Order. Applicants are required to submit to the SWRCB an electronic Notice of Intent that contains information on winery effluent flows and process water generation, treatment, reuse, and disposal. Applicants must also pay an application fee and an annual fee, based on process water flow rates.

Regional Regulations

North Coast Regional Water Quality Control Board

The North Coast RWQCB (Region 1) issues and enforces NPDES permits in the EIR Study Area, which includes permits for wastewater treatment plants (WWTP) and industrial waste discharges. NPDES permits allow the RWQCB to regulate where and how waste is disposed, including the discharge volume and effluent limits of waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance. The North Coast RWQCB reissued an NPDES permit in 2020 (Order No. R1-2020-0012) for the Santa Rosa Regional Water Reuse System and the Laguna Treatment Plant.

RWQCB Water Quality Trading Framework for Laguna de Santa Rosa Watershed

The North Coast RWQCB adopted Resolution No. R1-2018-0025 in 2018 approving the Water Quality Trading Framework for the Laguna de Santa Rosa Watershed. This resolution replaces the previous Santa Rosa Nutrient Offset Program, which was established in 2008, and is available for both the City of Santa Rosa and the Town of Windsor as an approved method for complying with the "no net loading" effluent limitations for total phosphorus in the NPDES permit. This allows the City to implement ecologically beneficial projects within the watershed that offset the potential phosphorus loading from discharge for the Laguna Treatment Plant. These offset projects must be completed in advance of any discharge and have a specified life and credit time period. The recent revision to the NPDES permit (Order No. R1-2021-0041) clarifies that credits from projects where ecological uplift is provided on permanently protected lands are no longer subject to expiration.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives that pertain to wastewater in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to wastewater are in Title 15, *Sewers, and* Title 20, *Zoning,* as follows:

- Chapter 26, *Water and Sewer Rates, Connection/Demand Fees; and Miscellaneous Fees and Charges.* The City Council is able to establish water and sewer rate changes as well as rates for connections to the City's utility system. All funds that are collected must be used for providing services and maintenance of the City's water and sewer systems.
- Chapter 15-04, *Administration*. This chapter describes the responsibilities of the City to maintain the wastewater collection system and the responsibilities of property owners to maintain the sewer service laterals, cleanouts, and backflow devices that connect to the City's collection system. It also states that the owner of any parcel with a private sewage system that is within 200 feet of the City's sewer system is required to connect to the City's sewer system.
- Chapter 15-06, *General and Pretreatment Enforcement*. This chapter describes the enforcement mechanisms and process for undertaking enforcement actions for violators of wastewater discharge permits or pretreatment requirements. The chapter also outlines the fees for wastewater discharge permit applicants, monitoring and inspection procedures, and reviewing and responding to accidental discharges and construction.
- Chapter 15-08, *Pretreatment*. This chapter provides a classification system for users that need to submit a wastewater discharge permit to the City based on each user's waste quality and flow rate and provides a basis for sewer use charges. The chapter incorporates pretreatment standards in accordance with federal and State standards and local limits. The Director of Utilities may require a permit holder to prepare a slug control plan if deemed necessary.
- Chapter 15-16, *Sewer Connections*. This chapter specifies the design criteria and standard plans and specifications that must be followed for constructing sewer service laterals or connections to the City's sewer system. The chapter specifies connection fees and non-residential and industrial demand factors, which are the basis of the connection fees, also known as sewer demand fees.
- Chapter 15-20, *Sewer Charges*. This chapter states that sewer charges will be levied in order to operate and maintain the existing sewer system and to provide for the expansion of the system with future development. The amounts and rate schedules for fees and charges are determined by the Board of Public Utilities and may include construction charges, connection or demand fees, sewer use permit fees, and fixed monthly service charges for sewer users. The collected fees are deposited into the wastewater capital recovery fund and the sewer utility fund for the operation, maintenance, and expansion of the City's wastewater collection system.
- Chapter 15-28, *Private Sewage Systems*. Construction of a private sewage system requires a permit from the Sonoma County Permit and Resources Management Department and must be on a property that is at least two acres in size with less than 30 percent slope for the leach field and must not be within close proximity to a City sewer line. Permits applications and plans must be submitted to the County Environmental Health Department and conform with County Health Department standards.
- Chapter 20-30, *Standards for All Development and Land Uses*. Article 10.20.100, *Septic Tank Area Requirements*, states that a septic tank may be allowed where no public sanitary sewer is accessible or within 500 feet, if the parcel is more than two acres and meets County Health Department standards.

NPDES Permit for Regional Water Reuse System and Laguna Treatment Plant

The North Coast RWQCB reissued an NPDES permit in 2020 (Order No. R1-2020-0012) for the Santa Rosa Regional Water Reuse System and the Laguna Treatment Plant located at 4300 Llano Road in Santa Rosa. The City of Santa Rosa conveys wastewater from within the EIR Study Area to the WWTP and also accepts wastewater from the cities of Cotati, Rohnert Park, and Sebastopol and unincorporated areas of Sonoma County. The permit establishes an average dry weather flow of 21.34.9 million gallons per day (MGD).[29] The facility is permitted to discharge tertiary treated wastewater to Santa Rosa Creek, an unnamed ditch tributary to Laguna de Santa Rosa, and Laguna de Santa Rosa from October 1 through May 14 but is limited to no more than 5 percent of the flow of the receiving water, as measured at the Hacienda Bridge (USGS Guage). During the dry season, tertiary treated recycled water is distributed for irrigation on authorized use sites and for recharging the steam fields at the Geysers Recharge Project. The NPDES permit includes effluent limitations, water recycling specifications and requirements, and receiving water limitations. A monitoring and reporting program is also included as part of the NPDES permit. The permit was amended in 2021 (Order. No. R1-2021-0041) to revise the Water Quality Training Framework for Laguna de Santa Rosa and clarify that the credits for long-term and multi-benefit projects do not expire.

Santa Rosa Sewer System Management Plan

The latest Santa Rosa SSMP was certified in April 2019 and revised in July 2019.[30] The purpose of the SSMP is to properly manage, operate, and maintain all parts of the sanitary sewer system in order to minimize the number of SSOs and mitigate any SSOs that do occur. The SSMP describes how the sanitary sewer system is operated and maintained, efforts to minimize infiltration and inflow, design and performance standards, overflow emergency response plan, a fats, oil and grease control program, and monitoring and audit requirements. As required by law, the SSMP must be updated every five years and must be developed in compliance with the requirements of the SWRCB Waste Discharge Requirements Order No. 2006-003-DWQ, Amended Monitoring and Reporting Program Order No. WQ 2008-002-EXEC, and Order No. WQ 2013-0058-EXEC.

Santa Rosa Sanitary Sewer System Master Plan Update

Most recently updated in August 2023, the Sanitary Sewer System Master Plan (Sanitary SSMP) is used to support ongoing wastewater collection system capital improvement projects as well as management and operation of the sanitary sewer system.[31] The Sanitary SSMP provides a description of the model used to estimate dry weather and wet weather wastewater flows in the City's existing sewer collection system and calculate future wastewater flow rates based on project population and employment increases. Additionally, the Sanitary SSMP provides a summary of areas that should be prioritized over the next

[29] To go up to 25.9 MGD, Santa Rosa Water would have to show that the needed capacity improvements have been made to support this higher flow without increasing discharge. (Mike Prinz, Deputy Director of Water Reuse Operations, Santa Rosa Water, August 6, 2024)

[30] Santa Rosa Water, revised July 3, 2019, *Sewer System Management Plan (SSMP)*, https://www.srcity.org/DocumentCenter/View/24182/Santa-Rosa-Water-Sewer-System-Management-Plan-PDF, accessed August 28, 2023.

[31] City of Santa Rosa, October 2014, *Sanitary Serwer System Master Plan Update*, https://www.srcity.org/DocumentCenter/View/13828/Sewer---2014-Master-Plan, accessed August 28, 2023.

several CIP cycles. A condition assessment was completed and identified sections of Llano and Robles Trunk Sewers as the highest priorities and rankings for the likelihood of failure (LOF) and consequence of failure (COF) in the sewer system. Los Alamos Trunk Sewer, the Cross Town Trunk Sewer, and the Airport Trunk Sewer were also identified for recommended size upgrades for several sewer pipelines.

Santa Rosa Regional Water Reuse System Master Plan

The Regional Water Reuse System Master Plan, prepared in February 2018, provides a description, capacity, and condition of the Laguna Treatment Plant and environmental laboratory, biosolids management facilities, and recycled water distribution and discharge system. The report also identifies opportunities to meet future needs through long term planning and major projects and programs as well as recommended capital improvement projects and a 20-year investment program.[32]

Incremental Recycled Water Program and Master Plan

The August 2007 update to the Recycled Water Master Plan (RWMP) was prepared to assist the City in deciding how to manage additional wastewater flows into the City's Regional Water Reuse System.[33] The RWMP also describes methods for managing current and future flows that are discharged. The sum of these flows is the incremental flow to be addressed by the Incremental Recycled Water Program (IRWP). The RWMP formulates a course of actions for implementing facilities under the IRWP to manage the incremental flow. The primary objectives of the IRWP are to provide wastewater treatment, recycling, and disposal for the Santa Rosa Regional Water Reuse System to accommodate projected growth; develop and operate the wastewater treatment and disposal system; and maintain a system and components that are economically feasible and continue to be successfully financed.

Sewer Design Standards

Adopted in October 2018, the Sanitary Sewer Standard Specifications includes sanitary sewer system design standards, standard plans, construction specifications, and an engineer's list of approved items.[34] Established to assist developers and their engineers, the Sanitary Sewer Standard Specifications provides guidelines for the design of sewer utilities projects and establishes the minimum acceptable design criteria. More stringent requirements may be imposed by the Director of Santa Rosa Water based on specific project conditions.

[32] City of Santa Rosa, February 2018, *Regional Water Reuse System Master Plan*, https://www.srcity.org/DocumentCenter/View/37627/Regional-Water-Reuse-Master-Plan---2018, accessed August 28, 2023.

[33] City of Santa Rosa, July 2007, *Incremental Recycled Water Program: August 2007 Update to the Recycled Water Master Plan*, https://www.srcity.org/DocumentCenter/View/13970/Incremental-Recycled-Water-Program---2007-Master-Plan, accessed April 5, 2023.

[34] City of Santa Rosa, October 18, 2018, Sanitary Sewer Standard Specifications, https://www.srcity.org/DocumentCenter/View/18368/Sewer-Design-Standards, accessed April 7, 2023.

Capital Improvement Program

The Capital Projects Engineering Division is responsible for the design and construction of projects to rehabilitate, upgrade, and expand the City's infrastructure, including sewer collection system projects and Laguna Treatment Plant projects. The capital projects are funded primarily through sewer and water rates, development fees, and grants. The City's CIP is a five-year financial plan for the maintenance and expansion of the City's infrastructure. The CIP identifies public facility improvements that are needed, provides a design and construction schedule, and identifies funding for these projects.[35] Some of the CIP programs that have currently been approved and are in the planning or construction phase include the following sewer and wastewater infrastructure projects:

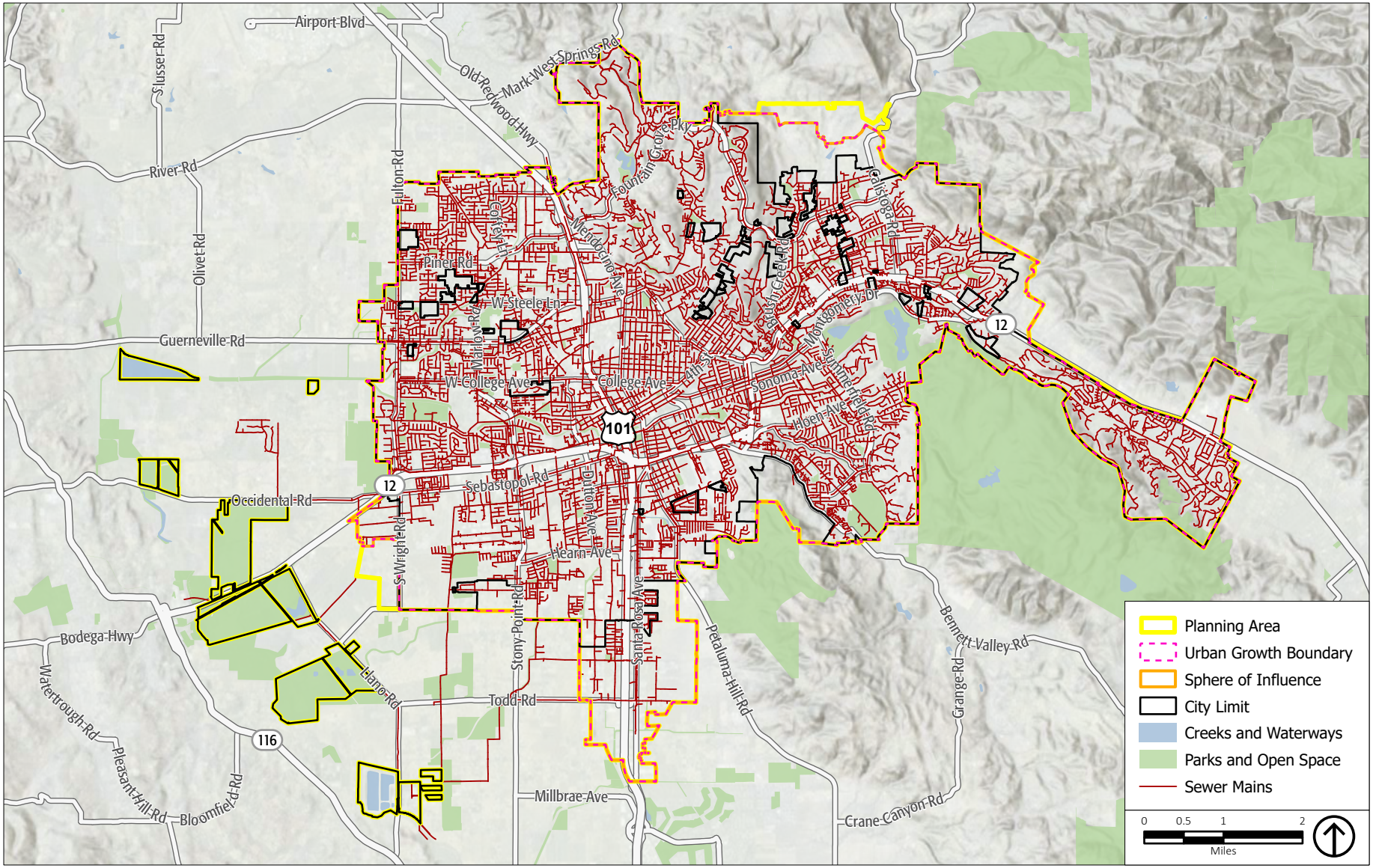
- North Trunk Sewer Replacement– Mendocino Avenue to Terra Linda Drive.
- Albany, Clement and Malano Sewer and Water Improvements.
- Laguna Treatment Plan Disinfection Improvements: Replace the existing UV system.
- Terra Linda and Buena Vista Sewer and Water Replacement.
- Mendocino Avenue Easement South of Dawson Road Sewer Main Replacement.
- E. Haven Drive Sewer and Water Improvements in Grace neighborhood.
- Los Alamos Trunk Sewer Replacement: Streamside Drive to Elaine Drive.
- Los Alamos Trunk Sewer Replacement: Elaine Drive to Melita Road at Santa Rosa Creek.
- Laguna Treatment Plant Waste Gas Burner Replacement.
- Cleveland Avenue and St. Rose District Sewer and Water Improvements.
- Controller and Radio Upgrades at Water Pump Stations and Sewer Lift Stations.
- Robles Trunk Lining.
- Fulton Road Sewer Main Improvements.
- Laguna Treatment Plant Emergency Generator Fuel Tank and Fleet Fueling Station Replacement.
- Backup Generators: Water and Wastewater Facilities.
- Llano Trunk Rehabilitation.
- Cross Town Trunk Lining.
- Slater Street and Lewrosa Way Sewer and Water Main Replacement.

Existing Conditions

Wastewater Collection

The City of Santa Rosa's sewer collection system serves a population of approximately 175,300 people with 50,512 connections. It consists of 587 miles of gravity sewer pipelines, 6.4 miles of force mains, and 17 lift stations. The location of the sewer pipelines within the EIR Study Area are shown on Figure 4.17-2, *City of Santa Rosa Sewer Collection System.* The sewer pipes range in size from 4 to 66 inches and are of various ages, dating back to the 1970s. Collected wastewater is conveyed to the Laguna Treatment Plant and is treated to tertiary (recycled) water standards.

[35] City of Santa Rosa, 2023, Capital Improvement Program, https://www.srcity.org/690/Capital-Improvement-Program, accessed August 29, 2023.



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 4.17-2
City of Santa Rosa Sewer Collection System

The Santa Rosa Water Department, Operations Division, operates and maintains the sewer collection system within the EIR Study Area. This includes the following tasks:[36]

- Perform regularly scheduled collection system maintenance, including hydroflushing, rodding, cleaning, closed circuit television (CCTV), and smoke testing.
- Minimize Inflow/Infiltration using data collected from flow monitors to determine the sources of inflow/infiltration and regularly inspect sources with the aid of smoke testing and CCTV.
- Minimize the number and impacts of SSOs and provide emergency response, cleanup, notification, and follow up for all SSOs in accordance with the Overflow Emergency Response Plan.
- Provide education to residents and businesses about the impact of fats, oil, and grease in the collection system.

The City is in the process of upsizing and replacing portions of the sewer collection system, as recommended in the 2014 Sanitary SSMP. Most notably, the prioritized projects focus on trunk line replacement in several areas to limit the inflow of stormwater into the sewer system. Also, the City is optimizing the use of both City and the Laguna Treatment Plant's wet weather storage ponds via flow meters to prevent surcharging during future storm events.

There also are several satellite wastewater collection systems operated and maintained by the cities of Cotati, Rohnert Park, and Sebastopol that convey wastewater to the Laguna Treatment Plant. The City of Santa Rosa maintains the sewer collection system of South Park County Sanitation District under contract. Each city and sanitation district is responsible for compliance with the State and local waste discharge requirements.

Wastewater Treatment

The Laguna Treatment Plant, also known as the Santa Rosa Regional Water Reuse System, is owned and operated by the City of Santa Rosa. The Laguna Treatment Plan is at 4300 Llano Road in Santa Rosa and provides tertiary treated effluent (recycled water) using primary sedimentation, biological secondary treatment (activated sludge) with alum coagulation, flocculation, and clarification, followed by tertiary filtration and ultraviolet light (UV) disinfection.

Tertiary treated effluent is discharged to an effluent pond system with a maximum capacity of 1.65 million gallons prior to entering either the recycled water distribution system or prior to discharge to Santa Rosa Creek and/or Laguna de Santa Rosa during the permitted discharge period from October 1 to May 14. The effluent pond system allows the City to control the timing, location, and volume of discharge to protect beneficial uses of the receiving waters and provide a source of recycled water during the discharge

[36] Santa Rosa Water, revised July 3, 2019, *Sewer System Management Plan (SSMP)*, https://www.srcity.org/DocumentCenter/View/24182/Santa-Rosa-Water-Sewer-System-Management-Plan-PDF, accessed August 28, 2023.

prohibition period.[37] Nearly 100 percent of the recycled water produced by the facility is used for landscape and agricultural irrigation and recharge of the Geyser's geothermal steam field.

Biosolids produced during the treatment process are thickened, anaerobically digested, and dewatered. Approximately one-third of the biosolids are transported to the Lystek facility in Fairfield, where it is processed using thermal hydrolysis and transformed into a Class A biosolids fertilizer product. The remainder of the biosolids are applied to agricultural land.

As previously discussed, the Laguna Treatment Plant also accepts wastewater from the cities of Cotati, Rohnert Park, and Sebastopol, as well as the South Park County Sanitation District. The facility also accepts hauled waste, including domestic septage, chemical toilet waste, grease trap waste, non-hazardous commercial and industrial waste, groundwater, grey water, and landfill leachate. Liquid wastes such as septage, greywater, and rinse water directly enter the liquid stream in the Laguna Treatment Plant. High strength wastes, such as kitchen grease from restaurants, food processing facility wastes, and wastes from breweries and wineries, are offloaded into dedicated tanks and pumped directly to the anaerobic digesters for treatment.

The Laguna Treatment Plant is permitted to treat 21.34 MGD as an average daily dry weather flow and is designed with a peak wet weather flow of 64 MGD. The average dry weather flow in 2022 was 13.1 MGD. No discharge to receiving waters occurred in 2022.[38] Wastewater flows from the City of Santa Rosa have ranged between 72 percent and 73.5 percent of the total wastewater flow for the past six years. For fiscal year 2021/2022, Santa Rosa's flows to the Laguna Treatment Plant were 4,388.95 MG, with total flows to the Laguna Treatment Plant being 6,008.68 MG, representing 73.04 percent of flows for that year. Santa Rosa's contribution to the wastewater flow to the plant in 2022 was calculated to be about 10.6 MGD.

4.17.2.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant wastewater related impact if it would:

4. Require or result in the relocation or construction of new or expanded wastewater treatment or facilities, the construction or relocation of which could cause significant environmental effects.
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
6. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to wastewater facilities.

[37] North Coast Regional Water Quality Control Board, 2020, Waste Discharge Requirements and Water Recycling Requirements for the City of Santa Rosa, Santa Rosa, Regional Water Reuse System, Laguna Treatment Plant, Sonoma County, Order No. R1-2020-0012.

[38] City of Santa Rosa, February 24, 2023, *2022 Annual Report: Regional Water Reuse System – Laguna Treatment Plant*, https://www.srcity.org/DocumentCenter/View/31637/2022-Santa-Rosa-Regional-Water-Reuse-System-Annual-Report, accessed September 7, 2023.

4.17.2.3 IMPACT DISCUSSION

USS-4 Implementation of the proposed project would not require or result in the relocation or construction of new or expanded wastewater treatment or facilities, the construction or relocation of which could cause significant environmental effects.

Buildout of the proposed project would result in an increase in wastewater, which includes liquid and solids, with the addition of 24,090 new housing units and 8,364,760 square feet of non-residential land use. Wastewater collected in the EIR Study Area would be conveyed to the Regional Water Reuse System/Laguna Treatment Plant for treatment. Other cities (Cotati, Rohnert Park, and Sebastopol) and the South Park County Sanitation District also convey wastewater to this facility and are included in this analysis.

An estimate of the amount of additional wastewater generated by the proposed project was determined, as shown in Table 4.17-10, *Wastewater Demand Increase, Proposed General Plan 2050.* The wastewater demand factors were derived in consultation with the City of Santa Rosa and assumed that 80 percent of the total water demand consisted of indoor water use and that 100 percent of the indoor water use became wastewater.

TABLE 4.17-10 WASTEWATER DEMAND INCREASE, PROPOSED GENERAL PLAN 2050

Category	Amount	Units
Water Demand	5,339,136	GPD
Wastewater Factor	0.8	
Wastewater Demand	4,271,309	GPD
Wastewater Demand Increase with General Plan 2050	**4.27**	**MGD**
Existing Wastewater Demand	13.1	MGD
Increase for Santa Rosa with GP Buildout	4.27	MGD
Increase for Other Contributors	0.6	MGD
Total	**17.97**	**MGD**

Notes:
a. Assumes 80 percent of total water demand is indoor water and that 100 percent of indoor water becomes wastewater.
b. GPD = gallons per day; MGD = million gallons per day.
c. Existing wastewater demand from 2022 Regional Water Reuse System Annual Report.
d. Projected 2035 wastewater flows for Cotati, Rohnert Park, and Sebastopol from 2014 Sanitary Sewer System Master Plan Update.
Sources: City of Santa Rosa, 2023; PlaceWorks, 2023.

The increase in wastewater demand with buildout of the proposed project is estimated to be approximately 4.27 MGD. Combined with the existing average daily flow of 13.1 MGD and the increase with other contributors to the Laguna Treatment Plant flow rates, the estimated total wastewater flow rate in 2050 is estimated to be approximately 18 MGD.

The Laguna Treatment Plant is currently permitted for an average daily flow rate of 21.34 MGD. As noted previously, capacity up to 25.9 MGD ADWF is permitted if the City can show the improvements necessary to achieve that flow. In addition, the facility has an effluent pond system with a maximum capacity of 1.65

million gallons that can control surges in volume during wet weather conditions and the facility also recycles approximately 6.6 billion gallons of wastewater per year. Also, the treatment plant is undergoing system upgrades as part of the CIP.

Therefore, the Laguna Treatment Plant will be able to accommodate the future wastewater flows from Santa Rosa and the other contributors to the facility's wastewater flow rates. In addition, the assumptions used in calculating future wastewater flow are conservative (i.e., they represent a "worst case scenario"), as wastewater flows to WWTPs continue to decline with water conservation efforts.[39]

In conjunction with upgrades to the Laguna Treatment Plant, the City of Santa Rosa is also implementing sewer collection improvement projects as recommended in the 2014 Sanitary SSMP. The goal is to replace portions of the sewer infrastructure with larger pipe sizes to accommodate future growth, improve wet weather capacity, and reduce inflow/infiltration. Completion of the Laguna Treatment Plant and sewer system upgrades should minimize the potential for future SSOs and the wastewater system will be able to accommodate the increases in wastewater flows with buildout of the EIR Study Area.

In addition, sewer demand fees (i.e., connection fees) are imposed on all new developments to recover a proportionate share of costs for existing and future wastewater system facilities and new or expanded connections to the City's wastewater system. Property owners are also required to pay monthly sewer service charges. These fees are also used to fund wastewater collection and treatment system improvements designated in the CIP and routine repair and maintenance by the Santa Rosa Water Department.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require planning and development decisions to consider impacts to wastewater collections systems and treatment facilities. In addition to the goals, policies, and actions listed under impact discussion USS-1, the following goal, policy, and actions would serve to minimize potential adverse impacts to wastewater infrastructure with future development:

- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.4: Ensure that adequate wastewater capacity is available to serve existing and future needs of the city.
    - Action 5-9.22: Maintain existing levels of wastewater service by preserving and improving infrastructure, including replacing sewer mains, as necessary.
    - Action 5-9.23: Decline requests for extension of sewer services beyond the Urban Growth Boundary.
    - Action 5-9.24: Implement the Sewer Master Plan via projects identified in the Capital Improvement Program.
    - Action 5-9.25: Regularly review wastewater treatment and biosolids management strategies to accommodate growth over the life of the General Plan.

[39] California Water Environment Association, 2023, Dealing with Declining Wastewater Flows, https://www.cwea.org/news/dealing-with-declining-flows/, accessed on August 31, 2023.

- Action 5-9.26: Work with regional partners (notably the Cities of Rohnert Park, Cotati, and Sebastopol, and Sonoma Water) to build consensus on maintenance, rehabilitation, modernization, and resilience improvements for facilities that provide service to them, such as the Laguna Treatment Plant.

Implementation of the proposed project would not require the construction or expansion of the Laguna Treatment Plant or sewer collection system beyond what is already planned or under construction. Adherence to the City's municipal code requirements as well as the proposed General Plan 2050 goals, policies, and action would reduce wastewater generation rates over time, and therefore impacts associated with the sewer collection and treatment systems would be *less than significant.*

Significance without Mitigation: Less than significant.

USS-5 Implementation of the proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

As described under impact discussion USS-4, the City's Laguna Treatment Plant is currently permitted to treat up to 21.34 MGD. The City's contribution to an increase in wastewater demand in 2050 is estimated to be 4.27 MGD, as shown in Table 4.17-10. Including increases by other wastewater contributors, the total wastewater flow rate to the treatment plant is estimated to be about 18 MGD. This is well below the permitted capacity of the Laguna Treatment Plant of 21.34 MGD. Capacity up to 25.9 MGD is permitted if the City can show the improvements necessary to achieve that flow.

The estimated increase in wastewater flows is conservative because there likely will be declining rates of wastewater generation over time because new projects would be required to comply with the California Plumbing Code and CALGreen and implement active and passive water conservation measures. This would also reduce the amount of wastewater produced per dwelling unit or building. Future development would also be required to undergo City review. Furthermore, as described under impact discussion USS-4, the proposed General Plan 2050, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* contains goals, policy, and actions that require local planning and development decisions to consider impacts to wastewater collections systems and treatment facilities. The same proposed General Plan 2050 goals, policies, and actions identified under impact discussion USS-4 would ensure that potential future development would minimize impacts to wastewater collection and treatment capacity.

With continued compliance with applicable regulations wastewater generated by the proposed project would not exceed the capacity of the Laguna Treatment Plant. In addition, implementation of the proposed General Plan 2050 goals, policies, and actions would further reduce demand. Therefore, the proposed project would not result in a determination by the wastewater treatment provider that there is not adequate capacity to serve the EIR Study Area's projected demand in addition to the demands of other wastewater dischargers. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

USS-6	**Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to wastewater facilities.**

The context used for the cumulative assessment is the service area of Santa Rosa's Laguna Treatment Plant. In addition to wastewater discharged to the treatment plant by the City, there are other dischargers, including the cities of Cotati, Rohnert Park, and Sebastopol, and the South Park Community Sanitation District.

As described under impact discussion USS-4, the existing and future wastewater flows to the City's Laguna Treatment Plant were calculated for all dischargers, as shown in Table 4.17-10. The facility currently has the capacity to treat 25.9 MGD and would still have a residual average annual dry weather capacity of 7.9 MGD.

Also, the City has committed to implementing improvements to the Laguna Treatment Plant and sewer collection system, as described in the CIP. The other dischargers to the treatment plant also have sewer collection system improvement programs. Future development within the city would require compliance with all applicable regulations and ordinances. Project applicants would have to pay wastewater demand (connection) fees and property owners are required to pay monthly sewer service charges, which funds continued improvements to the wastewater collection and treatment systems.

Therefore, with continued compliance with applicable regulations and future reductions in wastewater demands with water conservative efforts, cumulative development would not exceed wastewater collection or treatment capacities. Accordingly, the proposed project would not result in a cumulatively considerable impact related to wastewater, and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.3 STORMWATER

4.17.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

The regulatory framework for stormwater is described in detail in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR. The regulatory requirements that pertain solely to storm drain systems are repeated below.

Federal Regulations

National Pollutant Discharge Elimination System

Under the NPDES program, all facilities that discharge pollutants into waters of the U.S. are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The

City of Santa Rosa lies within the jurisdiction of North Coast RWQCB (Region 1) and is subject to the waste discharge requirements of the Phase I MS4 Permit (Order No. R1-2014-0030; NPDES No. CA0025054) that regulates stormwater discharges from the City of Santa Rosa, portions of unincorporated Sonoma County, Sonoma Water, the cities of Cotati, Cloverdale, Healdsburg, Rohnert Park, Sebastopol, Ukiah and the Town of Windsor.

State Regulations

SWRCB General Construction Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (Order WQ 2022-0057-DWQ; NPDES No. CAS000002), which was adopted on September 8, 2022, and becomes effective on September 1, 2023. Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMP) and prepare a SWPPP containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a weekly visual monitoring program and BMP inspections prior to, during, and after qualifying precipitation events. Water quality monitoring is also required with a schedule based on the risk level of the site.

SWRCB Industrial General Permit

The Statewide General Permit for Stormwater Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ and amended by 2015-0122-DWQ (2018), implements the federally required stormwater regulations in California for stormwater associated with industrial activities that discharge to waters of the United States. This regulation covers facilities that are required by federal regulations or by the RWQCBs to obtain an NPDES permit. Dischargers are required to eliminate non-stormwater discharges, develop SWPPPs that include BMPs, conduct monitoring of stormwater runoff, and submit all compliance documents via the SWRCB's SMARTS program.

SWRCB Trash Amendment

On April 7, 2015, the SWQCB adopted an amendment to *The Water Quality Control Plan for Ocean Waters of California* to control trash. In addition, the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* added Part 1, *Trash Provisions*. Together, they are collectively referred to as "the Trash Amendments." The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-

generation rates. Areas such as high density residential, industrial, commercial, mixed urban, and public transportation stations are considered priority land uses.

The Trash Amendments apply to all Phase I and II permittees under the NPDES MS4 permits. The Trash Amendments require municipalities to install certified trash control systems, such as filters, on all catch basins no later than December 2, 2030.[40]

Sonoma Water

Sonoma Water has recently revised its Flood Management Design Manual, which is to be used by public agencies and private entities in Sonoma County that are designing, constructing, or maintaining waterways, channels, closed conduits, or culverts. It is applicable for drainage designs, plans, or improvements that are subject to review by Sonoma Water. It provides the methodology and criteria for analyzing storm drain systems and facilities that are necessary to convey stormwater runoff from large storm events. It replaces the previous Sonoma Water Flood Control Design Criteria.[41] The Santa Rosa Storm Drain Design Standards uses this methodology for the hydrologic and hydraulic design of storm drains within the city.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives that pertain to stormwater in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions are in Title 16, *Storm Water Enterprise;* Title 17, *Environmental Protection;* and Title 20, *Zoning*:

- Section 14-30.055, *Grading Design Plan*. This chapter states that when slopes are greater than 10 percent, a grading plan is needed that clearly identifies drainage patterns and storm water retention improvements.
- Chapter 16-12, *Establishment of Storm Water Enterprise*. This chapter creates the Storm Drainage and Flood Control Management Enterprise which operates the City's surface water, storm water, storm drainage, and flood control management efforts.
- Chapter 17-12, *Storm Water*. This chapter is broken up into two articles that give an overview of drainage areas and storm water quality.
    - Article I. *Drainage*. This article establishes requirements for driveway culverts, permits, and violations associated with stormwater.

[40] State Water Resources Quality Control Board, September 2022, Storm Water Program: Trash Implementation Program, https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html, accessed April 4, 2023.

[41] Sonoma Water, 2020, *Flood Management Design Manual*, https://www.sonomawater.org/media/PDF/Water%20Resources/Flood%20Protection/Flood%20Management%20Design%20Manual/FMDM_Main_Body_Mar2020_ADA%20v2.pdf, accessed August 4, 2023.

- Article II. *Storm Water Quality.* This article's purpose is to limit the amount of spills and dumping or disposal of materials other than storm water in the City's storm water system and to reduce pollutants in storm water discharge to the highest degree possible.

- Chapter 20-30.040, *Creekside Development*. This section provides minimum setbacks from waterways to provide protection for owners of riparian property and the public from the hazards of stream bank failures and flooding. In general, the setback area on either side of a natural or modified waterway shall be 50 feet from the top of the highest bank for new structures.

Storm Water Low Impact Development Technical Design Manual

Recently revised in 2020 and applicable for all new development in Santa Rosa, the Storm Water Low Impact Development (LID) Technical Design Manual provides technical guidance for project designs that require the implementation of permanent stormwater BMPs intended to satisfy NPDES permit requirements.[42] The intention of the Stormwater LID Technical Design Manual is to promote LID goals of minimizing adverse impacts from storm water runoff; minimizing the percentage of impervious surfaces on land development projects and implementing mitigation measures to mimic the pre-development water balance; minimizing pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways; and properly selecting, designing and maintaining treatment control BMPs and Hydromodification Control BMPs.

Storm Drain Standards

The City of Santa Rosa has established Storm Drain Design Standards to assist developers and their engineers in the design of storm drain facilities within the City.[43] The Storm Drain Design Standards provides the methodology for determining stormwater runoff rates and the hydraulic design criteria to be used in sizing storm drains. In general, drainage systems must be designed to accommodate flows from storms with recurrence intervals ranging from 10 to 100 years, depending on the waterway classification to which it discharges. Open channels that will be maintained by Sonoma Water must be designed as specified in the 2020 Sonoma Water *Flood Management Design Manual*.

Storm Water Assessment Funding

The City of Santa Rosa has established a funding program dedicated to mitigating storm water impacts to the storm drain system, as well as downstream creeks and waterways. The Storm Water Assessment is a charge placed on each city parcel and is used to fund such projects as mapping and evaluating the storm drain system, flood control improvements, responses to flooding issues and creek restoration.[44]

[42] Cities of Cloverdale, Cotati, Healdsburg, Rohnert Park, Santa Rosa, Sebastopol, and Ukiah, County of Sonoma, Sonoma Water, and Town of Windsor, revised December 2020, *Storm Water Low Impact Development Technical Design Manual*, https://www.srcity.org/DocumentCenter/View/14974/2017-Storm-Water-Technical-Design-Manual-Narrative -revised-1621, accessed April 5, 2023.

[43] City of Santa Rosa, April 26, 2005, *Public Storm Drain Standards,* https://www.srcity.org/DocumentCenter/View/17627/Storm-Drain-Standards, accessed September 7, 2023.

[44] City of Santa Rosa, 2023, *Storm Water Assessment*, https://www.srcity.org/2909/ Storm-Water-Assessment, accessed September 5, 2023.

Existing Conditions

Stormwater Collection System

The City's storm drain system consists of 320 miles of storm drain lines and 75 miles of open channels and ditches. These facilities are part of an integrated system of roadside gutters, drainage ditches, pipelines, and creeks that are used to collect and convey the stormwater runoff to creeks within the City and ultimately into Laguna de Santa Rosa. The existing stormwater system is shown on Figure 4.17-3, *City of Santa Rosa Stormwater System.* The City's storm drain system also makes use of stormwater detention facilities used to attenuate peak flows and allow for the settlement of sediment from the stormwater flows before continuing downstream. The Public Works Department works year-round cleaning silt, trash, and other pollutants out of the City's catch basins and storm drains, using a large vacuum truck. Sonoma Water's Stream Maintenance crews are responsible for removing sediment and vegetation in the creeks that flow through the City of Santa Rosa. The City is in the process of developing a Storm Drain Master Plan to evaluate the capacity of the existing storm drain facilities, identify areas of deficiencies, and recommend upgrades to the system.

The City is continually upgrading its stormwater infrastructure through the CIP, which is a five-year financial plan for maintenance and expansion of public infrastructure. The prioritized capital improvement projects involving stormwater infrastructure focus on pumping improvements at wet weather storage basins, new bio-retention facilities, creek restoration, and various citywide improvements to storm drainage pipes, catch basins, ditches and bank stabilization.[45]

Some of the CIP programs that have currently been approved and are in the planning or construction phase include the following stormwater infrastructure projects:

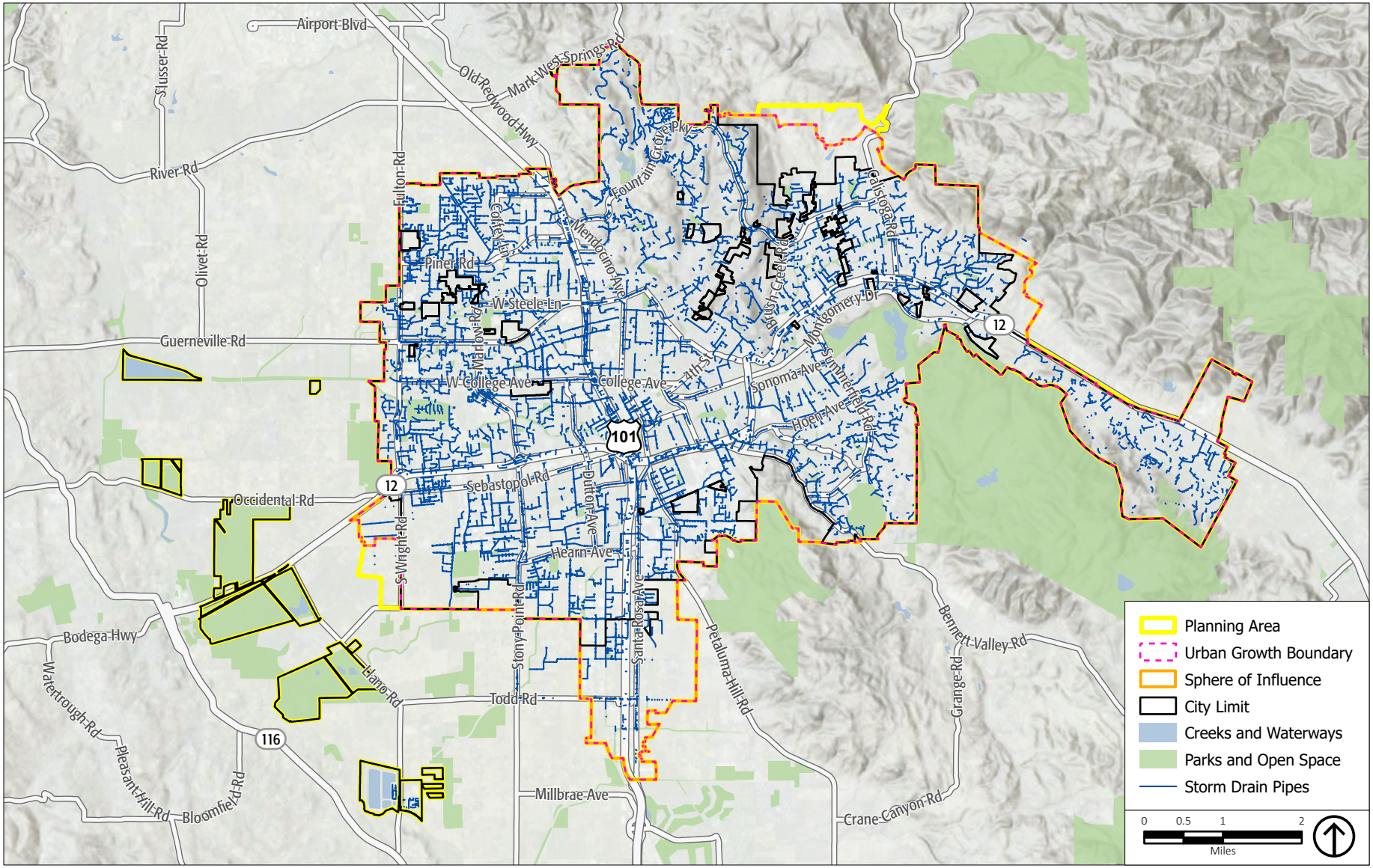
- Lower Colgan Creek Restoration: Restore channel into a natural creek and improve retention.
- Parker Hill Rd and Paulin Creek Erosion Repair: Improvements to drainage area to prevent erosion.
- 3rd Street Storm Drain Pump Coupling Replacement.
- Storm Water Creek Restoration Projects: Improvement to habitat and water quality in creeks and waterways.
- Preparation of the Storm Drain Master Plan.

Stormwater Discharge

Runoff generated in Santa Rosa drains through nine subwatershed areas that ultimately discharge into Laguna de Santa Rosa. Numerous major creeks and various tributaries convey the stormwater between the city's runoff-generating sources and the Laguna de Santa Rosa.

Santa Rosa Creek is a part of the city's largest drainage basin and flows westward through the City, collecting runoff from the east-central portion of the city as well as the downtown area. The northeastern section of the City is drained by Brush Creek and its tributaries, which connect to Santa Rosa Creek.

[45] City of Santa Rosa, 2023, Capital Improvement Program, https://www.srcity.org/690/Capital-Improvement-Program, accessed August 29, 2023.



Source: ESRI, 2022; City of Santa Rosa, 2023; PlaceWorks, 2024.

Figure 4.17-3
City of Santa Rosa Stormwater System

Portions of the Oakmont Creek subwatershed drain into Oakmont Creek, which connects to Santa Rosa Creek, while other creeks in the area drain east toward Sonoma Creek and eventually into San Pablo Bay. Matanzas Creek and Spring Creek are within the Matanzas Creek watershed and collect runoff from the southcentral portion of the city, eventually connecting to Santa Rosa Creek. Piner Creek and Paulin Creek collect runoff from the northern portion of the city and are also tributaries to Santa Rosa Creek. The Southern Santa Rosa Creeks subwatershed, which includes Roseland Creek, Kawana Springs Creek, and Colgan Creek, conveys runoff directly to Laguna de Santa Rosa. The Western Creeks watershed includes Gravenstein and Naval Creeks and also discharges directly into Laguna de Santa Rosa. Todd Creek also provides drainage for the far southern portion of the City and connects to Laguna de Santa Rosa via the Bellevue-Wilfred Channel.

4.17.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in a significant stormwater impact if it would:

7. Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.
8. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to stormwater facilities.

4.17.3.3 IMPACT DISCUSSION

USS-7	**Implementation of the proposed project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.**

Potential future new development and/or redevelopment in the EIR Study Area would result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, much of the city is already built out and future development and redevelopment sites may replace existing land uses that already contain impervious surfaces and pavement. Therefore, new development on these sites should not create a significant increase in impervious surfaces.

Also, regulated projects that create or replace 10,000 square feet or more of impervious surfaces would trigger the implementation of stormwater treatment and trash collection measures to reduce stormwater runoff, pursuant to the MS4 Permit and the City's Stormwater LID Technical Design Manual. Implementation of these stormwater measures will reduce the amount of stormwater runoff that is ultimately discharged to the City's storm drain system and the creeks that run through Santa Rosa. Prior to the issuance of grading permits, the City will require completion and submittal of a Storm Water LID Determination Worksheet and an Initial and Final Storm Water Low Impact Development Submittal (SWLIDS) report for review and approval to ensure that these requirements are met.

The MS4 permit and City also require that all projects that generate runoff from the 1.0-inch, 24-hour storm event must treat stormwater onsite for the pollutants of concern and install trash capture devices. For all projects that create and/or replace 10,000 square feet of impervious surface or more but less than one acre of impervious surface, any increase in stormwater volume from the 1.0-inch, 24-hour storm event must be captured onsite and trash capture requirements must be implemented. Projects that create and/or replace one acre or more of impervious surfaces must also adhere to the hydromodification requirements of the MS4 permit and demonstrate that 100 percent of the post-project runoff generated by a 1.0-inch, 24-hour storm event is infiltrated and/or retained on-site. This would minimize the amount of stormwater runoff from new development and redevelopment sites within the EIR Study Area.

Also, as part of the permitting process, future development would be required to pay a storm water assessment, pursuant to SRCC Title 16, which is designed to mitigate the impacts of stormwater that is discharged into the creeks and waterways in Santa Rosa. The assessments are used to evaluate and maintain the storm drain system, implement flood control improvements, respond to flooding issues, and restore creeks and habitat.

Additionally, all potential future development in the EIR Study Area would be required to comply with the requirements of the SRCC Section 17-12.010, which requires drainage permits for discharge into the storm drain system and prohibits discharges in violation of the NPDES permit (Section 17-12.150). All development that discharges storm water associated with industrial activity shall also comply with the requirements of the General Industrial Permit (Order No. 2014-0057-DWQ) and amended in 2018 by Order No. 2015-0122-DWQ.

Lastly, the City's CIP describes planned improvements to the existing storm drains and new stormwater infrastructure (i.e., bio-retention facilities) needed for future development. The construction of new stormwater facilities through the CIP, implementation of best management practices and on-site stormwater control measures, and preparation of the required documents and review by the City would serve to minimize any potential impacts associated with stormwater.

Chapter 3, *Circulation, Conservation, and Greenhouse Gas Reduction Element*, and Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities Element*, of the proposed General Plan 2050 contain goals, policies, and actions that require local planning and development decisions to consider impacts related to storm drain infrastructure. In addition to the goals, policies, and actions listed under impact discussion USS-1, the following goals, policies, and actions would serve to minimize potential adverse impacts related to stormwater discharge:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.5: Maintain, restore, and protect the city's waterways.
    - Action 3-5.14: Implement the Citywide Creek Master Plan and promote a "one water" approach that teaches preservation and stewardship of local creeks and water resources.
    - Action 3-5.15: Periodically review the status of local creeks and plan for ongoing restoration, planning, and stewardship, as identified in the Citywide Creek Master Plan.

- Action 3-5.16: Seek funding to maintain and restore citywide creeks, including for recreational opportunities linked to creeks as well as for flood control.
- Action 3-5.17: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.

- Policy 3-5.6: Restore channelized waterways and avoid creating additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.
  - Action 3-5.18: Restore and enhance the ecological function of channelized waterways, consistent with the Citywide Creek Master Plan, and avoid channelizing additional segments of the waterways system.

- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
  - Policy 5-2.6: Manage, maintain, and improve stormwater drainage and capacity.
    - Action 5-2.12: Require dedication, improvement, and ongoing maintenance of stormwater management and retention areas as a condition of development approval.
    - Action 5-2.13: Identify and collect development impact fees needed to pay for mitigation of stormwater management impacts for new development.
    - Action 5-2.14: Require improvements that maintain and improve the storm drainage system citywide and prioritize areas needing significant investment, consistent with the Santa Rosa Citywide Creek Master Plan goals of preserving natural conditions of waterways and minimizing channelization of creeks.
    - Action 5-2.15: Ensure creek-side paths and trails are consistent with the Citywide Creek Master Plan and Active Transportation Plan and are incorporated into stormwater improvement projects along creek corridors.
  - Policy 5-2.7: Provide storm drainage facilities that accommodate increased development and enhanced water quality.
    - Action 5-2.16: Cooperate with Sonoma Water and the Northern California Regional Water Quality Control Board on assessments of stormwater drainage facilities to ensure adequate capacity to accommodate increases in residential and commercial development.
    - Action 5-2.17: Require implementation of best management practices for all new development to reduce discharges of nonpoint-source pollutants to the storm drain system.

Compliance with the MS4 permit and the City's stormwater design standards and requirements would ensure that potential future development would not result in significant increases in runoff and would not contribute to the construction of new storm drain facilities or expansion of existing facilities that would cause significant environmental impacts. In addition, implementation of the proposed General Plan 2050 goals, policies, and actions would further reduce stormwater demand on the system, and the City would continue to repair, rehabilitate, and upgrade the storm drain system through implementation of the CIP. Therefore, impacts with respect to stormwater infrastructure would be *less than significant.*

Significance without Mitigation: Less than significant.

USS-8 Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to stormwater facilities.

The analysis of cumulative storm drainage impacts considers potential future development within the nine subwatersheds that encompass the EIR Study Area. Cumulative projects could result in an incremental increase in impervious surfaces that could increase stormwater runoff and impact existing storm drain facilities. However, all cumulative projects would be required to comply with the Sonoma County Municipal Code and SRCC as well as the MS4 permit, the City's Stormwater LID Technical Design Manual, and Sonoma Water's Water Smart Development Guidebook, which would minimize stormwater runoff.

As discussed previously, future development within the EIR Study Area would require conformance with State and City policies that would reduce hydrology and infrastructure construction impacts to less than significant levels. Any new development within the EIR Study Area would be subject to the proposed General Plan 2050 goals, policies, and actions listed under impact discussion USS-7, SRCC, LID Design Manual, and other applicable City requirements that reduce impacts related to hydrology and stormwater drainage facilities. Therefore, potential changes related to stormwater flows, drainage, impervious surfaces, and flooding would be minimized by the implementation of stormwater control measures, retention, infiltration, and low-impact-development measures and review by Santa Rosa Water to integrate measures to reduce potential stormwater drainage and flooding impacts.

All cumulative projects in unincorporated Sonoma County within the watershed areas would be subject to similar permit requirements and compliance with the MS4 permit. All new development would be required to prepare drainage reports in accordance with the County's Flood Management Design Manual for review and approval by Permit Sonoma. Sonoma County has also prepared the Water Smart Development Guidebook that serves as a supplementary resource to the City's Stormwater LID Technical Design Manual to assist developers in incorporating LID storm water features on their project sites.[46]

In combination with past, present, and reasonably foreseeable projects, development and redevelopment within the EIR Study Area would not result in a cumulatively considerable impact to stormwater infrastructure within the watersheds, and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

[46] Sonoma County Water Agency, December 2013, *Water Smart Development Guidebook*, accessed September 7, 2023, https://evogov.s3.amazonaws.com/media/185/media/165407.pdf.

4.17.4 SOLID WASTE

4.17.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State Regulations

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 *et seq.*) authorizes the formation of sanitation districts and enforces the sanitation districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. This Act was amended in 1949 to allow the sanitation districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

Integrated Waste Management Act

The Integrated Solid Waste Management Act of 1989 (AB 939), codified in Public Resources Code 40050 et seq., established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. This act also requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resource Recycling and Recovery (CalRecycle), a department within the California Natural Resources Agency. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is calculated as a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

Mandatory Commercial Recycling Act (AB 341)

AB 341 (Chapter 476, Statutes of 2011) increased the statewide solid waste diversion goal to 75 percent by 2020 and mandates commercial businesses and public entities that generate four cubic years or more of waste per week to have a recycling program in place. In addition, multifamily residential properties with five or more units are also required to develop a recycling program. AB 341 is designed to reduce greenhouse gas (GHG) emissions in the state by 5 million metric tons of carbon dioxide equivalents. In Santa Rosa, businesses and property owners can subscribe to composting and recycling services provided by Recology Sonoma Marin (Recology).

Mandatory Organics Recycling Act (AB 1826)

AB 1826, which was enacted in 2014 and took effect in 2016, mandated organic waste recycling for all businesses and multifamily dwellings that consist of five or more units. Starting in January 2020, all generators of two cubic yards or more of garbage, recycling, and compost combined per week must recycle organic waste. Organic waste includes food scraps, food-soiled paper and cardboard waste, green waste and yard trimmings, landscaping materials, and nonhazardous, untreated wood waste.

California Short-Lived Climate Pollutants Act (SB 1383)

SB 1383 focuses on the elimination of methane gas created by organic materials in landfills and establishes goals to reduce the landfill disposal of organics by achieving a 50 percent reduction in the statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. Organic waste makes up half of what Californians send to landfills. SB 1383 requires all businesses and residents to divert organic materials from landfills. The regulation took effect on January 1, 2022, and requires that organic collection services be provided to all residents and businesses. The collected organic waste must be recycled into new products, such as compost, mulch, biofuel, and electricity. Each city and county has an annual procurement target based on its population. Also, an edible food recovery program must be established by 2025 with the goal of recovering 20 percent of currently disposed edible food that would otherwise be sent to landfills to feed people in need. Mandated food donors and food recovery organizations and services must keep records of the amount and dates of food donations and acceptances.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act requires new commercial and multi-family development projects to set aside areas for collecting and loading recyclable materials. This act required CalRecycle to develop a model ordinance for adoption by any local agency that provides adequate areas for the collection and loading of recyclable materials for development projects. Local agencies are required to adopt the model, or an ordinance of their own, that establishes standards including space allocation for the collection and loading of recyclable materials.

CALGreen

The 2022 CALGreen became effective on January 1, 2023. Sections 4.408 and 5.408, C*onstruction Waste Reduction Disposal and Recycling*, mandate that, in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction and demolition debris must be recycled or

salvaged. CALGreen requires developers to prepare and submit a Construction Waste Management Plan, which must:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials would be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected can be taken.
- Identify construction methods employed to reduce the amount of waste generated.
- Specify that the amount of materials diverted shall be calculated by weight or by volume but not both.

Regional Regulations

Sonoma County Countywide Integrated Waste Management Plan

Prepared in 2003, the Sonoma County Countywide Integrated Waste Management Plan (CoIWMP) complies with the California Integrated Waste Management Act of 1989 and includes the Source Reduction and Recycling Element, Household Hazardous Waste Element, Siting Element, and Non-Disposal Facility Element.[47] The purpose of the CoIWMP is to demonstrate methods and goals for the reduction of solid waste that is disposed of at landfills while demonstrating the long-term ability for Sonoma County to implement waste diversion programs and adequate disposal facilities for local jurisdictions.

Sonoma County Environmental Health Section, Solid Waste Management Program

The Sonoma County Environmental Health Section, Solid Waste Management Program enforces state laws and regulations at solid waste sites within the County. Certified by CalRecycle, the agency is the Local Enforcement Agency for the landfills, transfer stations, and composting facilities within Sonoma County and conducts inspections and monitoring of these facilities as well as the franchised waste haulers. The agency also addresses illegal accumulation and investigates storage complaints.[48]

Zero Waste Sonoma

Zero Waste Sonoma (previously known as Sonoma County Waste Management Agency) is a joint powers authority for nine cities and towns within Sonoma County, including Santa Rosa, and the unincorporated areas of the county.[49] Zero Waste Sonoma provides recycling, composting and household hazardous waste programs and exists to serve and help county residents to reduce, reuse, and recycle materials safely and effectively. Jurisdictions within the county have adopted ordinances to reduce solid waste generation, with a goal of substantially reducing material going to landfills by 2030. Zero Waste Sonoma assists local

[47] Sonoma County, October 15, 2003, *Sonoma County Countywide Integrated Waste Management Plan*, https://zerowastesonoma.gov/uploads/reports/CoIWMP_Combined.pdf, accessed September 1, 2023.

[48] County of Sonoma, 2022, Solid Waste, https://sonomacounty.ca.gov/public-notice-solid-waste-management-program-local-enforcement-agency-(lea) , accessed September 6, 2023.

[49] Zero Waste Sonoma, 2023, About Us, https://zerowastesonoma.gov/about, accessed September 6, 2023.

jurisdictions in meeting statewide waste diversion goals and performs state reporting functions for the jurisdictions within the county.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives to ensure the proper handling of and adequate facilities for solid waste. The SRCC is organized by title, chapter, and section, and in some cases, articles. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to solid waste services are in Title 9, *Health and Safety*; Title 18, *Building and Construction;* and Title 20, *Zoning,* as follows:

- Chapter 9-10, *Waste Reduction Program for Carryout Bags*. This chapter states that no retail establishment shall provide single-use carryout bags and may make available for sale to a customer a recycled paper bag at a minimum charge
- Chapter 9-12, *Refuse and Sanitation*. This chapter establishes provision of waste, recycling, and yard trimmings collection services governed by the collection services contract. This chapter also outlines the rates for collection services and the rules associated with them.
- Chapter 9-14, *Construction and Demolition Debris*. This chapter requires that any person or entity that provides construction and demolition debris collection service within the city shall be required to enter into a nonexclusive Franchise Agreement with the City and pay a franchise fee to provide such service.
- Chapter 9-30, *Zero Waste Food Ware*. This chapter states that food facilities and retail establishments in Santa Rosa must not sell, procure, distribute, or otherwise give way food ware or food accessories that contain either Per- and Polyfluoroalkyl or Polystyrene, and requires all Dine-In food facilities to only use reusable food ware and reusable food ware accessories. This chapter also describes other restrictions regarding food ware or food accessories and how three-bin waste stream containers are required.
- Chapter 18-42, *California Green Building Standards Code*. This chapter adopts the State Green Building Standards Code by reference. With adoption of the California Green Building Standards Code, 2022 edition, the City requires that all construction projects submit a Construction Waste Management Plan that documents the diversion of construction waste and debris in compliance with the CALGreen requirements.
- Section 20-30.120, *Solid Waste and Recycling Storage Facilities*. The purpose of this section is to provide recycling and waste collection areas within all developments city-wide. Design review approval is required for all waste collection and recycling facilities.

Santa Rosa Zero Waste Master Plan

Adopted in January 2020, the City of Santa Rosa's Zero Waste Master Plan guides the community in diverting its waste from landfill disposal and reducing waste at the source.[50] The City's zero waste goal is to reduce landfill disposal to less than one pound per person per day and achieve at least 75 percent diversion of waste from landfill disposal by 2030. The strategy of the Zero Waste Plan is to reduce waste generation at the source, increase the rates of recovery for divertible materials, increase community participation in recycling programs, increase the diversion of construction and demolition materials, and establish the City as a community leader in Zero Waste culture through outreach and education. The City also adopted the Zero Waste Sonoma resolution in 2020 that sets a goal of zero waste by 2030 and reducing the total pounds per person per day by at least 10 percent every year.

Existing Conditions

Solid Waste Collection and Recycling

Recology is the franchise waste hauler for the City of Santa Rosa and provides residential and commercial solid waste collection, composting, and recycling services. Recology provides the following services to residents and businesses in the City:

- Weekly curbside collection of waste in three containers: landfill waste in a gray container, recyclables in a blue container, and organics (including yard and food waste) in a green container.
- Kitchen countertop compost pails to collect food scraps for placement in the compost cart.
- Curbside pickup of household batteries and motor oil and filters.
- Two free pickups per year of bulky items, such as old furniture, appliances, or mattresses.
- Outreach, education, and technical support to help customers divert more materials from landfill disposal and audits for businesses to identify opportunities to increase diversion
- 15 percent discount on Recology bill offered through the Recology Cares program for eligible households.
- Debris boxes for construction and demolition (C&D) waste and transport and recycling of C&D materials, are provided as a separate, non-exclusive service.

All garbage collected in the gray bins from residents and businesses is transported to the Central Landfill in Petaluma, which is operated by Republic Services. The single-stream recycled material collected in the blue bins is transported to Recology's Materials Recovery Facility in Santa Rosa, where it is sorted and baled for shipment. The organic waste collected in the green bins is transported to various composting facilities outside the County, including Cold Creek Compost, West Contra Costa Sanitary Landfill Organics Processing Facility, and Waste Management's Earth Care Compost Facility in Novato. Each jurisdiction within Sonoma County receives an allotment of compost as part of the organics processing contracts, and Zero Waste Sonoma also manages a compost rebate program. Santa Rosa received about 1,683 yards of compost in 2022, which is given to residents, schools, nonprofits, gardens, parks, and ranchland. Santa

[50] City of Santa Rosa, November 1, 2019*, Zero Waste Master Plan*, https://www.srcity.org/DocumentCenter/View/26668/Final-Santa-Rosa-Zero-Waste-Plan, accessed September 1, 2023.

Rosa recovered approximately 1.4 million pounds of edible food in 2022, which is donated to food recovery organizations and services in Santa Rosa. The majority of the food was delivered to Redwood Empire Food Bank, which serves pantries throughout Sonoma County.[51]

Landfills

The City of Santa Rosa is a member of the Sonoma County Waste Management Agency (now known as Zero Waste Sonoma), which is a county-wide Joint Powers Authority organized to provide regional compliance with State solid waste regulations and to act on behalf of its members in reporting disposal and diversion rates to CalRecycle. Therefore, there are no individual landfill disposal rates provided for cities within Sonoma County; they are incorporated in the County statistics.

In 2019, the solid waste that was generated by Sonoma County Waste Management Agency was transported to 26 facilities and landfills for a total disposal rate of 472,841 tons. However, 73 percent of the solid waste from Sonoma County and the majority of the waste from Santa Rosa was delivered to the Central Landfill in Petaluma.[52]

The Central Landfill (officially known as the Central Disposal Site) is operated by Republic Services of Sonoma County Inc. and is located at 500 Meacham Road in Petaluma. The landfill has a maximum permitted throughput of 2,500 tons per day, a remaining capacity of 9.2 million cubic yards, and is estimated to close in 2043. Therefore, the landfill has a remaining capacity of more than 15 years as required by AB 939.[53] The Central Landfill information is summarized in Table 4.17-11, *Central Landfill Data.*

TABLE 4.17-11 CENTRAL LANDFILL DATA

Landfill Name and Location	Maximum Permitted Throughput, tons/day	Average Disposal, tons/day	Residual Disposal Capacity, tons/day	Remaining Capacity, cubic yards	Estimated Closing Year
Central Landfill (Central Disposal Site), Petaluma, CA	2,500	960	1,540	9,181,519	2043

Source: CalRecycle, 2023, SWIS Facility Details and Landfill Tonnage Reports.

Solid Waste Diversion and Recycling

Compliance with AB 939 is measured by comparing the CalRecycle target disposal rates for residents and employees to actual disposal rates. The CalRecycle target disposal rates for Sonoma County Waste Management Agency, of which the City of Santa Rosa is a member, for 2021 are 7.1 pounds per day (ppd) for residents and 18.3 ppd for employees. The actual disposal rates in 2021 were 4.6 ppd for residents and

[51] Sonoma County Waste Management Agency, 2022, Electronic Annual Report to CalRecycle.

[52] CalRecycle, 2023, *Landfill Tonnage Reports*, https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed September 1, 2023.

[53] CalRecycle, 2023, *SWIS Facility/Site Detail,* https://www2.calrecycle.ca.gov/SolidWaste/Site/Details/3621 *s*, accessed September 2, 2024.

11.5 ppd for employees.[54] Therefore, the solid waste diversion goals for Sonoma County and the City of Santa Rosa have been met.

4.17.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts related to solid waste if it would:

9. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
10. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.
11. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to solid waste facilities.

4.17.4.3 IMPACT DISCUSSION

USS-9 Implementation of the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

With implementation of the proposed project, the population is anticipated to increase by 65,760 residents and 14,090 jobs. As shown in Table 4.17-12, *Increase in Solid Waste Generation at 2050 Buildout,* this level of growth would result in an increase in solid waste of approximately 232 tons per day, or 84,777 tons per year. These numbers are conservative because, with continued recycling and waste reduction programs implemented by the City and Zero Waste Sonoma, the waste generation rates would be reduced over time. The City's goal is to reduce landfill disposal to less than one pound per person per day and achieve at least a 75 percent diversion rate from landfill disposal by 2030.[55]

TABLE 4.17-12 INCREASE IN SOLID WASTE GENERATION RATES AT 2050 BUILDOUT

Category	Increase in Residents or Jobs	Solid Waste Generation Rate (pounds/day)	Increase in Solid Waste (tons/day)	Increase in Solid Waste (tons/year)
Residents	65,760	4.6	151	55,206
Jobs	14,090	11.5	81	29,571
		Total	**232**	**84,777**

Sources: CalRecycle, 2023; PlaceWorks, 2023.

[54] CalRecycle, 2023, *Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report,* accessed July 27, 2023.

[55] City of Santa Rosa, November 1, 2019*, Zero Waste Master Plan*, https://www.srcity.org/DocumentCenter/View/26668/Final-Santa-Rosa-Zero-Waste-Plan, accessed September 1, 2023.

As shown in Table 4.17-12, an increase of 232 tons per day with buildout of the project would be about 15 percent of the current residual capacity of 1,540 tons per day at Central Landfill. In addition, some of the solid waste from the City of Santa Rosa is transported to other landfills in the Bay Area, and Zero Waste Sonoma and the City are working together to divert more waste from landfill disposal through recycling, composting, and edible food redistribution. This estimate conservatively assumes that all of the generated waste is landfilled. The results in Table 4.17-12 show that the proposed project would not generate solid waste in excess of the capacity of the landfills that serve the City and Sonoma County.

Furthermore, all new potential future development in the EIR Study Area would require compliance with CALGreen Sections 4.408 and 5.408, which require that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. New development and redevelopment would also need to comply with the requirements of AB 341 and SB 1383 that mandates recycling and organics collection for commercial and multifamily residential land uses. In addition, Recology provides recycling and green waste collection for all residents in Santa Rosa. Therefore, solid waste facilities would be able to accommodate project-generated solid waste, and impacts would be less than significant.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities,* of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to minimize impacts related to solid waste generation. In addition to the goals, policies, and actions listed under impact discussion USS-1, the following proposed goal, policies, and actions would serve to minimize potential adverse impacts on solid waste generation:

- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.5: Meet the city's solid waste disposal needs while maximizing opportunities for waste reduction and recycling.
    - Action 5-9.33: Continue to implement and update the City's Zero Waste Master Plan and Program.
    - Action 5-9.34: Continue public education programs about waste reduction, including recycling, composting, yard waste, wood waste, and household hazardous waste.
    - Action 5-9.35: Continue to enforce the City's Zero-Waste Food Ware Ordinance and share information and resources with food facilities to help facilitate compliance.
    - Action 5-9.36: Continue to implement and update the City's Environmentally Preferable Purchasing policies and identify opportunities to reduce use of single-use plastics in municipal operations and at City events.
    - Action 5-9.37: Promote non-plastic packaging alternatives to local businesses.
    - Action 5-9.38: Provide and maintain public drinking fountains and bottle fillers in high traffic and outdoor recreation areas to reduce demand for bottled water.
  - Policy 5-9.6: Identify and work with partners to address impacts from groundwater threats and solid waste.

    - Action 5-9.40: Monitor the Solid Waste Information System (SWIS) and Closed, Illegal, and Abandoned (CIA) Disposal Sites Program to identify solid waste sites and facilities that are illegal, abandoned, or have not met the standards for closure, and work with State agencies to investigate and enforce standards for sites, prioritizing sites in and near Equity Priority Areas.
- Policy 5-9.7: Facilitate residential, commercial, and industrial compliance with the Sonoma County Countywide Integrated Waste Management Plan.
    - Action 5-9.42: Provide educational materials regarding waste management, control, and recycling, including the Sonoma County Household Hazardous Waste Management Plan.

With continued compliance of the applicable regulations, leading to increased recycling and waste diversion, and adherence to the General Plan 2050 goals, policies, and actions listed above, anticipated rates of solid waste disposal from the project would be less than significant with respect to permitted landfill capacity. In addition, Sonoma County is well below the CalRecycle target disposal rates and meets the regulatory requirements of AB 939. Therefore, implementation of the proposed project would not generate solid waste in excess of State and local standards, or in excess of the capacity of the landfills, or otherwise impair the attainment of solid waste reduction goals and the impact is *less than significant*.

Significance without Mitigation: Less than significant.

USS-10	**Implementation of the proposed project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste.**

As discussed under impact discussion USS-8, Recology, which serves the EIR Study Area, complies with all State requirements to reduce the volume of solid waste through recycling and organic waste diversion. The Zero Waste Sonoma per capita disposal rates of 4.6 ppd per resident and 11.5 ppd per employee are well below the CalRecycle targets of 7.1 ppd for residents and 18.3 ppd for employees. In addition, all potential future development over the buildout horizon of the proposed project would comply with CALGreen Sections 4.408 and 5.408, which require that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Potential future development would also comply with AB 341, which mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. All jurisdictions in California are required to provide organic waste collection services to all residents and businesses, beginning in 2022 and in accordance with SB 1383. Recology and the City currently comply with all applicable federal, State, and local solid waste regulations, and solid waste, recycling, and green waste collection services are available for all residents and commercial businesses. Therefore, the proposed project would comply with all current and future regulatory requirements and solid waste impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

USS-11	**Implementation of the proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to solid waste facilities.**

The area considered for cumulative impacts to solid waste disposal facilities is Sonoma County, which is serviced by Recology. As reported by the California Department of Finance, the total population of Sonoma County is expected to decrease from 488,022 in 2020 to 434,406 by 2050.[56] While the proposed project solid waste generation would be 232 tons per day for the City of Santa Rosa, a projected decrease in countywide population would result in an overall reduction in solid waste generation for Sonoma County. As discussed under impact discussion USS-8, conservatively assuming that all of this waste is landfilled, although the current diversion rate by Recology is about 34 percent, the additional waste generated by Santa Rosa with the proposed project at the horizon year of 2050 would only about 15 percent of the daily residual capacity of Central Landfill of 1,540 tons per day.

In addition, new development within the county would comply with CALGreen Sections 4.408 and 5.408, which require that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. This would also reduce the volume of solid waste transported to the landfills. Continued compliance with the applicable regulations and an increase in recycling and landfill diversion rates would ensure that solid waste cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.5 ENERGY INFRASTRUCTURE

4.17.5.1 ENVIRONMENTAL SETTING

Regulatory Framework

The regulatory framework for energy is described in detail in Chapter 4.6, *Energy*, of this Draft EIR. The regulatory requirements that pertain solely to energy infrastructure are repeated below.

Federal Regulations

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector, and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

[56] California Department of Finance, 2023, *Population Projections,* https://dof.ca.gov/forecasting/demographics/projections/, accessed September 6, 2023.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

National Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. The regulations enacted under this act have been updated several times. The latest revision is dated May 2023 and includes additional safety regulations for gas transmission pipelines, including repair criteria, integrity management improvements, cathodic protection, and other inspection and maintenance procedures. The regulations are encoded in 49 Code of Federal Regulations, Part 192.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest revision is dated January 2023.

California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The plan sets forth the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

California Building Energy Code: Title 24, Part 6, Energy Efficiency Standards

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. The standards are updated on a three-year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In August 2021, the CEC adopted the 2022 California Energy Code, which went into effect on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic systems and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.[57]

California Building Code: Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. CALGreen (24 California Code of Regulations, Part 11) was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The latest 2022 CALGreen code became effective on January 1, 2023.

[57] California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report, CEC-400-2021-077-D.

CALGreen includes provisions to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, etc. The code provides for design options, allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.[58]

Appliance Efficiency Regulations

The Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1608), combined with federal standards, set minimum efficiency levels for energy and water consumption in products, such as consumer electronics, household appliances, and plumbing equipment. The regulations are continually updated with the latest revisions dated 2023. Eighteen categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. These regulations exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

California Energy Benchmarking and Disclosure

The Building Energy Benchmarking Program is mandated under AB 802 and requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually. This program applies to all buildings with more than 50,000 square feet of gross floor area and owners of multifamily residential buildings with more than 50,000 square feet and 17 or more utility accounts. The bill requires each utility, upon the request and authorization of the owner, owner's agent, or operator of a building covered under the regulation, to deliver or provide aggregated energy usage data for a covered building. The required energy usage shall be reported to the CEC through the Energy Star Portfolio Manager.

California Renewable Portfolio Standards

A major component of California's Renewable Energy Program is the renewables portfolio standard established under SB 1078 (Sher) and SB 107 (Simitian). The standard requires that a specified percentage of the electricity that utilities provide comes from renewable resources. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. SB 1020, signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

[58] California Building Standards Commission, 2022, 2022 California Code of Regulations Title 24, Part 11, https://codes.iccsafe.org/content/CAGBC2022P1, accessed June 1, 2023.

CPUC Natural Gas Regulations

The CPUC regulates natural gas utility rates and services as well as the transportation of natural gas over the extensive transmission and distribution pipeline systems. The CPUC also regulates gas storage facilities. The Gas Safety and Reliability Branch of the CPUC ensures that natural gas pipeline systems are designed, constructed, operated, and maintained according to the safety standards set by the CPUC and the federal government. The regulations are provided in the CPUC General Order No. 112-E and the Natural Gas Pipeline Safety Act of 2011.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives pertaining to energy-related infrastructure. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy infrastructure are in Title 3, *Revenue and Finance*; Chapter 13, *Underground Utilities;* Title 18, *Buildings and Construction*; and Chapter 19, *Subdivisions*, as follows:

- Chapter 3-32, ***Utility Users Tax***. This chapter is also known as the utility users tax ordinance. Section 3-32.060, *Electricity Users Tax*, outlines the tax that electric energy users in the city must pay. This code also defines what a charge and what using electric energy use means in this context. Section 3-32.070, *Gas Users Tax*, outlines the tax imposed on every person in the city that uses gas through main or pipes. Some exclusions from the tax are applicable and described in this code as well.
- Chapter 13-12, ***Underground Utilities***. This chapter regulates and controls the wires, poles, and other wire-carrying structures within certain areas of the city. Section 13-12.30, *Poles and wires prohibited aboveground on Montgomery Drive*, prohibits aboveground wires, poles, or any other structure designed to carry telephone, telegraph, electric conduit at any place within 100 feet of the centerline of Montgomery Drive. Article II, *Procedure for Undergrounding*, outlines public hearing procedure, designation of underground utility districts, exceptions, notices, and the responsibilities of utility companies, property owners, and the City. Article III, *Electric Underground District*, describes the area designated as electric underground district. Article IV, *Undergrounding in Other Areas*, describes the requirements for undergrounding in other areas of the City that are part of the electric underground district.
- Title 18, ***Buildings and Construction***. This title adopts by reference, with the additions, insertions, deletions and changes listed throughout, the California Energy Code in Chapter 18-33, *California Energy Code*, and the California Green Building Standards Code in Chapter 18-42, *California Green Building Standards Code*. This title also includes Chapter 18-68, *Expedited Permit Process for Small Residential Rooftop Solar Energy Systems,* which provides for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 in order to achieve timely and cost-effective installations of small residential rooftop solar energy systems. It also includes Chapter 18-69, *Expedited Process for Electric Vehicle Charging Stations*.

- Chapter 19-04.090, *Energy Conservation*. This chapter provides for subdivisions to be designed to include passive or natural heating or cooling opportunities. Some examples of these opportunities include having the alignment of the subdivision be in the east-west direction and taking advantage of the available shade and prevailing breezes on the site.
- Chapter 20-44, *Telecommunication Facilities*. This chapter provides uniform and comprehensive standards for development of telecommunication facilities, including antenna installation, to protect environmental resources and ensure facilities comply with exposure standards from the Federal Communication Commission.

Santa Rosa City-Wide Energy Efficiency, Renewables, and Microgrid Feasibility Study

The City prepared a feasibility study to identify opportunities to reduce greenhouse gas emissions and improve the energy resiliency in light of the increased frequency of natural disasters and catastrophic climate change events.[59] A total of 47 City facilities and 63 parks were evaluated to identify locations for solar voltaic installations, electrification of building heating, air conditioning and ventilation systems, and other building efficiency measures. Seven buildings within the city were recommended for microgrids (i.e., a mix of distributed energy resources to improve energy delivery and resiliency).

Existing Conditions

Electricity

Two energy providers, Sonoma Clean Power (SCP) and Pacific Gas & Electric (PG&E), serve the EIR Study Area. SCP is the public electricity provider for Sonoma and Mendocino counties.[60] As a not-for-profit public agency, SCP is independently run by Sonoma County and the participating cities of Coverdale, Cotati, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, and Sonoma and the Town of Windsor. SCP provides electricity generated from renewable sources such as solar, wind, geothermal, and hydropower. Individuals residing or working within the SCP service area are automatically enrolled in SCP. SCP offers three program options; the CleanStart program provides 42 percent renewable power service; the EverGreen program provides 100 percent local renewable power service; or the OptOut program allows individuals to continue to receive PG&E's basic service.[61] The electric energy provided by SCP is conveyed to customers through PG&E's existing infrastructure. PG&E continues to maintain the grid, repair lines, and customer billing within the SCP service area.

PG&E is a publicly traded utility company that generates, purchases, and transmits energy and natural gas under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada to the Pacific Ocean. PG&E's electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466

[59] City of Santa Rosa, July 2021, *City-Wide Energy Efficiency, Renewables, and Microgrid Feasibility Study*.

[60] Sonoma Clean Power, 2023, *Who We Are,* https://sonomacleanpower.org/whoweare, accessed July 25, 2023.

[61] Sonoma Clean Power, 2023, *You have the Power,* https://sonomacleanpower.org/cleanstart-evergreen, accessed July 25, 2023.

circuit miles of interconnected transmission lines with approximately 5.5 million electric customer accounts.[62]

PG&E electricity is generated by a combination of sources such as natural gas-fired power plants, nuclear power plants, and hydro-electric dams as well as newer sources of energy such as wind turbines and photovoltaic plants, also known as solar farms. The electric grid is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

The power mix PG&E provided to customers in 2021 consisted of renewable resources (50 percent), nuclear (39 percent), natural gas plants (7 percent), and large hydroelectric facilities (4 percent). The renewable resources include wind, geothermal, biomass, solar, and small hydro.[63] PG&E also has 600 megawatts of battery storage capacity already connected to the electric grid and has contracts for an additional 3,300 megawatts of capacity by 2024.

PG&E's projected average annual electricity demand growth (mid-demand forecast) between 2019 and 2035 is approximately 1.5 percent. Total mid-electricity consumption in PG&E's service area was 106,617 gigawatt-hours per year in 2019 and is forecast to increase to 133,893 gigawatt-hours in 2035.[64] PG&E is expected to meet its electricity demands in 2035 and is ahead of schedule on meeting California's GHG-free requirements.

Natural Gas

PG&E is also the natural gas service provider for the city of Santa Rosa. The natural gas system includes approximately 50,000 miles of natural gas pipelines, including 6,700 miles of transmission pipelines and 42,000 miles of distribution pipelines.[65] The transmission pipelines move natural gas from compressor stations and storage facilities to regulator stations. At the regulator station, the pressure in the pipeline is reduced before gas enters the distribution system, which consists of smaller diameter pipelines that deliver gas to residences and businesses. PG&E has approximately 4.5 million natural gas customer accounts. Natural gas demand statewide is projected to decline an average of 1.1 percent per year through 2035.[66] This is primarily due to the goal of reducing greenhouse gas emissions and the ordinances of some cities for new construction to be all electric. Gas demand is expected to decrease from 5,298 million cubic feet of gas per day in 2022 to 4,857 million cubic feet per day by 2035. California's gas

[62] Pacific Gas and Electric Company, 2023, Company Profile, https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed on June 1, 2023.

[63] Pacific Gas and Electric Company, 2023, PG&E's 2021 Power Mix, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed June 1, 2023.

[64] California Energy Commission, 2023, California Energy Demand Forecast, 2021-2035, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report/2021-1, accessed June 1, 2023.

[65] Pacific Gas and Electric Company, 2023, PG&E Natural Gas System, https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page, accessed February 18, 2023.

[66] California Public Utilities Commission, 2022, *2022 California Gas Report*, https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf, accessed June 1, 2023.

storage facilities supplement pipeline gas supply during high demand periods and also provide supply reliability. The supplies of natural gas would meet the demand through year 2035.[67]

Telecommunications and Internet Providers

Telecommunications services include wireless internet, cell phone and land line telephone, cable television, and satellite television. There are numerous telecommunication and internet providers that serve the EIR Study Area. Telecommunication providers include AT&T, Verizon, CDS Wireless, and others. Internet providers include Comcast, Sonic, AT&T, T-Mobile, Vista Broadband Networks, and others. Multiple choices give Santa Rosa residents and businesses a variety of options when choosing telecommunication providers. The wireless networks consist of fiber-optic cables that connect major internet hubs over long distances. The networks can be expanded by using small cell facilities, which are small antennae placed on existing utility poles or streetlights along with small pole-mounted radios and other accessory equipment. In this manner, the fiber-optic network can be easily expanded to meet the demand for wireless services. The current infrastructure in place is sufficient to serve existing and future customers in the EIR Study Area.

4.17.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts related to energy infrastructure if it would:

12. Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
13. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to electric power, natural gas, or telecommunications facilities.

4.17.5.3 IMPACT DISCUSSION

USS-12	**Implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.**

Electrical service to the EIR Study Area would be provided by SCP and PG&E through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.17-13, *Year 2050 Forecast Electricity Consumption,* electricity use in the EIR Study Area would increase by 63,691,182 kilowatt-hours per year. However, the per-person electricity use would decrease by 548 kWh per year,

[67] California Public Utilities Commission, 2022, *2022 California Gas Report*, https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf, accessed June 1, 2023.

which reflects the replacement of existing building stock with new development that meets the California Building Energy Efficiency Standards and CALGreen standards.

TABLE 4.17-13 YEAR 2050 FORECAST ELECTRICITY CONSUMPTION

	Electricity Usage (kWh/year)		
Land Use	Existing Conditions	Proposed General Plan 2050 [a]	Net Change
EIR Study Area			
Residential	367,395,591	415,787,730	48,392,139
Nonresidential	525,542,438	540,841,480	15,299,042
Total	**892,938,028**	**956,629,210**	**63,691,182**
Service Population	275,569	355,425	79,856
Per Service Population Annual Consumption	**3,240**	**2,692**	**-548**

Notes: kWh = kilowatt hour.
a. Modified with State Actions to reduce greenhouse gas emissions (see Chapter 4.6, *Energy*, of this Draft EIR).
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.17-14, *Year 2050 Forecast Natural Gas Consumption*, natural gas use under the proposed project is estimated to total 48,851,700 therms annually. While the City currently has a reach code requiring all new residential construction of three stories and below to be all electric (SRCC Section 18-42.4.106.5), it cannot be guaranteed that every individual development project facilitated by the proposed project would be subject to this requirement. To provide a conservative assessment of what energy consumption may be in 2050 resulting from implementation of the proposed project, the new growth in building space anticipated through 2050 was assumed to include natural gas for space and water heating. With this assumption, by 2050, natural gas use in the EIR Study Area would be 4,525,626 therms annually, or approximately a 10 percent increase, from existing conditions. However, the per-service population natural gas consumption is estimated to slightly decrease from 161 therms per person per year in 2019 to 137 therms per person per year in 2050 for natural gas. As described above, this number can be considered to represent a conservative (i.e., "worst case") scenario as many residential projects in the city would be subject to the reach code's all-electric requirements.

TABLE 4.17-14 YEAR 2050 FORECAST NATURAL GAS CONSUMPTION

	Natural Gas Usage (Therms per year)		
Land Use	Existing Conditions	Proposed General Plan 2050 [a]	Net Change
EIR Study Area			
Residential	28,371,401	31,665,210	3,293,809
Nonresidential	15,954,672	17,186,490	1,231,818
Total	**44,326,074**	**48,851,700**	**4,525,626**
Service Population	275,569	355,425	79,856
Per Service Population Annual Consumption	**161**	**137**	**-24**

Note:
a. Modified with State Actions to reduce greenhouse gas emissions (see Chapter 4.6, *Energy*, of this Draft EIR).
Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR.

These energy consumption rates are modest increases when considered in the context of SCP's and PG&E's service territories. The increase in electricity usage for the EIR Study Area is approximately 0.1 percent of PG&E's projected energy supply in 2035, and the increase in natural gas consumption for the EIR Study Area is less than 0.03 percent of PG&E's natural gas supply.[68] PG&E also states that there would be sufficient electrical and natural gas supplies to cover its service area in 2035.

In addition, potential future development would be required to comply with the current and future updates to the California Energy Code and CALGreen, which would contribute to reducing energy demands. New buildings would also use new energy-efficient appliances and equipment pursuant to the Appliance Efficiency Regulations, which would ensure the use of efficient electricity and natural gas consumption. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. Additionally, new construction within the City would underground utilities per SRCC Chapter 13-20*, Underground Utilities,* which would improve electricity efficiency and safety.

Chapter 3, *Circulation, Conservation, and Greenhouse Gas Reduction Element*, of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider electricity and natural gas impacts. The following goal, policies, and actions would serve to improve energy efficiency and reduce energy impacts:

- Goal 3-7: Strive to achieve net carbon neutrality no later than 2045.
  - Policy 3-5.3: Increase the use of renewable, carbon free, and distributed energy resources throughout the city.
    - Action 3-7.5: Require regular energy audits of existing City-owned and operated structures, identifying levels of existing energy use and potential conservation and efficiency measures.
    - Action 3-7.6: Develop a capital project list and funding strategy to complete energy-efficiency projects for City-owned and operated structures and adjust the list annually to add new projects as needed.
    - Action 3-7.7: Provide information on the cost-savings potential and other benefits of energy audits and energy-efficient retrofits to encourage their preparation for buildings throughout the city.
    - Action 3-7.9: Identify incentives to encourage new buildings to exceed State energy efficiency requirements and/or meet or exceed the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program or equivalent standards.
    - Action 3-7.11: Use education and incentives to promote and sustain energy-conserving design and practices.
  - Policy 3-7.3: Increase the use of renewable, carbon-free, and distributed energy resources throughout the city.

[68] PG&E's projected energy supplies for electricity and natural gas do not extend beyond 2035.

- Action 3-7.12: Revise any existing codes and policies that constrain or prohibit the installation of environmentally acceptable forms of distributed energy generation.
- Action 3-7.13: Identify incentives and other means to encourage new and existing buildings to include battery energy storage systems, especially buildings with solar energy installations and municipal buildings that provide essential community services.
- Action 3-7.14: Participate in State and local efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation.
- Action 3-7.15: Continue to participate in utility-sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources.
- Action 3-7.16: Seek and identify resources to assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings.
- Action 3-7.17: Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.
- Action 3-7.18: Encourage the establishment of neighborhood renewable energy microgrids to support resilience.
- Action 3-7.19: Support State and utility efforts to improve grid resilience and capacity.

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, and Renewables Portfolio Standards) would increase building energy efficiency and reduce building energy demands. Additionally, the proposed General Plan 2050 goal, policies, and actions listed above will contribute to minimizing building-related energy demands and demands on nonrenewable sources of energy. Implementation of the proposed General Plan 2050 goals, policies, and actions in conjunction with and complementary to regulatory requirements would ensure that energy demand associated with growth under the proposed project would be efficient, therefore avoiding the need for new or expanded electric power and natural gas facilities. In addition, the energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. Therefore, implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

USS-13 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulatively considerable impact to electric power, natural gas, or telecommunications facilities.

The area considered for cumulative impacts are the service areas of SCP and PG&E for electricity and PG&E for natural gas. Other projects within the service areas would increase electricity and natural gas demands. The CPUC has identified the Integrated Energy Policy Report as "the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California." The latest report shows that California's electricity sector is leading efforts to reduce GHG emissions and electricity consumption is projected to increase compared to previous energy demand projections, mostly attributable to increased levels of transportation electrification.[69] Natural gas consumption is expected to level out between 2020 and 2026 before decreasing from 2026 to 2035 from new building standards and the implementation of city and county ordinances that require new construction to have all-electric appliances and heating.

In addition, all future projects developed within the SCP and PG&E service areas would implement the requirements of the California Energy Code and CALGreen. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations. Counties and cities review project design plans against these codes and ensure compliance before issuing construction permits. These measures would reduce the overall consumption of electricity and natural gas. The energy providers and telecommunications providers that serve the EIR Study Area and Sonoma County indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. In addition, the proposed General Plan 2050 includes goals, policies, and actions that would contribute to minimizing inefficient, wasteful, or unnecessary energy consumption and ensure compliance with State, regional, or local plans for renewable energy, therefore avoiding the need for new or expanded electric power and natural gas facilities. Therefore, the proposed project would not result in a significant impact to electric power, natural gas, or telecommunication facilities, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[69] California Energy Commission, February 2023, *Final 2022 Integrated Energy Policy Report Update*, https://www.energy.ca.gov/sites/default/files/2023-02/Adopted_2022_IEPR_Update_with_errata_ada.pdf, accessed September 7, 2023.

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4.18 WILDFIRE

This chapter of the Draft Environmental Impact Report (EIR) describes the potential wildfire impacts associated with the adoption and implementation of the proposed project. This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential wildfire impacts, and identifies proposed General Plan 2050 goals, policies, and actions, as well as feasible mitigation measures, that would minimize any potentially significant impacts.

4.18.1 ENVIRONMENTAL SETTING

4.18.1.1 REGULATORY FRAMEWORK

Federal Regulations

National Cohesive Wildfire Management Strategy

In the Federal Land Assistance, Management, and Enhancement Act of 2009, Congress mandated the development of a National Cohesive Wildland Fire Management Strategy for all lands in the United States. Wildfire management is guided by the National Cohesive Wildland Fire Management Strategy, which has three primary goals:[1]

- Resilient landscapes
- Fire adapted communities
- Safe and effective wildfire response

These three goals enable land managers to manage vegetation and fuels; protect homes, communities, and other values at risk; manage human-caused ignitions; and effectively and efficiently respond to wildfires. California is part of the Western Regional Strategy Committee, chartered to support and facilitate the implementation of the National Cohesive Wildland Fire Strategy.

Healthy Forests Restoration Act

The Healthy Forests Restoration Act (US Code Title 16, Chapter 84, Section 6501) was approved on December 3, 2003, to reduce wildfire risk to communities, municipal water supplies, and at-risk federal lands expediting projects designed to reduce hazardous fuels. This Act provides regulations for the protection of watersheds, forests, and rangelands from catastrophic wildfires across the landscape. Measures include improving systems to detect insect and disease infestations in hardwood forests; providing forestry assistance to state, private, and tribal landowners; facilitating research on large-scale

[1] United States Department of the Interior and United States Department of Agriculture, April 2014, *The National Strategy: The Final Phase of Development of the National Cohesive Wildland Fire Management Strategy*, https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPhaseIIINationalStrategyApr2014.pdf, accessed April 3, 2023.

treatments to reduce pest infestations; and entering into contracts with private landowners to manage their forests.

National Fire Protection Association Standards

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are recommended (advisory) guidelines for fire protection that are referenced in the California Fire Code (CFC), which is adopted by the City of Santa Rosa every three years. Specific standards applicable to wildland fire hazards include, but are not limited to:

- NFPA 1141, Fire Protection Infrastructure for Land Development in Wildlands
- NFPA 1142, Water Supplies for Suburban and Rural Fire Fighting
- NFPA 1143, Wildland Fire Management
- NFPA 1144, Reducing Structure Ignition Hazards from Wildland Fire
- NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

State Regulations

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. CAL FIRE provides fire assessment and firefighting services for land in State Responsibility Areas (SRA), conducts educational and training programs, provides fire planning guidance and mapping, and reviews general plan safety elements to ensure compliance with State fire safety requirements. CAL FIRE staff, or a designee, also reviews building permit applications, parcel maps, and use permits for construction or development in SRAs and Local Responsibility Areas (LRA).

The Board of Forestry and Fire Protection is a government-appointed approval body within CAL FIRE. It is responsible for developing the general forest policy of the state, determining the guidance policies of CAL FIRE and representing the State's interest in federal forestland in California. The Board of Forestry and Fire Protection also promulgates regulations and approves general plan safety elements that are adopted by local governments for compliance with State statutes.

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. These responsibilities include regulating buildings in which people live, congregate, or are confined; controlling substances and products that may, in and of themselves or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention within wildland areas; regulating hazardous liquid pipelines; developing and renewing regulations and building standards; and providing training and education in fire protection methods and responsibilities. These are accomplished through major programs, including engineering, education, enforcement, and support from the Board of Forestry and Fire Protection. For jurisdictions in SRAs or very high fire hazard severity zones (Very High FHSZs), the Land Use Planning Program division of the Office of State Fire Marshal reviews

safety elements during the update process to ensure consistency with California Government Code, Section 65302(g)(3).

Together, the Board of Forestry and Fire Protection, Office of State Fire Marshal, and CAL FIRE protect and enhance the forest resources of all wildland areas of California that are not under federal jurisdiction.

Fire Hazard Severity Zones and Responsibility Areas

CAL FIRE designates FHSZs as authorized under California Government Code Sections 51175 et seq. FHSZs may be designated Very High, High, or Moderate. CAL FIRE considers many factors when designating FHSZs, including fire history, existing and potential vegetation fuel, flame length, blowing embers, terrain, and weather patterns for the area. CAL FIRE designates FHSZs in two types of areas depending on which level of government is financially responsible for fire protection.

- **Local Responsibility Area (LRA).** Incorporated communities are financially responsible for wildfire protection.
- **State Responsibility Area (SRA).** CAL FIRE and contracted counties are financially responsible for wildfire protection.

CAL FIRE Strategic Plan

CAL FIRE produced the 2018 *Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. The 2018 *Strategic Fire Plan for California* focuses on fire prevention and suppression activities to protect lives, property, and ecosystems, in addition to providing natural resource management to maintain state forests as a resilient carbon sink to meet California's climate change goals. A key component of the 2018 *Strategic Fire Plan for California* is the collaboration between communities to ensure fire suppression and natural resource management is successful.[2]

2021 California's Wildfire and Forest Resilience Action Plan

The Governor's Forest Management Task Force developed California's Wildfire and Forest Resilience Action Plan, which is a framework for establishing healthy and resilient forests that can withstand and adapt to wildfire, drought, and climate change. The Wildfire and Forest Resilience Action Plan accelerates efforts to restore the health and resilience of California's forests, grasslands, and natural places; improves the fire safety of communities; and sustains the economic vitality of rural forested areas. CAL FIRE, in partnership with the US Forest Service, intends to scale up forest thinning and prescribed fire; integrate climate adaptation into the statewide network of regional forest and community fire resilience plans; improve the electricity grid resilience, and promote sustainable land use.

[2] California State Board of Forestry and Fire Protection, 2018, *2018 Strategic Fire Plan for California*, https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf, accessed November 28, 2022.

State Responsibility Area and Very High Fire Hazard Severity Zone Fire Safe Regulations

California Code of Regulations (CCR) Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/Very High FHSZ Fire Safe Regulations*, establishes minimum wildfire protection standards for construction and development in the SRA and Very High FHSZ and requires CAL FIRE to review development proposals and enact recommendations that serve as conditions of approval in these zones. These standards include basic emergency access and perimeter wildfire protection measures; signing and building numbering; private water supply resources for emergency fire use; and vegetation modification. These regulations apply to all residential, commercial, and industrial buildings in the SRA and Very High FHSZs in the LRA, the siting of new mobile homes, and all tentative and parcel maps. Fire Safe Regulations also include a minimum setback of 30 feet for all buildings from property lines and/or the center of a road. Section 1273.08, *Dead-End Roads*, of these standards provide regulations for the maximum lengths of single access roadways require the following:

- Parcels zoned for less than one acre: 800 feet
- Parcels zoned for 1 acre to 4.99 acres: 1,320 feet
- Parcels zoned for 5 acres to 19.99 acres: 2,640 feet
- Parcels zoned for 20 acres or larger: 5,280 feet

Fire Safe Regulations, Section 1299.03, *Fire Hazard Reduction Around Buildings and Structure Requirements*, provides defensible space requirements for areas within 30 feet of a structure (Zone 1) and between 30 and 100 feet from a structure (Zone 2). In Zone 1, all dead and dying plants must be removed, as must any flammable vegetation that could catch fire. In Zone 2, horizontal and vertical spacing among shrubs and trees must be created and maintained.

Public Resources Code Section 4291

Public Resources Code (PRC) Section 4291, *Mountainous, Forest-, Brush- and Grass-Covered Lands*, is intended for any person who owns, lease, controls, operates, or maintains a building or structure in a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material, regardless of whether the property is in an SRA or Very High FHSZ. This section requires defensible space to be maintained within 100 feet from each side of a structure. An ember-resistant zone is also required within 5 feet of a structure and more intense fuel reduction between 5 and 30 feet of a structure.

California Building Code

Building Design Standards

The California Building Code (CBC), Part 2 of Title 24 of the CCR, identifies building design standards, including those for fire safety. The CBC is updated on a three-year cycle. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC and any applicable local amendments. Typical fire safety requirements of the CBC include the installation of sprinklers in buildings and other facilities; the establishment of fire-resistance standards for fire doors,

building materials, and particular types of construction in high FHSZs; requirements for smoke-detection systems; exiting requirements; and the clearance of debris. The City of Santa Rosa regularly adopts each new CBC update under the Santa Rosa City Code (SRCC) Chapter 18.44, *2022 California Fire Code.*

Materials and Methods for Exterior Wildfire Exposure

Chapter 7A of the CBC, *Materials and Methods for Exterior Wildfire Exposure*, prescribes building materials and construction methods for new buildings in an FHSZ or Wildland-Urban Interface Fire Area (WUIFA). Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures. Other requirements include vegetation management compliance, as prescribed in the CFC Section 4906 and PRC 4291.

California Fire Code

The CFC incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official fire code for the State and all political subdivisions. It is found in CCR Title 24, Part 9, and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The City of Santa Rosa regularly adopts each new CFC update under SRCC Chapter 18-44, *2022 California Fire Code*. The CFC is a model code that regulates minimum fire safety regulations for new and existing buildings; facilities; storage; processes, including emergency planning and preparedness; fire service features; fire protection systems; hazardous materials; fire flow requirements; and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

Fire Safety During Construction and Demolition

Chapter 33 of the CFC, *Fire Safety During Construction and Demolition*, provides requirements for fire safety precautions during construction and demolition of a development project. The purpose of this chapter is to provide reasonable safety to life and property from fire during construction and demolition operations, including those in underground locations. Specific requirements include a prohibition of smoking on-site, except for in approved areas; management of combustible materials and debris; cutting and welding; electrical wiring; and cooking. Additional requirements include the preparation of site safety plans prior to building permit issuance, providing fire watch during nonworking hours, and maintaining water supply for fire protection as soon as combustible materials arrive on a project site.

Wildland-Urban Interface Areas

Chapter 49 of the CFC, *Requirements for Wildland Urban Interface Fire Areas*, applies to any geographical area identified as an FHSZ by CAL FIRE. It defines FHSZs, connects to the SRA/Very High FHSZ Fire Safe Regulation requirements for defensible space, and parallels requirements for wildfire protection buildings construction and hazardous vegetation fuel management in other sections of the CCR and PRC.

Chapter 49 of the 2022 CFC includes a definition for the Wildland-Urban Interface (WUI) and provides requirements for fire protection plans, landscape plans, long-term vegetation management, and creation and maintenance of defensible space for all new development within the WUI.

California Public Utilities Commission

In 2007, wildfires in southern California were ignited by overhead utility power lines and aerial communication facilities near power lines. In response, the California Public Utilities Commission (CPUC) began considering and adopting regulations to protect the public from fire hazards due to overhead power lines and nearby aerial communication facilities. The CPUC published a Fire-Threat Map under Rulemaking 15-05-006, following procedures in Decision 17-01-009, revised by Decision 17-06-024, which adopted a work plan for the development of a utility high fire-threat district where enhanced fire safety regulations in Decision 17-12-024 apply.[3] The fire regulations require electric utilities to:[4]

- Prioritize the correction of safety hazards.
- Correct nonimmediate fire risks in "Tier 2" (elevated fire threat) areas on the CPUC high fire-threat district within 12 months, and in "Tier 3" (extreme fire threat) areas within 6 months.
- Maintain increased clearances between vegetation and power lines within the high fire-threat district.
- Maintain stricter wire-to-wire clearances for new and reconstructed facilities in Tier 3 areas.
- Conduct annual inspections of overhead distribution facilities in rural areas of Tier 2 and Tier 3 areas.
- Prepare a fire prevention plan annually if overhead facilities exist in the high fire-threat district.

California Government Code

California Government Code Section 65302(g) and Section 65302.15 require that the mandatory safety element of a general plan be reviewed and revised as needed with the revision of a housing element or local hazard mitigation plan, but no less than every eight years, to ensure the goals, policies, actions, mapping, and background content are consistent with State regulations and reflect the best available information for wildfire risks, climate adaptation and resiliency, and emergency evacuation routes for certain residential areas. Communities with local hazard mitigation plan updates after January 1, 2022, must also ensure their safety elements or local hazard mitigation plans include an assessment of evacuation routes and their capacity, safety, and viability as well as evacuation locations under a range of emergency scenarios.

For wildfire and evacuation purposes, a safety element must:

- Identify wildfire hazards with the latest fire severity zone maps from the Board of Forestry and Fire Protection, US Geological Survey, and other sources.
- Consider guidance given by the Office of Planning and Research's Fire Hazard Planning document.

[3] California Public Utilities Commission, Fire Map, https://ia.cpuc.ca.gov/firemap/, accessed April 3, 2023.

[4] California Public Utilities Commission, CPUC Adopts New Fire-Safety Regulations, press release, , http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352402.PDF, accessed April 3, 2023.

- Demonstrate that the jurisdiction or contract agency and associated codes satisfactorily address adequate water supply, egress requirements, vegetation management, street signage, land use policies, and other criteria to protect from wildfires.
- Establish in the safety element (and other elements that must be consistent with it) a set of comprehensive goals, policies, and feasible implementation measures for protection of the community from unreasonable risks of wildfire.
- Identify evacuation-constrained residential parcels in hazard-prone areas.

Governor's Office of Planning and Research Fire Hazard Technical Advisory

The Governor's Office of Planning and Research published the Fire Hazard Technical Advisory in 2015 and revised it in 2022 as a planning guide for addressing fire hazards, reducing risk, and increasing resilience across California's diverse communities and landscapes. The Fire Hazard Technical Advisory provides a range of goals, policies, and programs for fire hazard prevention and mitigation, disaster preparedness, and emergency response and recovery. The 2022 update includes specific land use strategies to reduce fire risk to buildings, infrastructure, and communities.

California Environmental Quality Act

In November 2022 the California Attorney General issued the *Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act.* This guidance document was designed to help lead agencies comply with the California Environmental Quality Act (CEQA) when considering whether to approve projects in wildfire-prone areas. These areas are often in the WUI area—i.e., the area where the built environment meets or intermingles with the natural environment. This guidance provides suggestions for how best to comply with CEQA when analyzing and mitigating a proposed project's impacts on wildfire ignition risk, emergency access, and evacuation. The guidance is aimed at proposed development projects, such as residential, recreational, or commercial developments. The extent to which it applies will vary by project based on project design and location. It does not impose additional requirements on local governments or alter any applicable laws or regulations but is intended to provide guidance on some of the issues, alternatives, and mitigation measures that should be considered during the environmental review process.

Regional Regulations

Sonoma-Lake-Napa Unit Strategic Fire Plan

CAL FIRE developed the *Sonoma-Lake-Napa Unit Strategic Fire Plan*, adopted in 2022, which protects more than two million acres of the SRA in Sonoma, Napa, Lake, Yolo, Colusa, and Solano Counties.[5] The goal of this strategic fire plan is to build resilience and resistance to damaging wildfires while recognizing fire's beneficial aspects to forestry and environment practices. This is completed through education and

[5] California Department of Forestry and Fire Protection, updated May 2022, *Sonoma-Lake-Napa Unit 2022 Strategic Fire Plan*, https://osfm.fire.ca.gov/media/s1vdava4/2022-sonoma-lake-napa-solano-yolo-colusa-unit-fire-plan.pdf, accessed June 22, 2023.

participation with communities, collecting data and proper record keeping, monitoring the effectiveness of the Sonoma-Lake-Napa Unit's programs, and identifying and improving areas of the WUI.

Sonoma County Community Wildfire Protection Plan

The Sonoma County Community Wildfire Protection Plan (CWPP), developed by the Permit Sonoma Fire Prevention Division, Communications Division, and Natural Resources Division, as well as Fire Safe Sonoma and Steering committee members, identifies and prioritizes fuel reduction opportunities throughout the county and addresses structural ignitability and collaboration with stakeholders. The Sonoma County CWPP has been developed upon the priority goals and objectives identified by the Healthy Forest Restoration Act in partnership with local collaborators. The priority actions of the CWPP include structural modifications, defensible space vegetation management, landscape scale fuel break projects, and education and pre-fire planning. The strategies in the Sonoma County CWPP provide significant risk reduction, and the document is updated every five years, with most recent update in 2023.[6] The City of Santa Rosa's CWPP serves as an Annex of the County of Sonoma's CWPP.

Local Regulations

Santa Rosa City Code

The SRCC includes various directives pertaining to wildfire. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to wildfire impacts are in Title 9, *Health and Safety*; Title 13, *Street, Sidewalks and Public Places;* Title 17, *Environmental Protection;* Title 18, *Buildings and Construction*; and Title 20, *Zoning*, as follows:

- Chapter 9-08, *Weeds and Rubbish*. Weeds, as defined in this chapter, which: a) bear seeds of a wingy or downy nature that have attained a natural growth in height in excess of four inches, or attain such a large growth as to become a fire menace when dry, or which are otherwise noxious or dangerous, and b) are on undeveloped parcels, on developed parcels over 0.5 acres with more than 0.5 acres of unimproved land, or on parcels located in a WUIFA within city limits, constitute a public nuisance. Section 9-08.020, *Nuisance Determination*, requires that all weeds as defined in this chapter, may be declared to be a public nuisance by the City Council and may thereafter be abated as provided by this chapter.
- Chapter 9-28, *Fuels Mitigation Pile Burning*. This chapter includes provisions related to pile burning in the City's WUIFA to reduce wildfire fuel hazards and accomplish a combination of fire protection and resource management goals. Section 9-28.020, *Application,* outlines that this application applies to parcels that are over 5 acres in size and in the WUIFA. However, parcels that do not meet these criteria can still perform this application through the approval of the fire chief.

[6] Sonoma County, 2023, Sonoma County Community Wildfire Protection Plan, https://permitsonoma.org/sonomacountycwpp, accessed June 22, 2023.

- Chapter 9-30, *Hazardous Vegetation and Fuel Management*. The purpose and intent of this chapter is to require compliance with defensible space for all parcels within the WUIFA. It will also require property owners to maintain defensible space throughout the entire WUIFA, remove dead trees, hazardous vegetation and limit certain mulch under specific conditions.
- Chapter 13-12, *Underground Utilities*. This chapter regulates and controls the wires, poles, and other wire-carrying structures within certain areas of the city. Section 13-12.30, *Poles and wires prohibited aboveground on Montgomery Drive*, prohibits aboveground wires, poles, or any other structure designed to carry telephone, telegraph, electric conduit at any place within 100 feet of the centerline of Montgomery Drive. Article II, *Procedure for Undergrounding*, outlines public hearing procedure, designation of underground utility districts, exceptions, notices, and the responsibilities of utility companies, property owners, and the City. Article III, *Electric Underground District*, describes the area designated as electric underground district. Article IV, *Undergrounding in Other Areas*, describes the requirements for undergrounding in other areas of the city that are part of the electric underground district.
- Chapter 17-08, *Seismic Safety*. Section 17-08.020, *Earthquake Fault Zones*, sets forth the requirements for a State Geologist to delineate active and recently active earthquake fault zones that are a potential hazard. Any projects within the delineated earthquake fault zone require specialized approval authority from the decision-making body. Section 17-08.060, *Building Permits for Projects within Earthquake Fault Zones*, states that the decision-making body shall evaluate the suitability of a project and can attach conditions to the project if necessary. The decision-making body also can deny permits if it is found that the site is unsuitable for the proposed project.
- Title 18, *Adoption by Reference*. This section adopts the CBC in its entirety, subject, however, to the amendments, additions, and deletions set forth in this chapter. The purpose of the CBC is to prescribe regulations governing the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area and maintenance of all buildings and structures within the city. The CBC includes the establishment of fire resistance standards for fire doors, building materials, and particular types of construction, and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.
  - Chapter 18-16, *California Building Code*. This chapter describes all the sections of the CBC. This includes a section about living in the FHSZ or any WUIFA. Section 18-16.701A.3, *Application*, states that buildings located in the FHSZ or any WUIFA that has been constructed, altered, moved, repaired, or maintained after the application date shall comply with the provisions of this chapter around certain building aspects such as additions, maintenance, and vegetation management compliance.
    - Section 18-22R337.2, *Definitions*. This section defines a WUIFA as a geographical area identified by the City of Santa Rosa as a FHSZ in accordance with the PRC, as designated on the map titled "Wildland-Urban Interface Fire Area," dated January 28, 2009.
  - Chapter 18-44, *California Fire Code*. This chapter adopts regulations governing conditions hazardous to life and property from fire or explosion. This includes the 2022 CFC, which consists of portions of the 2022 International Fire Code as amended by the California Building Standards Commission. This title includes building regulations related to the fire resistance of buildings with amendments to the 2022 CFC, enforcing greater restrictions than those required by the State.

- Chapter 20-32, *Hillside Development Standards*. This chapter includes the regulations required to preserve the City's natural waterways and hillsides, amongst other areas, conserves open spaces and natural features, design standards to ensure the hillside development will be sensitive to existing terrain. Section 20-32.050, S*ite Planning and Development Standards*, specifically requires that development on hillsides be located on the most geologically stable portion of the site. Section 20-32.060, *Hillside* Development Permit*, requires a* review process for the City to consider the appropriateness of proposed development on hillside parcels, to ensure that a proposed project minimizes its environmental impact, including the preparation of geotechnical reports that identify and mitigate impacts.

Emergency Operations Plan

The Santa Rosa Emergency Operations Plan (EOP), originally adopted by Council in June 2017 and updated in December 2022, outlines how the City coordinates their response to major emergencies and disasters.[7] The EOP identifies operational strategies and plans for managing complex and potentially catastrophic events. It addresses the four phases of emergency management: preparedness, response, recovery, and mitigation. The EOP is organized into three parts. Part I, *Basic Plan*, presents the planning assumptions, policies, and concept of operations that guide the responsibilities for emergency preparedness, response, recovery and mitigation for the City. Part II, *Hazard Annexes*, and Part III, *Functional Annexes*, provide additional detail and guidance for specific hazards, functions, and operations.

Hazard Mitigation Plan

On December 7, 2021, the Santa Rosa City Council adopted the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) which also provides an update to the City's Local Hazard Mitigation Plan (LHMP).[8] The MJHMP is comprised of two volumes. Volume 1 includes all federally required elements of a disaster mitigation plan as they apply to the entirety of Sonoma County. Volume 2 is comprised of Annexes (chapters) for each local agency and special district participating in the MJHMP. The City of Santa Rosa Annex, which serves as a five-year update to the LHMP, is found in Volume 2, Chapter 3. The LHMP identifies the natural hazards faced by the city, assesses vulnerabilities to these hazards, and identifies hazard mitigation strategies that can be taken to reduce or alleviate the loss of life, personal injury, and property damage that otherwise might result from each natural hazards. Mitigation actions are suggested and carried out by various City departments. A description of the mitigation actions for wildfires include:

- In accordance with the adaptation strategies of the Climate Action Plans, integrate climate change adaptation into future updates of the Zoning Code, Building Code, General Plan, Urban Water Management Plan, and other related documents.
- Continue to update the City's emergency planning documents every five years to ensure consistency with state and federal law, local conditions, and best practices and the most recent science.

[7] City of Santa Rosa, June 2017, *City of Santa Rosa Emergency Operations Plan*, https://www.srcity.org/DocumentCenter/View/16434/Emergency-Operation-Plan, accessed March 22, 2023.

[8] City of Santa Rosa, 2021, *Local Hazard Mitigation Plan*, https://www.srcity.org/540/Local-Hazard-Mitigation-Plan, accessed March 9, 2023.

- Prepare a Zoning Code update to identify vegetation management requirements in the Wildland-Urban Interface zone for existing and new development.
- Retrofit, replace, or relocate critical facilities that are shown to be vulnerable to damage in natural disasters prioritizing those structures that have experienced repetitive losses and/or are located in a high or medium ranked hazard.
- Work with residents and property owners to develop an incentive program to replace shake roofs in the WUIFA.
- Continue to implement improvements to water flow capacity in the WUIFA.
- Continue to tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.
- Implement actionable Items identified within the City of Santa Rosa Community Wildfire Protection Plan.
- Integrate the Hazard Mitigation Plan into other plans, ordinances and programs that dictate land use decisions within the community, including the General Plan, Specific Plans, and the City Code.
- Develop a plan for expediting the repair and functional restoration of water and wastewater systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water/Wastewater Agency Response Network (WARN). Communicate that plan to local governments and critical facility operators.
- Explore the feasibility of resilience hubs within the City of Santa Rosa.

Community Wildfire Protection Plan

The Santa Rosa CWPP, developed for the Santa Rosa Fire Department (SRFD) through a collaborative process with the SRFD and the Sonoma-Lake-Napa Unit of CAL FIRE, as well as interested parties, key stakeholders, community members, local fire departments, and state and federal agencies managing land in the vicinity of Santa Rosa.[9] The Santa Rosa CWPP was built off of the October 2016 City of Santa Rosa Local Hazard Mitigation Plan, which as stated above, was updated in 2021. The Santa Rosa CWPP meets the requirements of both FEMA's Core Capabilities and the 2003 Healthy Forests Restoration Act and provides the City with tools that can enhance the protection of life safety and improve the resiliency of structures, critical infrastructure, and other assets to wildfire. Like the Sonoma County CWPP, the Santa Rosa CWPP identifies and prioritizes fuel reduction opportunities throughout the city and addresses structural ignitability and collaboration with stakeholders. Section 6 of the Santa Rosa CWPP includes the Action Plan for the City. The Action Plan section of the Santa Rosa CWPP recognizes that preparedness for the inevitable wildfire event includes activities and actionable items such as community education, emergency planning, protection of assets, reducing structure ignitibility, a comprehensive fuels mitigation strategy, and evacuation preparedness, and that a combination of hazardous fuel mitigation, structural

[9] City of Santa Rosa Community Wildfire Protection Plan, last modified August 25, 2020, *Community Wildfire Protection Plan*, https://srcity.org/DocumentCenter/View/30136/City-of-Santa-Rosa-Community-Wildfire-Protection-Plan-CWPP_91820, accessed September 9, 2024.

hardening, defensible space, and emergency preparedness activities can significantly affect firefighter success in protecting life safety and reducing the threat to the City's assets.

Santa Rosa Fire Department Strategic Plan

The Santa Rosa Fire Department developed a community-driven Strategic Plan (2024-2029), identifying the following key goals:

- Revitalize the fire department's workforce through innovative recruitment strategies to maximize organizational effectiveness.
- Improve physical resources to ensure the highest level of safety and service for our community and personnel.
- Enhance the overall technical readiness and communication infrastructure of the fire department to ensure efficient emergency response and personnel safety.
- Strengthen community engagement, safety, and preparedness through active community collaboration, communication, and outreach to create a more prepared community.

4.18.1.2 EXISTING CONDITIONS

Wildfire Background

The term "wildfire" refers to fires that usually result from the ignition of dry grass, brush, or timber. Historically, wildfires commonly occurred in steep or heavily vegetated areas, which makes suppression of the fire difficult. More recently, wildfires have been encroaching into more urban areas, that is, the WUIFA, threatening homes, businesses, and essential infrastructure. Though wildfires play an important role in the ecology of many natural habitats, risks to human safety and property increase as urban development moves into areas susceptible to wildfire hazards.

Types of Wildfires

There are three basic types of wildland fires: [10]

- Crown fires burn trees to their tops; these are the most intense and dangerous wildland fires.
- Surface fires burn surface litter and duff. These are the easiest fires to extinguish and cause the least damage to the forest. Brush and small trees enable surface fires to reach treetops and are thus referred to as *ladder fuels*.
- Underground fires occur underground in deep accumulations of dead vegetation. These fires move very slowly and can be difficult to extinguish.

[10] Natural Resources Canada, updated April 16, 2021, Fire Behavior, https://www.nrcan.gc.ca/forests/fire-insects-disturbances/fire/13145, accessed April 3, 2023.

Wildfires burn in many types of vegetation—forest, woodland, scrub (including chaparral and sage scrub), and grassland. Many species of native California plants are adapted to fire, and habitats such as woodlands, chaparral, and grasslands can recover from fire. For example, some species of chaparral plants, such as ceanothus, require intense heat for germination and therefore have flammable resins on leaves and roots that can quickly sprouts up in burned areas.[11] Between 2010 and 2017, wildfires in California burned about 265,000 acres of forest land, 207,000 acres of scrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types.[12] Wildfires have been observed to be more frequent and growing in intensity over the past several years.

Wildfire Causes

Although the term *wildfire* suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned.[13] The three most common types of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.), arson, and equipment use.[14] Power lines can also ignite wildfires through downed lines, vegetation contact, conductors that collide, and equipment failures.[15] CAL FIRE determined that between 2017 and 2021, 1,344 fires and 639,437 acres were burned due to electrical power and distribution lines.[16] Lightning is the most common natural cause of wildfire in the United States.[17] Power lines can ignite wildfires several ways, including:[18]

- Downed lines: downed power lines can produce arcing that can cause the powerlines to spark and ignite vegetation.
- Vegetation contact: a branch contacting two conductors for a sufficient duration may ignite the branch; a tree falling on a line can cause a downed line.
- High winds and severe weather: conductors can slap together during high winds and severe weather, creating arcing of the powerlines and ejecting hot metal particles that can ignite flammable matter on the ground.

[11] National Park Service, updated January 8, 2018, Wildland Fire in Chaparral: California and Southwestern United States, accessed April 3, 2023, https://www.nps.gov/articles/wildland-fire-in-chaparral.htm.

[12] California State Board of Forestry and Fire Protection, 2019, *2019 Strategic Fire Plan for California*, accessed November 28, 2022, https://www.fire.ca.gov/media/5504/strategicplan2019-final.pdf.

[13] Jennifer Balch, Bethany Bradley, John Abatzoglou, et al., March 2017, "Human-Started Wildfires Expand the Fire Niche across the United States," *Proceedings of the National Academy of Sciences*: Volume 114 No. 11, https://www.pnas.org/content/pnas/114/11/2946.full.pdf.

[14] Pacific Biodiversity Institute, May 2007, *Roads and Wildfires*, accessed April 3, 2023, http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf.

[15] Texas Wildfire Mitigation Project, 2014, How Do Power Lines Cause Wildfires? accessed April 3, 2023, https://wildfiremitigation.tees.tamus.edu/faqs/how-power-lines-cause-wildfires.

[16] California State Board of Forestry and Fire Protection, 2023, Statistics: Past Wildfire Activity Statistics (Redbooks), accessed April 3, 2023, https://www.fire.ca.gov/our-impact/statistics.

[17] Jennifer Balch, Bethany Bradley, John Abatzoglou, et al., March 2017, "Human-Started Wildfires Expand the Fire Niche across the United States," *Proceedings of the National Academy of Sciences*: Volume 114 No. 11, https://www.pnas.org/content/pnas/114/11/2946.full.pdf.

[18] Texas Wildfire Mitigation Project, 2014, How Do Power Lines Cause Wildfires? accessed June 23, 2023, https://wildfiremitigation.tees.tamus.edu/faqs/how-power-lines-cause-wildfires.

- Equipment failures: As circuit components deteriorate, they can arc and spark and thus ignite nearby flammable matter.

An analysis of United States Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires and 90 percent of all wildfires started within a half mile of a road and that about 61 percent of all wildfires and 55 percent of human-caused wildfires started within approximately 650 feet (200 meters) of a road. The study concluded that the increase in human-caused ignition greatly outweighs the benefits of increased access for firefighters.[19]

Wildfires ignite structures in three ways: burning embers landing on the structure or flammable material next to the structure, direct flame contact, and radiant heat from fire close to the structure. Embers are the most common cause of home ignition. Embers ignite structures by entering through attic vents, igniting flammable materials around the home (litter in the roof gutter; wood stacks; or wood fencing), or finding their way under roofing materials.[20]

CAL FIRE estimated in 2010 that there were about three million housing units in California in FHSZs and potentially at risk from wildland fire—that is, just over 20 percent of the total housing units in the state.[21] According to CAL FIRE data, approximately 95 percent of structures seriously damaged in California wildfires from 2013 to 2020 took place in FHSZs in the LRA, SRA, or Federal Responsibility Area.[22]

Wildland-Urban Interface Fire Area

A WUIFA in Santa Rosa is any area where structures and other human developments meet or intermingle with wildland vegetative fuels—shrubs, trees, and grasses. Developments in the WUIFA exacerbate fire occurrence and fire spread in several ways:

- Increased numbers of people near and in wildland areas, creating more frequent human-caused wildfires.
- Wildfires become harder to fight due to simultaneous evacuation and firefighting resources diverted from containing the wildfire to protecting lives and homes.
- Letting natural fires burn becomes impossible; leading to buildup of fuel in brush and forested areas and overgrowth of grasslands, increasing wildfire hazard further.[23]

[19] Pacific Biodiversity Institute, May 2007, *Roads and Wildfires*, accessed April 3, 2023, http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf.

[20] California Chaparral Institute, Protecting Your Home from Fire, accessed June 23, 2023, https://www.californiachaparral.org/fire/protecting-your-home/.

[21] State Board of Forestry and Fire Protection and California Department of Forestry and Fire Prevention, August 2018, *2018 Strategic Fire Plan for California*, accessed June 23, 2023, https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf.

[22] CapRadio, December 2021, After years of delays, CAL FIRE says updated and expanded wildfire hazard maps are on their way, accessed June 23, 2023, https://www.capradio.org/articles/2021/12/20/after-years-of-delays-calfire-says-updated-and-expanded-wildfire-hazard-maps-are-on-their-way/.

[23] Volker Radeloff, David Helmers, H. Kramer, et al., February 2018, *Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk*, https://www.pnas.org/content/pnas/115/13/3314.full.pdf, accessed June 23, 2023.

Secondary Effects

Secondary effects of wildfire include additional hazards such as poor air quality, landslides, and power outages. After a high intensity wildfire, the burn scar is typically bare of its vegetative cover, which had supported the hillsides and steeper slopes. As a result, heavy rainstorms increase the possibility of severe landslides and debris flows in these areas. The intense heat from the fire can also cause a chemical reaction in the soil that makes it less porous, causing water to run off during precipitation events, leading to flooding downstream. As discussed in Chapter 4.7, *Geology and Soils*, of this Draft EIR, the EIR Study Area has experienced landslides in the past ranging from small, localized events to events that caused injury and substantial damage. On December 31, 2005, a mudslide on Montgomery Drive collided with houses and automobiles as it extended into the middle of the road. Two houses were damaged and a third was destroyed. In 1997, decreased vegetation from wildfires combined with excessive ground moisture from heavy rains to cause the Hidden Acres landslide in the Bennet Valley area (outside of the Santa Rosa city limits). It was also a major concern following the 2017 wildfires, with preventative actions taken to cover and protect exposed slopes in fire-damaged hillside areas of the city. As shown on Figure 4.7-2, *Landslide Map*, in Chapter 4.7 of this Draft EIR, the EIR Study Area contains several areas that are prone to landslides and have experienced landslides in the past.

In addition to damaging natural environments, wildfires can injure and kill residents and firefighters as well as damage or destroy structures and personal property. Wildfires also deplete water reserves, down power lines, disrupt communication services, and block evacuation routes, which can isolate communities. Wildfires can also indirectly cause flooding if flood control facilities become inadequate to handle increases in stormwater runoff, sediment, and debris that are generated from burn scars.

Regionally, smoke from wildfires creates poor air quality that can last for days or weeks, depending on the scale of the wildfire and wind patterns. Smoke itself is made up of a complex mixture of gases and fine particles produced when wood and other organic materials burn. Health risks from smoke inhalation are largely from microscopic particles ($PM_{2.5}$) that can penetrate the lungs and cause a range of health problems, including chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. There are some populations that are more sensitive than others to smoke—for instance, people with heart or lung diseases, seniors, children, people with diabetes, people with compromised immune systems, and pregnant women.[24] Through observations of wildfires, experts have determined that wildfires which produce large plumes of smoke can result in that smoke and ash being carried thousands of miles from the burn area of the wildfire. Therefore, air pollution is a major secondary risk from wildfires in the region.[25]

[24] United States Environmental Protection Agency, updated October 20, 2022, Why Wildfire Smoke is a Health Concern, https://www.epa.gov/wildfire-smoke-course/why-wildfire-smoke-health-concern, accessed April 3, 2023.

[25] Nasa Earth Observatory, August 2018, Smoky Skies in North America, https://earthobservatory.nasa.gov/images/92612/smoky-skies-in-north-america, accessed April 3, 2023.

Wildfire in Santa Rosa

As shown on Figure 4.18-1, *Fire Hazard Severity Zones*, the EIR Study Area is in both the LRA and SRA. Lands within the city limit are within the LRA, and lands between the city limit and the Planning Area boundary are within the SRA. Figure 4.18-1 shows Very High FHSZs in the LRA are in the Fountaingrove, Skyhawk, and Oakmont neighborhoods of the city. The SRA to the north and south of the city limits contain Moderate and High FHSZs. As shown on Figure 4.18-2, *General Plan Land Uses in Wildland Urban Interface Fire Areas,* land uses within the WUIFA consist of very low and low density residential, with other land uses consisting of parks and recreation, medium density residential, medium low density residential, public/institutional, and retail and business services.

The wildland-urban interface is the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. In the different zones, the intermix zone is land with at least one housing unit per 40 acres and 50 percent or more vegetation cover, and the interface zone is land with at least one housing unit per 40 acres and less than 50 percent vegetation cover. In Santa Rosa, the WUIFA is a geographical area identified by the City as an FHSZ, in accordance with PRC, Sections 4201 through 4204, and Government Code, Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires.

Areas within EIR Study Area and adjacent unincorporated areas of Sonoma County are in the CPUC high fire-threat district, as shown on Figure 4.18-3, *CPUC Fire-Threat Map*. These areas are mainly to the east and west of the EIR Study Area in the surrounding mountain ranges. Both areas are a Tier 2 and 3 high fire-threat district.[26]

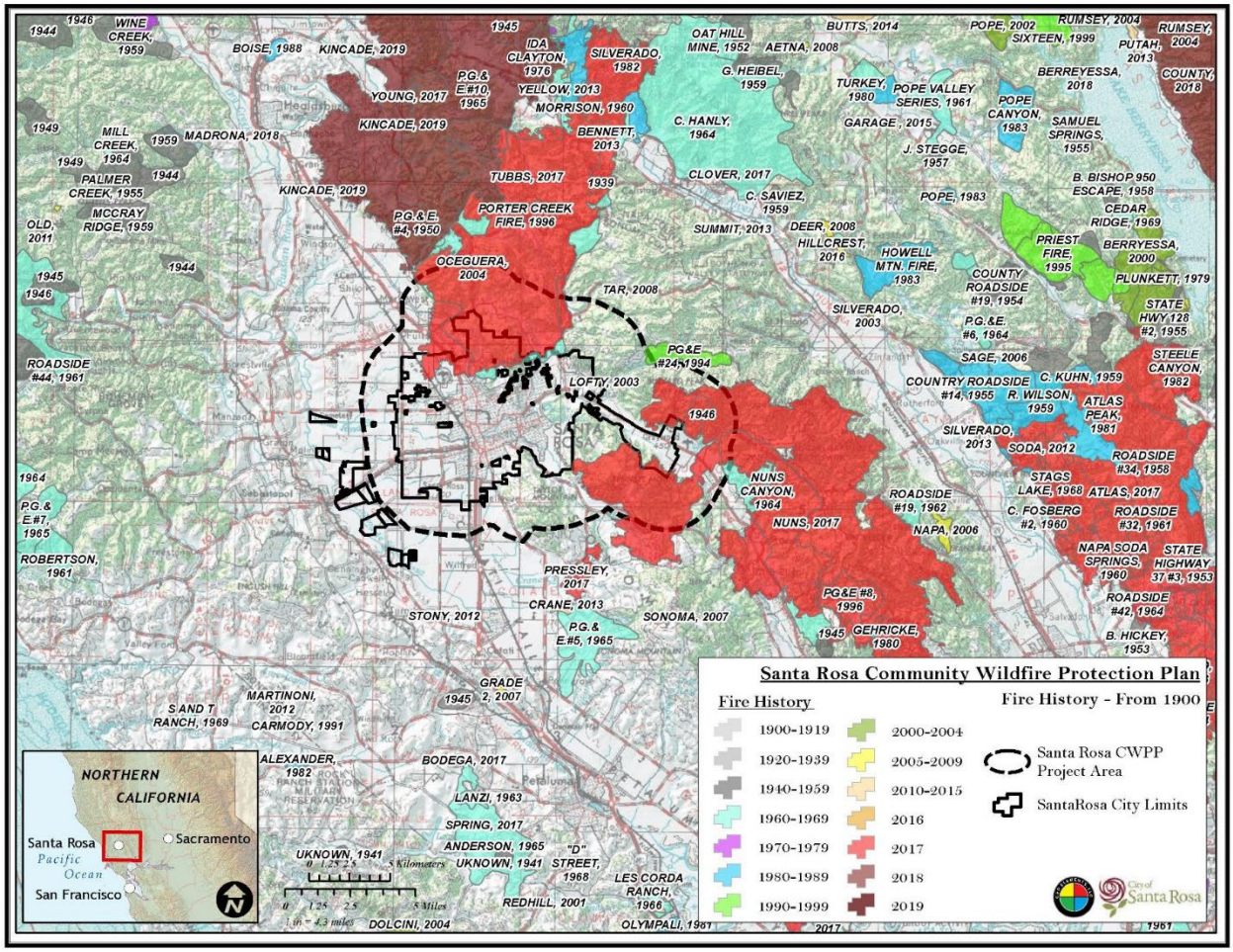
Wildfire History

As shown on Figure 4.18-4, *Historic Wildfire Perimeters*, several wildfires have burned in and near the EIR Study Area. These include the 1870 Great Fire, 1923 Mayacamas Fire, 1939 Airport Fire, 1964 Nuns Canyons Fire, 1964 Hanly Fire, 2003 Lofty Perch Fire, and more recent wildfire described below.

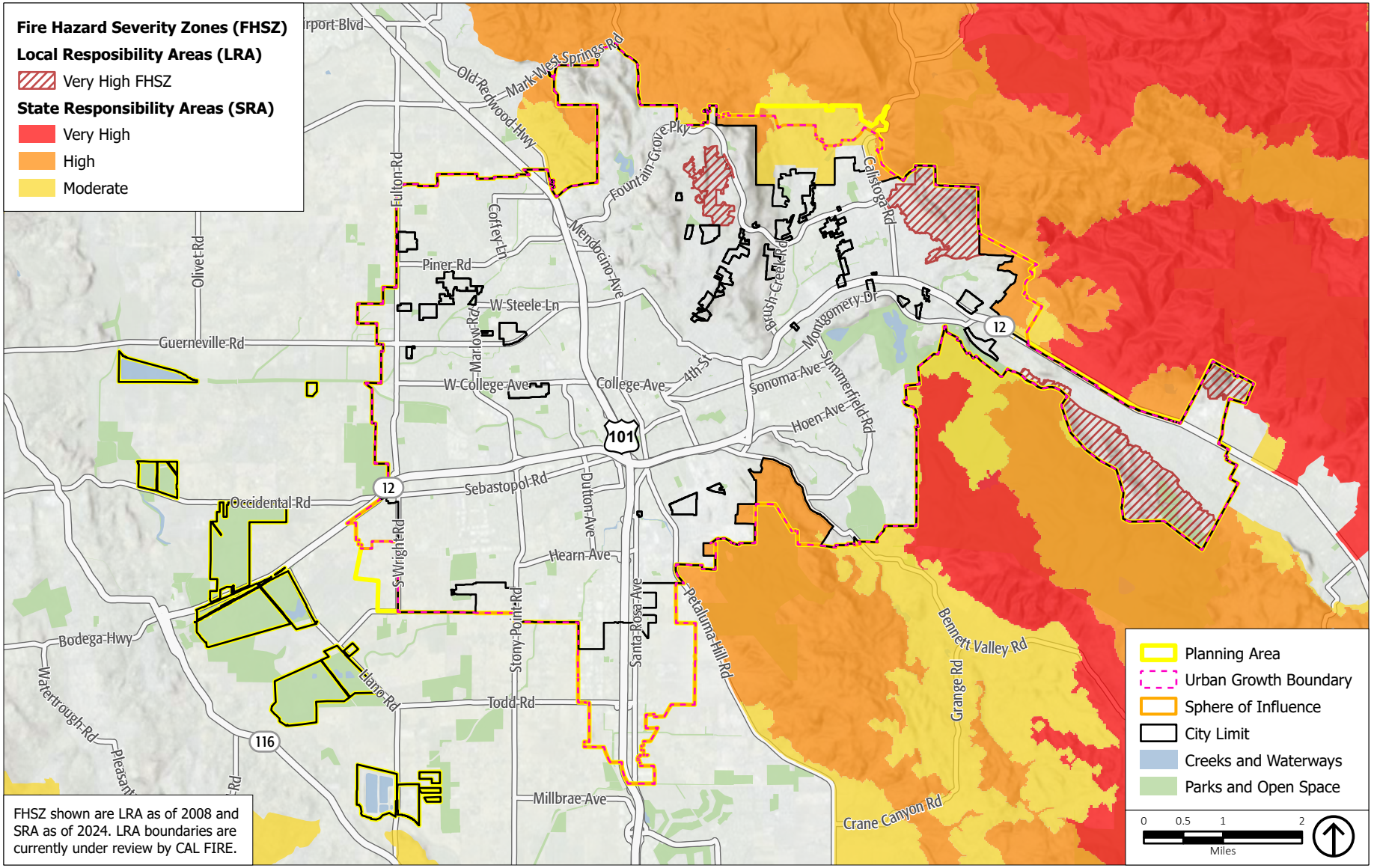
The following image from the Santa Rosa CWPP provides additional details regarding the names and year of occurrences of historic wildfires.[27]

[26] California Public Utilities Commission, revised August 19, 2021, CPUC Fire-Threat Map, https://files.cpuc.ca.gov/safety/fire-threat_map/2021/CPUC%20Fire%20Threat%20Map_v.3_08.19.2021.Letter%20Size.pdf, accessed April 3, 2023.

[27] City of Santa Rosa Community Wildfire Protection Plan, last modified August 25, 2020, *Community Wildfire Protection Plan*, https://srcity.org/DocumentCenter/View/30136/City-of-Santa-Rosa-Community-Wildfire-Protection-Plan-CWPP_91820, accessed September 9, 2024.

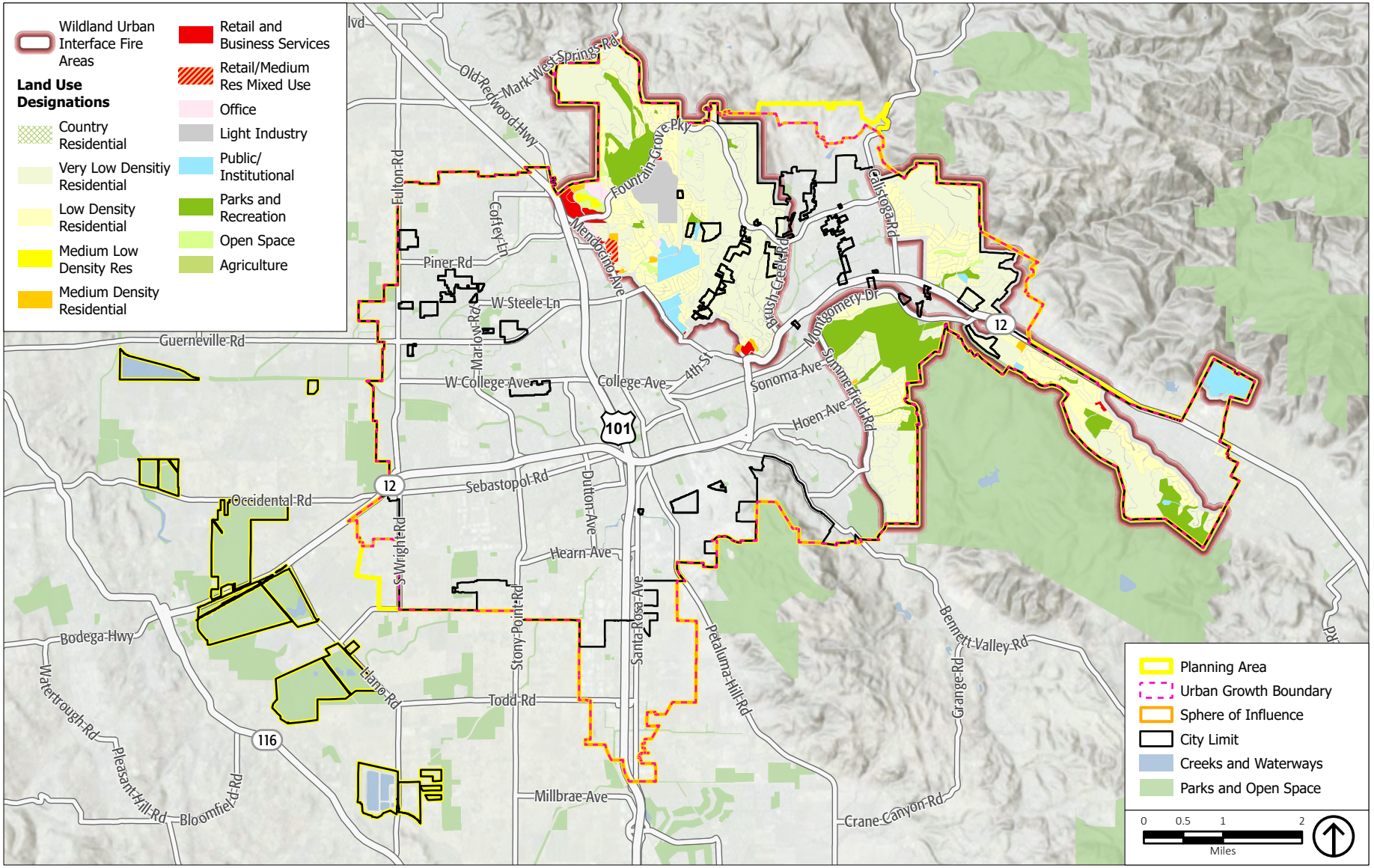


On Friday, October 6, 2017, the National Weather Service issued a Red Flag Warning for Sonoma County from Sunday, October 8, through Tuesday morning, October 10. On the night of Sunday, October 8, 2017, Santa Rosa and surrounding areas were experiencing above-normal wind speeds and reports of fires across the County. SRFD responded to 20 vegetation fires and six structure fires between 6:00 p.m. and midnight. The Tubbs Fire ignited near Highway 128 and Bennett Lane in Calistoga at 9:45 p.m., and the Nuns Fire ignited in the Sonoma County area north of Glen Ellen around the same time as the Fire Department was responding to multiple fires in the city and adjacent areas. Strong winds pushed the Tubbs Fire toward Santa Rosa, spreading at an average speed of approximately 4.5 miles per hour, or 1 mile every 13.3 minutes. By 1:10 a.m., the fire reached the Fountaingrove neighborhood, and by 2:01 a.m. it had jumped US Highway 101, impacting a regional commercial center and surrounding neighborhoods, including Coffey Park. Nine Santa Rosa residents lost their lives, and 100,000 county residents evacuated their homes. Three emergency shelters operated in the City. A Major Disaster Declaration was made on October 10th. The Tubbs and Nuns fires were finally declared contained on October 30 and 31.



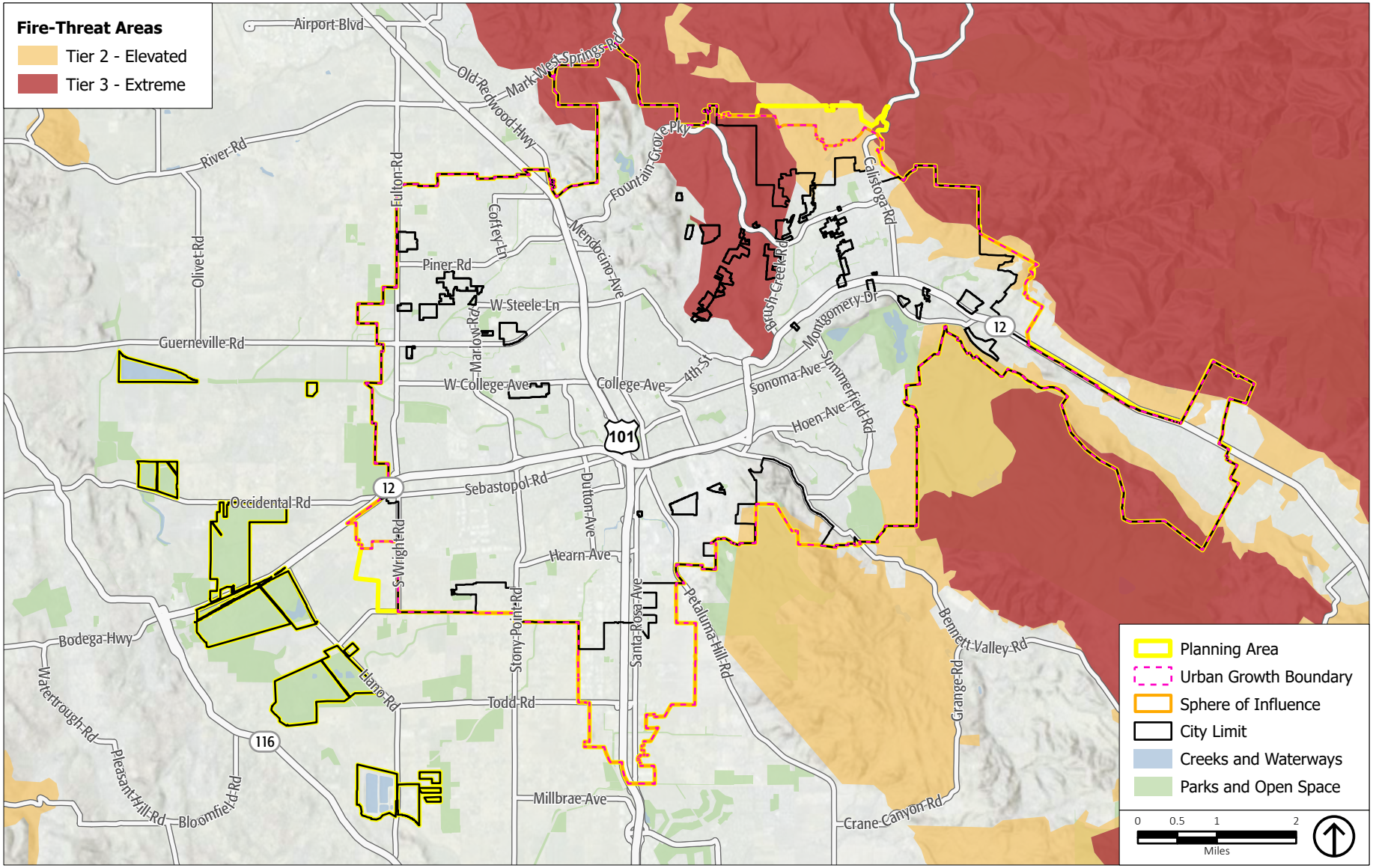
Source: City of Santa Rosa, 2020; ESRI, 2022; CAL FIRE 2024; PlaceWorks, 2024.

Figure 4.18-1
Fire Hazard Severity Zones



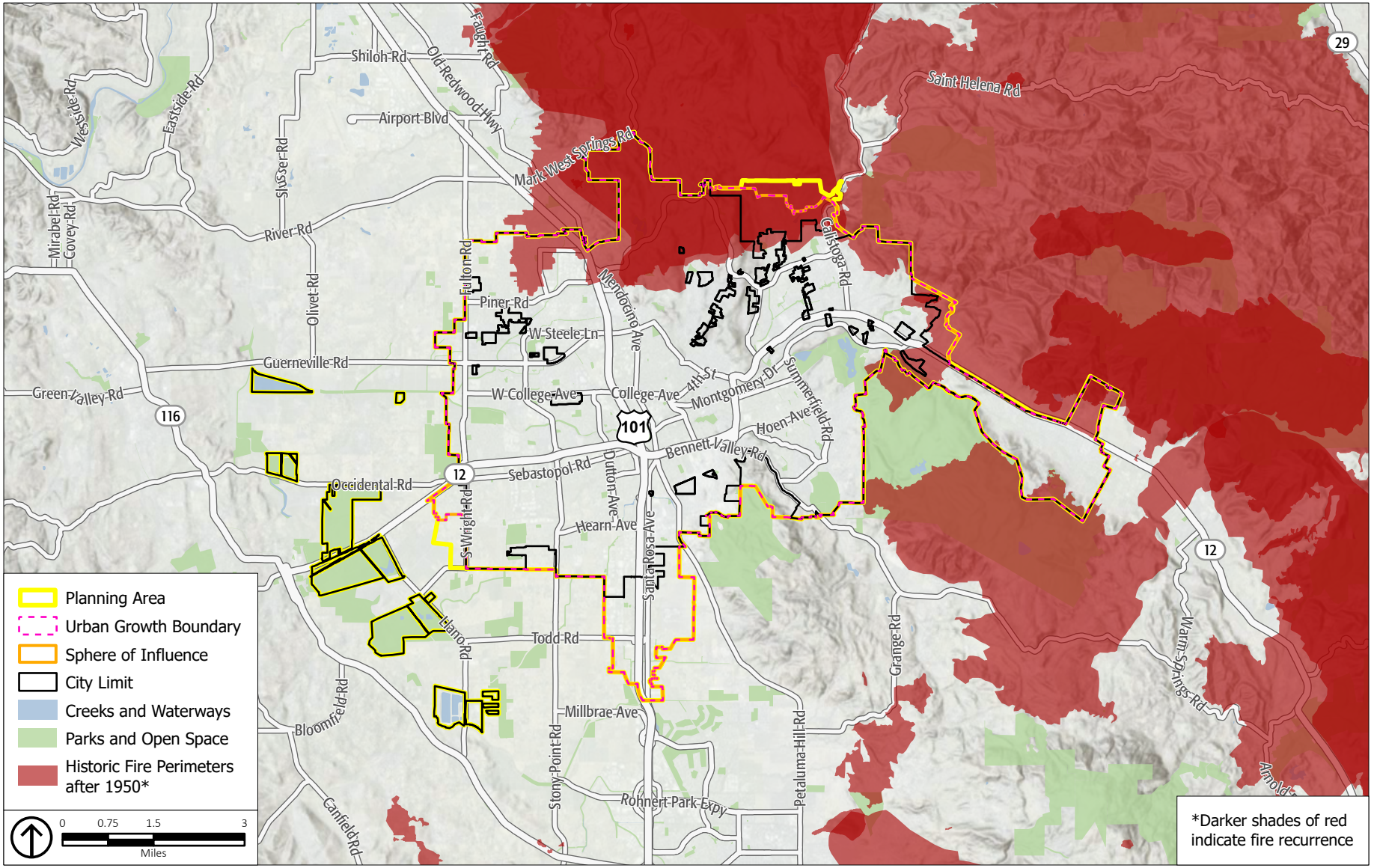
Source: City of Santa Rosa, 2020; ESRI, 2022; PlaceWorks, 2024.

Figure 4.18-2
General Plan Land Use in Wildland Urban Interface Fire Areas



Source: City of Santa Rosa, 2020; CPUC, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.18-3
CPUC Fire-Threat Map



Source: CAL FIRE, 2021; CalOES, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.18-4
Historic Wildfire Perimeters

The City spent approximately $9 million in reserves for initial fire response costs, and total suppression costs for the Tubbs Fire are estimated at $100 million. In all, the Tubbs Fire destroyed 3,043 residential units in the city of Santa Rosa--constituting 5 percent of the residential building stock—as well as 36 commercial buildings, including two hotels, a winery, a department store, and restaurants. It affected virtually the same areas of Santa Rosa as the 1964 Hanley Fire, but it also spread west of US Highway 101 and burned 1,432 homes in the Coffey Park neighborhood.

The city was again threatened by wildfire on the evening of October 23, 2019, when the Kincade Fire started near the Geysers Geothermal plant in north Sonoma County. The Kincade Fire burned 77,758 acres and destroyed 374 buildings, prompting the largest evacuation in the history of Sonoma County. The fire burned to the outskirts of Windsor, north of the city, before the southerly progression of the fire was stopped.

In August 2020, Northern California recorded over 12,000 lightning strikes, which sparked over 585 wildfires across the region. This lightning storm ignited the Sonoma Lightning Complex fires, which burned 61,875 acres and the Sonoma-Lake-Napa Unit Lightning Complex and Hennessey fires, which burned over 305,000 acres. In September 2020, the Glass Fire ignited, threatening neighborhoods in eastern Santa Rosa. The Glass Fire prompted evacuations of approximately 70,000 people in Santa Rosa and surrounding region, burning 67,484 acres and destroying 611 structures. Within the Santa Rosa City limits, 34 residential units and five commercial structures were destroyed. By October 22, 2020, Governor Newsom announced that Sonoma County, along with Napa and Shasta Counties, had been added to a Major Disaster Declaration due to the wildfires.[28]

Factors Influencing Wildfire

Several factors influence wildfire conditions and facilitate the spread of wildfires, including weather conditions, fuels, topography, and climate change. Human actions are also the leading cause of wildfires in California, increasing the risk of wildfire devastating natural lands and communities.

Weather

The climate in Santa Rosa is generally referred to as “Mediterranean,” with hot, dry summers and cool, wet winters. The weather is generally mild throughout the year. Fog and low overcast often move in from the Pacific Ocean during the mornings and evenings, usually clearing up to warm, sunny weather by late morning or noon.[29] Because the summer months are generally hot and dry, the risk of wildfires has historically been greatest in summer and fall. Relative humidity is also an important fire-related weather factor. As humidity levels drop, the dry air causes vegetation moisture levels to decrease, thereby

[28] California Office of Emergency Management, October 2020, Three Additional Counties Added to Presidential Major Disaster Declaration to Support State’s Response to Wildfires, http://news.caloes.ca.gov/three-additional-counties-added-to-presidential-major-disaster-declaration-to-support-states-response-to-wildfires/, accessed on November 22, 2022.

[29] Tetra Tech, 2021, *Sonoma County Multijurisdictional Hazard Mitigation Plan Santa Rosa Annex,* https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Long%20Range%20Plans/Adopted%20Plans/Hazard%20Mitigation%20Plan/Sonoma-County-2021-MJHMP-Volume-2-City-Of-Santa-Rosa-Annex.pdf, accessed June 28, 2023.

increasing the likelihood that plant material will readily ignite and burn; the risk of wildfire increases when lightning strikes occur during dry periods.

Wind is a primary weather factor of wildfire behavior. Diablo winds, which are a type of downslope, warm, northerly to northeasterly wind, flow over the mountains east of the EIR Study Area and can have speeds exceeding 50 to 60 miles per hour.[30] As wind speeds increase, the rate of fire spread, intensity, and ember spread potential also increases. Gusty and erratic wind conditions can cause a wildfire to spread irregularly, making it difficult to predict its path and effectively deploy fire suppression forces. Winds from the east in the late summer and fall compound with lower relative humidity, creating "red flag" conditions.[31] High winds and low humidity are especially dangerous because low humidity can dry out trees and other fuel that may also be weakened by the winds. This can increase wildfire conditions in the EIR Study Area. Wind shifts can also occur suddenly due to temperature changes and interactions with steep slopes or hillsides, causing fires to spread unpredictably. Fall has historically been one of the most dangerous times for wildfire risk, as periods of very high temperatures, low humidity, and strong wind increases cause red flag warnings and extreme fire danger.

Fuel

The qualities of vegetation that directly influence fire risk include fuel type and size, loading, arrangement, chemical composition, and dead and live fuel moisture, which contributes to the flammability characteristics of the vegetation. As described in more detail in Chapter 4.4, *Biological Resources*, of this Draft EIR, vegetation within the EIR Study Area consists of hardwood forest, conifer forest, grassland, nonnative forest, and shrub. Forest vegetation is the dominant vegetation type in the eastern portion of the EIR Study Area, and grassland and agriculture are dominant in the western portion of the EIR Study Area. Grasslands and woodlands are highly flammable, particularly leaf litter that is left to accumulate, ultimately dries, and provides fuel for potential fires. The fire risk in grassland and woodlands vegetation communities can be reduced through several tactics, primarily controlled burns and annual grazing.[32]

Topography

Slope is a measure of land steepness, and wildfire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. For example, as slope increases from 20 to 40 percent, flame heights can double and rates of fire spread can increase fourfold; from 40 to 60 percent, flame heights can become three times higher, and rates of spread can increase eightfold. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes. As mentioned in Chapter 4.7, *Geology and Soils*, of this Draft EIR, the topography of the EIR Study Area varies from steep slopes in the hillsides of the eastern and southern portions, to generally flat in the western

[30] Tetra Tech, 2021, *Sonoma County Multijurisdictional Hazard Mitigation Plan, Volume I,* https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Planning/Long%20Range%20Plans/Hazard%20Mitigation%20Plan/Adopted-Sonoma-County-MJHMP-Volume-1-December-2021.pdf, accessed June 28, 2023.

[31] The National Weather Service issues "red flag" weather day warnings when certain weather elements such as low relative humidity and strong winds could increase wildfire risk.

[32] The Nature Conservancy, updated March 28, 2022, Restoring Fire to Native Grasslands, https://www.nature.org/en-us/about-us/where-we-work/united-states/minnesota/stories-in-minnesota/restoring-fire-to-native-grasslands/, accessed April 3, 2023.

portion sloping toward the Laguna de Santa Rosa to the west. The steeply sloped area largely coincides with the fire-prone areas in the EIR Study Area.

Human Actions

Most wildfires are ignited by human action, the result of direct acts of arson, carelessness, or accidents. Many fires originate in populated areas along roads and around homes and are often the result of careless disposal of cigarettes, mowing of dead grass, electrical equipment malfunction, use of equipment, or burning of debris. Recreation areas with increased human activity that are in fire-prone areas also increase the potential for wildfires.

Climate Change

Climate change is likely to increase annual average maximum temperatures in Santa Rosa from a historical 70.8 degrees Fahrenheit (°F) to 75.4 °F by 2050 and 78.6°F by 2100.[33] This will likely create warmer temperatures earlier and later in the year. Precipitation levels are projected to increase over the course of the century, changing from a historical annual average of 35.9 inches per year to an annual average of 40.4 inches by 2050 and 44.8 inches by 2100.[34] Variations in precipitation patterns will also lead to an increase in frequency and intensity of heavy precipitation events as well as prolonged periods of drought. The combination of extreme heat and droughts cause soils and vegetation to dry out, creating more fuel for wildfires. These factors are expected to increase wildfire conditions, creating the risk of more frequent and intense wildfires. Historically, an average of 229 acres burned annually in the city.[35] Wildfires are projected to increase to an annual average in the city of 257 acres burned annually by 2050 and 267 acres burned annually by 2100.[36]

Fire Protection Resources

SRFD has primary responsibility for fire protection within city limits. The City is aided by CAL FIRE, the Sonoma County Fire Protection District and Sonoma Valley Fire District. Santa Rosa has a 2006 agreement with CAL FIRE that provides for CAL FIRE response on LRA lands as needed, which allows the City to leverage the state's considerable firefighting resources, including aircraft. Based on fire danger, various dispatch levels have been established in the agreement that define the number and kind of resources that CAL FIRE will send to a reported wildfire.

SRFD has a Fire Prevention Bureau staffed by a Fire Marshal, three Assistant Fire Marshals, six Fire Inspectors, a Plan Checker, two community outreach specialists and administrative personnel. Additionally, all ten of the City's fire stations are involved in a fire inspection program and work closely with Fire Inspectors to reduce community fire risk. Chapter 4.14, *Public Services, Park, and Recreation*, of this Draft EIR provides additional details about fire protection services in the EIR Study Area.

[33] Cal-Adapt, 2023, Annual Averages, https://cal-adapt.org/tools/annual-averages/, accessed April 3, 2023.
[34] Cal-Adapt, 2023, Annual Averages, https://cal-adapt.org/tools/annual-averages/, accessed April 3, 2023.
[35] Cal-Adapt, 2023, Wildfire, https://cal-adapt.org/tools/wildfire/, accessed April 3, 2023.
[36] Cal-Adapt, 2023, Wildfire, https://cal-adapt.org/tools/wildfire/, accessed April 3, 2023.

Evacuation and Access

Potential evacuation routes are roadways that allow many people to quickly leave an area due to a potential or imminent disaster. These routes should have sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe from emergency conditions. As shown on Figure 4.18-5, *Evacuation Routes and Evacuation-Constrained Residential Parcels*, primary evacuation routes include US Highway 101 and State Route 12. Figure 4.18-5 also shows dozens of additional evacuation routes throughout the city.

During emergencies, the Santa Rosa Police Department and the Santa Rosa Fire Department coordinate evacuation warnings and orders with the City of Santa Rosa emergency management team. Notifications are coordinated with the County of Sonoma Department of Emergency Management.

Several neighborhoods throughout the city have evacuation constraints, as shown on Figure 4.18-5. An evacuation-constrained residential parcel is defined as the following:

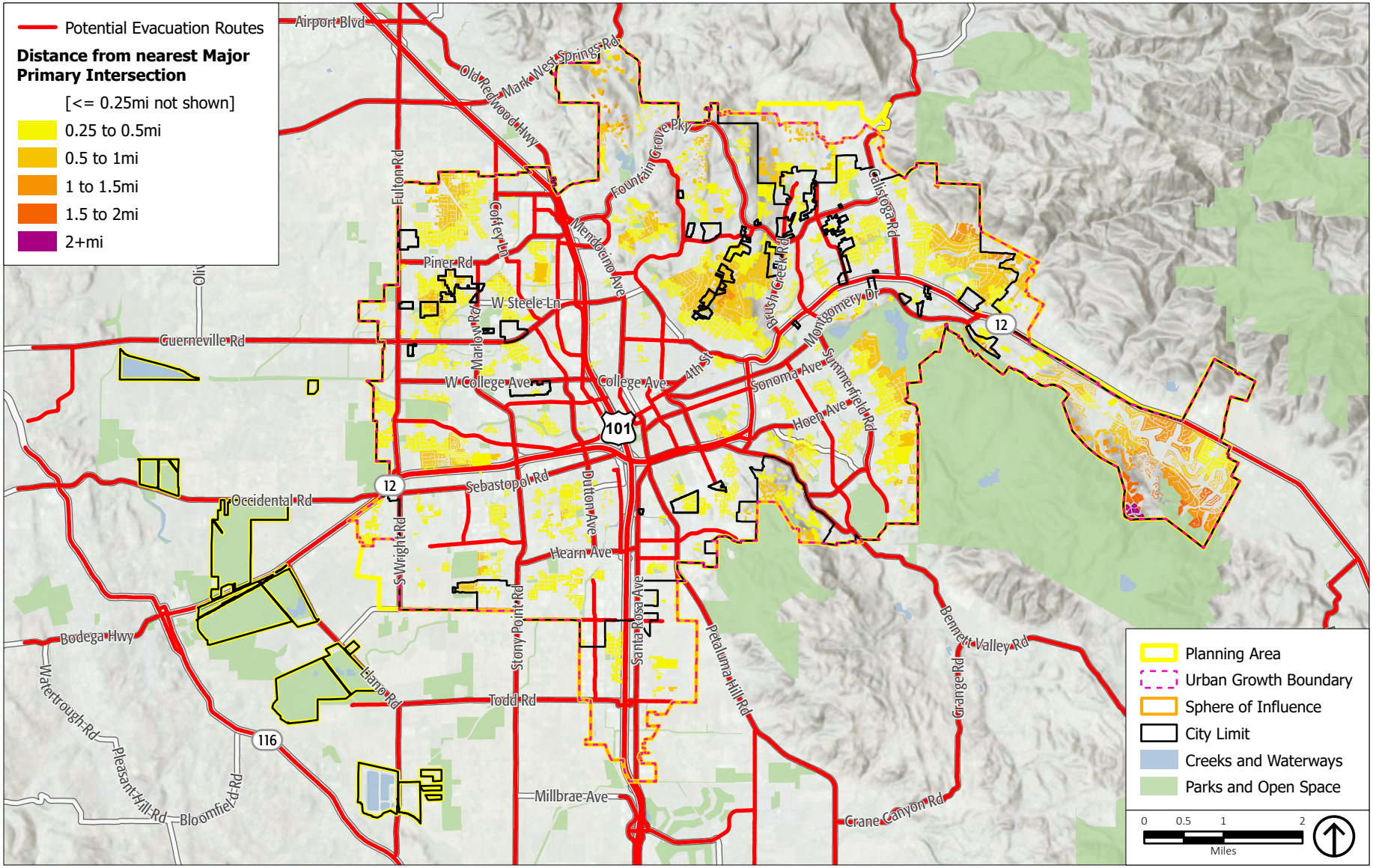
- A residential parcel with only one ingress and egress point; and/or
- A residential parcel that is more than 0.5 miles from the closest designated evacuation route based on the distance along the roadway network.

Evacuation-constrained residential parcels are throughout the EIR Study Area, and many are in or near the WUIFA and wildfire prone areas.

4.18.2 STANDARDS OF SIGNIFICANCE

If located in or near SRAs or lands classified as Very High FHSZs, the proposed project would result in a significant wildfire impact if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
5. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to wildfire.



Source: CalOES, 2021; ESRI, 2022; PlaceWorks, 2024.

Figure 4.18-5

Evacuation Routes and Evacuation Constrained Residential Parcels

4.18.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

WF-1 Implementation of the proposed project could substantially impair an adopted emergency response plan or emergency evacuation plan.

Adopted emergency response plans and emergency evacuation plans include those discussed under Section 4.18.1.1, *Regulatory Framework*, such as the Santa Rosa EOP. The proposed project could result in a significant impact if it would substantially impair the implementation of this EOP.

Potential future development in the EIR Study Area would be required to integrate applicable emergency operation and evacuation requirements as necessary to facilitate evacuation for people in wildfire-prone areas. Future development, regardless of whether it includes new development or redevelopment, is required to comply with adopted local, regional, and State plans and regulations addressing emergency access, response, and evacuation. Future development in the WUIFA or Very High FHSZs would be required to comply with the Very High FHSZ Fire Safe Regulations, the CBC, the CFC, and the SRCC, which have requirements for maximum lengths of single-access roads, minimum widths of roadways, and vegetation fuel management around roadways.

A temporary impact to emergency response and evacuation over the buildout horizon of the proposed project could occur from construction of future development projects if they were to result in temporary lane closures that would potentially alter evacuation routes. However, potential future development over the buildout horizon of the proposed project would be required to comply with applicable Very High FHSZ Fire Safe Regulations, the CBC, the CFC, and the SRCC, which would prohibit the obstruction of the circulation network. Additionally, these activities would be limited to the duration of the construction period, and direct impacts of construction would be evaluated during the permit review process by SRFD and/or CAL FIRE. Review and approval of temporary lane closures, if needed, for future development projects in the EIR Study Area would ensure that that no inconsistencies with emergency evacuation plans would occur.

Furthermore, as described in Chapter 3, *Project Description*, of this Draft EIR, the expansion of the city into surrounding lands is no longer a focus of City planning efforts. The proposed General Plan 2050 identifies 21 Areas of Change where the City will focus on housing, services, connectivity, and/or infrastructure needed to make these complete neighborhoods (see Figure 3-6, *Proposed General Plan 2050 Areas of Change*, in Chapter 3 of this Draft EIR). Potential future development in the EIR Study Area is projected to occur primarily in the proposed Areas of Change in the form of infill/intensification on sites already developed or underutilized, and/or in close proximity to existing development and infrastructure.

Out of the 21 Areas of Change, only the Oakmont (#20) location is partially in the WUIFA (the majority of this Area of Change is outside the WUIFA) and none of the Areas of Change are in the Very High FHSZ. Areas of Change that border WUIFAs include Fountaingrove/Mendocino Interchange (#1), Mendocino Corridor (#8), Flamingo Center (#10), and Howarth Commercial (#14). Therefore, the majority of the projected growth would not be in areas prone to wildfire hazards where evacuation due to fire threat would be greater than non-fire prone areas.

Buildout in the EIR Study Area would result in changes to the circulation patterns or emergency access routes throughout Santa Rosa. As described in Chapter 3, and evaluated in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project also includes new and improved circulation infrastructure, of which many of the circulation modifications reflected in the proposed General Plan 2050 are also identified in the recent *Moving Forward 2050 Sonoma County Comprehensive Transportation Plan*. As shown in Table 3-4, *Major Planned Roadway Circulation Improvements*, and Table 3-5, *Major Planned Multimodal Circulation Improvements* in Chapter 3 of this Draft EIR, the proposed changes to the circulation infrastructure include strategic roadway widenings on key arterials and highways, including SR 12, Fulton Road, Stony Point Road, and new or expanded roadways in WUIFA areas of Santa Rosa, to facilitate access of emergency responders. Specifically, improvements include evacuation route upgrades primarily on arterials in the WUIFA, including Fountaingrove Parkway and Montgomery Drive, and on the Farmers Lane Extension from Bennett Valley Road to Petaluma Hill Road, including sidewalks, bike lanes, and transit route. Accordingly, proposed circulation improvements would not substantially impair the implementation of the Santa Rosa EOP.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to emergency response and evacuation. The following goal, policies, and actions would serve to minimize potential adverse impacts related to emergency response and evacuation:

- Goal 5-5: Ensure that Santa Rosa is prepared for future emergencies.
  - Policy 5-5.1: Encourage City staff and community members to be prepared for and capable of responding to emergency events.
    - Action 5-5.1: Maintain and periodically update the City's Emergency Operations Plan.
    - Action 5-5.2: Coordinate with staff of the Sonoma County Operational Area (which consists of the cities, special districts, and unincorporated areas of the county) to update joint emergency response and disaster response plans, as needed.
    - Action 5-5.3: Promote public awareness of the natural hazards and potential effects of disasters in the Planning Area through community and volunteer organizations.
  - Policy 5-5.3: Promote emergency response and preparedness training for City staff, community members, and businesses to increase community resilience.
    - Action 5-5.6: Participate in emergency response exercises in the Operational Area that involve key hazards of concern for the city.
  - Policy 5-5.4: Prioritize projects and strategies that mitigate hazards and increase community resilience.

- Action 5-5.7: Update the Local Hazard Mitigation Plan per State and federal requirements and implement action items as feasible.

- Policy 5-5.5: Ensure that coordination between the City and Operational Area continuously improves to meet the changing risks of the community.
  - Action 5-5.11: Continue to implement mutual aid, automatic aid, and California's Mutual Master Aid System to provide effective emergency response.
  - Action 5-5.12: Maintain effective mutual-aid agreements with neighboring cities and Sonoma County to support emergency management.
  - Action 5-5.13: Continue to execute mutual-aid agreements with public and private entities to support community emergency management.
- Policy 5-5.6: Prioritize investments that expand and enhance evacuation capacity and capabilities.
  - *Action 5-5.14: Require all new development projects to provide adequate access for fire and emergency response personnel.
  - *Action 5-5.15: Prohibit the creation of new single ingress/egress roadway conditions in the city.
  - *Action 5-5.16: Retrofit existing single-access residential neighborhoods to include additional access routes or other provisions to increase evacuation safety.
  - *Action 5-5.17: Analyze the capacity, viability, and safety of evacuation routes for hazard areas in the city (e.g., WUIFA) and incorporate the results into the City's Emergency Operations Plan.

Without adequate access there is the potential for impacts related to evacuation to be potentially significant.

Impact WF-1: Implementation of the proposed General Plan 2050 could result in inadequate evacuation access the impair the implementation of an emergency evacuation plan.

Significance with Mitigation: Less than significant. Implementation of the proposed General Plan 2050 goals, policies, and actions would increase the effectiveness of emergency operations and evacuation, and therefore would not impair or conflict with applicable plans. Specifically, proposed *Action 5-5.16 would reduce the number of evacuation-constrained residential parcels identified on Figure 4.18-5, *Evacuation Routes and Evacuation-Constrained Residential Parcels*, by retrofitting existing single-access roads in residential neighborhoods to include additional access routes or other provisions to increase evacuation safety. Proposed *Action 5-5.17 requires the City to conduct an analysis of the evacuation route network to determine the capacity, viability, and safety of evacuation routes, which would be incorporated into the Emergency Operations Plan and would improve evacuation scenarios. In addition, as described, the proposed changes to the circulation infrastructure include strategic improvements that include evacuation route upgrades primarily on arterials within Wildland-Urban Interface Fire Areas. Future development, regardless of whether it includes new development or redevelopment, would be required to comply with adopted local, regional, and State plans and regulations addressing emergency response and evacuation, including proposed *Action 5-5.14 and

*Action 5-5.15, which require the provision of adequate access for fire and emergency response personnel and prohibit the creation of new single access roadways in the city. Therefore, implementation of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan and impacts would be *less than significant*.

WF-2 Implementation of the proposed project could, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

As discussed in Section 4.18.1.2, *Existing Conditions*, the topography of the EIR Study Area varies from steeply slopes in the hillsides of the eastern and southern portions, to generally flat in the western portion sloping towards the Laguna de Santa Rosa to the west. The steeply sloped area largely coincides with the fire-prone areas in the EIR Study Area. Construction of potential future development in fire-prone areas of the EIR Study Area would require grading and site preparation; however, these activities would not significantly change the slope. All potential future development in Santa Rosa would be required to comply with the CBC, CFC, and SRCC requirements for grading, which would minimize the ignition and spread of wildfire due to slopes.

As discussed in Section 4.18.1.2, *Existing Conditions*, Santa Rosa is prone to periods of high winds. These winds can shift suddenly, and they are often accompanied by low humidity. They create dangerous conditions for starting and spreading wildfires during the drier months of the year, and they also spread wildfire smoke hazards, as can prevailing winds. Section 4.18.1.1, *Regulatory Framework*, describes plans, policies, regulations, and procedures that help to reduce wildfire risks. The 2018 *Strategic Fire Plan for California*, 2021 *California Wildfire and Forest Resilience Action Plan*, Sonoma County CWPP, Santa Rosa CWPP, and Sonoma County MJHMP are intended to reduce wildfire hazards and coordinate response to these hazards on a statewide and regional scale. In addition, the Bay Area Air Quality Management District provides air quality alerts, advisories, and an interactive online map to view current air quality conditions in the region. Furthermore, proposed General Plan 2050 Policy 5-6.4 requires the City to continue to implement the City's existing policy for cooling center activation, weatherize City buildings, and participate in cooling strategies for persons engaged in outdoor work and persons experiencing homelessness, and Action 5-6.10 requires the City to seek funding to upgrade existing warming and cooling centers to have the ability to offer refuge from extreme heat events and poor air quality due to regional wildfire smoke.

Other factors, such as vegetation, have the potential to exacerbate wildfire risks. The forest, grassland, and shrub areas of Santa Rosa are easily ignited, especially during late summer and fall when temperatures and winds are high and relative humidity is low. During these conditions, vegetation can dry out, particularly in areas with unirrigated vegetation, becoming extremely flammable and increasing wildfire risks. As described in Section 4.18.1.1, *Regulatory Framework*, the Sonoma County MJHMP, Sonoma County CWPP, and the Santa Rosa CWPP contain several vegetation management, defensible space, fuel reduction, and fuel break projects to reduce the uncontrolled spread of wildfire due to vegetation. Additionally, all potential future development in wildfire-prone areas or the WUIFA in Santa Rosa would be required to comply with the Very High FHSZ Fire Safe Regulations, CFC Chapter 49, PRC

Section 4291, and the SRCC. These regulations have specific requirements for new and existing development to create defensible space and extensive fuel reduction within 100 feet of a structure, an ember-resistant zone within 5 feet of a structure, and the overall maintenance of properties to reduce the risk of uncontrolled fires or the spread of fires to other properties.

Furthermore, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts of slope, prevailing winds, and vegetation to wildfire risks. In addition to the proposed goals, policies, and actions identified under impact discussions WF-1, the following goals, policies, and actions would minimize wildfire risks:

- Goal 5-1: Minimize community exposure to seismic and geologic hazards.
  - *Policy 5-1.1: New development, redevelopment, and major remodels shall avoid or adequately mitigate seismic and geologic hazards.
    - *Action 5-1.1: Prior to new development approval, ensure geologic studies and analyses are deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer for applicable hazard conditions.
    - *Action 5-1.2: Restrict development in areas where adverse impacts associated with known natural or human-caused geologic hazards cannot be effectively mitigated, as determined by a California Certified Engineering Geologist and/or Geotechnical Engineer.
    - Action 5-1.3: Avoid or adequately mitigate development of critical facilities—hospitals, fire stations, emergency management headquarters, broadcast services, sewage treatment plants, and places of large congregations—in high-risk geologic hazard zones (e.g., Rodgers Creek Fault zone, liquefiable soils, areas of slope instability.
  - *Policy 5-1.2: Promote erosion-control strategies that reduce hazards to structures, properties, and drainages.
    - Action 5-1.9: Identify enhanced erosion-control measures for properties that exhibit high erosion potential, are in areas of steep slopes, or have experienced past erosion problems.
    - Action 5-1.10: Ensure each update to the Community Wildfire Protection Plan identifies slope stability and wildfire hazard areas and mitigation strategies to reduce post-wildfire erosion.
- Goal 5-3: Increase community resilience to future wildfire threats.
  - Policy 5-3.1: Encourage greenbelts as nature-based solutions to enhance climate resilience and reduce hazards in and around Santa Rosa.
    - Action 5-3.1: Consider ways that new development can incorporate greenbelt zones into the design to reduce wildfire risk and enhance climate resilience.
    - Action 5-3.2: Work with land use applicants to locate development relative to landscape features that can act as buffers from oncoming wildfires (like agricultural lands and maintained parks and greenbelts).

- Action 5-3.3: Seek provision of land management plans or alternative methods to fund vegetation management efforts, support defensible space maintenance on private property, and create fire breaks, greenbelts, and staging areas in strategic locations.

- Policy 5-3.2: Increase wildfire resiliency using required and voluntary risk reduction regulations and strategies.
  - Action 5-3.4: Adhere to State and local regulations and recommendations of the Community Wildfire Protection Plan that address wildfire risk and vulnerabilities.
  - Action 5-3.5: Continue to require new development, redevelopment, and remodels to comply with adopted codes and standards and promote implementation of recommendations for fire-safe design in the Community Wildfire Protection Plan.
  - Action 5-3.6: Continue to require conformance with the California Fire Safe Regulations for existing nonconforming properties in the Wildland-Urban Interface Fire Area (includes the Very High Fire Hazard Severity Zone).
  - Action 5-3.7: Continue improving the City's previously developed post-wildfire recovery framework to assist with future post-wildfire redevelopment activities.
  - *Action 5-3.8: Require the preparation of fire protection plans for new development and major remodels in the City's Wildland-Urban Interface Fire Area (WUIFA). Require that fire protection plans be consistent with requirements of the California Fire Code and include a risk analysis, fire response capabilities, fire safety requirements (e.g., defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for non-conforming fuel modifications, wildfire education maintenance and limitations, and evacuation plans.
- Policy 5-3.3: Promote new development in areas of the community that have lower risk of wildfire hazards.
  - Action 5-3.9: Consider updating the Zoning Code to prohibit land uses in the WUIFA that serve mobility-limited persons, such as assisted care facilities and additional uses recommended by the State.
  - Action 5-3.10: Explore the development of a pilot program to transfer rights for current or new development from fire hazard areas to less fire-prone areas and consider managed retreat, which could move people and existing structures away from wildfire risk.
  - Action 5-3.11: Explore prohibiting increased land use densities or intensities in the WUIFA and Very High Fire Hazard Severity Zone in accordance with State guidance.
- Policy 5-3.4: Implement the vegetation management strategies and enhanced roadway standards in fire-prone areas through the City's Community Wildfire Protection Plan.
  - Action 5-3.12: Require properties in the WUIFA to adhere to the City's Hazardous Vegetation and Fuel Reduction Ordinance, and all properties in the WUIFA and Very High Fire Hazard Severity Zone to comply with California Fire Safe Regulations (Title 14 of the California Code of Regulations).

- Action 5-3.13: Implement the fire mitigation projects in the Community Wildfire Protection Plan.
- Action 5-3.14: Establish a monitoring program to track the effectiveness of Community Wildfire Protection Plan fuel-treatment activities.
- Action 5-3.15: Update the Community Wildfire Protection Plan every five years to reflect the needs of the community and the changing risks in the WUIFA.
- Action 5-3.16: Ensure each update to the Community Wildfire Protection Plan identifies slope stability and wildfire hazard areas and mitigation strategies to reduce post-wildfire erosion.

- Policy 5-3.5: Ensure all community members and businesses are informed and empowered to address hazard vulnerabilities, considering the specific needs of Equity Priority Populations.
  - Action 5-3.17: Continue to conduct multilingual and culturally appropriate education and outreach campaigns that assist property owners with defensible space, fire-safe landscaping, home hardening, and wildfire preparedness, as identified in the Community Wildfire Protection Plan.
  - Action 5-3.18: Prioritize wildfire mitigation, education, and outreach efforts to vulnerable populations who may not receive typical outreach.
  - Action 5-3.19: Work with local and regional partners to assist low-income households with maintaining defensible space around their homes and properties.
  - Action 5-3.20: Identify at-risk populations and developments in the WUIFA and ensure that emergency management planning and training include efforts to increase resilience in these areas.

These proposed General Plan 2050 goals, policies, and actions would ensure that fire hazard reduction measures occur and are maintained, and that existing and new development in woodland, grassland, and shrub areas would incorporate vegetation management measures. However, wildfire smoke could potentially travel into other areas of the EIR Study Area due to slope and prevailing winds during a wildfire. Therefore, even with existing regulatory requirements and proposed General Plan 2050 goals, policies, and actions, potential future development over the buildout horizon of the proposed project could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to slope conditions and prevailing winds within the EIR Study Area.

Implementation of the proposed project could increase population, buildings, and infrastructure in wildfire prone areas. The introduction of additional humans (through new development and redevelopment) and human activities (including the use of construction equipment) to fire-prone areas inherently exacerbates existing fire hazards. Though the proposed General Plan 2050 goals, policies, and actions and mandatory State wildfire hazard reduction measures reduce risks in wildfire-prone areas, impacts related to exacerbating the risk of pollutant concentrations from wildfire and the uncontrolled spread of wildfire would be reduced, but not to a less-than-significant level. The proposed General Plan 2050 contains goals, policies, and actions that require existing development, new, and redevelopment projects to create and maintain fire safe vegetation around structures and roadways and enforcement of Very High FHSZ Fire Safe Regulations. New development would also be required to prepare Fire Protection

Plans. These policies provide the best wildfire hazard reduction measures available. Adherence to the above building practices, fire safety regulations, and vegetation fuel management requirements would reduce the potential for exacerbating wildfire risks. However, due to the programmatic nature of this analysis, the unknown details and potential impacts of specific future potential development projects over the buildout horizon of the proposed project, and the potential for future development to be in wildfire-prone areas, impacts are considered *significant*.

Impact WF-2: Potential future development over the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

> Significance with Mitigation: Significant and unavoidable. Goals, policies, and actions identified in the proposed General Plan 2050 provide the best wildfire hazard reduction measures available. Specifically, proposed *Action 5-3.8 requires the preparation of fire protection plans for new development and major remodels in the City's Wildland-Urban Interface Fire Area (WUIFA), which are highly vulnerable areas; that are consistent with requirements of the California Fire Code and include a risk analysis, fire response capabilities, fire safety requirements (e.g., defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for nonconforming fuel modifications, wildfire education maintenance and limitations, and evacuation plans. However, the only way to fully avoid the wildfire impact from implementation is to prohibit development in Very High Fire Hazard Severity Zones (FHSZ) and the WUIFA. The majority of northern and eastern Santa Rosa is in a Very High FHSZ and/or the WUIFA. Prohibiting new development in this portion of Santa Rosa is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. Therefore, this measure is considered and rejected, and there are no feasible mitigation measures beyond the policies and plans described above. Due to potential unknown impacts from future development over the buildout horizon of the proposed project, impacts at the programmatic level would remain *significant and unavoidable*. This conclusion does not preclude a finding of less-than-significant impacts at the project level.

WF-3 Implementation of the proposed project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) but doing so would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

Potential buildout over the buildout horizon of the proposed project could require the installation of new roadways, fuel breaks, emergency water sources, transmission lines, and other utilities to serve future potential development in Santa Rosa. Furthermore, Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts of wildfire management infrastructure to reduce wildfire risks. In addition to the proposed goals, policies, and actions identified under impact discussions WF-1 and WF-2, the following goals, policies, and actions would minimize wildfire risks from infrastructure and maintenance:

- Goal 5-6: Ensure Santa Rosa is a resilient city able to adapt to, recover from, and thrive under changing climate conditions.
    - Policy 5-6-7: Strengthen the community's ability to respond to the risks and negative effects of power outages, including public safety power shutoffs (PSPS) and other climate-related threats.
        - Action 5-6.26: Support efforts to underground electrical transmission infrastructure throughout the city, including substations, prioritizing high-voltage transmission lines and areas in the WUIFA.
- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
    - Policy 5-9.1: Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents.
        - Action 5-9.2: Continue to require that water supply capacity and infrastructure are in place prior to occupancy of new development.
        - Action 5-9.8: Evaluate the City's long-term water supply strategies, including development of new sources of water supply, enhanced water-efficiency programs, and implementation of appropriate growth-control measures, if deemed necessary by the City.
        - Action 5-9.10: Implement the Water Supply Alternatives Plan to mitigate potential impacts of climate change, drought, and natural or human-caused catastrophic events by enhancing water supply resiliency and reliability.

The following addresses the types of wildfire risk management infrastructure that could be required in the EIR Study Area over the 2050 buildout horizon.

- Roadways. Buildout of the proposed project would include new roadways in the western and southern portions of the EIR Study Area. Potential future development over the buildout horizon of the proposed project could also create new or expanded roadways in WUIFA areas of Santa Rosa, including developing roadways to new development and expanding existing roads to accommodate new development and multimodal forms of transportation. All new roadways would be built to code to accommodate emergency vehicles and routinely maintained pursuant to vegetation management regulations.
- Fuel Breaks. Proposed General Plan 2050 *Action 5-3.8 and Action 5-3.12 require the preparation of fire protection plans for new development that addresses defensible space and fuel modifications around buildings and structures for properties or development within the Very High FHSZ and WUIFA.
- Emergency Water Sources. Proposed General Plan 2050 Action 5-9.2, Action 5-9.8, and Action 5-9.10 continue to require water supply capacity and infrastructure are in place prior to occupancy of new development, require the evaluation of the City's long-term water supply, and implement the Water Supply Alternatives Plan for reducing impacts from natural or human-caused catastrophic events, such as a wildfire.

- Power Lines. Potential future development over the buildout horizon of the proposed project would require electrical line installations and connections to provide power to buildings and infrastructure. Proposed General Plan 2050 Action 5-6.26 supports efforts to underground electrical transmission infrastructure throughout the city, including substations, prioritizing high-voltage transmission lines and areas in the WUIFA, which is consistent with SRCC Chapter 13-12. Additionally, the CPUC requires maintenance of vegetation around power lines, strict wire-to-wire clearances, annual inspections of aboveground power lines, and the preparation of fire prevention plans for aboveground power lines in high fire-threat districts. These measures would reduce the wildfire risks associated with the installation and maintenance of power lines.
- Other Utilities. Potential future development over the buildout horizon of the proposed project would require the installation and maintenance of water systems, septic or sewer systems, internet infrastructure, and stormwater systems in wildfire-prone areas.

These types of improvements would involve temporary construction and result in changes to the existing built environment. Development in the WUIFA and Very High FHSZ areas in the EIR Study Area would also be required to comply with building and design standards in the CBC, CFC, and Very High FHSZ Fire Safe Regulations, which include provisions for fire-resistant building materials, the clearance of debris, and fire safety requirements during demolition and construction activities. Additionally, PRC Section 4291 requires a defensible space within 100 feet of a structure and an ember-resistant zone within 5 feet of a structure. These measures, along with the other applicable State regulations and the proposed General Plan 2050 goals, policies, and actions discussed above, would minimize wildfire risks associated with the installation and maintenance of infrastructure. Therefore, impacts would be *less than significant.*

Significance with Mitigation: Less than significant.

WF-4	**Implementation of the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, postfire slope instability, or drainage changes.**

Wildfires, such as the 2017 Tubbs Fire and the 2019 Kincade Fire, can create favorable conditions for other hazards, such as flooding and landslides during the rainy season. Wildfires on hillsides can burn the vegetation that stabilizes the slope and create hydrophobic conditions that prevent the ground from absorbing water, causing water to run off and affect downslope or downstream areas. A project would result in a significant impact if—due to slopes, drainage patterns, or postfire slope instability—it would expose people or structures to significant risks from landsides, debris flows, or flooding.

As discussed in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR, approximately 168 acres in the EIR Study Area are within the 100-year floodplain and about 284 acres are in the 500-year floodplain. As shown on Figure 4.10-3, *Potential Flood Hazards,* in Chapter 4.10 of this Draft EIR, these areas are primarily located along the creeks that run through the city, including Spring Creek, Matanzas Creek, Colgan Creek, Naval Creek, Roseland Creek, and Kawana Springs Creek. These areas are generally outside of the fire-prone areas of the Very High FHSZ and the WUIFA.

As discussed in Chapter 4.7, *Geology and Soils*, of this Draft EIR, the topography of the EIR Study Area varies from steep slopes in the hillsides of the eastern and southern portions to generally flat in the western portion, sloping towards the Laguna de Santa Rosa to the west. The steeply sloped area largely coincides with the fire-prone areas in the EIR Study Area. These areas are considered susceptible to landslides from precipitation and other causes. This overlap could cause areas outside of a flood hazard or landslide-susceptible zone to be affected by runoff, post-fire slope instability, or drainages changes following a wildfire.

Chapter 5, *Safety, Climate Resilience, Noise, and Public Services and Facilities*, of proposed General Plan 2050 provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazards. In addition to the proposed goals, policies, and actions identified under impact discussions WF-1 and WF-2, the following goals, policies, and actions would serve to minimize potential adverse impacts related to postfire slope instability or drainage changes upstream:

- Goal 5-2: Effectively manage the potential effects of flooding and dam failure.
  - Policy 5-2.1: Ensure land use strategies consider flood impacts and stormwater management tactics to reduce the effects of future inundation.
    - Action 5-2.1: Ensure land use strategies consider flood impacts and stormwater management tactics to reduce the effects of future inundation.
    - Action 5-2.2: Complete and implement the Storm Drain Master Plan.
    - Action 5-2.3: Coordinate with Sonoma Water regarding flood zones, land use, and flood mitigation strategies.
    - Action 5-2.4: Employ flood mitigation strategies in the development of plans and projects along creeks and waterways.
  - Policy 5-2.2: Promote the enhancement and expansion of open space for flood management and passive recreation where appropriate and safe.
    - Action 5-2.5: Protect floodplains by retaining and expanding, as feasible, open space areas that can retain stormwater, recharge groundwater/aquifers, and prevent/reduce flooding.
    - Action 5-2.6: Limit the use of areas designated for flood control to passive recreation activities (e.g., hiking, fishing, bike riding), consistent with requirements to maintain the integrity of these areas to protect public safety.
  - Policy 5-2.3: Comply with all applicable FEMA flood-management regulations and requirements.
    - Action 5-2.7: Continue to maintain and periodically update flood hazard data, and coordinate with federal, State, and local agencies responsible for flood hazard analysis and management activities.
    - Action 5-2.8: Continue to incorporate into public works projects features and appropriate standards that reduce flooding hazards, including daylighting culverts in urban areas such as downtown.
  - Policy 5-2.4: Ensure that the design of new development in a flood zone provides adequate flood protection without negatively impacting adjacent or downstream properties.

    - Action 5-2.9: Require an evaluation of flood hazards and appropriate on-site mitigation options by a qualified professional for any project in a FEMA- and Department of Water Resources (DWR)– designated flood zone during the development review process.
  - Policy 5-2.6: Manage, maintain, and improve stormwater drainage and capacity.
    - Action 5-2.12: Require dedication, improvement, and ongoing maintenance of stormwater management and retention areas as a condition of development approval.
    - Action 5-2.13: Identify and collect development impact fees needed to pay for mitigation of stormwater management impacts for new development.
    - Action 5-2.14: Require improvements that maintain and improve the storm drainage system citywide and prioritize areas needing significant investment, consistent with the Santa Rosa Citywide Creek Master Plan goals of preserving natural conditions of waterways and minimizing channelization of creeks.
    - Action 5-2.15: Ensure creek-side paths and trails are consistent with the Citywide Creek Master Plan and Active Transportation Plan and are incorporated into stormwater improvement projects along creek corridors.
  - Policy 5-2.7: Provide storm drainage facilities that accommodate increased development and enhanced water quality.
    - Action 5-2.16: Cooperate with Sonoma Water and the Northern California Regional Water Quality Control Board on assessments of stormwater drainage facilities to ensure adequate capacity to accommodate increases in residential and commercial development.
    - Action 5-2.17: Require implementation of best management practices for all new development to reduce discharges of nonpoint-source pollutants to the storm drain system.
- Goal 5-9: Provide adequate and high-quality city services for water, wastewater, recycled water, stormwater, and solid waste.
  - Policy 5-9.1: Ensure water quality, water service delivery, and wastewater treatment are sufficient to meet the needs of current and future residents.
    - Action 5-9.3: Maintain water, wastewater, and recycled water system integrity and capacity by continuing to prioritize maintenance and preserve funding for maintenance, rehabilitation, and replacement of existing infrastructure.
  - Policy 5-9.2: Maintain water quality and encourage Santa Rosa Water customers to save water.
    - Action 5-9.13: Require new development projects to provide water-efficient landscaping in accordance with the City's Water Efficient Landscape Ordinance.
    - Action 5-9.15: Promote water efficiency through public education, incentives, rebates, technical assistance, customer programs, and information about indoor and outdoor water use efficiency measures.
  - Policy 5-9.4: Ensure that adequate wastewater capacity is available to serve existing and future needs of the city.

- Action 5-9.28: Improve stormwater management to increase infiltration, provide treatment, promote groundwater recharge, reduce flood risk, capture trash, and enhance the environment.
- Action 5-9.30: Evaluate stormwater capture and reuse consistent with goals of the Santa Rosa Citywide Creek Master Plan and the MS4 National Pollutant Discharge Elimination System (NPDES) permit to preserve natural conditions of waterways, minimize channelization of creeks, and protect water quality, and identify, educate, and label to promote community awareness that storm drains flow untreated into creeks.
- Action 5-9.32: Employ a multibenefit "one-water" approach for new capital projects to include stormwater quality (low-impact development features) on a large scale, flood mitigation, creek restoration, and increased groundwater recharge.

Furthermore, all new development in the EIR Study Area would be required to comply with State and local regulations, such as the CBC and SRCC, both of which have provisions to reduce flooding and landslides in existing and new development. For example, CBC Section 1803 (SRCC Chapter 18-16) requires a geotechnical investigation that must assess existing landslide susceptibility on a project site. In addition, SRCC Chapter 20-32 and proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2 include requirements for hillside development and the preparation of geotechnical reports that identify and mitigate impacts from the potential from landslides such that there would not be a significant impact.

New development complying with state and local regulations, as well as the proposed General Plan 2050 goals, policies, and actions identified above would not expose people or structures to downslope landslides or downstream flooding due to postfire hazards. Furthermore, as identified under impact discussions WF-1 and WF-2, potential future development over the buildout horizon of the proposed project must also comply with best management practices regarding wildfire prevention, action, and recovery as outlined in the Santa Rosa EOP, Sonoma County MJHMP, and the Sonoma County CWPP. All future development, regardless of the location, is required to comply with adopted local, regional, and State plans and regulations addressing wildfire prevention, which would minimize risks of postfire hazards. Compliance with these policies, actions, and regulatory requirements would ensure that impacts from postfire instability would be *less than significant*.

Significance with Mitigation: Less than significant.

WF-5 In combination with past, present, and reasonably foreseeable projects, implementation of the proposed project could result in a cumulatively considerable impact to wildfire impacts.

The cumulative setting includes potential future development in the EIR Study Area and the surrounding region. Future development over the buildout horizon of the proposed project would not impair an adopted emergency response plan or emergency evacuation plan; would not exacerbate wildfire risks due to the installation or maintenance of infrastructure; and would not cause downslope or downstream post-fire flooding or landslide hazards. Cumulative development in the surrounding unincorporated county, local jurisdictions, and State lands would be subject to the same State regulations applicable to future

projects over the buildout horizon of the proposed project. Although federal lands would not be subject to State regulations, they would still be subject to the National Cohesive Wildfire Management Strategy and the NFPA Standards.

However, the proposed project would result in significant and unavoidable impacts where it would potentially expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors, as described under impact discussion WF-2. The addition of other proposed development projects in adjacent jurisdictions in similar environments that are sloped and contain high fuel loads would have the potential to contribute to cumulative wildfire risks. These projects would have the potential to result in significant environmental impacts and they could also potentially expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors. These would potentially result in cumulatively considerable impacts when taken into consideration with the proposed project. Future potential development in the EIR Study Area and the surrounding region would be required to comply with the same State regulations, such as SRA and Very High FHSZ Fire Safe Regulations, PRC Section 4291, CBC, and CFC. Lands throughout Sonoma County would also implement wildfire reduction strategies through implementation of the Sonoma County CWPP and the Sonoma County MJHMP. However, the increase of potential development projects within the SRA in the Sphere of Influence and Urban Growth Boundary and unincorporated County lands outside of the EIR Study Area, along with the VHFHSZ or WUIFA, would result in a cumulatively significant impact due to the inherent risk of any increased human activity in these areas. Therefore, cumulative wildfire impacts would be considered *significant*.

Impact WF-5: Potential development over the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas (SRA), Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface Fire Areas (WUIFA), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

> Significance with Mitigation: Significant and unavoidable. Same as Impact WF-2, even with implementation of the proposed General Plan 2050 goals, policies, and actions, including proposed *Action 5-3.8, the only way to fully avoid the cumulative wildfire impact is to prohibit development in the SRA, Very High FHSZs, and WUIFA throughout the region. As a full prohibition of development in these areas is not feasible in the region, this impact is *significant and unavoidable*.

5. Alternatives to the Proposed Project

The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. The California Environmental Quality Act (CEQA) Guidelines set forth the intent and extent of alternatives analysis to be provided in an environmental impact report (EIR). Section 15126.6(a) of the CEQA Guidelines states that:

> An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

5.1 PURPOSE

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

5.2 SELECTION OF A REASONABLE RANGE OF ALTERNATIVES

Section 15126.6(c) of the CEQA Guidelines states:

> The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice

of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

5.2.1 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15126.6(c), the range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the proposed project. As listed in Chapter 3, *Project Description*, of this Draft EIR, the City has identified objectives, which build on the framework of the Santa Rosa Vision and reflect the community's desires for the future of Santa Rosa to serve as the project objectives for the EIR. As described in Chapter 3 of the Draft EIR, the primary purpose of the proposed project is to plan for the growth and conservation of Santa Rosa over an approximately 25-year time horizon while achieving the vision. The project objectives to realize the Santa Rosa Vision are related specifically to growth in the 21 Areas of Change, the majority of which capitalize on infill opportunities in and around Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). Development of infill sites near transit makes the most of existing infrastructure and allows for the streamlining of future development in a manner that is consistent with the proposed General Plan 2050. Meeting the vision also includes making major improvements to the transportation network, which focus on bridging east and west and enhancing multimodal connectivity and safety citywide. Achieving the vision also entails creating complete streets and complete neighborhoods to activate the Areas of Change. Further, it includes creating a cross-sector approach to integrating greenhouse gas reduction into all parts of the general plan; creating new opportunities for a vital thriving downtown and entertainment district; preserving community character and environmental, historic and cultural resources as the city develops and becomes denser; and creatively blending old and new development to create a cohesive urban fabric and public realm. A complete list of project objectives is provided in Section 3.6*, Project Objectives*, of Chapter 3 of this Draft EIR. Achieving these objectives requires extending the buildout horizon to year 2050 and updating goals, policies, and actions so that they meet current State requirements and community priorities, as articulated during an extensive public engagement process conducted for the project (https://www.santarosaforward.com/engagement).

5.2.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

All the potential environmental impacts associated with adoption and implementation of the proposed project were found to be either less than significant without mitigation or less than significant with mitigating General Plan 2050 policies and actions, except for impacts to agricultural resources (AG), air quality (AIR), noise (NOI), transportation (TRAN), and wildfire (WF), which were found to be significant and unavoidable at the program level. As described in the impact discussions of these chapters, although the proposed project results in significant and unavoidable impacts, the identification of these program-level impacts does not preclude the finding of less-than-significant impacts for subsequent development proposals analyzed at the project level that do not exceed the applicable project-level thresholds. The program-level significant and unavoidable impacts include the following:

- Agricultural Resources
  - **Impact AG-1:** Implementation of the proposed project could result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland land (together referred to as "CEQA Important Farmland") to non-agricultural land uses.
  - **Impact AG-2:** Implementation of the proposed project could result in the loss of agricultural land under the Williamson Act.
  - **Impact AG-4:** The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact with respect to the conversion of CEQA Important Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) and Williamson Act properties to non-agricultural uses.
- Air Quality
  - **Impact AIR-2b:** Buildout of the proposed project could generate operational emissions that could exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$ and PM_{10}).
  - **Impact AIR-3b:** Large industrial or warehouse development projects under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminants (TAC) and particulate matter ($PM_{2.5}$) concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.
  - **Impact AIR-5:** The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative air quality impacts with respect to generation of criteria pollutant and exposure of substantial pollutant concentrations to sensitive receptors.
- Noise
  - **Impact NOI-1a:** Construction activities associated with potential future development could expose sensitive receptors to excessive noise from construction equipment.
  - **Impact NOI-1b:** Operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project.
  - **Impact NOI-4:** Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative noise impacts, with respect to generation of construction-and transportation related noise.
- Transportation
  - **Impact TRAN-2a:** Implementation of the proposed project could result in a significant vehicle miles traveled (VMT) impact for residential VMT per capita.
  - **Impact TRAN-2b:** Implementation of the proposed project could result in a significant roadway network vehicle miles traveled (VMT) impact associated with increasing the capacity of the arterial street network.

- Impact TRAN-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in significant cumulative impact with respect to vehicle miles traveled (VMT).

- Wildfire
  - Impact WF-2: Potential future development over the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.
  - Impact WF-5: Potential development over the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas (SRA), Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface Fire Areas (WUIFA), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

5.2.3 ALTERNATIVES CONSIDERED AND REJECTED AS BEING INFEASIBLE

Pursuant to CEQA Guidelines Section 15126.6(c) of the State CEQA Guidelines, EIRs should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. The following is a discussion of alternatives considered and rejected, along with the reasons they were not included in the analysis.

5.2.3.1 REDUCED HOUSING ALTERNATIVE

The City considered alternatives that would reduce the construction-related impacts of the proposed project by reducing the proposed buildout potential, including the amount of potential housing development. The City rejected any alternative that would reduce the amount of housing due to the ongoing housing crisis.

The State of California has enacted several laws intended to address California's housing needs. The California Housing Accountability Act was initially passed in 1982 and has been revised in recent years. Under the Housing Accountability Act, so long as a project complies with applicable objective General Plan and zoning standards, a local agency may not deny a project or approve it at a lower density unless the agency finds that the project would have specific, adverse, unavoidable impacts on public health or safety. Pursuant to Government Code Section 65589.5(j), a local agency may only require a reduction in housing density as a condition of approval if the proposed project has a specific adverse effect on public health and safety that can only be mitigated by lowering the residential density. Accordingly, for many housing projects with no specific, adverse, unavoidable impacts on public health or safety, local agencies find reduced housing alternatives to be infeasible.

The City finds that with implementation of proposed General Plan 2050 goals, policies, and actions that require the evaluation and mitigation of impacts on public health and safety from potential future development, including the construction and operation of the potential future housing, a reduction in housing is not necessary to avoid a public health and safety impact. Therefore, due to the well-documented housing crisis and the lack of housing in Santa Rosa and the requirements to evaluate and mitigate impacts to public health and safety as a result of any future housing, a reduced housing alternative should be considered infeasible. Furthermore, while the reduced housing alternative would reduce impacts from construction and operation when compared to the proposed project, it would not entirely avoid significant mitigable environmental impacts.

Lastly, a reduced housing alternative would not fully achieve the project objectives that seek to provide and ensure that a diverse mix of high-quality, safe, thoughtfully designed, efficiently planned, and well-served housing at all affordability levels is available throughout the community to accommodate everyone, including formerly homeless, immigrants, local workers, multigenerational households, seniors, students, and formerly incarcerated people, within neighborhoods that are increasingly walkable/bikeable.

5.2.3.2 INCREASED PLANNING AREA ALTERNATIVE

During the scoping process, the expansion of the Urban Growth Boundary (UGB) and/or Sphere of Influence (SOI) was considered. The City rejected any alternative that would expand the UGB or SOI because, as described in Chapter 3, *Project Description* of this Draft EIR, the expansion of the city into surrounding lands is no longer a focus of City planning efforts. Growth and change in the city will be tailored to support maintenance and development of complete neighborhoods, particularly in Areas of Change. These are places where the City will focus efforts to address housing, services, connectivity, and/or infrastructure needs and help provide complete neighborhoods with goods and services that are easily available. The proposed General Plan 2050 identifies 21 Areas of Change, as shown on Figure 3-6, *Proposed General Plan 2050 Areas of Change,* in Chapter 3 of this Draft EIR.

The City finds that with implementation of the proposed General Plan 2050 land use map and the goals, policies, and actions that require the evaluation and mitigation of impacts from potential future development, the expansion of the UBG and/or SOI is not required to accommodate the proposed potential buildout or to reduce any potentially significant impacts. Rather, the City finds that the potential expansion of the UGB or SOI to accommodate growth in areas would potentially increase impacts caused by developing on undisturbed lands and on lands further away from core services areas such that VMT could be increased when compared to the proposed project.

Lastly, an expanded UGB and/or SOI alternative would not fully achieve the project objectives that seek to provide and ensure the primary purpose of the proposed project, which is to plan for the growth and conservation of Santa Rosa over an approximately 25-year time horizon while achieving the Santa Rosa Vision. Expansion of the planning area would not support the vision to ensure that natural resources are restored, protected, and expanded to provide accessible green space for everyone in all neighborhoods, mitigate drought, and minimize GHG.

An expansion of the City would not support an increasingly dense urban core or streamline future development by focusing on infill sites near transit to make the most of existing infrastructure; nor would it ensure strong connections between land use, transportation, utilities, and other infrastructure. Additionally, this alternative would not focus development in the 21 Areas of Change, the majority of which capitalize on infill opportunities in and around PDAs and TPAs, so that implementing the plan supports the City in reaching its climate mandates and supports regional strategies to reduce greenhouse gas (GHG) emissions and improve air quality.

Finally, the Increased Planning Area alternative would not support the activation of the Areas of Change by developing complete neighborhoods that are walkable/bikeable and increasingly protected from environmental hazards nor support the cross-sector approach to integrating GHG reduction into all parts of the general plan.

5.2.3.3 SELECTED ALTERNATIVES

Two project alternatives and the comparative merits of the alternatives are discussed in this section in accordance with the CEQA Guidelines. The alternatives to be analyzed in comparison to the proposed project include:

- Alternative A: No Project Alternative (Current General Plan 2035)
- Alternative B: Increased Density Alternative

The first alternative is the CEQA-required "No Project" Alternative, which assumes the current General Plan 2035 and the City's 2012 Community-wide Climate Action Plan (CCAP) remain in effect and are not replaced by the proposed project. The second alternative is the Increased Density Alternative. This alternative assumes the same amount of households, residential units, population, and jobs would occur as under the proposed project, but would allow for more opportunity for dense housing connected to transit facilities through the redesignation of certain medium low density residential parcels as medium high density residential.

5.2.4 ASSUMPTIONS AND METHODOLOGY

The alternatives analysis is presented as a comparative analysis to the proposed project. The development intensity for the alternatives varies from the proposed project. The estimated growth under each alternative, as well as the proposed project, is provided in Table 5-1, *Forecast Additional Growth for the Proposed Project and the Alternatives to the Proposed Project*.

TABLE 5-1 FORECAST ADDITIONAL GROWTH FOR THE PROPOSED PROJECT AND THE ALTERNATIVES TO THE PROPOSED PROJECT

Category	Proposed Project	Alternative A: No Project [a]	Alternative B: Increased Density
Residential Units	24,090	3,996 [b]	24,090
Population	65,760	17,270 [b]	65,760
Jobs	14,090	-30,000 [b]	14,090

Notes:
a. Based on a review of existing conditions and projected trends, the City is not on track to meet the 2035 buildout estimates of the current General Plan 2035 and is accordingly revising local growth projections to be more in line with regional growth.
b. City of Santa Rosa, March 2009, *General Plan 2035 Environmental Impact Report*, Table 3-1, *Buildout Changes Between the 2020 to 2035 General Plans,* https://www.srcity.org/DocumentCenter/View/3096/Draft-General-Plan-Environmental-Impact-Report-Santa-Rosa-2035-PDF.
Source: City of Santa Rosa, 2023.

The alternatives analysis assumes that the proposed General Plan 2050 goals, policies, and actions would apply to Alternative B, including the mitigating policies and actions, but would not apply to Alternative A. The following discussion compares the environmental impacts of the alternatives with those of the proposed project for each of the environmental topics analyzed in detail in Chapter 4.0, *Environmental Analysis*, of this Draft EIR. The impacts of each alternative are classified as less than (<), similar or comparable to (=), or greater than (>) the level of impacts associated with the proposed project. Table 5-2, *Impact Comparison of the Proposed Project and Alternatives by Environmental Topic*, summarizes the relative impacts of each environmental topic of the alternatives compared to the proposed project.

TABLE 5-2 IMPACT COMPARISON OF THE PROPOSED PROJECT AND THE ALTERNATIVES BY ENVIRONMENTAL TOPIC

		Impact Conclusion Compared to the Proposed Project	
Environmental Topic	Impact Conclusion of the Proposed Project [a]	Alternative A: No Project	Alternative B: Increased Density
Aesthetics	LTS	=	=
Agricultural Resources	SU	<	<
Air Quality	SU	>	<
Biological Resources	LTS/M	>	<
Cultural Resources	LTS/M	>	>
Energy	LTS	>	<
Geology and Soils	LTS/M	>	=
Greenhouse Gas Emissions	LTS	>	<
Hazards and Hazardous Materials	LTS/M	>	=
Hydrology and Water Quality	LTS/M	>	=
Land Use and Planning	LTS	>	=
Noise	SU	>	<
Population and Housing	LTS	>	=
Public Services and Recreation	LTS	<	=
Transportation	SU	>	<
Tribal Cultural Resources	LTS/M	>	<
Utilities and Service Systems	LTS	<	=
Wildfire	SU	>	<

Note:
a. The impact conclusions in this column represent the highest significance determination for each respective standard of significance.

TABLE 5-2 IMPACT COMPARISON OF THE PROPOSED PROJECT AND THE ALTERNATIVES BY ENVIRONMENTAL TOPIC

Environmental Topic		Impact Conclusion of the Proposed Project [a]	Impact Conclusion Compared to the Proposed Project: Alternative A: No Project	Impact Conclusion Compared to the Proposed Project: Alternative B: Increased Density
LTS	Less Than Significant	<	Less impact in comparison to the proposed project	
LTS/M	Less Than Significant with Mitigation	=	Similar impact in comparison to the proposed project	
SU	Significant and Unavoidable	>	Greater impact in comparison to the proposed project	

As previously stated, the alternatives were selected because of their potential to further reduce and avoid the significant and unavoidable impacts listed in Section 5.2.2. Table 5-3, *Comparison of Significant and Unavoidable Impacts of the Proposed Project and the Alternatives by Environmental Topic and Standard of Significance*, summarizes the relative impacts of each environmental topic of the alternatives compared to the proposed project.

TABLE 5-3 COMPARISON OF SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROPOSED PROJECT AND THE ALTERNATIVES BY ENVIRONMENTAL TOPIC AND STANDARD OF SIGNIFICANCE

Environmental Topic	Impact Statement	Proposed Project	Alternative A: No Project	Alternative B: Increased Density
Agricultural Resources	**Impact AG-1:** Implementation of the proposed project could result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland land (together referred to as "CEQA Important Farmland") to non-agricultural land uses.	SU	<	<
	Impact AG-2: Implementation of the proposed project could result in the loss of agricultural land under the Williamson Act.	SU	<	<
	Impact AG-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact with respect to the conversion of CEQA Important Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) and Williamson Act properties to non-agricultural uses.	SU	<	<
Air Quality	**Impact AIR-2b:** Buildout of the proposed project could generate operational emissions that could exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$ and PM_{10}).	SU	>	<
	Impact AIR-3b: Large industrial or warehouse development projects under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminants (TAC) and particulate matter ($PM_{2.5}$) concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.	SU	>	<

TABLE 5-3 COMPARISON OF SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROPOSED PROJECT AND THE ALTERNATIVES BY ENVIRONMENTAL TOPIC AND STANDARD OF SIGNIFICANCE

Environmental Topic	Impact Statement	Proposed Project	Alternative A: No Project	Alternative B: Increased Density
	Impact AIR-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative air quality impacts with respect to generation of criteria pollutant and exposure of substantial pollutant concentrations to sensitive receptors.	SU	>	<
Noise	**Impact NOI-1a:** Construction activities associated with potential future development could expose sensitive receptors to excessive noise from construction equipment.	SU	>	<
	Impact NOI-1b: Operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project.	SU	>	<
	Impact NOI-4: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative noise impacts, with respect to generation of construction-and transportation related noise.	SU	>	<
Transportation	**Impact TRAN-2a:** Implementation of the proposed project could result in a significant vehicle miles traveled (VMT) impact for residential VMT per capita.	SU	>	<
	Impact TRAN-2b: Implementation of the proposed project could result in a significant roadway network vehicle miles traveled (VMT) impact associated with increasing the capacity of the arterial street network.	SU	>	<
	Impact TRAN-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in significant cumulative impact with respect to vehicle miles traveled (VMT).	SU	>	<
Wildfire	**Impact WF-2:** Potential future development over the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.	SU	>	<
	Impact WF-5: Potential development over the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas (SRA), Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface Fire Areas (WUIFA), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.	SU	>	<

Notes:
SU Significant and Unavoidable
< Less impacts in comparison to the proposed project
= Similar impact in comparison to the proposed project
> Greater impact in comparison to the proposed project

5.3 ALTERNATIVE A: NO PROJECT (GENERAL PLAN 2035)

5.3.1 DESCRIPTION

Pursuant to CEQA Guidelines Section 15126.6(e)(1), the No Project Alternative is required as part of the "reasonable range of alternatives" to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), when the project is the revision of a plan, as in this case, the no project alternative will be the continuation of the existing plan. Under Alternative A, potential future development in Santa Rosa would continue to be subject to existing policies, regulations, development standards, and land use designations of the existing General Plan 2035. Alternative A would not implement the amendments to the North Station Area Specific Plan (NSASP), Downtown Station Area Specific Plan (DSASP), or Santa Rosa City Code (SRCC) associated with the proposed General Plan 2050 and Land Use Map. Alternative A would also not adopt the proposed GHG Reduction Strategy to serve as the strategic plan for how the City will reduce GHG emissions and foster a sustainable community through 2050 and beyond.

As described in Chapter 3, *Project Description,* of this Draft EIR, the existing General Plan was adopted in 2009 and included a horizon year of 2035. A number of State and federal laws guiding general plan policies have also been updated during this time. Many of the community issues vetted in the General Plan 2035 are still relevant, well addressed, and do not require major changes. However, Alternative A would not incorporate new topics that are now required by State law, such as environmental justice, and would not revise relevant policies and actions to meet those requirements.

Pursuant to CEQA Guidelines Section 15126.6(e)(3)(C), the City of Santa Rosa, acting as the lead agency, should analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services. Implementation of the No Project Alternative assumes that development growth throughout the city would remain unchanged until the buildout horizon year 2050, which is consistent with other regional plans, including *Plan Bay Area* 2050.

Future development permitted under the No Project Alternative would not increase development potential in Santa Rosa beyond what was considered in the existing General Plan 2035 and analyzed in the associated EIR (State Clearinghouse No. 2008092114), but rather assumes the remaining development growth shown in Table 5-1 would occur through 2050. No General Plan land use designations changes or zoning amendments would be required to accommodate these uses.

Table 5-4, *2019 to 2050 Growth Under the Proposed Project and Alternative A*, shows the difference between 2019 to 2050 growth of the proposed project compared to Alternative A. As shown in Table 5-4, Alternative A would result in less residential and job growth when compared to the proposed project.

TABLE 5-4 2019 TO 2050 GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE A

Category	Proposed Project	Alternative A: No Project	Difference between the Proposed Project and Alternative A
Residential Units	24,090	3,996[a]	20,094 more residential units
Population	65,760	17,270 [a]	48,490 more population
Jobs	14,090	-30,000 [a]	44,090 more jobs

Notes:
a. City of Santa Rosa, March 2009, *General Plan 2035 Environmental Impact Report*, Table 3-1, *Buildout Changes Between the 2020 to 2035 General Plans,* https://www.srcity.org/DocumentCenter/View/3096/Draft-General-Plan-Environmental-Impact-Report-Santa-Rosa-2035-PDF.
Source: City of Santa Rosa, 2023.

5.3.2 IMPACT DISCUSSION

The potential environmental impacts associated with Alternative A when compared to the proposed project are described herein.

5.3.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics.

While there are no officially designated scenic vistas in the EIR Study Area, the City has officially designated certain roadways in Santa Rosa as scenic roads in the General Plan. The EIR Study Area also includes portions of State Route (SR) 12 which have been designed as “eligible” for and “officially designated” as a State Scenic Highway.

Like the proposed project, potential future development in the EIR Study Area under Alternative A is anticipated to occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser impact on scenic vistas. The proposed General Plan 2050 reinforces existing uses, heights, and densities in most locations, with allowances for greater intensity only in a limited number of locations and therefore would not substantially increase building height beyond what is previously accounted for under the current General Plan 2035.

Potential future development under both the proposed project and Alternative A would be required to comply with SRCC regulations, including those for the Scenic Road Combining District and Design Review. *Santa Rosa Design Guidelines* would also apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements. Potential future development in the city would also be subject to the various planning documents that govern scenic quality in the city, such as the *Citywide Creek Master Plan*, *Sebastopol Road Urban Vision and Corridor Plan,* and Street Light Design Standards.

Similar to the proposed project, Alternative A would result in new lighting sources that could result in sources of glare. Potential future development under both scenarios would be required to comply with best management practices in CALGreen, the SRCC, the Street Light Design Standards, and other adopted

plans. Potential future development would be reviewed for consistency with the lighting standards regarding the appropriate use of lighting and avoidance of glare from lighting and other sources.

While there is less development potential under Alternative A when compared to the proposed project, potential future development under both scenarios would be subject to the same regulations; therefore, impacts related to aesthetics would be ***similar*** under Alternative A when compared to the proposed project.

5.3.2.2 AGRICULTURAL RESOURCES

As determined in Chapter 4.2, *Agricultural Resources*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts related to the loss of agricultural lands due to the potential conversion to non-agricultural land uses. Through the proposed General Plan 2050 goal, policies, and actions, impacts related to the conversion of qualifying agricultural lands would be reduced, but not to a less-than-significant level.

The EIR Study Area contains 43 acres of Prime Farmland, 660 acres of Farmland of Statewide Importance, and 54 acres of Unique Farmland. There is a total of 97 acres of land that are under Williamson Act contracts within the EIR Study Area. Under both scenarios, there is the potential for these agricultural lands to be converted to non-agricultural uses. However, there is less development potential under Alternative A when compared to the proposed project; therefore, impacts related to agricultural resources would be ***less*** under Alternative A when compared to the proposed project.

5.3.2.3 AIR QUALITY

As described in Chapter 4.3, *Air Quality*, of this Draft EIR, the proposed project would result in less than significant impacts related to construction with implementation of proposed General Plan 2050 *Action 3-6.31, *Action 3-6.32, and *Action 6-1.5. However, significant and unavoidable impacts related to operational emissions of reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter (PM_{10} and $PM_{2.5}$) and exposure of air quality-sensitive receptors to substantial toxic air contaminants (TAC) and $PM_{2.5}$ concentrations, despite implementation of proposed General Plan 2050 *Action 3-6.31, *Action 6-1.5, and *Action 6-1.6. This significant and unavoidable impact is only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

Alternative A would continue development as allowed under the current General Plan 2035, which would result in less development in the EIR Study Area compared to the proposed project. Therefore, less direct and indirect criteria air pollutant emissions from energy (e.g., natural gas use) and area sources (e.g., aerosols and landscaping equipment) would occur. Additionally, there would be less of an elevation in concentrations of toxic air contaminants in the vicinity of sensitive land uses.

Potential future development under both the proposed project and Alternative A would be subject to the Bay Area Air Quality Management District's (BAAQMD's) rules and regulations, including those related to fugitive dust and odor, and would be required to prepare a detailed air quality impact assessment on a project-by-project basis. However, Alternative A would not include the updated policy framework of the proposed project that ensures adequate planning occurs to accommodate the future population increase

and potential future development, thereby conflicting with the BAAQMD 2017 Clean Air Plan. Furthermore, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions or the proposed GHG Reduction Strategy to further reduce potential VMT and GHG emissions. Therefore, impacts related to air quality would be *greater* under Alternative A when compared to the proposed project.

5.3.2.4 BIOLOGICAL RESOURCES

As described in Chapter 4.4, *Biological Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to biological resources with implementation of proposed General Plan 2050 *Action 3.5-7, *Action 3-5.10, *Action 3-5.11, *Action 3-5.12, *Action 3-5.13, *Action 3-5.19, and *Action 3-5.20.

The EIR Study Area is not within any local, regional, or State Habitat Conservation Plan areas. Therefore, neither the proposed project nor Alternative A would conflict with the conservation strategy in any Habitat Conservation Plan or Natural Community Conservation Plan. The City of Santa Rosa General Plan is the overriding planning document for the City of Santa Rosa and would therefore not conflict with local policies and ordinances protecting biological resources.

Like the proposed project, potential future development in the EIR Study Area under Alternative A could potentially affect animal and plant species identified as candidate, sensitive, or special-status species but would primarily occur as infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, which reduces the likelihood that special-status plant and animal species could be impacted. Infill development also reduces the likelihood that the riparian habitats, wetlands, and wildlife movement corridors could be impacted. Potential future development under both scenarios would be required to adhere to all federal, state, and local regulations relating to biological resources.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require consultation with the California Department of Fish and Wildlife to preserve populations of plants and animals, continued implementation of existing regulations and procedures, preparation of a biological resource assessments as part of project approval, avoidance of nests of native birds and implementation of protection measures, establishment of ecological buffer zones, and maintenance of adequate setbacks.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to biological resources would be *greater* under Alternative A when compared to the proposed project.

5.3.2.5 CULTURAL RESOURCES

As described in Chapter 4.5, *Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources with implementation of proposed General Plan 2050 *Action 3-5.19, *Action 3-5.20, *Action 4-2.1, *Action 4-2.2, *Action 4-2.3, *Action 4-2.4, *Action 4-3.2, *Action 4-3.6, *Action 4-3.7, and *Action 4-3.9.

The EIR Study Area contains existing prehistoric, architectural, historical, or archaeological resources that could be impacted by new demolition, inappropriate modification, or inappropriate new construction under the proposed project or Alternative A. Like the proposed project, potential future development under Alternative A would be subject to the regulations of the SRCC for historic and cultural preservation and the Historic Combining District. *Santa Rosa Design Guidelines* would also apply to all historic structures and neighborhoods that have been adopted by the city. In the event of the discovery of human remains, procedures of conduct mandated by Health and Safety Code Section 7050.5, Public Resources Code (PRC) Section 5097.98, and the California Code of Regulations (CCR) Section 15064.5(e) would be adhered to.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require continued review of proposed developments in conjunction with appropriate entities to determine the presence of historic and archeological resources and mitigation to protect such resources, examination of project areas with significant archaeological resources by a qualified consulting archaeologist with recommendations for protection and preservation, and continued compliance with existing regulations.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to cultural resources would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.6 ENERGY

As described in Chapter 4.6, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy.

All development that occurs in the State is required to comply with best management practices regulated in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor Alternative A would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure.

Less development would occur under Alternative A, so energy consumption from construction would be less when compared to the proposed project. Energy use from building electricity, natural gas, and transportation would also be less under Alternative A because there is less development potential when compared to the proposed project. However, as the standard of significance for energy impact is focused

on efficiency and not on amount, it is assumed that the net benefits from the proposed General Plan 2050 goals, policies, and actions and the proposed GHG Reduction Strategy would result in more efficient and less wasteful energy use when compared to Alternative A. Because Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions or the proposed GHG Reduction Strategy, impacts related to energy would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.7 GEOLOGY AND SOILS

As described in Chapter 4.7, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils with implementation of proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2.

Potential future development under both the proposed project and Alternative A would be subject to the same the SRCC regulations, including the requirement for any project within a State Geologist-delineated earthquake fault zone to obtain specialized approval, compliance with the California Building Code and hillside development standards, and implementation of grading, erosion, and sediment control. Potential future development under both scenarios would also be required to comply with the federal Paleontological Resources Preservation Act that limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency and the PRC Section 5097 that prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require avoidance and mitigation of seismic and geological hazards. Geologic studies and analyses are required to be deemed acceptable by a California Certified Engineering Geologist and/or Geotechnical Engineer, and where it is determined that hazards cannot be effectively mitigated, development shall be restricted.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to geology and soils would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.8 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to GHG emissions and consistency with applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Potential future development under both the proposed project and Alternative A would experience emission reductions from implementation of State measures and strategies to reduce Statewide GHG emissions. The GHG emissions from new buildings constructed would be subject to the triennial updates of California's Building and Energy Efficiency Standards, which would presumably improve over time and thereby result in more energy efficient buildings.

Under Alternative A, there would be less development, resulting in an overall decrease in energy usage from construction and operation of potential future development. However, Alternative A would be implemented under the current General Plan 2035, which does not include the new mix of land uses that increase density to reduce VMT. Furthermore, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions or the proposed GHG Reduction Strategy to further reduce potential GHG emissions to achieve State GHG reduction goals consistent with the BAAQMD CEQA Guidelines. Therefore, impacts related to GHG emissions would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.9 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.9, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials. With respect to impacts related to TACs during construction and operation, which could occur within 0.25 miles of a school, the implementation of proposed General Plan 2050 *Action 6-1.5 and *Action 6-1.6 were found to be less than significant as discussed in Chapter 4.3*, Air Quality*, of this Draft EIR.

The Charles M. Schulz Sonoma County Airport AIA is located northwest of, but greater than two miles outside of, the EIR Study Area. Therefore, neither the proposed project nor Alternative A would result in a safety hazard or excessive noise for people residing or working in an area within an airport land use plan.

Potential future development within the EIR Study Area under both scenarios would involve the routine use, transport, and handing of hazardous materials throughout the city, and could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action. There is a total of 596 hazardous materials sites listed on databases complied pursuant to Government Code Section 65962.5, 103 of which are designated as active and the remaining 493 sites are designated as “closed” or “completed–case closed.” Potential future development under both the proposed project and Alternative A would be required to comply with all federal, State, regional, and local regulations regarding the safe handling, transport, disposal, and use of hazardous materials, as well as those regarding emergency response and evacuation to minimize impacts.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require the preparation of construction and operational health risk assessments to ensure that potential future development would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

While development in the EIR Study Area would be less than the proposed project and thereby pose less risk of geological hazards, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to hazards and hazardous materials would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.10 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.10, *Hydrology and Water Quality,* of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality with implementation of proposed General Plan 2050 *Action 3-5.10, *Action 3-5.12, Action 3-5.19, *Action 3-5.20, *Action 5-2.14, *Action 5-2.15, *Action 5-2.17, and *Action 5-9.30.

Like the proposed project, potential future development under Alternative A would likely occur within previously urbanized areas, connect to existing drainage systems already in place, and be subject to the same existing federal, state, and local regulations relating to hydrology and water quality to ensure that pre- and post-construction impacts to water quality are minimized.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require continued implementation of existing regulations and procedures, preparation of a biological resource assessments as part of project approval, establishment of ecological buffer zones, maintenance of adequate setbacks, maintenance and improvements to the storm drainage system, ensured consistency with City plans, implementation of best management practices to reduce discharges to the storm drain system, and maintained consistency with the MS4 National Pollutant Discharge Elimination System (NPDES) permit.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to hydrology and water quality would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.11 LAND USE AND PLANNING

As described in Chapter 4.11, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning.

Like the proposed project, Alternative A would maintain the existing roadway patterns and would not include any new major roadways or other physical features through existing neighborhoods that would create new physical barriers in the EIR Study Area.

Under Alternative A, development would continue to occur throughout the EIR Study Area under the current General Plan 2035 and Zoning Code and would not conflict with these already approved standards. However, Alternative A would not implement the updated land use mix to guide future development in a more sustainable and efficient manner consistent with Plan Bay Area 2050. Alternative A would also not adopt and implement the proposed GHG Reduction Strategy which ensures consistency with Plan Bay Area by supporting the City's trajectory to meet its GHG reduction targets.

Continuing the use of the current General Plan 2035 would conflict with applicable land use plan adopted for the purpose of avoiding or mitigating an environmental effect and impacts related to land use and planning would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.12 NOISE

As described in Chapter 4.12, *Noise*, of this Draft EIR, the proposed project would result in less-than-significant impacts with respect to land use compatibility, vibration (operation and construction), with implementation of proposed General Plan 2050 *Action 5-7.1, Action 5-7.2, *Action 5-7.3, *Action 5-7.9, and *Action 5-7.10. Significant and unavoidable impacts related to exposure of noise-sensitive receptors to excessive construction noise and operational vehicle traffic noise, despite implementation of the proposed mitigating General Plan 2050 actions previously listed plus *Action 5-7.7. These significant and unavoidable impacts are only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

The City boundaries lie outside the 55 dBA CNEL/L_{dn} contour line of the Charles M. Schulz-Sonoma County Airport located more than two miles northwest of the city. Therefore, neither the proposed project nor Alternative A would expose people residing or working within two miles of a private airstrip or airport to excessive noise levels.

Future development allowed under both the proposed project and Alternative A would be subject to the standards of the SRCC. Because less development would occur under Alternative A and fewer vehicular trips would be generated, noise and vibration from construction and operation of potential future development would be less under Alternative A when compared to the proposed project.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require conducting acoustical studies, implementing conditions of approval or mitigation to reduce noise exceeding normally acceptable levels primarily through site planning, using the Federal Transit Authority's construction noise and vibration thresholds to assess impacts and identify mitigation, working with Caltrans to evaluate and develop traffic noise mitigation programs, and adopting construction best management practices.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to noise would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing.

The proposed General Plan 2050 is the policy document that plans ahead to accommodate the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth. Therefore, the proposed project would not directly induce growth, but rather is a response to growth that is likely to occur whether the proposed project is adopted or not. The projected growth under the proposed project accounts for future Regional Housing Needs Allocation (RHNA) cycles.

Alternative A would not include the updated policy framework of the proposed project that ensures adequate planning occurs to accommodate the future population increase and future development to extended buildout year through 2050. While Alternative A would result in a net increase in housing, like the proposed project, it would not be enough to cover the next RHNA cycle and could result in displacement and require replacement housing. Therefore, impacts related to population and housing would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.14 PUBLIC SERVICES AND RECREATION

As described in Chapter 4.14, *Public Services and Recreation*, of this Draft EIR, impacts under the proposed project to fire protection services, police services, parks, schools, and libraries were found to be less than significant.

Alternative A would result in less residents and jobs in the EIR Study Area compared to the proposed project, and therefore, would result in less demand on the public service providers that serve the EIR Study Area. Potential future development under Alternative A would be required to comply with all existing City regulations adopted to ensure that development pays its fair share of the cost of delivering services, providing park space and libraries, while payment of property taxes would ensure that future development pays its fair share towards schools. Overall, impacts related to public services and recreation would be ***less*** under Alternative A than those of the proposed project.

5.3.2.15 TRANSPORTATION

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts related to VMT generation of the proposed project exceeding the City's thresholds, despite implementation of proposed General Plan 2050 *Action 3-1.1. This significant and unavoidable impact is only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

Any potential new transportation facilities built under both the proposed project and Alternative A, whether constructed as part of private developments or by agencies, including the City of Santa Rosa, to improve circulation consistent with City plans, would be designed and constructed to local, regional, and federal standards. These include, but are not limited to, the *California Manual on Uniform Traffic Control Devices*, the Caltrans *Highway Design Manual*, and the City of Santa Rosa's *Street Design and Construction Standards*, all of which have been developed to minimize the potential for safety conflicts and hazards.

Like the proposed project, potential future development in the EIR Study Area under Alternative A is anticipated to occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, generation of VMT would be lower than if development were proposed in areas not served by public transportation and a network of sidewalks and bicycle facilities. However, Alternative A would be implemented under the current General Plan 2035, which does not include the new mix of land uses that increase density to reduce VMT.

Several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require analysis of project VMT and mitigation as part of the project review process. However, because VMT uncertainties as to whether individual development projects will be able to successfully meet VMT standards even with mitigation, and uncertainties as to the availability of other mitigation strategies such as VMT exchanges or banks.

While the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project would not fully mitigate VMT impacts of the proposed project, Alternative A would not realize these proposed goals, policies, or actions and would not include the new mix of land uses that increase density to reduce VMT. Therefore, impacts related to transportation would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to tribal cultural resources (TCR) with implementation of proposed General Plan 2050 *Action 3-5.19, *Action 3-5.20, *Action 4-2.1, *Action 4-2.2, and *Action 4-2.4. Note, as discussed in Chapter 4.5, *Cultural Resources*, of this Draft EIR, that *Action 4-2.3 would reduce impacts to archeological resources, which could be identified as TCRs, to less-than-significant levels.

The EIR Study Area does not contain any known TCR; however, there is the potential for TCRs to be identified as part of project-specific development over the course of the implementation of the proposed project. Like the proposed project, potential future development under Alternative A would be subject to the federal and state laws regarding TCRs. In the event of the discovery of human remains, procedures of conduct mandated by Health and Safety Code Section 7050.5, Public Resources Code (PRC) Section 5097.98, and the California Code of Regulations (CCR) Section 15064.5(e) would be adhered to.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require continued review of proposed developments in conjunction with appropriate entities to determine the presence of TCRs and mitigation to protect such resources, examination of project areas with significant archaeological resources by a qualified consulting archaeologist with recommendations for protection and preservation, and continued compliance with existing regulations.

While development in the EIR Study Area would be less than the proposed project, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to TCRs would be ***greater*** under Alternative A when compared to the proposed project.

5.3.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, stormwater, solid waste, and energy infrastructure under the proposed project, were found to be less than significant with the compliance of all applicable regulations.

Like the proposed project, potential future development under Alternative A would be required to comply with all existing federal, state, and local regulations. Demand and consumption trends generally demonstrate that advances in water-efficient regulations in building and landscaping, stricter stormwater retention requirements and recycling and solid waste reduction requirements would reduce impacts from existing conditions. Additionally, Alternative A would result in less residents and jobs in the EIR Study Area compared to the proposed project, and therefore, would result in less demand on the utilities infrastructures that serve the EIR Study Area. Overall, impacts related to utilities and service systems would be ***less*** under Alternative A when compared to the proposed project.

5.3.2.18 WILDFIRE

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to evacuation with implementation of proposed General Plan 2050 *Action 5-5.14, *Action 5-5.15, *Action 5-5.16, and *Action 5-5.17. However, even with implementation of proposed General Plan 2050 *Action 5-3.8, the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks and resulting in impacts that are significant and unavoidable.

Like the proposed project, potential future development under Alternative A would be required integrate applicable emergency operation and evacuation requirements as necessary into development to continue its facilitation in evacuation for people in wildfire-prone areas. Potential future development, regardless of whether it includes new development or redevelopment, would also be required to comply with adopted local, regional, and State plans and regulations addressing emergency access, response, and evacuation and wildfire hazards. Future development in the Wildland-Urban Interface Fire Area (WUIFA) or Very High fire hazard severity zones (FHSZ) would be required to comply with the Very High FHSZ Fire Safe Regulations, the California Building Code (CBC), the California Fire Code (CFC), and the SRCC, which have emergency access, building fire safety, and perimeter wildfire protection measures.

However, several new and modified General Plan 2050 policies and actions serve as means to mitigate environmental impacts under CEQA. Such proposed policies and actions require updates to the Community Wildfire Protection Plan identify slope stability and wildfire hazard areas and mitigation strategies and the preparation of fire protection plans for new development and major remodels in the WUIFA.

While development in the EIR Study Area would be less than the proposed project and thereby pose less risk of wildfire hazards, Alternative A would not realize the new or modified General Plan 2050 goals, policies, or actions that were prepared as part of the proposed project, and as such, impacts related to wildfire would be ***greater*** under Alternative A when compared to the proposed project.

5.3.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES

Under Alternative A, the proposed project would not be implemented, and therefore this alternative would not accomplish any of the project objectives.

5.4 ALTERNATIVE B: INCREASED DENSITY

5.4.1 DESCRIPTION

Alternative B assumes the General Plan would be updated as well as the associated amendments to the NSASP, DSASP, and SRCC associated with the proposed General Plan 2050 and Land Use Map. Accordingly, Alternative B, like the proposed project, would focus future commercial and residential growth in PDAs and/or TPAs and in the Areas of Change that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities. Alternative B assumes the same number of households, residential units, population, and jobs as under the proposed project, but would allow for more opportunity for dense housing connected to transit facilities. Alternative B presumes the same General Plan land use designations as the proposed project, except that the parcels designated as Medium Low density residential (8.0-13.0 units per gross acre) in Areas of Change that are in or adjacent to PDAs and/or TPAs would be redesignated to Medium High density residential (8.0-18.0 units per gross acre).

As shown in Table 4-1, *Proposed General Plan 2050 Areas of Change by PDA/TPA*, in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, there are 11 Areas of Change that are within or directly adjacent to a PDA and/or TPA. Out of these 11 Areas of Change, there are three that have parcels with Medium Low density land use designations. These are the Marlow Center and Lance Drive Annexation (#4), Downtown Station Area (#7), and Hearn Corridor (#17) Areas of Change (see Figure 3-7, *Proposed General Plan 2050 Areas of Change,* in Chapter 3). While potential future development under this alternative could occur throughout the 21 Areas of Change, under Alternative B, the parcels in these three Areas of Change with a Medium Low density land use designation would be changed to Medium High density land use designation to allow for more opportunities for the development of more dense housing than what is allowed under the proposed project. However, if a parcel has a Medium Low density land use designation and is within a Historic District, that parcel would not be redesignated to ensure the potential impacts to historic resources would not be greater in Alternative B when compared to the proposed project. The specific purpose of this alternative is to reduce the significant and unavoidable impacts associated with transportation. As described in Chapter 4.15, *Transportation*, of this Draft EIR, the VMT modeling results indicate that the proposed project's residential uses would be above the standard of significance that is used to measure residential VMT per capita. Accordingly, to reduce residential VMT per capita, Alternative B would allow for higher residential densities in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities. By allowing more dense housing development in areas that can meet community needs, Alternative B would accommodate the same amount of growth as the proposed General Plan 2050, but in a smaller footprint, and promote active and public transportation to reduce VMT.

The alternatives analysis assumes that the proposed General Plan 2050 goals, policies, and actions would apply to Alternative B, including the mitigating policies and actions.

5.4.2 IMPACT DISCUSSION

The potential environmental impacts associated with Alternative B when compared to the proposed project are described herein.

5.4.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics.

While there are no officially designated scenic vistas in the EIR Study Area, the City has officially designated certain roadways in Santa Rosa as scenic roads in the General Plan. The EIR Study Area also includes portions of SR 12 which have been designed as "eligible" for and "officially designated" as a State Scenic Highway.

Like the proposed project, potential future development in the EIR Study Area under Alternative B is anticipated to occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser impact on scenic vistas. However, Alternative B would allow for greater density in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities. Increased building height would have the potential to affect scenic vistas or scenic roadways in the EIR Study Area, but such development would be focused in infill urban areas.

Potential future development under both the proposed project and Alternative B would be required to comply with SRCC regulations, including those for the Scenic Road Combining District and Design Review. *Santa Rosa Design Guidelines* would also apply to all projects that require design review, including most new buildings, subdivisions, infill development, and public improvements. Potential future development in the city would also be subject to the various planning documents that govern scenic quality in the city, such as the *Citywide Creek Master Plan*, *Sebastopol Road Urban Vision and Corridor Plan,* and Street Light Design Standards.

Similar to the proposed project, Alternative B would result in new lighting sources that could result in sources of glare. Potential future development under both scenarios would be required to comply with best management practices in CALGreen, the SRCC, the Street Light Design Standards, and other adopted plans. Potential future development would be reviewed for consistency with the lighting standards regarding the appropriate use of lighting and avoidance of glare from lighting and other sources.

While Alternative B would allow for greater density and increased building height, potential future development would be subject to the same regulations as those under the proposed project; therefore, impacts related to aesthetics would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.2 AGRICULTURAL RESOURCES

As determined in Chapter 4.2, *Agricultural Resources*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts related to the loss of agricultural lands. Through the proposed General Plan 2050 goal, policies, and actions, impacts related to the conversion of qualifying agricultural lands would be reduced, but not to a less-than-significant level.

The EIR Study Area contains 43 acres of Prime Farmland, 660 acres of Farmland of Statewide Importance, and 54 acres of Unique Farmland. There is a total of 97 acres of land that are under Williamson Act contracts within the EIR Study Area.

Alternative B allows for more dense infill development potential, reducing the amount of the farmlands—Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, and lands under Williamson Act contracts—to be converted to non-agricultural uses. While the loss of any of these lands through the conversion to non-agricultural uses would result in a significant impact, because less qualifying agricultural lands could be converted, impacts related to agricultural resources would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.3 AIR QUALITY

As described in Chapter 4.3, *Air Quality*, of this Draft EIR, the proposed project would result in less than significant impacts related to construction with implementation of proposed General Plan 2050 *Action 3-6.31, *Action 3-6.32, and *Action 6-1.5. However, significant and unavoidable impacts related to operational emissions of reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter (PM_{10} and $PM_{2.5}$) and exposure of air quality-sensitive receptors to substantial toxic air contaminants (TAC) and $PM_{2.5}$ concentrations, despite implementation of proposed General Plan 2050 *Action 3-6.31, *Action 6-1.5, and *Action 6-1.6. This significant and unavoidable impact is only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

Alternative B would result in the same level of development compared to the proposed project. Therefore, direct and indirect criteria air pollutant emissions from energy (e.g., natural gas use) and area sources (e.g., aerosols and landscaping equipment) would be similar to the proposed project, as would be the concentrations of TACs and $PM_{2.5}$ to which sensitive receptors are exposed. The additional housing opportunities in these three Areas of Change would have the potential to put more housing where there are known, but mitigable, environmental hazards when compared to the proposed project. However, Alternative B allows for more dense infill development potential, specifically in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities to reduce VMT and therefore automobile emissions in support of the goals of the BAAQMD 2017 Clean Air Plan.

Potential future development under both the proposed project and Alternative B would be subject to the Bay Area Air Quality Management District's (BAAQMD) rules and regulations, including those related to fugitive dust and odor, and would be required to prepare a detailed air quality impact assessment on a project-by-project basis. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions and the proposed GHG Reduction Strategy to further ensure protection of air quality.

Overall, because Alternative B would result in increased infill opportunities and would be expected to decrease the number and length of driving trips, impacts related to air quality would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.4 BIOLOGICAL RESOURCES

As described in Chapter 4.4, *Biological Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to biological resources with implementation of proposed General Plan 2050 *Action 3.5-7, *Action 3-5.10, *Action 3-5.11, *Action 3-5.12, *Action 3-5.13, *Action 3-5.19, and *Action 3-5.20.

The EIR Study Area is not within any local, regional, or State Habitat Conservation Plan areas. Therefore, neither the proposed project nor Alternative B would conflict with the conservation strategy in any Habitat Conservation Plan or Natural Community Conservation Plan. The City of Santa Rosa General Plan is the overriding planning document for the City of Santa Rosa and would therefore not conflict with local policies and ordinances protecting biological resources.

Like the proposed project, the same federal, state, and local regulations related to biological resources would apply under Alternative B. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further ensure protection of biological resources. However, Alternative B allows for more dense infill development potential, reducing the potential for disturbance of undeveloped lands and biological resources compared to the proposed project.

Therefore, while development would be more intensive in some land use designations under Alternative B, development would be concentrated in infill urban areas, and impacts related to biological resources would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.5 CULTURAL RESOURCES

As described in Chapter 4.5, *Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources with implementation of proposed General Plan 2050 *Action 3-5.19, *Action 3-5.20, *Action 4-2.1, *Action 4-2.2, *Action 4-2.3, *Action 4-2.4, *Action 4-3.2, *Action 4-3.6, *Action 4-3.7, and *Action 4-3.9.

The EIR Study Area contains existing prehistoric, architectural, historical, or archaeological resources that could be impacted by new demolition, inappropriate modification, or inappropriate new construction under the proposed project or Alternative B. Like the proposed project, potential future development under Alternative B would be subject to the regulations of the SRCC for historic and cultural preservation and the Historic Combining District. *Santa Rosa Design Guidelines* would also apply to all historic structures and neighborhoods that have been adopted by the city. While no parcels designated as Medium Low density that are within a Historic District would be redesignated to Medium High density, due to the age of the existing buildings, there would be a greater potential for properties to qualify as historic or for historic districts to become established over the 2050 buildout horizon. Accordingly, there is the potential to cause greater impacts to historic resources.

In the event of the discovery of human remains, procedures of conduct mandated by Health and Safety Code Section 7050.5, PRC Section 5097.98, and 14 CCR Section 15064.5(e) would be adhered to. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals,

policies, and actions to further ensure protection of cultural resources. However, Alternative B allows for more dense infill development potential, reducing the potential for disturbance of undeveloped lands and archaeological resources compared to the proposed project.

Therefore, because development would be more intensive where historic buildings may be identified in the future under Alternative B, impacts related to cultural resources overall would be ***greater*** under Alternative B when compared to the proposed project.

5.4.2.6 ENERGY

As described in Chapter 4.6, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy.

All development that occurs in the State is required to comply with best management practices regulated in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor Alternative B would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure.

The same amount of development would occur under Alternative B, so energy consumption from construction would be similar when compared to the proposed project. Energy use from building electricity and natural gas would also be similar under Alternative B. However, energy use from transportation would be less under Alternative B because there would be greater density in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities to reduce VMT.

As the standard of significance for energy impact is focused on efficiency and not on amount, it is assumed that the net benefits from more compact development, in addition to the proposed General Plan 2050 goals, policies, and actions and the proposed GHG Reduction Strategy, would result in more efficient and less wasteful energy use when compared to the proposed project. Therefore, impacts related to energy would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.7 GEOLOGY AND SOILS

As described in Chapter 4.7, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils with implementation of proposed General Plan 2050 *Policy 5-1.1, *Action 5-1.1, and *Action 5-1.2.

Potential future development under both the proposed project and Alternative B would be subject to the same the SRCC regulations, including the requirement for any project within a State Geologist-delineated earthquake fault zone to obtain specialized approval, compliance with the California Building Code and hillside development standards, and implementation of grading, erosion, and sediment control. Potential future development under both scenarios would also be required to comply with the federal Paleontological Resources Preservation Act that limits the collection of vertebrate fossils and other rare

and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency and the PRC Section 5097 that prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further minimize geologic hazards.

Since the same development potential would occur under Alternative B as the proposed project and the same regulations would apply, impacts related to geology and soils would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.8 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.8, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to GHG emissions and consistency with applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Potential future development under both the proposed project and Alternative B would experience emission reductions from implementation of State measures and strategies to reduce Statewide GHG emissions. The GHG emissions from new buildings constructed would be subject to the triennial updates to California's Building and Energy Efficiency Standards, which would presumably improve over time and thereby result in more energy efficient buildings. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions and the proposed GHG Reduction Strategy to further reduce GHG emissions.

The same amount of development would occur under Alternative B so GHG emissions from building electricity and natural gas would also be similar when compared to the proposed project. However, Alternative B but would allow for greater density in infill urban areas in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities to reduce VMT, so GHG emissions from energy consumption during construction and from transportation would be less when compared to the proposed project.

In summary, overall impacts from GHG emissions would be ***less*** under Alternative B when compared to the proposed project because there would be greater density in infill urban areas in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities, and the net benefits of the proposed General Plan 2050 goals, policies, and actions and the proposed GHG Reduction Strategy that improve energy efficiency and reduce VMT would be realized.

5.4.2.9 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.9, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials. With respect to impacts related to TACs during construction and operation, which could occur within 0.25 miles of a school, the implementation of proposed General Plan 2050 *Action 6-1.5 and *Action 6-1.6 were found to be less than significant as discussed in Chapter 4.3*, Air Quality*, of this Draft EIR.

The Charles M. Schulz Sonoma County Airport AIA is located northwest of, but greater than two miles outside of, the EIR Study Area. Therefore, neither the proposed project nor Alternative B would result in a safety hazard or excessive noise for people residing or working in an area within an airport land use plan.

Potential future development within the EIR Study Area under both scenarios would involve the routine use, transport, and handing of hazardous materials throughout the city, and could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action. A total of 596 hazardous materials sites are listed on databases complied pursuant to Government Code Section 65962.5, 103 of which are designated as active; the remaining 493 sites are designated as "closed" or "completed–case closed." Potential future development under both the proposed project and Alternative B would be required to comply with all federal, State, regional, and local regulations regarding the safe handling, transport, disposal, and use of hazardous materials, as well as those regarding emergency response and evacuation to minimize impacts. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further minimize hazards.

Since the same development potential would occur under Alternative B as the proposed project and the same regulations would apply, impacts related to hazards and hazardous materials would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.10 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.10, *Hydrology and Water Quality,* of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality with implementation of proposed General Plan 2050 *Action 3-5.10, *Action 3-5.12, Action 3-5.19, *Action 3-5.20, *Action 5-2.14, *Action 5-2.15, *Action 5-2.17, and *Action 5-9.30.

Like the proposed project, potential future development under Alternative B would likely occur within previously urbanized areas, connect to existing drainage systems, and be subject to the same existing federal, state, and local regulations relating to hydrology and water quality to ensure that pre- and post-construction impacts to water quality are minimized. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further protect hydrology and water quality.

Since the same development potential would occur under Alternative B as the proposed project and the same regulations would apply, impacts related to hydrology and water quality would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.11 LAND USE AND PLANNING

As described in Chapter 4.11, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning.

Like the proposed project, Alternative B would maintain the existing roadway patterns and would not include any new major roadways or other physical features through existing neighborhoods that would create new physical barriers in the EIR Study Area.

Under Alternative B, development would occur throughout the EIR Study Area under the proposed General Plan 2050. Such development, but with more dense infill development potential, would be the same as under the proposed project and therefore implementation of either scenario would not conflict with any applicable land use plan adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts related to land use and planning would be ***similar*** under Alterative B when compared to the proposed project.

5.4.2.12 NOISE

As described in Chapter 4.12, *Noise*, of this Draft EIR, the proposed project would result in less-than-significant impacts with respect to land use compatibility, vibration (operation and construction), with implementation of proposed General Plan 2050 *Action 5-7.1, Action 5-7.2, *Action 5-7.3, *Action 5-7.9, and *Action 5-7.10. Significant and unavoidable impacts related to exposure of noise-sensitive receptors to excessive construction noise and operational vehicle traffic noise, despite implementation of the proposed mitigating General Plan 2050 actions previously listed plus *Action 5-7.7. These significant and unavoidable impacts are only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

The city boundaries lie outside the 55 dBA CNEL/L_{dn} contour line of the Charles M. Schulz-Sonoma County Airport located more than two miles northwest of the city. Therefore, neither the proposed project nor Alternative B would expose people residing or working within two miles of a private airstrip or airport to excessive noise levels.

Future development allowed under both the proposed project and Alternative B would be subject to the standards of the SRCC. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further minimize noise impacts.

However, Alternative B would result in increased infill opportunities but would not increase overall development potential, which would result in the same construction but less VMT. Because construction is temporary, the reduced VMT from Alterative B would result in less vehicular noise from the operational phase of potential future development. Therefore, impacts related to noise would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing.

The proposed General Plan 2050 is the policy document that plans ahead to accommodate the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth. Therefore, the proposed project would not directly induce

growth, but rather is a response to growth that is likely to occur whether the proposed project is adopted or not. The projected growth under the proposed project accounts for future RHNA cycles.

Alternative B would result in the same population, housing, and jobs as the proposed project; thus, the regional projections would be the same as the proposed project. Alternative B would also include the updated policy framework of the proposed project, which ensures adequate planning occurs to accommodate the future population increase and future development. Therefore, impacts related to population and housing would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.14 PUBLIC SERVICES AND RECREATION

As described in Chapter 4.14, *Public Services and Recreation*, of this Draft EIR, impacts under the proposed project to fire protection services, police services, parks, schools, and libraries were found to be less than significant.

Alternative B would result in the same amount of growth in residents and jobs in the EIR Study Area as the proposed project, and therefore, would result in the same demand on the public service providers that serve the EIR Study Area. Potential future development under Alternative B would be required to comply with all existing City regulations adopted to ensure that development pays its fair share of the cost of delivering services, providing park space and libraries, while payment of property taxes would ensure that future development pays its fair share towards schools. Overall, due to the same level of growth, impacts related to public services and recreation would be ***similar*** under Alternative B when compared to the proposed project.

5.4.2.15 TRANSPORTATION

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts related to VMT generation of the proposed project exceeding the City's thresholds, despite implementation of proposed General Plan 2050 *Action 3-1.1. This significant and unavoidable impact is only related to the programmatic nature of the proposed project that precludes the availability of mitigation measures at the project level.

Any potential new transportation facilities built under both the proposed project and Alternative B, whether constructed as part of private developments or by agencies, including the City of Santa Rosa, to improve circulation consistent with City plans, would be designed and constructed to local, regional, and federal standards. These include, but are not limited to, the *California Manual on Uniform Traffic Control Devices*, the Caltrans *Highway Design Manual*, and the City of Santa Rosa's *Street Design and Construction Standards*, all of which have been developed to minimize the potential for safety conflicts and hazards. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further promote safe and efficient paths of travel and active and public transportation.

Like the proposed project, potential future development in the EIR Study Area under Alternative B is anticipated to occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, generation of VMT would be lower than

if development were proposed in areas not served by public transportation and a network of sidewalks and bicycle facilities. However, Alternative B would allow for greater density in Areas of Change that are in or adjacent to PDAs and/or TPAs that are near Downtown, transit facilities, and along central thoroughfares connected to transit facilities to reduce VMT.

While Alternative B would result in the same level of development as the proposed project, potential future development under Alternative B would be more compact with greater infill intensity, likely resulting in less VMT. Therefore, impacts related to transportation would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to TCRs with implementation of proposed General Plan 2050 *Action 3-5.19, *Action 3-5.20, *Action 4-2.1, *Action 4-2.2, and *Action 4-2.4. Note, as discussed in Chapter 4.5, Cultural Resources, that *Action 4-2.3 would reduce impacts to archeological resources, which could be identified as TCRs, to less-than-significant levels.

The EIR Study Area does not contain any known TCRs, however, there is the potential for TCRs to be identified as part of project-specific development over the course of the implementation of the proposed project. Like the proposed project, potential future development under Alternative A would be subject to the federal and state laws regarding TCRs. In the event of the discovery of human remains, procedures of conduct mandated by Health and Safety Code Section 7050.5, PRC Section 5097.98, and 14 CCR Section 15064.5(e) would be adhered to. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further ensure protection of TCRs. However, Alternative B allows for more dense infill development potential, reducing the potential for disturbance of undeveloped lands and archaeological resources compared to the proposed project.

Therefore, while development would be more intensive in some land use designations under Alternative B, development would be concentrated in infill urban areas, and impacts related to TCRs would be ***less*** under Alternative B when compared to the proposed project.

5.4.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, stormwater, solid waste, and energy infrastructure under the proposed project, were found to be less than significant with the compliance of all applicable regulations.

Like the proposed project, potential future development under Alternative B would be required to comply with all existing federal, state, and local regulations. Demand and consumption trends generally demonstrate that advances in water-efficient regulations in building and landscaping, stricter stormwater retention requirements and recycling and solid waste reduction requirements would reduce impacts from existing conditions. Because Alternative B would result in the same number of residents and jobs in the EIR Study Area compared to the proposed project, demand on the utilities infrastructures that serve the EIR Study Area would be similar when compared to the proposed project. Overall, impacts related to

utilities and service systems would be *similar* under Alternative B when compared to the proposed project.

5.4.2.18 WILDFIRE

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to evacuation with implementation of proposed General Plan 2050 *Action 5-5.14, *Action 5-5.15, *Action 5-5.16, and *Action 5-5.17. However, even with implementation of proposed General Plan 2050 *Action 5-3.8, the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks and resulting in impacts that are significant and unavoidable.

Like the proposed project, potential future development under Alternative B would be required to integrate applicable emergency operation and evacuation requirements as necessary into development to facilitate evacuation for people in wildfire-prone areas. Potential future development, regardless of whether it includes new development or redevelopment, would also be required to comply with adopted local, regional, and State plans and regulations addressing emergency access, response, and evacuation and wildfire hazards. Future development in the WUIFA or Very High FHSZ would be required to comply with the Very High FHSZ Fire Safe Regulations, the CBC, the CFC, and the SRCC, which have emergency access, building fire safety, and perimeter wildfire protection measures. Potential future development under Alterative B would also be subject to the proposed General Plan 2050 goals, policies, and actions to further minimize wildfire hazards.

While the same development potential would occur under Alternative B as the proposed project and the same regulations would apply, Alternative B would provide greater opportunities for infill development that is not in the Very High Fire Hazard Severity Zone and/or the Wildland-Urban Interface Fire Area.. Therefore, impacts related to wildfire would be *less* under Alternative B when compared to the proposed project.

5.4.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES

The primary purpose of the proposed project is to plan for the growth and conservation of Santa Rosa over a 25-year time horizon and to achieve a more equitable, sustainable, and prosperous future for all residents. This requires extending the buildout horizon to year 2050 and updating goals, policies, and actions so that they meet current State requirements and community priorities on the framework of the Santa Rosa Vision and reflect the community's desires for the future of Santa Rosa. Because Alternative B would increase opportunities for infill development to support the reduction of VMT and GHG emissions and reduce the amount of qualifying agricultural lands that could be converted to non-agricultural uses, Alternative B would generally meet the project objectives but not to the same degree as the proposed project. For example, Alternative B would eliminate any Medium Low density residential (8.0-13.0 units per gross acre) in the Marlow Center and Lance Drive Annexation (#4), Downtown Station Area (#7), and Hearn Corridor (#17) Areas of Change. Therefore, it would not provide the same range of housing types to meet the needs of all Santa Rosa residents as the proposed project. The additional housing opportunities in these three Areas of Change would have the potential to put more housing where there are known, but mitigable, environmental hazards when compared to the proposed project. Lastly, because these Areas of

Change have older buildings, there is a greater potential for sites to be identified as historic buildings and districts over the 2050 buildout horizon, and therefore, this alternative would not preserve historic and cultural resources as the city develops and becomes denser, at the same level as the proposed project. Therefore, although this alternative would further some of the objectives of the proposed project, it would do so less than would the proposed project.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the CEQA Guidelines requires that an "environmentally superior" alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative to the proposed project that would be expected to generate the least number of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative to the proposed project selected may not be the alternative to the proposed project that best meets the goals or needs of Santa Rosa. Because CEQA Guidelines Section 15126.6(c) requires an evaluation of a reasonable range of alternatives to the proposed project, the proposed project under consideration cannot be identified as the environmentally superior alternative. Additionally, in accordance with CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table 5-2 and Table-5-3, Alternative B would, in comparison to the proposed project, result in greater impacts to cultural resources and reduced environmental impacts related to agricultural resources, air quality, biological resources, energy, GHG emissions, noise, transportation, TCRs, and wildfire. Therefore, as shown in Table 5-2 and Table 5-3, Alternative B would be the environmentally superior alternative.

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6. CEQA-Required Conclusions

This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapter 4.0, *Environmental Analysis*, and its subchapters 4.1 through 4.18, of this Draft Environmental Impact Report (EIR). The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. For a more detailed analysis of the proposed project's environmental effects and the proposed General Plan 2050 mitigating policies and actions to minimize significant impacts, see Chapter 4.0 and its subchapters 4.1 through 4.18, of this Draft EIR.

6.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

California Environmental Quality Act (CEQA) Guidelines Section 15128, *Effects Not Found to Be Significant*, allows environmental issues to be "scoped out" if there is no likelihood of a significant impact, and they do not need to be analyzed further in the EIR. This section explains the reasoning for the determination that the proposed project would have no effect within an entire environmental topic or under specific criteria within an environmental topic. As shown below, there would be no impacts to mineral resources as a whole pursuant to the CEQA standards; therefore, this topic is not evaluated in Chapter 4.0, *Environmental Analysis*, of this Draft EIR. Furthermore, there would be no impacts to some of the criteria for forestry resources. These specific criteria are identified in the corresponding subsection of this chapter and are not required to be evaluated in this EIR.

6.1.1 FORESTRY RESOURCES

The following standards of significance are not evaluated in this EIR:

- Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

This EIR does not analyze impacts to forestry resources because the Santa Rosa City Code (SRCC) does not contain a zoning district for forest land or timberland production. Further, there are no State or national forest lands in the EIR Study Area. Consequently, the proposed project would not result in any impacts to forestry resources, and this topic is not discussed further in this EIR.

6.1.2 MINERAL RESOURCES

The following standards of significances are not evaluated in this EIR:

- Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state.
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

According to the California Geological Survey, Department of Conservation, there are no known significant mineral resources within the EIR Study Area.[1] Furthermore, there are no active/permitted mining or designated land in the City. As such, these standards have been screened out from further evaluation. Consequently, there would be no impacts to mineral resources as a result of adoption and implementation of the proposed project.

6.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires that "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects." Chapter 2, *Executive Summary*, of this Draft EIR contains Table 2-1, *Summary of Significant Impacts and Mitigating Policies and Actions,* which summarizes the significant impacts, mitigating proposed General Plan 2050 policies and actions, and levels of significance with and without mitigating policies and actions. While mitigating General Plan 2050 policies and actions would reduce the level of impact, the following impacts would remain significant and unavoidable after mitigating policies and actions are applied. The identification of these program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the thresholds of significance. As detailed in Chapter 4.2, *Agricultural Resources*, Chapter 4.3, *Air Quality*, Chapter 4.4, *Biological Resources*, Chapter 4.12, *Noise*, Chapter 4.15, *Transportation*, and Chapter 4.18, *Wildfire*, of this Draft EIR, environmental impacts associated with the proposed project were found to be significant and unavoidable, as listed:

- Agricultural Resources
  - Impact AG-1: Implementation of the proposed project could result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland land (together referred to as "CEQA Important Farmland") to non-agricultural land uses.
  - Impact AG-2: Implementation of the proposed project could result in the loss of agricultural land under the Williamson Act.

[1] California Geological Survey, Department of Conservation, 2013, *Special Report 205: Update of Mineral Land Classification: Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin, and Southwestern Solano Counties, California*, accessed April 13, 202, https://maps.conservation.ca.gov/mineralresources/3.

- **Impact AG-4:** The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact with respect to the conversion of CEQA Important Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) and Williamson Act properties to non-agricultural uses.

- Air Quality
  - **Impact AIR-2b:** Buildout of the proposed project could generate operational emissions that could exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for reactive organic compounds (ROG), nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$ and PM_{10}).
  - **Impact AIR-3b:** Large industrial or warehouse development projects under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminants (TAC) and particulate matter ($PM_{2.5}$) concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.
  - **Impact AIR-5:** The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative air quality impacts with respect to generation of criteria pollutant and exposure of substantial pollutant concentrations to sensitive receptors.
- Noise
  - **Impact NOI-1a:** Construction activities associated with potential future development could expose sensitive receptors to excessive noise from construction equipment.
  - **Impact NOI-1b:** Operational vehicle traffic noise increases could exceed the City's significance thresholds with implementation of the proposed project.
  - **Impact NOI-4:** Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative noise impacts, with respect to generation of construction-and transportation related noise.
- Transportation
  - **Impact TRAN-2a:** Implementation of the proposed project could result in a significant vehicle miles traveled (VMT) impact for residential VMT per capita.
  - **Impact TRAN-2b:** Implementation of the proposed project could result in a significant roadway network vehicle miles traveled (VMT) impact associated with increasing the capacity of the arterial street network.
  - **Impact TRAN-5:** The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in significant cumulative impact with respect to vehicle miles traveled (VMT).
- Wildfire
  - **Impact WF-2:** Potential future development over the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

- Impact WF-5: Potential development over the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas (SRA), Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface Fire Areas (WUIFA), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

6.3 GROWTH INDUCEMENT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development.

This section evaluates the proposed project's potential to create such growth inducements. As CEQA Guidelines Section 15126.2(d) requires, "[it] must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment." In other words, negative impacts associated with growth inducement occur only where the projected growth would cause significant adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

As discussed in detail in Chapter 4.13, *Population and Housing*, of this Draft EIR, the General Plan is the policy document that plans ahead to accommodate the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth. Therefore, the proposed General Plan 2050 would not directly induce growth, but rather is a response to growth that is likely to occur whether the proposed project is adopted or not. Because the proposed General Plan 2050 also includes recommendations for future roadway and infrastructure extension, as it is required to do by state law, it has the potential to indirectly induce growth. However, the proposed General Plan 2050 itself is the City's effort to adequately plan for this growth.

Additionally, this additional growth would likely occur incrementally over a period of approximately 25 years and a policy framework is in place to ensure adequate planning occurs to accommodate it regardless of the development timeline. The proposed project results in mixed-use development and employment centers and implements energy and water conservation requirements related to existing and new development, thereby minimizing consumption of non-renewable resources to the extent practicable.

6.3.1 DIRECT IMPACTS

The proposed project is a plan-level document and does not propose any specific development; however, implementation of the proposed project would induce growth by increasing the development potential in the EIR Study Area, as shown in Table 3-6, *Proposed 2050 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR. As shown in Table 3-6, the 2050 forecast for the EIR Study Area is approximately 263,740 total population, 99,940 housing units, and 91,680 jobs.

State law requires the City to promote the production of housing to meet its fair share of the regional housing needs distribution made by the Association of Bay Area Governments. While the City provides adequate sites to meet its fair-share housing obligations, the additional housing capacity provided by the proposed project would meet the additional demand generated by new job growth.

In addition, the proposed project would result in regional benefits by promoting growth that encourages less automobile dependence, which could have associated air quality and GHG benefits. Encouraging infill growth in designated areas would help to reduce development pressures on lands outside the City Limits.

6.3.2 INDIRECT IMPACTS

The proposed project could be considered growth inducing because it includes policies and actions that encourage new growth in the urbanized areas of Santa Rosa. Development in these areas would consist of infill development on underutilized sites, sites that have been previously developed, and that are vacant and have been determined to be suitable for development. However, infrastructure is largely in place, and growth would be required to comply with the City's General Plan, zoning regulations, and standards for public services and utilities; secondary effects associated with this growth do not represent a new significant environmental impact that has not already been addressed in the individual resource chapters of this EIR. Additional population and employment growth would likely occur incrementally over a period of approximately 25 years and would be consistent with the regional planning objectives established for the Sonoma County region.

6.4 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which the proposed project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed herein.

6.4.1 CHANGES IN LAND USE THAT COMMIT FUTURE GENERATIONS

As described in detail in Chapter 3, *Project Description*, of this Draft EIR, the proposed project maintains the land use pattern of the existing General Plan. Development is encouraged in existing urban areas, and new development is required to be contiguous with the existing City Limits. The current General Plan 2035 provided development allocations for buildout of the city through the year 2035. Some future

development under the proposed project would be on land that is generally urbanized or on infill sites and sites in developed areas that are underutilized. However, some potential future development may occur on vacant non-urban sites that are already designated for development. Once future development under the proposed project occurs, it would not be feasible to return the developed land to its existing (pre-project) condition. Therefore, there is potential that some of the development allowed under the proposed project would lead to irreversible changes in land use.

6.4.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with development activities; however, compliance with the applicable regulations and proposed General Plan 2050 goals, policies, and actions as discussed in Chapter 4.9, *Hazards and Hazardous Materials*, of this Draft EIR would ensure these impacts would be less than significant. Therefore, irreversible damage is not expected to result from the adoption and implementation of the proposed project.

6.4.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Future development allowed under the proposed project would result in the commitment of limited, renewable resources, such as lumber and water. In addition, development under the proposed project would irretrievably commit nonrenewable resources for the construction of buildings, infrastructure, and roadway improvements. These nonrenewable resources include mined minerals, such as sand, gravel, steel, lead, copper, and other metals. Future buildout under implementation of the proposed project also represents a long-term commitment to the consumption of fossil fuels such as natural gas and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from Santa Rosa. However, as shown in Chapter 4.6, *Energy,* and in Section 4.17.1, *Water*, and Section 4.17.4, *Solid Waste*, of Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, several regulatory measures and proposed General Plan 2050 goals, policies, and actions encourage energy and water conservation, alternative energy use, waste reduction, alternatives to automotive transportation, and green building. Future development under the proposed project would be required to comply with all applicable building and design requirements, including those set forth in Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, future development would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Therefore, while the construction and operation of future development, as a result of increased development allocations under the proposed project, would involve the use of nonrenewable resources, compliance with applicable standards and regulations and implementation of proposed General Plan 2050 goals, policies, and actions would reduce the use of nonrenewable resources to the maximum extent practicable; therefore, the proposed project would not represent a large commitment of nonrenewable resources in comparison to a business-as-usual situation.

7. Organizations and Persons Consulted

This Draft Environmental Impact Report (EIR) was prepared by the contributors listed herein and includes content and information provided by individuals with the lead agency, other agencies, service providers, consultants, and other contributors.

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8. Acronyms and Abbreviations

ACRONYM/ ABBREVIATION	MEANING
°C	degrees Celsius
°F	degrees Fahrenheit
AAQS	ambient air quality standards
AB	Assembly Bill
ABAG	Association of Bay Area Government
ACF	Advanced Clean Fleets
AFY	acre-feet per year
AIA	Airport Influence Area
AQMP	air quality management plan
AR4	*Fourth Assessment Report: Climate Change 2007* (IPCC)
BAAQMD	Bay Area Air Quality Management District
BES	Battery Energy Storage
BMP	best management practice
BPMP	Bicycle and Pedestrian Master Plan
BTU	British thermal unit
BUSD	Bellevue Union School District
BVSD	Bennett Valley School District
CAA	Clean Air Act
CAFE	corporate average fuel economy
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
Cal/OSHA	California Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention
CalEMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CALGreen	California Green Building Standards Code
California Register	California Register of Historic Resources
CalOES	California Governor's Office of Emergency Services
CalRecycle	California Department of Resources, Recycling, and Recovery

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAP	community climate action plan
Ccf	hundreds of cubic feet
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEP	Community Empowerment Plan
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CES4	CalEnviroScreen v.4
CESA	California Endangered Species Act
CFC	California Fire Code
CFD	Community Facilities District
CFF	capital facilities fee
CFGC	California Fish and Game Code
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol
CIP	Capital Improvements Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CSC	California Species of Concern
CTP	Comprehensive Transportation Plan
CTS	California tiger salamander
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWPP	Sonoma County Community Wildfire Protection Plan
dB	Decibel
dBA	A-Weighted Decibel
Design Guidelines	*Santa Rosa Design Guidelines*

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
DNL or L_{dn}	Day-Night Sound Level
DPM	diesel particulate matter
DSOD	Division of Safety of Dams (CA)
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources (CA)
EAP	emergency action plan
EMS	Emergency Medical Services
EO	Executive Order
EOC	emergency operations center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency (US)
EPCRA	Emergency Planning Community Right-to-Know Act
ESMP	Environmental Site Management Plan
ESU	evolutionarily significant unit
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FMP	facilities master plan
FTA	Federal Transit Administration
gcpd	gallons per capita per day
GHG	greenhouse gas
gpm	gallons per minute
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
GW	gigawatts
GWP	global warming potential
HazMat	Sonoma County Fire and Emergency Services Department Hazardous Materials
HMRT	Hazardous Materials Response Team
Hz	Hertz
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
ISO	Insurance Service Office
KSD	Kenwood School District
KW	kilowatts
kWh	Kilowatt-hours

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
LAFCO	Local Agency Formation Commission
LCFS	low-carbon fuel standard
L_{eq}	Equivalent Continuous Noise Level
LHMP	Local Hazard Mitigation Plan
LID	low impact development
L_n	Statistical Sound Level
LNU	Sonoma-Lake-Napa Unit [CAL FIRE]
LOS	level of service
LRA	local responsibility area
LSE	load-serving entities
LUSTIS	Leaking Underground Storage Tank Information System
MBTA	Migratory Bird Treaty Act
Mcf	thousands of cubic feet
MGD	million gallons per day
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most Likely Descendant
MMT	million metric tons
MPG	miles per gallon
MPO	metropolitan planning organization
MS4	municipal separate storm sewer system
MT	metric ton
MTC	Metropolitan Transportation Commission
MW	megawatts
MWELO	Model Water Efficient Landscape Ordinance
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NWPRR	Northwest Pacific Railroad
O_3	ozone
OD	origin-destination
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor’s Office of Planning and Research

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
OSHA	Occupational Safety and Health Administration
PBO	Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California (USFWS)
PDA	Priority Development Area
PG&E	Pacific Gas and Electric Company
PHSMA	Pipeline and Hazardous Materials Safety Administration
PM	particulate matter
POSD	Piner-Olivet School District
ppd	pounds per day
ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRD	permit registration documents
RAMS	Roseland Accelerated Middle School
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Act Information System
REF	residential equivalency factor
RHNA	Regional Housing Needs Allocation
RPS	renewable portfolio standard
RSD	Roseland School District
RTAC	Regional Transportation Advisory Committee
RTP/SCS	regional transportation plan / sustainable communities strategy
RVUSD	Rincon Valley Unified School District
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCFPD	Sonoma County Fire Protection District
SCL	Sonoma County Library
SCLL	Sonoma County Law Library
SCP	Sonoma Clean Power
SCS	sustainable communities strategy
SCTA	Sonoma County Transportation Authority
SCTM	Sonoma County Travel Model
SFBAAB	San Francisco Bay Area Air Basin
SGMA	Sustainable Groundwater Management Act
SMART	Sonoma-Marin Area Rail Transit
SMARTS	Stormwater Multiple Application and Report Tracking System

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
SO_2	sulfur dioxide
SOI	sphere of influence
SR	State Route
SRA	state responsibility area
SRCC	Santa Rosa City Code
SRCSD	Santa Rosa City School District
SRFD	Santa Rosa Fire Department
SRJC	Santa Rosa Junior College
SRPCS	Santa Rosa Plain Conservation Strategy
SRPD	Santa Rosa Police Department
SSMP	sewer system management plan
SSO	sanitary sewer overflow
SWLIDS	Storm Water Low Impact Development Submittal
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCR	tribal cultural resource
TDM	transportation demand management
TISG	Vehicle Miles Traveled–Focused Transportation Impact Study Guide (Caltrans)
TMDL	total maximum daily load
TPA	transit priority area
TRU	transport refrigeration unit
UGB	urban growth boundary
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
VdB	vibration decibels
VMT	vehicle-miles traveled
VOC	volatile organic compound
WARN	Water/Wastewater Agency Response Network
WDO	water demand offset
WESD	Wright Elementary School District

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
WMP	water master plan
WSA	water supply assessment
WUI	wildland-urban interface
WUIFA	Wildland-Urban Interface Fire Area
WWTP	wastewater treatment plant
ZE	zero emissions
ZEV	zero-emission vehicle

ACRONYMS AND ABBREVIATIONS

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