

**MCMURTRY CREEK ESTATES PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT**

STATE CLEARINGHOUSE NO. 2024051142

VACAVILLE, CALIFORNIA



March 2025

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VACAVILLE, CALIFORNIA

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
2004 Project	Rice McMurtry Annexation and Residential Development Project
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ALUC	(Solano County) Airport Land Use Commission
APN	Assessor's Parcel Numbers
BMP	Best Management Practice
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGP	Construction General Permit
Cheyenne Estates	Reserve at Browns Valley Phase 3
CHRIS	California Historic Resources Inventory System
City	City of Vacaville
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂ e	carbon dioxide equivalents
Cortese List	California Environmental Protection Agency Hazardous Waste and Substances Sites List
County	County of Solano
CRHR	California Register of Historical Resources
CTP	Comprehensive Transportation Plan

CWA	Federal Clean Water Act
dBA	A-weighted decibel
DOC	State Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DU	dwelling unit
ECAS	Energy and Conservation Action Strategy
EIR	Environmental Impact Report
FAST	Fairfield and Suisun Transit
FEIR	Final Environmental Impact Report
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
HA	Hillside Agriculture
HCP	Habitat Conservation Plan
HFHSZ	High Fire Hazard Severity Zone
HQT	Habitat Quantification Tool
I-505	Interstate 505
I-80	Interstate 80
Knoll Creek	Reserve at Browns Valley Phase 2
LAFCO	Solano Local Agency Formation Commission
L _{eq}	equivalent continuous sound level
LID	Low Impact Development
LOS	level of service
LRA	Local Responsibility Area
LTS	Less Than Significant
LTS/M	Less Than Significant with Mitigation
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System

MTC	Metropolitan Transportation Commission
NAHC	Native American Heritage Commission
NI	No Impact
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O&M Plan	Operation and Maintenance Plan
OPR	Governor's Office of Planning and Research
PDA	Priority Development Areas
PG&E	Pacific Gas and Electric Company
PM ₁₀	particulate matter less than 10 microns in size
PM _{2.5}	particulate matter less than 2.5 microns in size
PPV	peak particle velocity
PRC	Public Resources Code
PRD	Permit Registration Document
proposed project	McMurtry Creek Estates Project
PS	Potentially Significant
Rancho Rogelio	Reserve at Browns Valley Phase 1
RE	Residential Estates
ROG	reactive organic gasses
Roger's Ranch	Reserve at Browns Valley Phase 3
RTC	Response to Comments
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
S	Significant
SB	Senate Bill
SCOA	Standard Condition of Approval
SCWA	Solano County Water Agency
SEIR	Supplemental Environmental Impact Report

SMARTS	Stormwater Multiple Application and Report Tracking System
SOI	Sphere of Influence
SRA	State Responsibility Area
STA	Solano Transportation Authority
SU	Significant and Unavoidable
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	Traffic Analysis Zone
TDM	transportation demand management
TISG	Transportation Impact Study Guide
Tribe	Yocha Dehe Wintun Nation
TSM	transportation systems management
UGB	Urban Growth Boundary
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
UTM	Universal Transverse Mercator
UWMP	Urban Water Management Plans
VFD	Vacaville Fire Department
VMC	Vacaville Municipal Code
VMT	Vehicle Miles Traveled
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirement
WUI	wildland-urban interface
YSAQMD	Yolo-Solano Air Quality Management District

1.0 INTRODUCTION

1.1 PURPOSE OF THIS EIR

In compliance with the California Environmental Quality Act (CEQA), this Environmental Impact Report (EIR) describes the potential environmental impacts of the proposed McMurry Creek Estates Project (proposed project). The City of Vacaville (City) is the CEQA Lead Agency for environmental review.

The purpose of this EIR is to inform City decision-makers, responsible agencies, and the general public about the proposed project and the potential physical environmental consequences of project implementation. This EIR also examines alternatives to the proposed project and recommends mitigation measures to reduce or avoid potentially significant physical environmental impacts, to the extent feasible. This EIR will be used as an informational document by the City's Planning Commission and/or City Council, responsible agencies, and the public in their review of the proposed project and associated approvals described below and in more detail in Chapter 3.0, Project Description.

1.2 PROPOSED PROJECT

The project site (Assessor's Parcel Numbers [APNs] 0105-200-150 and 0105-200-140) is located within unincorporated Solano County adjacent to the northwestern Vacaville city limits. The project site is within the City of Vacaville's Sphere of Influence (SOI) and Urban Growth Boundary (UGB). The project site is located at the end of McMurry Lane, just north of Preserve Lane, and is currently vacant except for a single farmhouse and associated structures located in the western portion of the site. The project site is bounded by undeveloped lands to the north and west, and single-family residential uses to the east and south. To the south is Phase 3 of the Reserves at Browns Valley residential development, which is nearing completion. To the east and south is the greater Rice/McMurtry Development Area consisting of existing custom and semi-custom single-family residential homes, which is largely completed with the exception of a few remaining home lots. There is one 0.31-acre constructed stock pond/seasonal wetland in the south-central part of the site and two ephemeral drainage channels in the southern portion of the site. A Pacific Gas and Electric (PG&E) easement with a transmission line is situated at the western and northern project boundaries.

The project proposes to annex 15.73 acres of land from Solano County into the City of Vacaville to develop a subdivision consisting of 20 single-family residential estate lots, along with associated roadway and utility improvements. The residential estate lots would accommodate executive-style custom homes ranging in lot area from 12,412 to 63,749 square feet in size. Additionally, as part of the subdivision, two new parcels would be created: Parcel A, the 15.73-acre project site, which would be annexed into the City of Vacaville and includes the 20 residential lots, fire access roads, and a 150-foot irrigated landscape buffer; and Parcel B, a separate 18.60-acre remnant parcel that would remain unimproved and within Solano County. As such, the project proposal would require a General Plan Amendment to change the General Plan designation from Hillside Agriculture (HA) to Residential Estates (RE) and apply the Residential Estate (RE-12) pre-zoning district to the project site. In addition, the project includes a Tentative Subdivision Map to create 20 lots within Parcel A

while designating Parcel B as an unimproved remnant parcel. Annexation would require approval from the Solano Local Agency Formation Commission (LAFCO).

The proposed project would include approximately 3.7 acres of landscaping for fire protection, of which 2.44 acres would be designated as open space. A 150-foot irrigated landscape buffer would be installed between the property boundary and the fire access road along the northern boundary of the project site. Additionally, the proposed project would include a 15,000-square-foot detention pond. Primary access to the project site would be provided by an extension of Preserve Lane with a secondary emergency access route along McMurtry Lane. The proposed project would extend McMurtry Lane to the north and remove the existing cul-de-sac at Preserve Lane within the Reserves at Browns Valley Development to connect McMurtry Lane to the proposed extended Preserve Lane. A 22-foot-wide fire access road would be constructed around the perimeter of the development and connect to the new multi-use path on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development.

Chapter 3.0, Project Description, provides a complete description of the proposed project's location, context, background, objectives, details of the proposed project itself, and a summary of required approvals and entitlements.

1.3 EIR PROCESS AND SCOPE

This Draft EIR has been prepared to evaluate environmental impacts that may result from implementation of the proposed project. As the Lead Agency, the City has the authority for preparation of this Draft EIR and, after the comment/response process, certification of the Final EIR (FEIR) and approval of the proposed project as described in this Draft EIR.

The City has the authority to make decisions on discretionary actions relating to development of the proposed project. As previously stated, this Draft EIR is intended to serve as an informational document to be considered by the City during deliberations on the proposed project. This Draft EIR evaluates and mitigates the reasonably foreseeable environmental consequences associated with the implementation of the proposed project.

1.3.1 Notice of Preparation and Scoping

On May 24, 2024, the City circulated a Notice of Preparation (NOP) notifying responsible agencies and interested parties that an EIR would be prepared for the proposed project and indicated the environmental topics anticipated to be addressed in the EIR. The City also held a public scoping meeting on June 13, 2024, to solicit verbal comments relative to the content of the information to be analyzed in this EIR. In accordance with *State CEQA Guidelines* Section 15082, the NOP was circulated for a period of 30 days, during which time written comments were solicited pertaining to environmental issues that the EIR should evaluate. The comment period ended on June 24, 2024.

The NOP was distributed to the Governor's Office of Planning and Research, State Clearinghouse, for distribution to State agencies. The NOP was also mailed by the City to adjacent property owners and occupants, businesses, community groups, elected officials, and State, local, and federal agencies. A total of four written comment letters were received. **Appendix A** includes the NOP, a scoping

summary, a summary of comments received during the public scoping meeting, and copies of written comments received.

1.3.2 Effects Found Not to be Significant

As required by *State CEQA Guidelines* Section 15128, this Draft EIR identifies the potential effects of the proposed project that were determined not to be significant and adverse, and therefore, not addressed in the Draft EIR. Impacts that were determined to be less than significant are discussed and evaluated in the Initial Study. The Initial Study and Environmental Checklist for the proposed project are included in **Appendix B** of this EIR. The environmental topics found to have no impact or less than significant impacts, are:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Chapter 5.0, Other CEQA Considerations, of this EIR, provides a summary of the analysis and conclusions for each environmental topic evaluated in the Initial Study and not further addressed in this EIR.

1.3.3 Focused EIR

Based on the preliminary analysis provided in the Initial Study (**Appendix B**), consultation with City staff, and review of the comments received during the scoping process, the topic of transportation is the only topic studied in further detail in this EIR. Given that many topic areas were scoped out and only one topic area is evaluated in detail in this EIR, the document may also be referred to as a focused EIR.

The Draft EIR will be circulated for a period of 45 days, from March 6, 2025, to April 21, 2025. Following the close of the EIR comment period, the City will prepare a Response to Comments (RTC) Document to respond to all substantive comments on the Draft EIR. The RTC Document will also identify any changes or additions to the Draft EIR as a result of comments received, if required. The Draft EIR and RTC Document together will constitute the Final EIR, which will be considered for certification by the Planning Commission and City Council during consideration of the proposed project.

1.4 FORMAT OF THE EIR

Pursuant to *State CEQA Guidelines*, Section 15120(c), this Draft EIR contains the information and analysis required by *State CEQA Guidelines*, Sections 15122 through 15131. The EIR is organized as follows:

- **Chapter 1.0, Introduction**, discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scoping process and contents, and summarizes the organization of the EIR.
- **Chapter 2.0, Summary**, provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant environmental impacts, and describes the alternatives to the proposed project.
- **Chapter 3.0, Project Description**, includes a discussion of the project's geographical setting, the history of the planning area, the project's objectives, characteristics, and components, and the anticipated discretionary action for the project.
- **Chapter 4.0, Setting, Impacts and Mitigation Measures**, describes the following for the topic of transportation: existing conditions (setting), potential environmental impacts of the proposed project and the level of significance, and mitigation measures recommended to reduce or avoid identified potential impacts of the proposed project. Potential cumulative impacts are also addressed.
- **Chapter 5.0, Other CEQA Considerations**, provides an analysis of effects found not to be significant, including the Initial Study findings, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.
- **Chapter 6.0, Alternatives**, describes a reasonable range of alternatives that could feasibly attain the basic objectives of the project and that are capable of eliminating any significant adverse environmental effects or reducing them to a less than significant level. The alternatives analyzed include the No Project Alternative and the Partial Build Alternative.
- **Chapter 7.0, Report Preparation**, provides a list of the preparers of the Draft EIR, as well as persons consulted during preparation of the Draft EIR.
- **Chapter 8.0, References**, provides the references cited in this Draft EIR.
- **Appendices**, the Appendices include technical data supporting the analysis and conclusions of the Draft EIR and consist of the following:
 - **Appendix A**, Notice of Preparation, Scoping Summary, Summary of Comments Received during Public Scoping, and copies of written comments received
 - **Appendix B**, Initial Study
 - **Appendix C**, Vehicle Miles Traveled (VMT) Analysis Memorandum

2.0 SUMMARY

This chapter provides an overview of the proposed project and findings identified in this Environmental Impact Report (EIR), prepared pursuant to the California Environmental Quality Act (CEQA), including a discussion of alternatives and cumulative project impacts.

2.1 PROPOSED PROJECT

This EIR has been prepared to evaluate the potential environmental consequences of implementation (i.e., construction and operation) of the proposed project. The approximately 15.73-acre project site is bounded by undeveloped lands to the north and west, and single-family residential uses to the south and east.

The proposed project involves the annexation of 15.73 acres of land from Solano County into the City of Vacaville (City) and the construction of 20 new residential estate lots and associated roadway and utility improvements on the project site, 3.7 acres of landscaping for fire protection around the perimeter of the proposed lots, and 2.44 acres of designated open space.

Refer to Chapter 3.0, Project Description, for a complete description of the proposed project's location, context, background, and objectives, details of the proposed project itself, and a summary of required approvals and entitlements.

2.2 POTENTIAL AREAS OF CONTROVERSY

Pursuant to *State CEQA Guidelines* Section 15123, this EIR acknowledges the areas of controversy and issues to be resolved that are known to the City or were raised during the scoping process. On May 24, 2024, the City circulated a Notice of Preparation (NOP) notifying responsible agencies and interested parties that an EIR would be prepared for the proposed project and indicated the environmental topics anticipated to be addressed in the EIR. The City also held a public scoping meeting on June 13, 2024, to solicit verbal comments relative to the content of the information to be analyzed in this EIR.

A total of four commenters submitted written responses to the NOP, in addition to the verbal comments received at the public scoping session held on June 13, 2024. The NOP, a scoping summary, a summary of comments received during public scoping, and copies of written comments received are included in **Appendix A**. Comments in response to the NOP and the Public Scoping Meeting generally identified the following areas of potential concern as shown in **Table 2.A** on the following page.

The proposed project would be required to comply with all applicable mitigation measures identified in the Initial Study and the Mitigation Monitoring and Reporting Program (MMRP). Applicable mitigation measures identified in the Initial Study are provided in **Table 2.B**, at the end of this chapter. For a complete description of potential impacts identified in the Initial Study, please refer to the specific discussion within each topical section of the Initial Study, included as **Appendix B** to this EIR. Chapter 5.0, Other CEQA Considerations, also includes a summary of the findings for each topic not discussed in the EIR.

Table 2.A: Potential Areas of Controversy

Agency/Commenter	Topic Issue	Comment
California Department of Fish and Wildlife (CDFW)	Biological Resources	Outlined the requirements under CEQA for the preparation of an EIR and outlined the City's regulatory requirements under the California Endangered Species Act and Native Plant Protection Act.
Central Valley Regional Water Quality Control Board (RWQCB)	Hydrology and Water Quality	Outlined the City's permitting requirements under the Central Valley Regional Water Quality Control Board.
The Native American Heritage Commission (NAHC)	Tribal Cultural Resources	Overviewed the compliance requirements of Assembly Bill (AB) 52 and Senate Bill (SB) 18.
Solano Local Agency Formation Commission (LAFCO)	Land Use	Outlined the City's annexation requirements under LAFCO.
Anonymous	Biological Resources and Transportation and Traffic	Inquired about the presence of a pond specifically on Lots 16 and 17 on the project map and whether water would be retained there. Expressed concern regarding the impact on frogs and other wildlife in the vicinity of the pond. Additionally, asked if emergency vehicles would be able to access the site. Also asked if there are plans for extending the McMurtry Lane cul-de-sac to the end of the street.
Brittany Myers	Biological Resources and Transportation and Traffic	Asked if the project would continue the McMurtry Lane cul-de-sac to the end of the street. Mentioned that the biological assessment completed in January for the proposed project did not report the presence of White-tailed kites. However, she has emailed pictures of the bird within a 5-mile radius to the city, suggesting that it may be a protected species under California law. Also brought up previous public comments from the neighborhood meeting in July regarding access to the new neighborhood. Stated that there was a suggestion to establish a main entry point off White Stone Court.
Joel Jorrich	Transportation and Traffic	Noted that the diagram in the scoping meeting showed a multi-use path and suggested converting this path into a road to avoid the exclusive use of Preserve Lane.
Isabell	Transportation and Traffic	Concerned about construction crews and trucks using Preserve Lane instead of McMurtry Lane.

Source: LSA (2024).

2.3 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in the Initial Study (included in **Appendix B**) and Chapter 4.0, Setting, Impacts, and Mitigation Measures, of this EIR.

2.3.1 Findings of the Initial Study

The Initial Study for the proposed project is included in **Appendix B** to this EIR. The Initial Study identified the following: (1) no impacts; (2) less than significant impacts; and (3) less than significant impacts with implementation of mitigation measures related to the following environmental issues:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The Initial Study identified transportation as a potentially significant impact requiring more detailed evaluation, and is further evaluated in Section 4.1, Transportation, of this EIR.

2.3.2 Significant and Unavoidable Impacts

The proposed project would result in a significant and unavoidable impact related to transportation. Specifically, the proposed project would exceed the applicable vehicle miles traveled (VMT) threshold of significance, and no feasible mitigation measures are available to reduce this impact to a less than significant level. Refer to Section 4.1, Transportation, of this EIR for a detailed discussion.

2.3.3 Cumulative Impacts

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts that are individually limited but cumulatively significant. These impacts can result from the proposed project when combined with other past, present, or reasonably foreseeable future projects. As described in Chapter 4.0 of this EIR, the cumulative impacts analysis in this Draft EIR is based on information provided by the City on currently planned, approved, or proposed projects and regional projections for the area. The proposed project would result in a significant and unavoidable impact under the cumulative condition to transportation. Specifically, the proposed project, in combination with cumulative projects, would exceed the existing VMT thresholds of significance.

2.3.4 Alternatives to the Project

In accordance with CEQA and the *State CEQA Guidelines* Section 15126.6, an EIR must describe a reasonable range of alternatives to the project, or to the location of the project, that could attain most of the project’s basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives “whose effect cannot be ascertained and whose implementation is remote and speculative.”

The following two alternatives to the proposed project are discussed and analyzed in Chapter 6.0, Alternatives, of this EIR:

- **No Project Alternative.** Under the No Project Alternative, the proposed project would not occur. The existing structures located along the western edge of the site adjacent to McMurtry Lane, including a single-family home, trailer, livestock enclosures, and a number of other associated storage structures, including a barn and shed, would remain. No modifications to existing site access or infrastructure would occur.
- **Partial Build Alternative.** Under the Partial Build Alternative, 10 single-family residential lots would be built out on the project site, as compared to 20 lots under the proposed project. Similar to the proposed project, the Partial Build Alternative would include 3.7 acres of landscaping for fire protection around the perimeter of the proposed lots, and 2.44 acres of designated open space and associated roadway and utility improvements. Under this alternative, the annexation of the project site into the Vacaville City Limits, the General Plan Amendment, the Zoning Map Amendment to Pre-Zone as Residential Estates (RE-12), and the Tentative Subdivision Map Approval and Planned Development Approval would still be required similar to the proposed project.

Each alternative is compared to the proposed project and discussed in terms of its various mitigating or adverse effects on the environment. Analysis of the alternatives focuses on those topics for which adverse impacts would result from the proposed project. The Partial Build Alternative is considered to be the environmentally superior alternative.

2.4 SUMMARY TABLES

Information in Table 2.B, Summary of Impacts and Mitigation Measures, from the Initial Study summarizes the environmental impacts and recommended mitigation measures from the Initial Study. Information in Table 2.B has been organized to correspond with the environmental issues discussed in Chapter 4.0 of this EIR. **Tables 2.B** and **2.C** of this EIR are arranged in four columns: (1) impacts; (2) level of significance without mitigation; (3) mitigation measures; and (4) level of significance with mitigation. Levels of significance are categorized as follows:

LTS	Less Than Significant
S	Significant
LTS/M	Less Than Significant with Mitigation
SU	Significant and Unavoidable

For a complete description of potential impacts and recommended mitigation measures, please refer to the specific topical discussions in Chapter 4.0 and the Initial Study (**Appendix B**).

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
4.1 AESTHETICS			
<i>There are no significant impacts to aesthetics.</i>			
4.2 AGRICULTURE AND FORESTRY RESOURCES			
<i>There are no significant impacts to agriculture and forestry resources.</i>			
4.3 AIR QUALITY			
Construction of the proposed project would generate air pollutant emissions that could violate air quality standards.	S	<p>Mitigation Measure AIR-1: Air Quality Dust Control Measures. The following construction dust control measures shall be implemented by the Applicant during construction activities:</p> <ul style="list-style-type: none"> • Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. • Haul trucks shall maintain at least two feet of freeboard. • Cover all trucks hauling dirt, sand, or loose materials. • Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area. • Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. • Plant vegetative ground cover in disturbed areas as soon as possible. • Cover inactive storage piles. • Sweep streets if visible soil material is carried out from the construction site. • Treat site accesses to a distance of 100 feet from the paved road with 6 to 12-inch layer of wood chips or mulch. • Treat site accesses to a distance of 100 feet from the paved road with 6-inch layer of gravel. 	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
3.4 BIOLOGICAL RESOURCES			
Implementation of the proposed project could result in the loss of special-status plant species.	S	<p>Mitigation Measure BIO-1: Special-Status Plant Species Survey. A qualified Approved Biologist shall complete two additional blooming/identification season surveys one between April and May and the second between June and September for special-status plant species prior to initiation of project activities. The survey shall be completed during the appropriate blooming period for the species likely to occur on site. These surveys shall be in compliance with all California Department of Fish and Wildlife (CDFW) (2009), the United States Fish and Wildlife Service (USFWS) (1996), and the California Native Plant Society (CNPS) (2001) published survey guidelines.</p> <p>If the survey finds that there are no special-status plants on the project site that would be impacted or within the proposed project site, then there would be no further mitigation and the project may proceed, provided all other applicable permits and authorizations are obtained for the project.</p> <p>If special-status plant species are found, populations will be mapped and enumerated. If any populations are found within the proposed work area, they shall be flagged and project development plans shall consider avoidance to the extent practicable. If avoidance is not practicable while otherwise obtaining the project's objectives, then other suitable measures shall be implemented as detailed below.</p> <p>A qualified Approved Biologist shall complete an inventory and analysis of the on-site population(s) of the species within and outside of the work area to determine the extent and significance of the potential impacts that will occur as a result of the project. This analysis shall be presented to Solano County Water Agency (SCWA) as part of their review of the project. If a significant impact would occur as a result of the project work, then a mitigation plan shall be developed and approved by the SCWA for implementation of the following measures prior to site disturbance. The mitigation plan shall include the following elements:</p> <ul style="list-style-type: none"> • Prior to construction within the project site, a qualified botanist shall collect the seeds, propagules, and topsoils, or other part of the plant that would ensure successful replanting of the population elsewhere. The seeds, propagules, or other plantable portion of all plants shall be collected at the appropriate time of the year. • At least 2/3 of the seeds, propagules, or other plantable portion of all plants shall be planted at the appropriate time of year (late-fall months). Half of the seeds and topsoils collected shall be appropriately stored and propagated at a native plant nursery to ensure germination. This material will be planted at an approved and 	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>protected area during the appropriate season. Planting location, timing, collection methods etc., will be detailed in a mitigation plan.</p> <ul style="list-style-type: none"> The Applicant shall hire a qualified Approved Biologist to conduct annual monitoring surveys of the transplanted plant population for a five-year period and shall prepare annual monitoring reports reporting the success or failure of the transplanting efforts. These reports shall be submitted to the County no later than December 31 each monitoring year. A California Natural Diversity Database (CNDDDB) form shall be filled out and submitted to CDFW for any special-status plant species identified within the project site. 	
Implementation of the proposed project could result in the loss of northwestern pond turtle habitat.	S	<p>Mitigation Measure BIO-2: Pre-Activity Surveys for the Northwestern Pond Turtle. The qualified Approved Biologist shall conduct at least two surveys of the work site no more than two weeks prior to the onset of Covered Activities in modeled habitat.</p> <p>All surveyors shall implement decontamination protocols as outlined in the Draft Solano HCP.</p> <p>Presence/absence surveys of aquatic habitats for pond turtles shall be conducted under all the following conditions:</p> <ul style="list-style-type: none"> On sunny days between 9:00 a.m. and 4:00 p.m. When air temperatures are a minimum of 55 degrees Fahrenheit (°F). When winds are less than 12 miles per hour (3 on the Beaufort scale). <p>Survey forms for submittal to the SCWA shall document, at a minimum, the name(s) of the waterbody, the type(s) of waterbody, the project site(s) name, surveyor name(s), date, start and end times, and weather conditions (temperature, wind, and cloud cover) of each survey; the numbers, age class, behaviors, and locations (Universal Transverse Mercators [UTMs]) of pond turtles observed; and any invasive species observations.</p> <p>Upland habitat survey forms shall include the above information, plus locations of nests or individuals observed (UTMs) and distance to water.</p> <p>Mitigation Measure BIO-3: Best Management Practices During all Operation, Maintenance, and Construction Activities. The following measures shall be implemented by a qualified Approved Biologist during construction activities:</p> <ul style="list-style-type: none"> The qualified Approved Biologist shall submit a report detailing results of the activities to SCWA within seven days of the completion of initial ground habitat disturbance. The qualified Approved Biologist shall be present during all in-water work activities to 	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>monitor compliance with all avoidance and minimization measures.</p> <ul style="list-style-type: none"> The qualified Approved Biologist shall have the authority to halt any action that might result in effects at greater than anticipated levels under Draft Solano HCP take coverage. The qualified Approved Biologist shall capture and relocate northwestern pond turtles or their nests out of Covered Activity work areas, or salvage injured or killed pond turtles, in accordance with Draft Solano HCP requirements. <p>Mitigation Measure BIO-4: Mitigation for Effects to Northwestern Pond Turtle Modeled Habitat from Covered Activities. The Applicant planning to conduct development and construction Covered Activities that will affect Core Habitat for northwestern pond turtle shall pay into the Northwestern Pond Turtle Habitat Enhancement Fee prior to the start of Covered Activities. This Fee will be managed by SCWA and will help protect and enhance modeled habitat of northwestern pond turtle in the Plan Area to achieve a no net loss of occupied habitat, and preserve and manage 50 acres of riparian habitat, and 121 acres of shallow aquatic habitat within Priority Watersheds and Drainages within the Core Habitat, and additional modeled northwestern pond turtle habitat to support foraging, basking, nesting, overwintering, and aestivation for habitat preservation, including enhancing modeled species habitat (e.g., improve basking sites and nesting habitat).</p> <p>This Fee shall be \$1,000 per acre of northwestern pond turtle designated Core Habitat impacted.</p> <p>In lieu of payment of the fee, the Applicant shall submit a restoration plan to the SWCA for review and approval. The plan shall identify the location(s) of habitat restoration, northwestern pond turtle essential habitat elements, the number of acres to be restored and or preserved, the methods and materials to be used, success criteria, monitoring timing and methods, and maintenance plans. Restoration shall be in-kind based on habitat impacted (e.g., aquatic habitat restored for aquatic habitat impacted, upland habitat restored for upland habitat impacted). Restoration shall be implemented and completed prior to or concurrent with approved covered activities. All areas shall be protected perpetuity.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
The project site contains potentially suitable habitat for burrowing owl.	S	<p>Mitigation Measure BIO-5: Burrowing Owl Pre-Construction Surveys. Between February 1 and August 31, a qualified Approved Biologist shall conduct preconstruction surveys in known and suitable habitat areas to identify and subsequently avoid nesting areas for burrowing owls, within 15 days of the start of ground-disturbing activities and shall follow standard Solano HCP protocols. An additional survey is required 24 hours before construction work will start. If a lapse in project-related construction work of 15 days or longer occurs during the nesting season, additional preconstruction surveys shall be required before project work may be reinitiated.</p> <p>Mitigation Measure BIO-6: Burrowing Owl Construction Buffers and Exclusion. The following measures shall be implemented for new construction activities if preconstruction surveys find burrowing owls to be present in the project site:</p> <ul style="list-style-type: none"> • During the non-breeding season (September 1 through January 31), a circular exclusion zone with a radius of 250 feet shall be established around occupied burrows by the Contractor. • If an adequate exclusion zone cannot be established during the non-breeding season (except as provided below for buffer modifications), burrowing owls may be evicted from the entire construction area using passive relocation techniques and vegetation management provided suitable alternative burrows are located within 330 feet of the occupied burrows and can be protected during project construction or until such time that burrowing owls can be actively relocated (see Mitigation Measure BIO-7). When possible, a qualified biologist should try to identify resident and migrant owls during the preconstruction surveys. The Contractor shall prepare an Exclusion Plan for review and approval by the SCWA, the CDFW, and the USFWS. The Exclusion Plan shall address the following minimum requirements: <ul style="list-style-type: none"> ○ An assessment of available suitable burrows within 330 feet of the edge of the construction area and the extent of suitable contiguous foraging habitat remaining. ○ Provisions to install artificial burrows if suitable donor burrows are not present. ○ A maintenance and monitoring program that includes a minimum of two years following completion of the project that resulted in impacts. The maintenance program shall include provisions to maintain artificial burrows, if required, in usable condition and maintain vegetation height at six inches or less within 50 feet of the burrows. ○ Protocols to confirm that the burrow(s) is unoccupied by burrowing owls and other 	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>species prior to destruction. Protocols shall include:</p> <ul style="list-style-type: none"> ▪ Properly functioning one-way doors shall be installed in all suitable burrows and in place for a minimum of 48 hours prior to burrow excavation; ▪ Twice daily monitoring to confirm evidence that owls have been excluded from the burrow; and ▪ Scoping of the burrows to confirm absence. <ul style="list-style-type: none"> ○ Procedures for how the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow). ○ Removal of other potential owl burrow surrogates or refugia on site. ○ Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take. ○ Measures to make the site inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until activity is complete. ○ Monitoring Reports describing the exclusion activities shall be submitted to SCWA. <p>If adverse effects are identified, construction activities shall cease immediately, and construction shall not resume until the qualified Approved Biologist, in consultation with SCWA, CDFW, and USFWS, has determined that construction may continue under modified restrictions or that nesting activity is complete.</p> <p>Mitigation Measure BIO-7: Burrowing Owl Nest Relocation or Translocation. Covered projects compliant with Solano HCP measures may not cause the disturbance, destruction, or conversion of active burrowing owl nests. In order to prevent disturbance to active nests, Applicants shall either: passively relocate resident burrowing owls prior to the nesting season onto suitable conserved lands; or cooperate with and provide funding to SCWA to implement an Active Burrowing Owl Translocation Study to relocate the owls (amount to be determined based on cost of owl relocation). Determinations of the appropriate approach will be based on the best likely outcome for owls considering: any conserved habitat availability near the affected nest site, and the best available science.</p> <p><i>Passive Relocation.</i> The Applicant may propose to passively relocate resident burrowing owls per Mitigation Measure BIO-6 above. Passive relocation may be permitted at the</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>discretion of SCWA, CDFW, and USFWS based on potential protected and managed habitat near the affected nest site and the best available science under the following conditions:</p> <ul style="list-style-type: none"> Sufficient and suitable burrows on conserved lands consistent with the criteria identified in Mitigation Measure BIO-9 below are present within 330 feet of the nest site. A passive relocation assessment shall be prepared by a qualified Approved Biologist to determine if passive relocation is preferable to active relocation. In this case, a passive relocation plan following CDFW's 2012 Staff Report on Burrowing Owl Mitigation (CDFW 2012 or as updated) shall be submitted to SCWA, CDFW, and USFWS. If approved, the plan shall be implemented and the passive relocation shall include but not be limited to monitoring of the passively relocated owls for a minimum of two years. <p><i>Active Translocation.</i> If resident burrowing owls are not passively relocated onto conserved land, the Applicant in collaboration with SCWA shall develop and implement a scientific study to actively relocate the affected owls to suitable habitat, upon CDFW and USFWS approval. The Active Burrowing Owl Translocation Study shall evaluate the translocation of burrowing owls from active nests affected by the project to a release site on reserves within the Solano HCP Plan Area. A protocol for capture, acclimatization aviaries, holding period, feeding and other methods shall be developed by the Applicant in collaboration with SCWA based on best available science. Active translocation shall be managed by the City of Vacaville and SCWA as applicable upon CDFW and USFWS approval. If owls are actively translocated, habitat enhancement shall include the relocation site. CDFW and USFWS review and approval of the Active Burrowing Owl Relocation Study is required unless the CDFW or USFWS provides documentation that it lacks the resources to complete the review. If that is the case, the Applicant in collaboration with SCWA shall instead obtain the review and written acceptance from a qualified burrowing owl expert with demonstrated successful burrowing owl relocation experience and authorship of scientific literature on burrowing owl, or another combination of burrowing owl experience approved by the CDFW and USFWS.</p> <p>Mitigation Measure BIO-8: Mitigation for Direct, Indirect, and Temporary Effects to Foraging Burrowing Owl Habitat. Mitigation measures for effects to burrowing owl are applicable to all covered activities in the Solano HCP Plan Area (e.g., construction) that would affect known and suitable burrowing owl habitat. All or portions of the mitigation for loss of breeding, foraging, and overwintering owl habitat may be addressed</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>concurrently with habitat preservation and management requirements specified for other Natural Communities under the Solano HCP.</p> <p><i>Direct Effects:</i> Mitigation for the direct disturbance, destruction, or conversion of burrowing owl foraging habitat resulting from covered activities shall be provided by the Applicant, as specified, for applicable Natural Communities and/or Covered Species (i.e., Swainson's hawk with similar foraging habitat). Mitigation lands used to satisfy mitigation measures for other Natural Communities and/or covered species can be used to satisfy burrowing owl conservation if the reserve area meets the basic burrowing owl reserve standards from Chapter 7.0 and criteria specified in Chapter 5.0 of the Solano HCP. All burrowing owl foraging habitat affected directly by the project will be subject to the compensation requirement.</p> <p><i>Indirect Effects:</i> Indirect effects to burrowing owl foraging habitat from development in irrigated agriculture lands shall be mitigated by the Applicant through the preservation and management of irrigated agriculture foraging habitat at a ratio of 0.5:1 mitigation-to-effect in accordance with Chapter 6.0 mitigation requirements in the Solano HCP.</p> <p><i>Temporary Effects:</i> All temporarily disturbed burrowing owl habitats shall be restored to original conditions within 1 year at a minimum 1:1 ratio according to Solano HCP mitigation details.</p> <p>Mitigation Measure BIO-9: Mitigation for Loss of Known Nest Sites. The Applicant proposing to implement covered activities (e.g., construction) resulting in the disturbance, destruction, or conversion of a burrowing owl known nest site (i.e., nest site that has been active for breeding within five years) shall preserve two known nest sites in the Solano HCP Plan Area.</p> <p>Mitigation for effects to known nest sites must include sufficient foraging habitat to support the nesting burrowing owls. The required amount of suitable foraging habitat the Applicant must protect or enhance under Priorities 2, 3, and 4 of this mitigation measure shall be equal to the amount of owl foraging habitat directly affected by the project. As described below, at a minimum, the area of protected or enhanced suitable owl foraging habitat shall be based on available foraging habitat at the affected nest site within 1,968 feet (600 meters) (CDFW 2012) of the nest or center of the nesting territory, whichever is greater. Since each project footprint and location is different, this owl foraging habitat mitigation requirement will be determined on a case-by-case basis in collaboration with the SCWA, CDFW, and USFWS as applicable.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>Priorities for permanent nest site preservation (in descending order) are as follows:</p> <ul style="list-style-type: none"> • Purchase of occupied nest credits from an HCP-certified mitigation bank, which the CDFW and USFWS have verified to be in good standing at the time of purchase, before project construction begins. • Establishment of a new Solano HCP reserve that (a) permanently protects a known burrowing owl nest site and associated foraging habitat (requirement described above) within the Solano HCP Plan Area by placing a conservation easement; and (b) implementing and funding in perpetuity a Long-Term Management Plan before project construction begins. Permanent preservation of known nest sites and associated foraging habitat must occur within the Solano HCP Plan Area and is subject to the requirements and approvals specified in Chapter 10.0 of the HCP. Each nest site shall include a minimum of three suitable burrows with sufficient foraging habitat. Nest sites, the Long-term Management Plan, and implementation funding must be reviewed and approved by the SCWA, USFWS, and CDFW prior to project construction. • Purchase of known burrowing owl nest sites on lands preserved in the Solano HCP Reserve System which are not already committed as burrowing owl mitigation for other projects under the following conditions: <ul style="list-style-type: none"> ○ A Burrowing Owl Habitat Enhancement Plan shall be prepared for the conserved lands following guidelines developed by the SCWA, CDFW, and USFWS. The Habitat Enhancement Plan shall include, but is not limited to: <ul style="list-style-type: none"> ▪ Installation of artificial burrows following a design approved by the SCWA, CDFW, and USFWS unless sufficient natural burrows are available. ▪ Incorporation of conspecific cues to attract burrowing owls such as acoustic playback of owl calls and imitation of whitewash. ▪ A California ground squirrel assessment and plan to increase populations if necessary. ▪ Predator control provisions including an assessment of feral cats and other potential burrowing owl predators, and reducing these threats by, for example, humanely removing feral cats or avian predators' hunting perches. ▪ Vegetation height and thatch reduction through mowing or grazing. ▪ An assessment of burrowing owl prey availability and plan to increase prey if necessary. 	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<ul style="list-style-type: none"> ▪ An adaptive management plan to address burrowing owl occupancy of protected lands. ▪ Sufficient owl foraging habitat protection/enhancement requirement described above based on the project's size and direct effects to owl foraging habitat. ○ Funding is provided for implementation of the Burrowing Owl Habitat Enhancement Plan and for the in-perpetuity implementation of a long-term management plan (Chapter 10.0 of the Solano HCP); and ○ The preserved lands are part of the Solano HCP Reserve System. • If implementing Priorities 1, 2, or 3 for known nest site protection is not feasible, applicants shall fund a Burrowing Owl Habitat Enhancement Plan following the requirements described under Priority 3. The enhancement plan must be submitted to and approved by the SCWA, CDFW, and USFWS. The enhancement plan will be implemented either on the new Solano HCP reserve established as mitigation for the project that resulted in effects to the known nest site (consistent with all habitat and funding requirements in priority two including the foraging habitat protection/enhancement requirement) or expand burrowing owl habitat on an existing suitable Solano HCP reserve. Implementation of the Burrowing Owl Habitat Enhancement Plan will improve conditions for burrowing owl in order to encourage the establishment and/or expansion of burrowing owl nesting populations consistent with applicable burrowing owl goals and objectives in Chapter 5.0 of the Solano HCP, including providing sufficient habitat acreage and burrows to effectively support the number of nesting burrowing owls required by the Solano HCP. <p>Mitigation Measure BIO-10: Habitat Enhancement. The Applicant planning to conduct covered activities that affect burrowing owl known and suitable habitat in the Solano HCP Plan Area shall pay a Burrowing Owl Protection Fee prior to project construction to fund habitat expansion and enhancement for burrowing owl nesting and overwintering sites (see Chapter 11.0 of the Solano HCP). Implementation and fully mitigated effects under Mitigation Measure BIO-9 Priority 2 above or are otherwise exempt are not required to pay into the Burrowing Owl Protection Fee.</p> <p>Mitigation Measure BIO-11: Mitigation for Temporary Effects. If construction activities result in the loss of occupied nesting or wintering burrows (e.g., closure, collapse due to ground disturbance, or disturbance in the construction buffer zones) within the temporarily disturbed area, mitigation shall be provided by the Applicant according to</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>the following criteria at all times of the year:</p> <ul style="list-style-type: none"> • <i>Alternative Burrow Plan:</i> The Applicant shall provide an Alternative Burrow Plan for review and approval by the SCWA, USFWS, and CDFW. The Alternative Burrow Plan shall include, but is not limited to, the following: <ul style="list-style-type: none"> ○ An assessment of available suitable burrows within 330 feet of the edge of the construction area if suitable contiguous habitat remains. ○ Provisions to install artificial burrows if suitable donor burrows are not present. ○ A maintenance and monitoring program that includes a minimum of two years following completion of the project that resulted in the temporary effect. The maintenance program shall include provisions to maintain artificial burrows, if required, in usable condition and maintain vegetation height at six inches or less within 50 feet of the burrows. ○ Compliance with this Mitigation Measure does not allow for the destruction or disturbance of an active burrow containing burrowing owls, including eggs and/or dependent young. Methods described in Mitigation Measure BIO-6 and Chapter 6.0 of the Solano HCP will be used to confirm the burrow is vacant prior to temporary disturbance. • <i>Temporary Effects:</i> All temporarily disturbed burrowing owl habitats shall be restored to original conditions within one year at a minimum 1:1 ratio. • <i>Alternative:</i> If the Alternative Burrow Plan measure cannot be implemented because sufficient habitat is not present in surrounding, contiguous lands to support burrowing owls or if temporary effects cannot be restored at a 1:1 ratio within one year, temporary effects shall be mitigated per the requirements of Mitigation Measure BIO-8 and Mitigation Measure BIO-9. 	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
Construction of the proposed project has the potential to directly impact the valley elderberry longhorn beetle.	S	<p>Mitigation Measure BIO-12: Elderberry Avoidance and Minimization. The Applicant shall enlist the services of a qualified Approved Biologist to monitor implementation and compliance of all the measures below for ground-disturbing activities within 100 feet of elderberry plants:¹</p> <ul style="list-style-type: none"> • A minimum setback of 20 feet from the dripline of each elderberry plant shall be established between the development and all elderberry plants containing stems measuring one inch in diameter or greater at ground level, except where elderberry plants are established immediately along existing roads or other paved or graveled surfaces (e.g., sidewalks, bike/pedestrian paths, facility access roads). The setback shall be fenced and flagged consistent with the general construction avoidance and minimization measures for exclusion fencing to prevent encroachment of equipment and materials. • Where elderberry plants are established adjacent to existing roads and facilities, construction avoidance fencing shall be provided to protect the trunk and main stems of the plant. • All contractors shall be briefed by a qualified Approved Biologist on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. Work crews shall be instructed on the status of the valley elderberry longhorn beetle and the need to protect its elderberry host plant. • Signs shall be placed by a qualified Approved Biologist every 50 feet along the edge of the buffer zone with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Federal Endangered Species Act (FESA). Violators are subject to prosecution, fines, and imprisonment." The signs shall be clearly readable from a distance of 20 feet and must be maintained for the duration of construction. • A qualified Approved Biologist shall oversee the routine trimming of overgrown and overhanging elderberry shrubs that may pose a human safety threat along pathways, trails, bike paths, and ensure that roadways shall adhere to the following restrictions: <ul style="list-style-type: none"> ○ Only branches and stems less than one inch in diameter may be trimmed or cut. ○ Trimming may only occur between September 1 and March 14. Trimming is 	LTS/M

¹ Visual evidence of valley elderberry longhorn beetle is not always evident; for the purposes of compliance with the Solano HCP, all elderberry plants with stems meeting this minimum size should be considered occupied habitat.

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>recommended from November through the first two weeks in February, when plants are dormant and have lost their leaves.</p> <ul style="list-style-type: none"> ○ Trimming shall not occur after the shrubs have leafed out (when adult valley elderberry longhorn beetles are likely to be active). ○ Vegetation clearing within five feet of elderberry shrub stems shall be done by hand (pulling, clipping, etc.). • Following completion of construction work affecting the buffer zone, any damage done to the buffer zone shall be restored using native erosion control seed mixes and native riparian plant species, as appropriate. • Any elderberry plants that cannot be avoided during construction shall be transplanted to other appropriate locations in the buffer zone, and other mitigation as specified in Mitigation Measure BIO-13 shall be implemented. • After construction, buffer zones must continue to be protected from adverse effects of the development project. Protection measures such as fencing and signage shall be included in the project plans and are subject to the approval of SCWA in consultation with the Draft Solano HCP Technical Review Committee. No insecticides, herbicides, fertilizers, or other chemicals that might harm the valley elderberry longhorn beetle or its host plant shall be used in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring one inch in diameter or greater at ground level. • Fire fuel breaks (disked land) may not be included within the 100 feet setback; however, vegetation in the setback may be cleared by mowing (e.g., mower, mechanical trimmers, hand tools) to less than two inches in height. The mowing of grasses/ground cover in the buffer zone may occur from July through April to reduce fire hazards. No mowing shall occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment). • Mitigation Measure BIO-13: Elderberry Shrub Mitigation for Valley Elderberry Longhorn Beetles. Where removal of elderberry shrubs or their stems measuring one inch in diameter or greater is unavoidable, these impacts shall be mitigated by the Applicant. Removal of elderberry shrubs or stems one inch in diameter or greater shall not create gaps in a riparian corridor greater than 100 feet. Mitigation will include salvaging and replanting affected elderberry shrubs and planting additional elderberry 	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>shrubs and associated native riparian plants according to the following criteria:</p> <ul style="list-style-type: none"> • <i>Transplanting Removed Elderberry Shrubs.</i> Transplant removed elderberry shrubs to an approved, secure site, such as an approved mitigation bank location in Solano County or non-bank relocation sites shall meet the minimum reserve standards identified in Section 10.5 (e.g., site shall be protected by a conservation easement or other applicable protection measure, and funding shall be provided for long-term monitoring and maintenance). Transplanting shall occur between June 15 and March 15 (November through February is the optimal period for transplanting). Elderberry may not be transplanted between March 16 and June 14 except where isolated bushes are located more than 0.5 mile from other suitable valley elderberry longhorn beetle habitat and no signs of use (exit holes) have been identified. • <i>Mitigation for Whole Shrub Removal.</i> For each removed elderberry bush, plant a minimum of five elderberry seedlings or rooted cuttings and five associated native, woody riparian plants in the mitigation area, or purchase applicable credits from a mitigation bank approved under the Solano HCP to sell valley elderberry longhorn beetle credits. • <i>Mitigation for Trimming/Removal of Stems One Inch in Diameter or Greater.</i> For every 10 elderberry stems one inch in diameter or greater that are trimmed/removed, plant two elderberry seedlings and two associated native, woody riparian plant seedlings 	
Project construction activities associated with vegetation and tree removal have the potential to remove nesting and foraging habitat for Swainson's hawk.	S	<p>Mitigation Measure BIO-14: Swainson's Hawk Nest Tree Preservation. Known, active, or potential nest trees shall be avoided to the maximum extent practicable. Applicants proposing to remove an otherwise healthy known, active, or potential nest tree shall provide written justification for the tree removal to SCWA. Sufficient rationale for known, active, or potential tree removal shall be primarily based on declining or poor suitability of the tree as a nesting site for Swainson's hawk and/or to meet public safety needs. The justification letter shall provide a clear analysis of the biological value of the tree to Swainson's hawk under pre-project conditions and post-project conditions (if the tree were to be avoided) and will consider the presence of alternate nest sites in the vicinity of the project site. Known, active, or potential nest trees shall only be removed if there is a biological basis that the use of the tree is unlikely under post-project conditions. SCWA, in consultation with the HCP Technical Review Committee, will be responsible for approval of the requests to remove healthy nest trees and for ensuring adequate mitigation (Mitigation Measure BIO-20 provides mitigation requirements of nest tree removal).</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>Mitigation Measure BIO-15: Swainson's Hawk Pre-construction Nest Surveys. Between March 1 and August 31, a Solano HCP qualified Approved Biologist shall conduct preconstruction surveys to identify and subsequently avoid effects to nesting areas for Swainson's hawk. Surveys shall follow approved Solano HCP protocols and be of sufficient intensity (typically two to three surveys) to document nesting within a quarter mile (1,320 feet) buffer around planned work activities. A final survey shall be conducted no more than 15 days prior to the anticipated start of construction. If a lapse in project-related construction work of 15 days or longer occurs, additional preconstruction surveys shall be required before project work may be reinitiated. Note that Swainson's hawk in the region is typically incubating during late April to early June, and active nests can be difficult to find.² As such, surveys during the late April to early June period may not be acceptable for determining the absence of Swainson's hawk nests.</p> <p>Mitigation Measure BIO-16: Swainson's Hawk Active Nest Buffers. Construction work (including grading, earthmoving, surveying, and any operation of construction equipment) shall not occur within a quarter mile buffer zone around an active, occupied Swainson's hawk nest with eggs or young except as provided below. Construction work may commence in the buffer zone when a Solano HCP qualified Approved Biologist has confirmed that nesting activity is complete (e.g., Swainson's hawk young have fully fledged and are capable of flight and have left the nest, or the adults have abandoned the nest for a minimum of seven days and there is no evidence of re-nesting activity). Nest trees may be removed between September 16 and February 1 when nests are unoccupied.</p> <p>The size of nest site buffer zones may be reduced only under the following conditions:</p> <ul style="list-style-type: none"> • A site-specific analysis prepared by a Solano HCP qualified Approved Biologist indicates that the nesting pair under consideration are not likely to be adversely affected by construction activities (e.g., the nest is located in an area where the hawks are habituated to human activity and noise levels comparable to anticipated construction work). The SWCA, CDFW, and USFWS must approve this analysis before construction may begin within a quarter mile of a nest. • Monitoring by a Solano HCP qualified Approved Biologist is conducted for a sufficient time (during all construction activities for a minimum of 10 consecutive days following the initiation of construction), and the nesting pair does not exhibit adverse reactions 	

² Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. May 31, 2000. Website: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990> (accessed September 21, 2022).

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>to construction activities (e.g., changes in behavioral patterns, reactions to construction noise).</p> <ul style="list-style-type: none"> Monitoring by a Solano HCP qualified Approved Biologist is continued at least once per week through the nesting cycle at that nest. This longer-term monitoring may be reduced to a minimum of two hours in the morning and two hours in the afternoon during construction activities; however, additional and more frequent monitoring may be required if any adverse reactions are noted. Weekly monitoring reports from a Solano HCP qualified Approved Biologist shall be submitted to SCWA, CDFW, and USFWS during construction and monitoring activities. <p>If adverse effects are identified, construction activities shall cease immediately and construction shall not resume until the Solano HCP qualified Approved Biologist, in consultation with SCWA, has determined that construction may continue under modified restrictions or that nesting activity is complete.</p> <p>Mitigation Measure BIO-17: Post-Construction Occupied Nest Avoidance. If a nest tree becomes occupied by Swainson's hawk during ongoing construction activities, construction activities shall not occur within 500 feet of the nest, except where monitoring consistent with the criteria in Mitigation Measure BIO-16 documents that adverse effects will not occur.</p> <p>Mitigation Measure BIO-18: Irrigated Agriculture Foraging Habitat Conservation.</p> <ul style="list-style-type: none"> All mitigation shall be provided in the Irrigated Agriculture Potential Reserve Area, which is a designated portion of the Swainson's Hawk Irrigated Agriculture Conservation Area within the Solano HCP Plan Area. <i>Direct Effects:</i> Direct effects to Swainson's hawk foraging habitat in the Irrigated Agriculture Conservation Area shall be mitigated by the Applicant through the preservation and management of high quality foraging habitat, with a site foraging score of at least 50, according to the Habitat Quantification Tool (HQT) Habitat Quality Score (see Chapter 5.0 and Appendix F of the Solano HCP). Unsuitable parcels (i.e., site score is less than 50) are ineligible for becoming a Swainson's hawk reserve. The Plan requires the following ratios of affected (in acres) to reserve acreage depending on the HQT habitat quality category of the reserve site: <ul style="list-style-type: none"> Suitable habitat (site scores between 50 and 64) requires a mitigation ratio of 1.2:1 (mitigated-to-affected). Premium habitat (site score of 65 or higher) requires a mitigation ratio of 1:1 	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>(mitigated-to-affected).</p> <ul style="list-style-type: none"> • <i>Indirect Effects:</i> Indirect effects to Swainson's hawk foraging habitat within 250 feet of development shall be mitigated by the Applicant through the preservation and management of foraging habitats at the following ratios: <ul style="list-style-type: none"> ○ Suitable habitat (site scores between 50 and 64) requires a mitigation ratio of 0.6:1 (mitigated-to-affected). ○ Premium habitat (site score of 65 or higher) requires a mitigation ratio of 0.5:1 (mitigated-to-affected). • <i>Temporary Effects:</i> Temporary effects to Swainson's hawk foraging habitat shall not require direct compensation provided activities comply with Mitigation Measure BIO-16, and all temporarily disturbed habitats shall be restored to original conditions within one year at a minimum 1:1 ratio. • <i>Irrigated Agriculture Habitat Enhancement Program:</i> All Applicants with development projects that convert irrigated or intensively cultivated farmland to non-farm uses shall pay a Farmland Conversion Fee to provide funding for the Habitat Enhancement Fund program as described in Chapters 5.0 and 11.0 of the Solano HCP. Compliance with this measure by Applicants will be used to implement a perpetual funding program for crop incentives and other habitat enhancement in the Irrigated Agriculture Potential Reserve Area to benefit Swainson's hawk. Costs shall be based on a per-acre basis of converted farmland. <p>Mitigation Measure BIO-19: Swainson's Hawk Objectives. The following measure is designed to meet Solano HCP Swainson's Hawk Objectives in Chapter 5.0 by providing sufficient nesting habitat in proximity to suitable foraging habitat to support the current Swainson's hawk population in the Solano HCP Plan Area. All Applicants must (a) avoid destruction of active Swainson's hawk nests occupied by eggs or dependent young, (b) avoid take of Swainson's hawks in compliance with the California Fish and Game Code Sections 3503 and 3503.5, and (c) meet the requirements specified in Mitigation Measures BIO-15, BIO-16, and BIO-17, and Mitigation Measure BIO-20.</p> <p>Mitigation Measure BIO-20: Swainson's Hawk Known Nest Trees. Covered activities resulting in the loss of a Swainson's hawk known nest tree (tree that contained an active nest within five years) shall preserve either (a) a known nest tree, or (b) an active nest (i.e., currently occupied by hawks, eggs, and/or dependent young). If known or occupied nests are unavailable on a Solano HCP reserve and preserving a known or occupied nest</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>is not practicable, the Applicant will pay a Nest Protection Fee to provide funding to the HCP's Swainson's Hawk Nest Protection Program (see Chapters 5.0 and 11.0 of the Solano HCP).</p> <p>Under the Solano HCP, removal of an active Swainson's hawk nest is not authorized; see Chapter 6.0 for details. Nest trees may only be removed when the nest site is no longer active. For the purposes of this Mitigation Measure BIO-19, loss of a known nest tree will occur if either of the following conditions is met:</p> <ul style="list-style-type: none"> • The covered activity directly removes the nest tree or involves soil compaction or grading (excavation or fill) within more than 25 percent of the root zone of the nest tree. The root zone shall be determined by a qualified Arborist but shall, at a minimum, be the greater of the horizontal distance from the tree at least equal to the tree's height or the outer edge of the tree canopy. • The covered activity results in direct effects within 250 feet of an active nest or known nest tree. If this occurs, that would be considered loss of a nest site because it would reduce the suitability of the nest site even if the tree itself is not removed. • Covered Activities affecting Swainson's hawk nests under Conditions 1 or 2 shall: <ul style="list-style-type: none"> ○ Directly comply with Mitigation Measure BIO-14's nest preservation requirements (e.g., purchase of occupied nest credits from an HCP-certified mitigation bank or preserve a known nest tree (Chapter 10.0 of the Solano HCP); or ○ Upon approval from SCWA and the applicable Resource Agencies, the Applicant will pay the current Nest Protection Fee described in Chapter 11.0 of the Solano HCP; or ○ Demonstrate to and receive concurrence from the SCWA, CDFW, and USFWS that the Covered Activity will not substantially increase disturbance to the active nest or known nest tree. <p>Note: Indirect effects to Swainson's hawk known nest trees may occur from covered activities. If such activities cannot be conducted in compliance with Mitigation Measure BIO-17, then the above requirements will apply.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
Implementation of the proposed project could result in potential effects to white-tailed kite and other nesting migratory birds.	S	<p>Mitigation Measure BIO-21: Preconstruction Surveys for White-Tailed Kite and Nesting and Migratory Birds. To avoid and minimize impacts to white-tailed kites, nesting and migratory birds, and raptors and to comply with the federal Migratory Bird Treaty Act, preconstruction surveys shall be conducted by a qualified Approved Biologist and construction avoidance measures shall be implemented if necessary.</p> <p><i>Preconstruction Survey:</i> The project site shall be surveyed by a qualified Approved Biologist (experienced with the nesting behavior of white-tailed kite and other bird species of the region) prior to construction to evaluate nesting bird habitat within 7 days prior to the commencement of construction activities that would occur during the nesting/breeding season. The intent of the survey should be to determine if active nests are present within or adjacent to the construction zone, that is within approximately 250 feet of the work areas. If ground disturbance activities are delayed following a survey, then an additional preconstruction survey should be conducted such that no more than one week will have elapsed between the last survey and the commencement of ground- disturbing activities. The preconstruction survey can be conducted concurrently with the Swainson's hawk survey identified in Mitigation Measure BIO-16.</p> <p><i>Avoidance and Minimization:</i> If an active bird nest is found within areas that could be directly or indirectly affected by the project, a no-disturbance buffer zone shall be installed around active nests by a qualified Approved Biologist during the breeding season or until a qualified Approved Biologist determines that all young have fledged and construction personnel and activities restricted from the area. The buffer size should be a minimum of 50 feet wide for passerines and 250 feet wide for raptor species. The size of the buffer zone may be modified through consultation with the CDFW and the Draft Solano HCP taking into account factors such as the following:</p> <ul style="list-style-type: none"> • Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; • The types of construction activities to occur near the nest, • Distance and amount of vegetation or other screening between the construction site and the nest; and • Sensitivity of individual nesting species and behaviors of the nesting birds. <p>The buffer zone around an active nest should be established in the field with orange construction fencing or another appropriate barrier and construction personnel should be instructed on the sensitivity of nest areas. The qualified Approved Biologist should</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		serve as a construction monitor during those periods when construction activities would occur near active nest areas of special status bird species to ensure that no impacts on these nests occur.	
Construction and operation of the proposed project would result in permanent impacts to wetlands, totaling 0.311 acre.	S	<p>Mitigation Measure BIO-22: Regulatory Permits. The Applicant shall apply for and obtain permits from the USACE (USACE, Clean Water Act [CWA] Section 404 permit) and Regional Water Quality Control Board (RWQCB, CWA Section 401 water quality certification) prior to the commencement of ground-disturbing activities.</p> <p>If the project would result in the loss of wetland and/or non- wetland waters, mitigation shall be accomplished in accordance with permits issued by resource agencies of jurisdiction (USACE, CDFW, RWQCB, etc.) for which permits may include on-site or off-site measures, credit purchase, and in-lieu fees, etc.</p> <p>Mitigation Measure BIO-23: Mitigation for Loss of Wetlands. The Applicant shall consult with the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and the Regional Water Quality Control Board (RWQCB) to mitigate for the loss of 0.311 acre of wetlands and the loss of 88.7 linear feet (0.006 acre) of ephemeral tributary. At a minimum, the mitigation will include:</p> <ul style="list-style-type: none"> On-site ephemeral tributary creation at a minimum 1:1 ratio of created to lost ephemeral tributary and/or a mix of creation and enhancement measure acceptable to agency staff. Wetland mitigation either on-site at a 1:1 ratio of created to lost habitat or off-site at a 2:1 ratio of created to lost habitat. A mitigation plan describing the created/enhanced ephemeral tributary and wetland locations, construction methods, and monitoring and success criteria will be submitted to the permitting agencies for review and approval, prior to the start of the project or any earth-moving work. 	LTS/M
Construction activities associated with the proposed project have the potential to indirectly impact trees through limb removal or damage.		<p>Mitigation Measure BIO-24: Tree Removal. Prior to the issuance of a demolition or grading permit, the Applicant shall obtain a Tree Removal Permit for any tree to be removed from the project site in compliance with the VMC (Vacaville Municipal Code) Tree Preservation Ordinance.</p> <p>Mature trees that will not be removed during project construction shall be protected with a construction fence installed at the dripline. No equipment shall enter the fence line. When encroachment into the fenced area is necessary, protective measures such as application of mulch shall be implemented.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		The removal of trees should be minimized to the greatest extent practicable. Trees, as noted above, that are removed shall be replaced on-site at suitable locations and mitigated with replacement tree plantings at a mitigation ratio greater than or equal to as required by the VMC Tree Preservation Ordinance.	
4.5 CULTURAL RESOURCES			
Project construction activities could cause a substantial adverse change in the significance of an archaeological resource.	S	Mitigation Measure CUL-1: Archaeological Discovery Protocol. Consistent with Standard Condition of Approval (SCOA) 12, should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the Applicant shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recordation of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods and findings shall be prepared and submitted to the City of Vacaville's Community Development Director for review and approval, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate curation facility and used for public interpretive displays, as appropriate and in coordination with a local Native American tribal representative.	LTS/M
4.6 ENERGY			
Construction of the proposed project would require energy for the manufacture and transportation of construction materials, preparation of the site for grading activities, and construction of the proposed project. To increase energy efficiency on the site during project construction, equipment idling times would be restricted to five minutes or	S	Mitigation Measure AIR-1: Air Quality Dust Control Measures. The following construction dust control measures shall be implemented by the Applicant during construction activities: <ul style="list-style-type: none"> • Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. • Haul trucks shall maintain at least two feet of freeboard. • Cover all trucks hauling dirt, sand, or loose materials. • Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area. • Apply chemical soil stabilizers on inactive construction areas (disturbed lands within 	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
less and construction workers would be required to shut off idle equipment, consistent with State requirements.		<p>construction projects that are unused for at least four consecutive days).</p> <ul style="list-style-type: none"> Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. Plant vegetative ground cover in disturbed areas as soon as possible. Cover inactive storage piles. Sweep streets if visible soil material is carried out from the construction site. Treat site accesses to a distance of 100 feet from the paved road with six to 12-inch layer of wood chips or mulch. Treat site accesses to a distance of 100 feet from the paved road with 6-inch layer of gravel. 	
4.7 GEOLOGY AND SOILS			
The project site contains a relatively small landslide above McMurtry on southwest portion of the project site.	S	Mitigation Measure GEO-1: Implementation of Geotechnical Evaluation Recommendations. The Applicant's Construction Contractor shall implement the recommendations of the Geotechnical Evaluation prepared for the proposed project, as applicable, to the satisfaction of the City of Vacaville (City) Chief Building Official, or designee. The City's Chief Building Official, or designee, shall confirm recommendations have been implemented into the design and construction of the proposed project prior to the issuance of a building permit.	LTS/M
Operation of the proposed project would increase the amount of impervious surface area and could result in increased stormwater runoff (both flow rate and volume) from the project site relative to pre-project conditions, which may result in hydromodification impacts.	S	<p>Mitigation Measure HYD-1: Construction General Permit. Prior to the commencement of any land-disturbing activities, the Construction Contractor shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The City shall provide the Waste Discharge Identification Number (WDID) to the Planning Manager of the City of Vacaville (City) or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee.</p> <p>A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by a Qualified SWPPP Developer in accordance with the requirements of the Construction General Permit.</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>These include: BMPs for erosion and sediment control, site management/housekeeping/waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association's Stormwater Best Management Handbook: Construction.</p> <p>The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.</p> <p>Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.</p>	
Project construction activities could disturb unique paleontological resources.	S	<p>Mitigation Measure GEO-2: Discovery of Paleontological Resources. Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. For purposes of this mitigation, a "qualified paleontologist" shall be an individual with the following qualifications: (1) a graduate degree in paleontology or geology and/or a person with a demonstrated publication record in peer-reviewed paleontological journals; (2) at least two years of professional experience related to paleontology; (3) proficiency in recognizing fossils in the field and determining their significance; (4) expertise in local geology, stratigraphy, and biostratigraphy; and (5) experience collecting vertebrate fossils in the field. If the paleontological resources are found to be significant and project activities cannot avoid them, measures shall be implemented to ensure that the project does not cause a substantial adverse change in the significance of the paleontological resource. Measures may include monitoring, recording the fossil locality, data recovery and analysis, a final report, and accessioning the fossil material and technical report to a paleontological repository. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City for review. If paleontological materials are recovered, this report also shall be submitted to a paleontological repository such as the University of California Museum of Paleontology, along with significant paleontological materials. Public</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>educational outreach may also be appropriate.</p> <p>The Applicant shall inform its contractor(s) of the sensitivity of the project site for paleontological resources and shall verify that the following directive has been included in the appropriate contract documents:</p> <p><i>“The subsurface of the construction site may be sensitive for fossils. If fossils are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Fossils can include plants and animals, and such trace fossil evidence of past life as tracks or plant imprints. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Contractor acknowledges and understands that excavation or removal of paleontological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5.”</i></p>	
4.8 GREENHOUSE GAS EMISSIONS			
There are no significant impacts to greenhouse gas emissions.			
4.9 HAZARDS AND HAZARDOUS MATERIALS			
Project construction activities could result in pollutants being released into surface waters.	S	<p>Mitigation Measure HYD-1: Construction General Permit. Prior to the commencement of any land-disturbing activities, the Construction Contractor shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The City shall provide the Waste Discharge Identification Number (WDID) to the Planning Manager of the City of Vacaville (City) or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee.</p> <p>A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by a Qualified SWPPP Developer in accordance with the requirements of the Construction General Permit.</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>These include: BMPs for erosion and sediment control, site management/housekeeping/waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association's Stormwater Best Management Handbook: Construction.</p> <p>The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.</p> <p>Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.</p>	
4.10 HYDROLOGY AND WATER QUALITY			
Project construction activities could result in the violation of water quality standards and degrade surface or groundwater quality.	S	<p>Mitigation Measure HYD-1: Construction General Permit. Prior to the commencement of any land-disturbing activities, the Construction Contractor shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The City shall provide the Waste Discharge Identification Number (WDID) to the Planning Manager of the City of Vacaville (City) or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee.</p> <p>A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by a Qualified SWPPP Developer in accordance with the requirements of the Construction General Permit. These include: BMPs for erosion and sediment control, site management/housekeeping/waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association's Stormwater Best Management Handbook:</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>Construction.</p> <p>The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/ maintenance/repair activities.</p> <p>Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.</p> <p>Mitigation Measure HYD-2: City of Vacaville Municipal Code. Prior to issuance of a grading permit, the City shall review and approve final project plans, which address compliance with the water quality management requirements of Title 14 Land Use and Development Code. Title 14 includes specific provisions for urban storm water quality, management and discharge control to be implemented during construction activities including the requirement that new development must submit for review and approval by the City a construction erosion and sediment control plan, as described in the City's Grading, Erosion, and Sediment Control Ordinance, Division 14.19.</p> <p>In addition, prior to the issuance of a building or construction permit, the City shall prepare a post-construction BMP design plan including a storm water management Facilities Operation and Maintenance Plan (O&M Plan) in accordance with the Small Phase II Municipal Separate Storm Sewer System (MS4) Permit. The O&M Plan shall detail the post-construction BMPs intended to control the volume, rate, and potential pollutant load of storm water runoff from the project site. Post-construction BMP shall comply with the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for Construction.</p> <p>Mitigation Measure HYD-3: Small Phase II MS4 Permit. Prior to issuance of grading permit, the City of Vacaville (City) shall review and approve a Final Storm Water Management Plan (SWMP) in compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) RWQCB Order No. 2013-001-DWQ, NPDES No. CAS000004, as amended by Order 2015-0133-EXEC, Order WQ 2016-0069-EXEC, Order 2017-XXXX-DWQ, Order 2018-0001-EXEC, and Order 2018-0007-EXEC, including specifying project-specific site design measures, source control measures, Low Impact Development (LID) Design Standards,</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		Hydromodification Measures, Operation and Maintenance of Storm Water Control Measures, and Post-Construction BMPs and associated water quality monitoring actions to ensure water quality thresholds are maintained and facilities meet the required sizing design criteria. Mitigation Measure HYD-4: Storm Drain Design Standards Section DS 4. Prior to issuance of grading, the City of Vacaville shall review and approve a Final Storm Drainage Master Plan to ensure it is in compliance with the City of Vacaville Storm Drain Design Standards Section DS 4.	
Project construction and operation could result in the 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.	S	Please refer to Mitigation Measures HYD-1 through HYD-4 above.	LTS/M
Project construction and operation could result in release of pollutants due to project inundation.	S	Please refer to Mitigation Measures HYD-1 through HYD-4 above.	LTS/M
Implementation of the proposed project could conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan.	S	Please refer to Mitigation Measures HYD-1 through HYD-4 above.	LTS/M
4.11 LAND USE AND PLANNING			
<i>There are no significant impacts to land use and planning.</i>			
4.12 MINERAL RESOURCES			
<i>There are no significant impacts to mineral resources.</i>			
4.13 NOISE			
<i>There are no significant impacts to noise.</i>			
4.14 POPULATION AND HOUSING			

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
<i>There are no significant impacts to population and housing.</i>			
4.15 PUBLIC SERVICES			
<i>There are no significant impacts to public services.</i>			
4.16 RECREATION			
<i>There are no significant impacts to recreation.</i>			
4.17 TRANSPORTATION			
<i>Impacts to transportation would be potentially significant and are addressed in Table 2.C of this EIR.</i>			
4.18 TRIBAL CULTURAL RESOURCES			
During construction, the proposed project has the potential to discover previously unidentified human remains, which may be of tribal origin.	S	<p>Mitigation Measure CUL-1: Archaeological Discovery Protocol. Consistent with Standard Condition of Approval (SCOA) 12, should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the Applicant shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recordation of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods and findings shall be prepared and submitted to the City of Vacaville's Community Development Director for review and approval, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate curation facility and used for public interpretive displays, as appropriate and in coordination with a local Native American tribal representative.</p> <p>Mitigation Measure TCR-1: Cultural Affiliation. The Yocha Dehe Wintun Nation ("Tribe") traditionally occupied lands in Yolo, Solano, Lake, Colusa and Napa Counties. The Tribe has designated its Cultural Resources Committee("Committee") to act on the Tribe's behalf with respect to the provisions of this Protocol. Any human remains which are found in conjunction with Projects on lands culturally-affiliated with the Tribe shall be treated in accordance with Section III (Mitigation Measure TCR-3) of this Protocol. Any other cultural resources shall be treated in accordance with Section IV (Mitigation Measure TCR-4) of this Protocol.</p> <p>Mitigation Measure TCR-2: Inadvertent Discovery of Native American Human Remains.</p>	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>Whenever Native American human remains are found during the course of a Project, the determination of Most Likely Descendant ("MLD") under California Public Resources Code Section 5097.98 will be made by the Native American Heritage Commission ("NAHC") upon notification to the NAHC of the discovery of said remains at a Project site. If the location of the site and the history and prehistory of the area is culturally-affiliated with the Tribe, the NAHC contacts the Tribe; a Tribal member will be designated by the Tribe to consult with the landowner and/or project proponents. Should the NAHC determine that a member of an Indian tribe other than Yocha Dehe Wintun Nation is the MLD, and the Tribe is in agreement with this determination, the terms of this Protocol relating to the treatment of such Native American human remains shall not be applicable; however, that situation is very unlikely.</p> <p>Mitigation Measure TCR-3: Treatment of Native American Remains. In the event that Native American human remains are found during development of a Project and the Tribe or a member of the Tribe is determined to be MLD pursuant to Section II (Mitigation Measure TCR-2) of this Protocol, the following provisions shall apply. The Medical Examiner shall immediately be notified, ground disturbing activities in that location shall cease and the Tribe shall be allowed, pursuant to California Public Resources Code Section 5097.98(a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods should be treated and disposed of with appropriate dignity.</p> <p>The Tribe shall complete its inspection and make its MLD recommendation within forty-eight (48) hours of getting access to the site. The Tribe shall have the final determination as to the disposition and treatment of human remains and grave goods. Said determination may include avoidance of the human remains, reburial on-site, or reburial on tribal or other lands that will not be disturbed in the future.</p> <p>The Tribe may wish to rebury said human remains and grave goods or ceremonial and cultural items on or near the site of their discovery, in an area which will not be subject to future disturbances over a prolonged period of time. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code Sections 5097.98(a) and (b).</p> <p>The term "human remains" encompasses more than human bones because the Tribe's traditions call for the burial of associated cultural items with the deceased (funerary objects), and/or the ceremonial burning of Native American human remains, funerary objects, grave goods and animals. Ashes, soils and other remnants of these burning</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>ceremonies, as well as associated funerary objects and unassociated funerary objects buried with or found near the Native American remains are to be treated in the same manner as bones or bone fragments that remain intact.</p> <p>Mitigation Measure TCR-4: Non-Disclosure of Location of Reburials. Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq. The Medical Examiner shall withhold public disclosure of information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(r). The Tribe will require that the location for reburial is recorded with the California Historic Resources Inventory System ("CHRIS") on a form that is acceptable to the CHRIS center. The Tribe may also suggest that the landowner enter into an agreement regarding the confidentiality of site information that will run with title on the property.</p> <p>Mitigation Measure TCR-5: Treatment of Cultural Resources. Treatment of all cultural items, including ceremonial items and archeological items will reflect the religious beliefs, customs, and practices of the Tribe. All cultural items, including ceremonial items and archeological items, which may be found at a Project site should be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Project Proponent should waive any and all claims to ownership of Tribal ceremonial and cultural items, including archeological items, which may be found on a Project site in favor of the Tribe. If any intermediary, (for example, an archaeologist retained by the Project Proponent) is necessary, said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe.</p> <p>Mitigation Measure TCR-6: Work Statement for Tribal Monitors.</p> <p>I. Preferred Treatment. The preferred protocol upon the discovery of Native American human remains is to (1) secure the area, (2) cover any exposed human remains or other cultural items, and (3) avoid further disturbances in the area.</p> <p>II. Comportment. All parties to the action are strongly advised to treat the remains with appropriate dignity, as provided in Public Resource Code Section 5097.98. We further recommend that all parties to the action treat tribal representatives and the event itself with appropriate respect. For example, jokes and antics pertaining to the remains or other inappropriate behavior are ill advised.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>III. Excavation Methods. If, after the Yocha Dehe Tribal representative has been granted access to the site and it is determined that avoidance is not feasible, an examination of the human remains will be conducted to confirm they are human and to determine the position, posture, and orientation of the remains. At this point, we recommend the following procedures:</p> <ul style="list-style-type: none"> a. <i>Tools.</i> All excavation in the vicinity of the human remains will be conducted using fine hand tools and fine brushes to sweep loose dirt free from the exposure. b. <i>Extent of Exposure.</i> In order to determine the nature and extent of the grave and its contents, controlled excavation should extend to a full buffer zone around the perimeter of the remains. c. <i>Perimeter Balk.</i> To initiate the exposure, a perimeter balk (especially, a shallow trench) should be excavated, representing a reasonable buffer a minimum of 10 cm around the maximum extent of the known skeletal remains, with attention to counterintuitive discoveries or unanticipated finds relating to this or other remains. The dirt from the perimeter balk should be bucketed, distinctly labeled, and screened for cultural materials. d. <i>Exposure Methods.</i> Excavation should then proceed inward from the walls of the balk as well as downward from the surface of the exposure. Loose dirt should be scooped out and brushed off into a dustpan or other collective device. Considerable care should be given to ensure that human remains are not further impacted by the process of excavation. e. <i>Provenience.</i> Buckets, collection bags, notes, and tags should be fully labeled per provenience, and a distinction should be made between samples collected from: (1) Perimeter Balk (described above), (2) Exposure (dirt removed in exposing the exterior/burial plan and associations, and (3) Matrix (dirt from the interstices between bones or associations). Thus, each burial may have three bags, "Burial 1 Perimeter Balk," "Burial 1 Exposure Balk," "Burial 1 Matrix. Please note the provisions below with respect to handling and conveyance of records and samples. f. <i>Records.</i> The following records should be compiled in the field: (1) a detailed scale drawing of the burial, including the provenience of and full for all human remains, associated artifacts, and the configuration of all associated phenomena such as burial pits, evidence for preinterment grave pit burning, 	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>soil variability, and intrusive disturbance, (2) complete a formal burial record using the consultants proprietary form or other standard form providing information on site #, unit or other proveniences, level depth, depth and location of the burial from a fixed datum, workers, date(s), artifact list, skeletal inventory, and other pertinent observations, (3) crew chief and worker field notes that may supplement or supersede information contained in the burial recording form, and (4) photographs, including either or standard photography or high-quality (400-500 DPI or 10 MP recommended) digital imaging.</p> <p>g. <i>Stipulations for Acquisition and Use of Imagery.</i> Photographs and images may be used only for showing location or configuration of questionable formation or for the position of the skeleton. They are not to be duplicated for publication unless a written release is obtained from the Tribe.</p> <p>h. <i>Association.</i> Association between the remains and other cultural materials should be determined in the field in consultation with an authorized Tribal representative, and may be amended per laboratory findings. Records of provenience and sample labels should be adequate to determine association or degree of likelihood of association of human remains and other cultural materials.</p> <p>i. <i>Samples.</i> For each burial, all Perimeter Bulk soil is to be 1/8"-screened. All Exposure soil is to be 1/8"-screened, and a minimum of one 5-gallon bucket of excavated but unscreened Exposure soil is to be collected, placed in a plastic garbage bag in the bucket. All Matrix soil is to be carefully excavated, screened as appropriate, and then collected in plastic bags placed in 5-gallon buckets.</p> <p>j. <i>Human remains are not to be cleaned in the field.</i></p> <p>k. <i>Blessings.</i> Prior to any physical action related to human remains, a designated tribal representative will conduct prayers and blessings over the remains. The archaeological consultant will be responsible for insuring that individuals and tools involved in the action are available for traditional blessings and prayers, as necessary.</p> <p>IV. Lab Procedures. No laboratory studies are permitted without consultation with the tribe. Lab methods are determined on a project-specific basis in consultation with Yocha Dehe Wintun Nation representatives. The following procedures are recommended:</p> <p>a. <i>Responsibility.</i> The primary archaeological consultant will be responsible for</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>insuring that all lab procedures follow stipulations made by the Tribe.</p> <p>b. <i>Blessings</i>. Prior to any laboratory activities related to the remains, a designated tribal representative will conduct prayers and blessings over the remains. The archaeological consultant will be responsible for insuring that individuals and tools involved in the action are available for traditional blessings and prayers, as necessary.</p> <p>c. <i>Physical Proximity of Associations</i>. To the extent possible, all remains, associations, samples, and original records are to be kept together throughout the laboratory process. In particular, Matrix dirt is to be kept in buckets and will accompany the remains to the lab. The primary archaeological consultant will be responsible for copying all field records and images, and insuring that the original notes and records accompany the remains throughout the process.</p> <p>d. <i>Additional Lab Finds</i>. Laboratory study should be done making every effort to identify unanticipated finds or materials missed in the field, such as objects encased in dirt or human remains misidentified as faunal remains in the field. In the event of discovery of additional remains, materials, and other associations the tribal representatives are to be contacted immediately.</p> <p>V. Re-internment without Further Disturbance. No laboratory studies are permitted on human remains and funerary objects. The preferred treatment preference for exhumed Native American human remains is reburial in an area not subject to further disturbance. Any objects associated with remains will be reinterred with the remains.</p> <p>VI. Curation of Recovered Materials. Should all, or a sample, of any archaeological materials collected during the data recovery activities – with the exception of Human Remains – need to be curated, an inventory and location information of the curation facility shall be given to tribe for our records.</p>	
4.19 UTILITIES AND SERVICE SYSTEMS			
<i>There are no significant impacts to utilities and service systems.</i>			
4.20 WILDFIRE			
Implementation of the proposed project could expose people or structures to significant risks, including downslope or downstream	S	Mitigation Measure GEO-1: Implementation of Geotechnical Evaluation Recommendations. The Applicant's Construction Contractor shall implement the recommendations of the Geotechnical Evaluation prepared for the proposed project, as applicable, to the satisfaction of the City of Vacaville (City) Chief Building Official, or designee. The City's Chief Building Official, or designee, shall confirm recommendations	LTS/M

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.		<p>have been implemented into the design and construction of the proposed project prior to the issuance of a building permit.</p> <p>Mitigation Measure HYD-1: Construction General Permit. Prior to the commencement of any land-disturbing activities, the Construction Contractor shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The City shall provide the Waste Discharge Identification Number (WDID) to the Planning Manager of the City of Vacaville (City) or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee.</p> <p>A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by a Qualified SWPPP Developer in accordance with the requirements of the Construction General Permit. These include: BMPs for erosion and sediment control, site management/housekeeping/waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association's Stormwater Best Management Handbook: Construction.</p> <p>The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.</p> <p>Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.</p> <p>Mitigation Measure HYD-2: City of Vacaville Municipal Code. Prior to issuance of a grading permit, the City shall review and approve final project plans, which address compliance with the water quality management requirements of Title 14 of the VMC.</p>	

Table 2.B: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		<p>Title 14 includes specific provisions for urban storm water quality, management and discharge control to be implemented during construction activities including the requirement that new development must submit for review and approval by the City a construction erosion and sediment control plan, as described in the City's Grading, Erosion, and Sediment Control Ordinance, VMC Section 14.19.</p> <p>In addition, prior to the issuance of a building or construction permit, the City shall prepare a post-construction BMP design plan including a storm water management Facilities Operation and Maintenance Plan (O&M Plan) in accordance with the Small Phase II Municipal Separate Storm Sewer System (MS4) Permit. The O&M Plan shall detail the post-construction BMPs intended to control the volume, rate, and potential pollutant load of storm water runoff from the project site. Post-construction BMP shall comply with the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for Construction.</p> <p>Mitigation Measure HYD-3: Small Phase II MS4 Permit. Prior to issuance of grading permit, the City of Vacaville (City) shall review and approve a Final Storm Water Management Plan (SWMP) in compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) RWQCB Order No. 2013-001-DWQ, NPDES No. CAS000004, as amended by Order 2015-0133-EXEC, Order WQ 2016-0069-EXEC, Order 2017-XXXX-DWQ, Order 2018-0001-EXEC, and Order 2018-0007-EXEC, including specifying project-specific site design measures, source control measures, Low Impact Development (LID) Design Standards, Hydromodification Measures, Operation and Maintenance of Storm Water Control Measures, and Post-Construction BMPs and associated water quality monitoring actions to ensure water quality thresholds are maintained and facilities meet the required sizing design criteria.</p> <p>Mitigation Measure HYD-4: Storm Drain Design Standards Section DS 4. Prior to issuance of grading, the City of Vacaville shall review and approve a Final Storm Drainage Master Plan to ensure it is in compliance with the City of Vacaville Storm Drain Design Standards Section DS 4.</p>	

Source : LSA (2024).

LTS = Less Than Significant

LTS/M = Less Than significant with Mitigation incorporated

NI = No Impact

S = Significant

Table 2.C: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
4.0 TRANSPORTATION			
Impact TRA-1: The proposed project would exceed applicable VMT thresholds of significance.	S	There are no feasible mitigation measures to reduce this impact to a less than significant level.	SU
Impact TRA-2: The proposed project, in combination with cumulative projects, would exceed the existing VMT thresholds of significance.	S	There are no feasible mitigation measures to reduce this impact to a less than significant level.	SU

Source: LSA (2024).

S = Significant

SU = Significant and Unavoidable

VMT = vehicle miles traveled

3.0 PROJECT DESCRIPTION

This chapter describes the proposed project evaluated in this Environmental Impact Report (EIR). A description of the proposed project's location, context, background, and objectives is followed by details of the proposed project itself and a summary of required approvals and entitlements.

3.1 PROJECT SITE

The following section describes the proposed project location, existing conditions, surrounding land uses, and regulatory setting.

3.1.1 Project Location

The approximately 15.73-acre project site consists of two parcels of primarily undeveloped land located at 4420 McMurtry Lane within central western Solano County (Assessor's Parcel Numbers [APNs] 0105-200-150 and 0105-200-140), as shown on **Figure 3-1, Project Location and Regional Vicinity**. The project site is located at the end of McMurtry Lane and just north of Preserve Lane.

Regional vehicular access to the project site is provided by Interstate 505 (I-505), which is located east of the project site. The closest on- and off-ramps to the project site are located along Vaca Valley Parkway, approximately 2.3 miles to the east. Bus stops along Browns Valley Road provide transit service to the project site.¹ The closest bus stop is located at Tipperary Drive at Browns Valley Road, approximately one mile southeast of the project site.

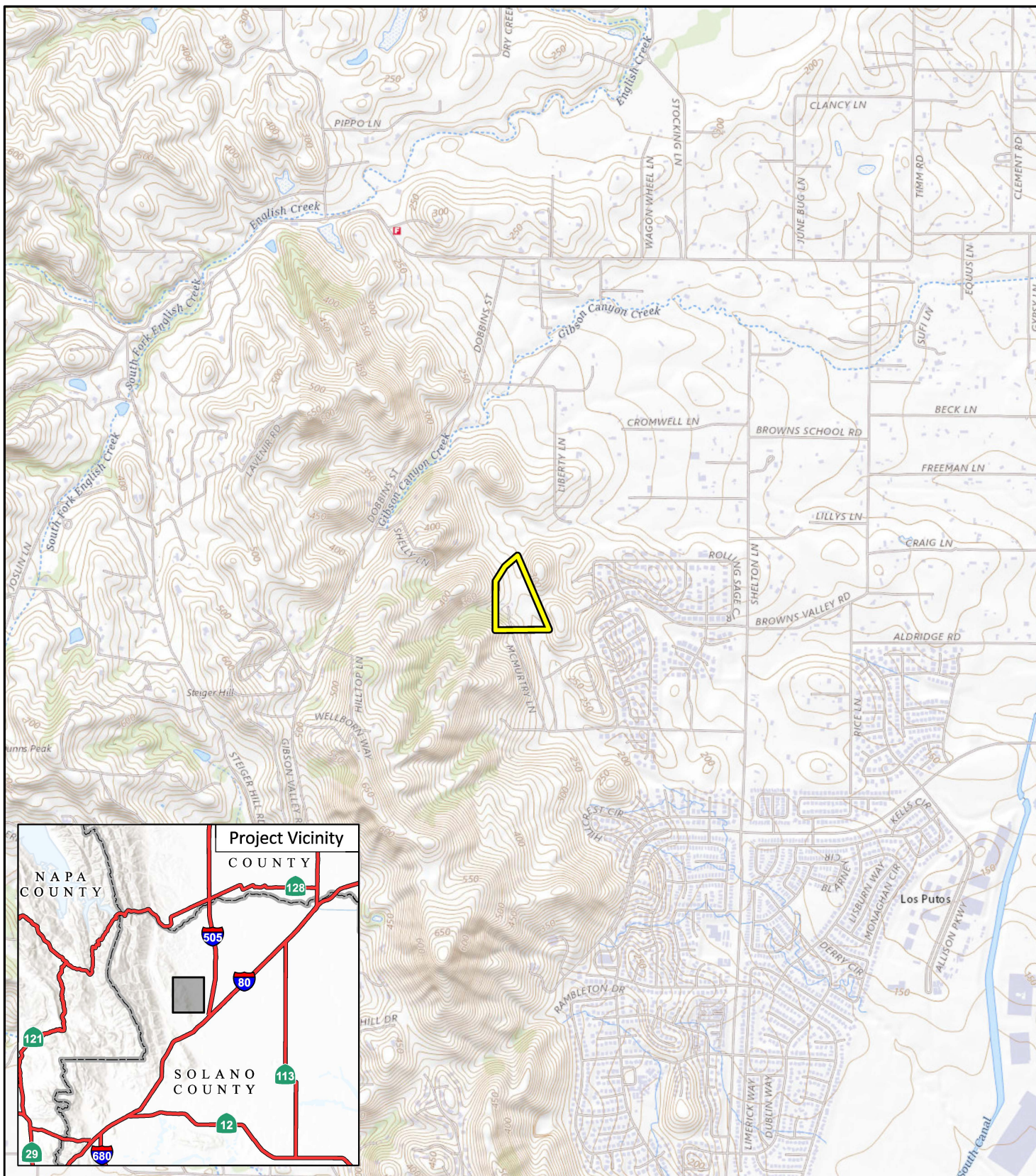
3.1.2 Existing Conditions

The project site contains some existing structures located along the western edge of the site adjacent to McMurtry Lane, including a single-family home, trailer, livestock enclosures, and a number of other associated storage structures, including a barn and shed. The residential and storage structures are currently occupied/in use, and the livestock enclosures are vacant. There is one 0.31-acre constructed stock pond/seasonal wetland in the south-central part of the site and two ephemeral drainage channels in the southern portion of the site. A Pacific Gas and Electric (PG&E) easement with a transmission line is situated at the western and northern project boundaries.

The project site is relatively level with low, gently rolling hills that slope from south to east, and site elevations ranging from 252 to 326 feet above mean sea level. Existing vegetation of the undeveloped portions of the project site generally consist of non-native annual grassland and other non-native species.

¹ City of Vacaville. 2022. City Coach. Route 2. Website: <https://citycoach.com/find-your-route/route-2/> (accessed February 29, 2024).

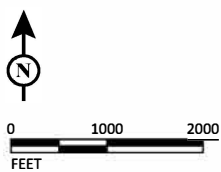
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LSA

 Project Location

FIGURE 3-1



SOURCE: USGS The National Map (2017)

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McMurtry Creek Estates Project
Project Location and Regional Vicinity

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3.1.3 Surrounding Land Uses

The project site is bounded by undeveloped lands to the north and west, and single-family residential uses to the south and east, as shown on **Figure 3-2, Aerial Photograph and Surrounding Land Uses**. The Reserve at Browns Valley Phase 3 (Rogers Ranch), which includes 29 single-family residential lots, is located to the south of the project site, and Cheyenne Estates at Browns Valley development (Cheyenne Estates), which includes 221 single-family residential lots, is located to the east.

The Rogers Ranch and Cheyenne Estates development projects are subdivisions within the Rice-McMurtry Development, which was approved by the City Council in 2004. The development comprises 309 units in four subdivisions on 175 acres: Cheyenne Estates to the east of the project site, Rogers Ranch to the south of the project site, the Reserve at Browns Valley Phase 2 (Knoll Creek) to the southeast of the project site, and the Reserve at Browns Valley Phase 1 (Rancho Rogelio) further east of the project site.²

3.1.1 Regulatory Setting

According to the General Plan Land Use Element,³ the proposed project is currently designated as Hillside Agriculture (HA), which is intended for low-intensity agricultural uses and allows for the development of one residential unit per 20 acres. The proposed project is located in an unincorporated area of Solano County and has not been zoned by the City of Vacaville.

3.2 PROJECT BACKGROUND

On March 1, 2004, the Final Environmental Impact Report (FEIR) for the Rice McMurtry Annexation and Residential Development Project (2004 Project) was certified by the Vacaville City Council. The FEIR evaluated the potential impacts associated with the development of 300 residential units on an approximately 130-acre area and the development of a multi-purpose recreational trail. The 2004 Project included the annexation of approximately 253 acres of land to the City of Vacaville and a General Plan Amendment, which included replacing the Solano County General Plan land use designations with the City of Vacaville General Plan designations. The 2004 Project EIR did not include the project site but did expand the Sphere of Influence (SOI) and the Urban Growth Boundary (UGB) of the City of Vacaville in the vicinity of the proposed project.

The proposed project is located within the City's SOI and the UGB (see **Figure 3-3, Sphere of Influence and Urban Growth Boundary**). According to the Vacaville General Plan, the SOI is a boundary that identifies land that the City may annex in the future for which urban services, if available, would be provided. In 2008, the City of Vacaville adopted the 20-year UGB, which totaled 36 square miles. The UGB indicates the maximum allowable extent of urbanization.

² City of Vacaville. n.d. Residential Activity. Rice-McMurtry. Website: <https://www.cityofvacaville.gov/government/community-development/planning-and-development/development-activity/residential-activity/rice-mcmurtry> (accessed September 11, 2023).

³ City of Vacaville. 2015. *Vacaville General Plan Land Use Element*. Website: <https://www.ci.vacaville.ca.us/home/showpublisheddocument/5416/638157981726430000> (accessed June 21, 2024).

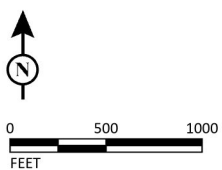
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LSA

 Project Location

FIGURE 3-2

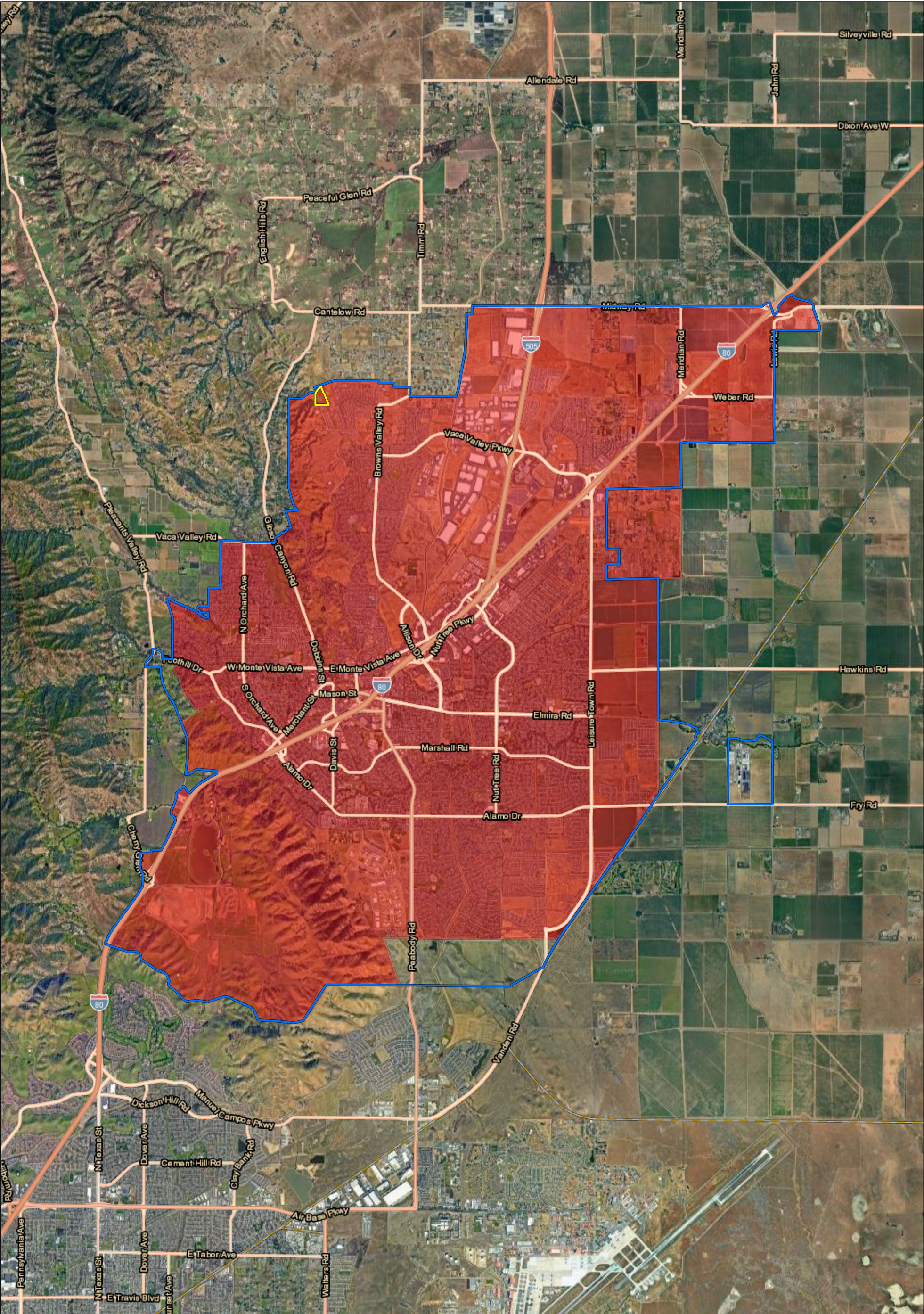


SOURCE: Google Imagery (2023)

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McMurtry Creek Estates Project
Aerial Photograph and Surrounding Land Uses

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Project Location

Sphere of Influence

Urban Growth Boundary

FIGURE 3-3

0

0.5

1

MILES

SOURCE: Google Imagery (2022); City of Vacaville (3/2024)

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Beyond this boundary, only agricultural or open space uses are typically permitted. Land outside the UGB cannot be annexed into the City or designated for anything other than agriculture, park, open space, public facility, or utility uses until March 1, 2028.⁴

3.3 PROJECT OBJECTIVES

The following objectives have been established for the proposed project:

- Encourage development within the City of Vacaville Sphere of Influence;
- Encourage development within the City of Vacaville's Urban Growth Boundary;
- Encourage carefully planned new development in undeveloped portions Vacaville;
- Preserve and enhance the existing character and sense of place in residential neighborhoods;
- Promote the City's Economic Development Strategy; and
- Support the City's Strategic Plan goals.

3.4 PROPOSED PROJECT

The proposed project involves the construction of 20 new residential estate lots and associated roadway and utility improvements on the project site. The 15.73-acre project site includes a developable area of approximately 7.8 acres for the 20 single-family residential lots, 3.7 acres of landscaping for fire protection around the perimeter of the proposed lots, and 2.44 acres of designated open space. Additionally, as part of the subdivision, two new parcels would be created: Parcel A, the 15.73-acre project site, which would be annexed into the City of Vacaville and includes the 20 residential lots, fire access roads, and a 150-foot irrigated landscape buffer; and Parcel B, a separate 18.60-acre remnant parcel that would remain unimproved and within Solano County. Individual components of the proposed project are discussed below.

Access to the project site would be provided by the existing McMurtry Lane and Preserve Lane. The proposed project would extend both McMurtry Lane and Preserve Lane north to connect to the proposed private access driveway and fire access road around the perimeter of the proposed project. Additionally, the proposed project would create a new 22-foot-wide multi-use path connecting the east side of the project to White Stone Court (along McMurtry Lane, the multi-use path would be 20 only feet wide), which would also provide fire truck access. **Figure 3-4, Conceptual Site Plan**, shows the conceptual site plan for the proposed project and **Figure 3-5, Proposed Fire Truck Access and Multi-Use Path**, shows the proposed fire access road and multi-use path within the project site.

⁴ City of Vacaville. 2023. Planning Commission, Staff Report 2023. October. Website: https://vacaville.granicus.com/MetaViewer.php?view_id=&clip_id=1915&meta_id=107805 (accessed February 12, 2024).

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LSA

FIGURE 3-4



0 75 150
FEET

SOURCE: PEI Engineering

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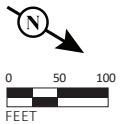
McMurtry Creek Estates Project
Conceptual Site Plan

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FIGURE 3-5

LSA



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3.4.1 General Plan Amendment and Rezoning

The proposed project would require a General Plan Amendment to change the General Plan designation for the site from Hillside Agriculture (HA) to Residential Estates (RE) and apply the Residential Estate (RE-12) pre-zoning district to the project site. The Residential Estate designation is generally characterized by very low-density residential uses, while the RE-12 district is intended to provide for residential development in a semi-rural setting on lots with a minimum lot size of 12,000 square feet.⁵ Additionally, the project includes a Tentative Subdivision Map to create 20 lots within Parcel A while designating Parcel B as an unimproved remnant parcel. Annexation would require approval from the Solano Local Agency Formation Commission (LAFCO).

3.4.2 Building Program

As previously discussed, the proposed project would result in the subdivision of the project site to construct 20 lots for future single-family detached residential developments. The proposed residential developments would consist of one- and two-story residences, which would not exceed 35 feet tall. The proposed lots would range from 12,412 to 63,740 square feet. Additionally, the existing ranch property located on Lot 1 would be retained.

3.4.3 Open Space and Landscaping

The proposed project would include approximately 3.7 acres of landscaping for fire protection, of which 2.44 acres would be designated as open space. As shown in **Figure 3-6, Preliminary Landscape Plan**, 27 live oaks (*Quercus agrifolia*) and 27 smaller Western redbuds (*Cercis occidentalis*) would be planted within the 150-foot irrigated landscape buffer between the custom-home lots and the hillside areas along the project boundary. Additionally, the proposed project would reconstruct a seasonal wetland within the project boundary, and construct a new detention pond, as further described below, that would be approximately 15,000 square feet in size along the northern boundary of the project. Future custom homes would provide landscaping for each individual lot as development progresses.

3.4.4 Access, Circulation, and Parking

Primary access to the project site would be provided by an extension of Preserve Lane with a secondary emergency access route along McMurtry Lane. The proposed project would extend McMurtry Lane to the north and remove the existing cul-de-sac at Preserve Lane within the Reserves at Browns Valley Development to connect McMurtry Lane to Preserve Lane. A 22-foot-wide fire access road would be constructed around the perimeter of the development and connect to a new multi-use path on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development.

⁵ City of Vacaville. 2015c. *Vacaville General Plan Land Use Element*. Website: <https://www.ci.vacaville.ca.us/home/showpublisheddocument/5416/638157981726430000> (accessed June 21, 2024).

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LSA

LEGEND

 Total Area of Irrigated Planted Area
325,178 Square Feet



0 25 50
FEET

SOURCE: James Ferguson Clabaugh

I:\20230997\G\Landscape_Plan.ai (1/15/2025)

FIGURE 3-6

McMurtry Creek Estates Project
Preliminary Landscape Plan

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3.4.5 Utilities and Infrastructure

The project site is located in a developed area that is currently served by existing utilities, including water, sanitary sewer, storm drainage, electricity, gas, and telecommunications infrastructure. Existing and proposed utility connections are discussed below.

3.4.5.1 Water

Water service is provided by the City of Vacaville. The proposed project would include the installation of three new 8-inch water lines that would tie into the existing 12-inch water mains located within White Oak Court, Preserve Lane, and McMurtry Lane. The proposed project would be directly supplied by the Reynolds Ranch Reservoir, part of the Zone 2 system.

3.4.5.2 Wastewater

The City maintains existing sanitary sewer lines within the vicinity of the project site, including an 8-inch line within the existing Preserve Lane in the Reserves subdivision, immediately south of the project site. A new 8-inch sanitary sewer line would be installed within the subdivision and would tie into the existing 8-inch line in Preserve Lane.

3.4.5.3 Stormwater

As previously noted, the majority of the project site is currently undeveloped and existing vegetation is comprised of non-native grassland. A 0.31-acre constructed stock pond/seasonal wetland is located in the south-central part of the site, and two ephemeral drainage channels are in the southern portion of the site. Under existing conditions, the project site contains 5,303 square feet of impervious surfaces. Existing stormwater infrastructure consists of two 24-inch stormwater mains that run north to south just outside of the southern boundaries of the project site. Additionally, two storm drain manholes are located within McMurtry Lane south of the project site.

Upon construction of the developable area within the proposed project site (7.8 acres), approximately 213,856 square feet (63 percent) of the developable area would become impervious surfaces. The remaining area is assumed to be pervious surfaces, consisting of the park and landscaped areas. Additionally, the proposed project would include approximately 15,000 square feet for a detention pond on the northern end of the project site, which would be used for stormwater control.

The proposed project would include catch basins and storm drains throughout the project site, which would drain to the detention pond located to the north, with another connection point that would drain into the existing seasonal creek. The existing seasonal creek would be maintained by the development. The seasonal wetland (stock pond) would be reconstructed and relocated immediately southeast within the project site to allow for the development of the proposed project.

3.4.5.4 Electricity and Gas

Electricity and gas service is provided to the project site by PG&E. The proposed project would include connections to the existing electricity and natural gas lines that run along the southern and northern borders of the project site adjacent to the site, along the existing PG&E easement.

3.4.5.5 Telecommunication

Telecommunication services to the project site would be provided by AT&T or Comcast.

3.4.6 Construction

Grading of the proposed lots would be on slopes less than 15 percent. The fire access road around the property's perimeter would involve steeper grading, with slopes ranging from 20 to 25 percent. Steeper grading within the proposed project would be confined to the western section at the rear of Lots 9, 10, 11, and 14.

Generally, only minor grading would be required for site preparation. Ground disturbance associated with utility installations would not exceed a depth of excavation of 5 feet below ground surface. A total of 7.8 acres of soil would be disturbed during construction activities. It is anticipated that a total of 12,000 cubic yards of soil would be cut-and-fill; however, no fill would be imported to the site, and no additional truck trips would be required. Construction of the proposed project is anticipated to begin in 2026 and would occur over an approximately nine-month period.

3.4.7 Project Approvals

While the City is the CEQA Lead Agency for the proposed project, other agencies have discretionary authority related to the proposed project and approvals or serve as a responsible and/or trustee agency in connection to the proposed project. A list of these agencies and potential permits and approvals that may be required is provided in **Table 3.A**.

Table 3.A: Potential Permits and Approvals

Lead Agency	Permits/Approvals
City of Vacaville	<ul style="list-style-type: none"> • EIR Certification • Approval of Annexation submittal to Solano LAFCO • General Plan Amendment • Zoning Map Amendment to Pre-Zone as Residential Estates (RE-12) • Tentative Subdivision Map Approval • Planned Development Approval
Other Agencies	
Solano Local Agency Formation Commission (LAFCO)	<ul style="list-style-type: none"> • Approve annexation of project site into Vacaville city limits
Solano County Airport Land Use Commission (ALUC)	<ul style="list-style-type: none"> • Consistency determination of the project with the Travis Air Force Base Compatibility Plan
Solano County Fire Protection District	<ul style="list-style-type: none"> • Review/Approve fire truck access and site fire flow design
California Department Fish and Wildlife (CDFW)	<ul style="list-style-type: none"> • Notify and obtain authorization for activities affecting watercourses under Section 1602 of the California Fish and Game Code
United States Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> • Review/Approve compliance with federal water quality standards for project impacts on federally regulated wetlands and waters under Section 401 of the Clean Water Act
United States Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> • Review/Approve potential impacts on federally regulated wetlands and waters under Section 404 of the Clean Water Act

Source: LSA (2024).

4.0 SETTING, IMPACTS, AND MITIGATION MEASURES

The following chapter contains an analysis of the potential environmental impacts to Transportation, a topic outlined in Appendix G of the Guidelines for the California Environmental Quality Act (*State CEQA Guidelines*) (California Code of Regulations [CCR] Title 14, Chapter 3, Sections 15000–15397).

The Draft Environmental Impact Report (EIR) includes a detailed explanation of the existing conditions, thresholds of significance that will be applied to determine whether the impacts due to the McMurtry Creek Estates Project (proposed project) are significant, analysis of the potential environmental impacts, and a determination of whether the proposed project would have a significant impact to the environmental topic if implemented. A “significant impact” or “significant effect” means “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (14 CCR 15382). The environmental topic analyzed in Chapter 4.0 also includes a discussion of the cumulative effects of the proposed project when considered in combination with other projects causing related impacts, as required by Section 15130 of the *State CEQA Guidelines*.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code [PRC] Section 21068). The *State CEQA Guidelines* (CCR, Title 14 Section 15000) direct that this determination be based on scientific and factual data. Each impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are derived from Appendix G of the *State CEQA Guidelines*. In determining whether a project's impacts are significant, an EIR ordinarily compares those impacts with existing environmental conditions, which are referred to as the “baseline” for the impact analysis. This EIR compares the potential environmental impacts of the proposed project with the baseline environmental conditions in existence at the time that the Notice of Preparation (NOP) was published, on May 24, 2024.

ISSUES ADDRESSED IN THE DRAFT EIR

Section 4.1 of this chapter describes the environmental setting of the project as evaluated in the EIR and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate. The topic of Transportation is evaluated in Section 4.1 of this chapter.

An Initial Study was completed for the proposed project and is included in **Appendix B**. The analysis contained in the Initial Study determined that the proposed project would not result in significant impacts to the following environmental topics: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire. Consequently, these issues are not examined in this chapter of the EIR, but are briefly addressed in Chapter 5.0, Other CEQA Considerations.

As previously discussed in Chapter 3.0, Project Description, the proposed project would be required to comply with all applicable mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP), which is a requirement of any proposed development. The proposed project has been determined to have less than significant impacts with mitigation to a number of topic areas analyzed in the Initial Study (refer to **Appendix B** and Chapter 5.0 of the EIR). These impacts and mitigation measures are not addressed in this EIR, but are identified in the Initial Study, and Chapter 2.0, Summary, and will be included in the MMRP that would be adopted by the City if the EIR is certified.

CUMULATIVE ANALYSIS CONTEXT

State CEQA Guidelines Section 15355 defines cumulative impacts as two or more past, present, and/or reasonably foreseeable future actions which, when considered together, result in a significant impact. Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "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. These impacts can result from a combination of the proposed project together with other projects causing related impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

An analysis of cumulative impacts follows the evaluation of project impacts under existing conditions in the specific environmental topic Section 4.1, Transportation, in Chapter 4.0. The cumulative impacts analyze the extent to which the proposed project would contribute to cumulative impacts, and whether that contribution would be considerable (i.e., would cause a cumulative condition to be significant and/or substantially increase the severity of a cumulative impact that would be significant whether or not the project was developed).

The cumulative context for residential development project effects is typically localized, within the vicinity of the project site, or at the neighborhood level. Cumulative development includes the projects listed in **Table 4.A**. These projects are either projects for which the City of Vacaville has a project application on file or projects that have been entitled but have not yet begun construction at the time that the EIR analysis was initiated. As shown, these projects include new residential and mixed-use projects.

FORMAT OF ISSUE SECTION

Section 4.1, Transportation, is organized into the following subsections:

1. **Introduction** briefly describes the topics and issues covered in the section.
2. **Scoping Process** describes the comment letters received during the public review period of the Notice of Preparation (NOP) that are related to the topic.

Table 4.A: Cumulative Projects in the Vicinity of the Project Site

Project Name	Location	Description of Project	Project Status	Vicinity to Project Site
The Fields at Alamo Creek Project	Unincorporated Solano County ("County") immediately adjacent to the Specific Plan boundary and the city limits to the south and west, Hawkins Road to the north, and undeveloped agricultural land within the County to the east.	Construction of 241 detached single-family residential lots and 88 half-plex lots for attached homes; construction of a 0.6-acre park; and 7.2 acres of open space/agricultural buffer.	Pending Supplemental Environmental Impact Report EIR (SEIR) submitted on February 14, 2024	4.5 miles southeast of the project site
Vanden Cove Subdivision	5742, 5750, and 7038 Vanden Road, Vacaville, California 95687	Construction of 114 new single-family units.	Approved by the City on February 20, 2024	5.5 miles south of the project site
The Greentree Project	999 Leisure Town Road Vacaville, CA 95687	Construction of 1,149 dwelling units, construction of a 299,345-square-foot commercial building.	Approved by the City of December 19, 2022	3.5 miles southeast of the project site
Oak Grove Apartments Project	475 West Monte Vista Avenue, Vacaville, CA 95688	Construction of a 67-unit multifamily apartment complex.	Approved by the City on April 15, 2022	3 miles southwest of the project site
Roberts' Ranch Specific Plan Draft EIR	201 El Camino Real	Construction of 785 single family dwellings.	Under construction	5.2 miles southeast of the project site
North Village Area Plan 2	East of Interstate 505, south of Midway Road, north of Vaca Valley Parkway, and west of Leisure Town Road	<p>North Village was originally approved in 1995 with two planning areas (Area Plan 1 and Area Plan 2) that encompass 882 acres consisting of 2,499 residential units with commercial, business parks, community facilities, public parks, and open space. Construction of Area Plan 1 is near completion with 1,348 units.</p> <p>Area Plan 2, the northern portion of the master-planned development, was recently approved to accommodate 1,251 residential units with open space, public school site, and a public park.</p>	Under construction	2.4 miles northeast of the project site

Source: City of Vacaville (July 2024).

3. **Existing Setting** describes the physical conditions that existed at the time the NOP was prepared. This section focuses on physical site characteristics that are relevant to the environmental topic being analyzed.
4. **Methodology** describes the approach and methods employed to complete the environmental analysis for the issue under investigation.
5. **Regulatory Framework** lists and discusses the laws, ordinances, regulations, and policies that relate to the specific environmental topic and how they apply to the proposed project.
6. **Impacts and Mitigation Measures** describes the impacts and mitigation measures for each environmental topic and presents a discussion of the potential impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which are the thresholds used to determine whether an impact is potentially significant. The latter part of this section presents the potential impacts from the proposed project and mitigation measures, if necessary. The potential impacts of the proposed project are organized into separate categories based on the criteria listed in each topical section. Cumulative impacts are also addressed. Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively and begin with an acronymic or abbreviated reference to the impact section (e.g., TRA). The following labeling is used for the individual environmental topic:

TRA Transportation

Impacts are also categorized by type of impact, as follows: Less Than Significant, Potentially Significant, Less Than Significant with Mitigation, and Significant and Unavoidable. Significance determinations are also indicated in **bold text**.

4.1 TRANSPORTATION

This chapter provides a discussion of the existing transportation conditions in the region, in Vacaville, and in the vicinity of the project site and evaluates potential impacts related to transportation from implementation of the proposed project. This section summarizes information provided in the McMurry Creek Estates Project Vehicle Miles Traveled (VMT) Analysis, which is included in **Appendix C** of this Draft Environmental Impact Report (EIR). This section also incorporates data and information from the City of Vacaville (City) General Plan, a review of existing resources, technical data, and applicable laws, regulations, and guidelines.

4.1.1 Scoping

The City received four comment letters during the public review period of the Notice of Preparation (NOP) between Friday, May 24, 2024, to Monday, June 24, 2024, and no comments pertaining to transportation were received. These comments are summarized in **Table 2.A**, in Chapter 2.0, Summary, and copies of the NOP comment letters are included in **Appendix A** of this Draft EIR.

In addition, the City received four public comments pertaining to transportation issues from participants at the public scoping meeting held on June 14, 2024. These comments included:

- **Brittany Myers:** Suggested a main entry point off White Stone Court.
- **Anonymous:** Asked whether emergency vehicles would be able to access the site. Asked if the project would continue the McMurry Lane cul-de-sac to the end of the street.
- **Joel Jorish:** Noted that the diagram in the scoping meeting showed a multi-use path. Suggested converting this path into a road to avoid the exclusive use of Preserve Lane.
- **Isabell:** Concerned about construction crews and trucks using Preserve Lane instead of McMurry Lane.

4.1.2 Existing Setting

This section describes the existing transportation conditions within the project study area. The applicable regulatory framework is also described.

4.1.2.1 Existing Transportation and Circulation System

This section describes the existing transportation conditions, including the roadway network, transit service, bicycle facilities, and pedestrian facilities within the study area.

Existing Roadway Network. Primary arterials, minor arterials, collectors, and local streets run through the project area. Descriptions of roadways are provided below.

Interstate 80. Interstate 80 (I-80) is designated as a freeway in the City's General Plan. I-80 is a major east-west freeway originating in the San Francisco Bay Area to the west, continuing east towards Sacramento. I-80 passes through the cities of Fairfield, Vacaville, and Dixon in a

southwest-to-northeast direction. In the cities of Fairfield and Vacaville, I-80 provides four mixed-flow lanes in each direction, with a posted speed limit of 65 miles per hour (mph).

Interstate 505. Interstate 505 (I-505) is designated as a freeway in the City's General Plan. I-505 is a north-south freeway connecting I-80 in Vacaville to Interstate 5 (I-5) just north of the City of Woodland in unincorporated Yolo County.

Browns Valley Parkway. Browns Valley Parkway is designated as an arterial roadway in the City's General Plan. Between Allison Drive and Vaca Valley Parkway, Browns Valley Parkway is a four-lane, divided arterial running southbound and northbound. There are bike lanes in both directions of this segment. There is no provision for on-street parking. Browns Valley Parkway narrows to two lanes, becoming Browns Valley Road, a two-lane, divided arterial. There are bike paths in both directions of this segment. There are no provisions for on-street parking along this segment.

Vaca Valley Parkway. Vaca Valley Parkway is designated as an arterial in the City's General Plan. Between Browns Valley Road and I-505, Vaca Valley Parkway is a four-lane, divided arterial with a raised median along various segments. There are bike lanes and bike paths in both directions of this roadway. There is no provision for on-street parking.

McMurtry Lane. McMurtry Lane is designated as a two-lane collector in the City's General Plan. Between Vaca Valley Parkway and Whispering Ridge Drive, McMurtry Lane is a two-lane, divided collector. There are bike paths and sidewalks in both directions of this segment. There is no provision for on-street parking.

Preserve Lane. Preserve Lane is designated as a local street in the City's General Plan. Between McMurtry Lane and Whispering Ridge Drive, Preserve Lane is a one-lane, undivided street. There are no bicycle facilities. There are provisions for on-street parking on both sides of this segment.

Transit Facilities. Transit within the City is provided by Vacaville City Coach, Fairfield and Suisun Transit (FAST), and YOLOBUS. City Coach provides connections to local and regional destinations via the Intermodal Transportation Center located on Allison Drive between Ulatis Drive and Nut Tree Parkway just off I-80 and the Vacaville Transit Plaza, located at the corner of Monte Vista Avenue and Cernon Street in downtown Vacaville. Additionally, City Coach provides special services to eligible residents as an Americans with Disabilities Act (ADA) paratransit service within Vacaville.

City Coach provides local bus service in Vacaville and to the project area. The nearest bus stop for City Coach Route 2 is located on Tipperary Drive at Browns Valley Road one mile south of the project site.

Bicycle Facilities. According to the City of Vacaville General Plan Transportation Element, amended on September 28, 2021, bikeway facilities within the County of Solano (County) have three distinct classifications. They are as follows:

- **Class I (Bike Path).** Off-street bike paths are designated for the exclusive use of bicyclists and pedestrians, with minimal crossflows by motorists.
- **Class II (Bike Lane).** On-street, striped, and signed bike lanes are designated for the exclusive or semi-exclusive use of bicycles alongside through travel by motor vehicles. Vehicle parking and crossflows by pedestrians and motorists are permitted adjacent to Class II bikeways.
- **Class III (Bike Route).** On-street signed bike routes are designated for shared use by bicyclists with motorists. Bicycles are permitted on most roadways, but for safety purposes, signed bicycle routes are often found on streets with lower speeds and traffic volumes.

As described above, bicycle facilities within the study area generally consist of Bike Paths and Bike Lanes. The majority of the bicycle network within Vacaville consists of Bike Lanes.

Pedestrian Facilities. Pedestrian facilities within the vicinity of the project site include sidewalks located along Preserve Lane immediately south of the project site. The proposed project would construct pedestrian facilities along the internal streets within the project site, including bike paths and sidewalks. Additionally, the proposed project would connect to White Stone Court within the Cheyenne subdivision, which would provide a multi-use pathway along the perimeter of the Cheyenne subdivision.

4.1.3 Methodology

Until July 1, 2020, roadway congestion or level of service (LOS) was used as the primary study metric for planning and environmental review of development projects in California. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts pursuant to CEQA, known as Vehicle Miles Traveled (VMT). The VMT metric was developed in an effort to meet the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. California Public Resources Code (PRC) Section 21099(b) states that, upon certification of the revised guidelines for determining transportation impacts, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

4.1.3.1 Vehicle Miles Traveled

VMT is a measurement of the amount and distance that a person drives. Many interdependent factors affect the amount and distance a person might drive. In particular, the type of built environment affects how many places a person can access within a given distance, time, and cost, using different ways of travel (e.g., private vehicle, public transit, bicycling, walking). Typically, low-density development located at great distances from other land uses and in areas with few alternatives to the private vehicle provides less access than a location with high-density development, a mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT per capita compared to a similarly sized development in an urban area. In general, higher VMT areas are associated with more air pollution, including GHG emissions and energy usage, than lower VMT areas. VMT is calculated by multiplying the number of trips generated by a project by the total distance of each of those trips.

4.1.3.2 VMT Screening Criteria

The City's updated General Plan and Energy Conservation Action Strategy (ECAS)¹ has adopted the SB 743 Guidelines that present screening criteria, consistent with OPR's Technical Advisory,² to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed VMT analysis. A land use project needs only to meet one of the below screening criteria to have a presumption of less than significance.

1. *Small Projects.* The Technical Advisory concludes that, absent of any information to the contrary, projects that generate 110 trips per day or less may be assumed to cause a less than significant transportation impact. The project would include 20 single-family, detached dwelling units on 15.73 acres of land that has the potential to create more than 110 trips per day. The project does not meet this screening criterion based on its proposed size and land use.
2. *Project Near Transit Station.* Projects located within 0.50 mile of an existing "major transit stop" or an "existing stop along a high-quality transit corridor may be presumed to have a less than significant impact absent of substantial evidence to the contrary. The project site is not located within 0.50 mile of an existing major transit stop, or along a high-quality transit corridor, and therefore does not meet this screening criterion.
3. *Affordable Residential Development.* Projects consisting of a high percentage of affordable housing may be assumed to cause a less than significant transportation impact on VMT because they may improve jobs-housing balance and/or otherwise generate less VMT than market-based units. The project does not include an affordable housing component and therefore does not meet this screening criterion.
4. *Redevelopment Projects.* If a proposed redevelopment project leads to a net overall decrease in VMT (when compared against the VMT of the existing land uses), the project would lead to a less than significant transportation impact. The project consists of new single-family homes located on a vacant parcel and would not qualify as a redevelopment project.
5. *Local Serving Retail.* Trip lengths may be shortened and VMT reduced by adding "local-serving" retail opportunities that improve retail destination proximity. The Technical Advisory generally describes retail development including stores less than 50,000 square feet as locally serving. The project is not a local serving retail use and therefore does not meet this screening criterion.
6. *Low VMT Generating Area.* The City's Guidelines provide VMT screening maps for the most common land use types in the city. The maps present an estimate of VMT by land use for traffic analysis zones (TAZs) throughout the City and are used to identify areas within the City that are "low VMT generating" areas. The TAZs are color coded based on the percentage difference in VMT compared to the citywide average VMT per thousand square feet or VMT per dwelling unit. The project site is currently designed as Hillside Agriculture (HA) in the General Plan and based

¹ City of Vacaville. 2021b. *Vacaville General Plan and ECAS EIR*.

² Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. Website: https://opr.ca.gov/ceqa/docs/20190122-743_Technical_Advisory.pdf (accessed June 2024).

on the City's VMT maps, the project is in an area that has a VMT that is 20 percent to 10.1 percent above the citywide average (for single-family land use), which does not qualify as a low VMT generating area. Therefore, the project does not meet this screening criterion.

4.1.3.3 VMT Threshold of Significance for Residential Land Uses

For projects that do not qualify for any of the screening opportunities identified in the City's Guidelines, the City of Vacaville applies the following thresholds of significance when analyzing the VMT transportation impacts of residential land use projects under CEQA.

1. The project would cause a significant transportation impact if it would generate an average VMT per dwelling unit that is greater than 85 percent of the citywide average for that land use type.
2. If the above threshold is exceeded, the project's VMT impact could still be found to be less than significant if it does not cause the total VMT generated by the City of Vacaville to increase.

4.1.4 Regulatory Framework

The following federal, State, regional, and local transportation plans, policies, and regulations guide transportation planning in Vacaville.

4.1.4.1 Federal Regulations

This section summarizes applicable federal regulations guiding transportation planning in Vacaville.

Federal Highway Administration. The Federal Highway Administration (FHWA) is a major agency of the United States Department of Transportation. In partnership with State and local agencies, the FHWA carries out federal highway programs to meet the nation's transportation needs. The FHWA administers and oversees federal highway programs to ensure that federal funds are used efficiently.

Federal Transit Administration. The Federal Transit Administration (FTA) is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by Title 49 of the United States Code, which states the FTA's interest in fostering the development and revitalization of public transportation systems. The FTA invests approximately \$12 billion annually to support and expand public transit.

Americans with Disabilities Act. The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The revised guidelines, published August 8, 2023, address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps,

street furnishings, pedestrian signals, parking, and other components of public rights-of-way. These guidelines would apply to proposed roadways in the study area.

4.1.4.2 State Regulations

This section summarizes applicable State regulations guiding transportation planning in Vacaville.

California Department of Transportation. The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS would need to be approved by Caltrans. In May 2020, Caltrans published the Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), which replaced its Guide for the Preparation of Traffic Impact Studies (2002). The TISG generally endorses the policies, technical approaches, and recommendations from OPR's Technical Advisory. It also indicates that Caltrans intends to "transition away from requesting LOS or other vehicle operations analyses of land use projects," instead placing the focus on VMT and safety.³

Senate Bill 375. As a means to achieve the Statewide emission reduction goals set by Assembly Bill (AB) 32 ("The California Global Warming Solutions Act of 2006"), SB 375 ("The Sustainable Communities and Climate Protection Act of 2008") directs the California Air Resources Board (CARB) to set regional targets for reducing GHG emissions from cars and light trucks. Using the template provided by the State's Regional Blueprint program to accomplish this goal, SB 375 seeks to align transportation and land use planning to reduce VMT through modified land use patterns. There are five basic directives of the bill: (1) creation of regional targets for GHG emissions reduction tied to land use, (2) a requirement that regional planning agencies create a sustainable communities strategy (SCS) to meet those targets (or an Alternative Planning Strategy if the strategies in the SCS would not reach the target set by CARB), (3) a requirement that regional transportation funding decisions be consistent with the SCS, (4) a requirement that the Regional Housing Needs Allocation numbers for municipal general plan housing element updates must conform to the SCS, and (5) CEQA exemptions and streamlining for projects that conform to the SCS. The implementation mechanism for SB 375 that applies to land use in Vacaville is Plan Bay Area 2050.

Senate Bill 743. On September 27, 2013, SB 743 was signed into law, which created a process to change the way transportation impacts are analyzed under CEQA. SB 743 required the OPR to amend the *State CEQA Guidelines* to provide an alternative to LOS as the metric for evaluating transportation/traffic impacts. Since preparation of the 2018 EIR, the *State CEQA Guidelines* have been updated and as of July 2020 require a project's VMT be evaluated in lieu of LOS. Under the new transportation guidelines, LOS or vehicle delay, is no longer considered an environmental impact under CEQA. Amendments to the *State CEQA Guidelines* required under SB 743 were approved on December 28, 2018, and the new Section 15064.3 identifies VMT as the most appropriate measure of transportation impacts under CEQA and is currently being implemented as of July 1, 2020. Related legislation, SB 32 (2016) requires California to reduce GHG emissions

³ California Department of Transportation (Caltrans). 2020b. *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*. May. Website: <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf> (accessed July 30, 2024).

40 percent below 1990 levels by 2030. The CARB has determined that it is not possible to achieve this goal without reducing VMT and specifically California needs to reduce per capita VMT across all economic sectors. SB 743 is primarily focused on passenger-cars and the reduction in per capita VMT as it relates to individual trips.

The OPR's 2018 Technical Advisory provides guidance and tools to properly carry out the principles within SB 743 and how to evaluate transportation impacts in CEQA. The VMT analysis for the project is based on the City of Vacaville General Plan Transportation Element and Energy Conservation Action Strategy Update Draft Supplemental EIR (SCH # 2020090526 – "2021 Supplemental EIR"),⁴ which was certified by the City Council in September 2021.

4.1.4.3 Regional Regulations

This section summarizes applicable regional regulations guiding transportation planning in Vacaville.

Metropolitan Transportation Commission. The Metropolitan Transportation Commission (MTC) is responsible for planning, coordinating, and financing transportation projects in the nine-county Bay Area. The local agencies that comprise these nine counties help the MTC prioritize projects based on need, feasibility, and conformance with federal and local transportation policies. In addition to coordinating with local agencies, the MTC distributes State and federal funding through the Regional Transportation Improvement Program.

Plan Bay Area. Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan. This strategy integrates transportation, land use, and housing to meet GHG reduction targets set by the CARB. The plan meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

Regional Transportation Plan/Sustainable Communities Strategy. The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range plan for transportation improvements within the nine county Bay Area, including the City of Vacaville within Solano County, developed by the MTC and Association of Bay Area Governments (ABAG). Plan Bay Area 2050 (adopted in October 2021) is the latest iteration of the RTP/SCS that provides a regional long-range plan for housing, economic development, transportation and environmental resilience and charts the course for the future of the region.

Solano Transportation Authority (STA). The Solano County Comprehensive Transportation Plan (CTP), prepared by STA, envisions, directs, and prioritizes the transportation needs of Solano County. The CTP identifies Routes of Regional Significance, which are roadways that carry significant through traffic, connect two or more jurisdictions, serve major transportation hubs, or cross county lines. Since these routes are significant to the transportation network of the region, and serve more than

⁴ City of Vacaville 2021c. *City of Vacaville General Plan Transportation Element and Energy Conservation Action Strategy Update*. July. Website: <https://www.cityofvacaville.gov/home/showpublisheddocument/19100/637685179483230000> (accessed July 30, 2024).

local transportation needs, they are eligible for federal funding. The CTP identifies long-term transportation needs for Solano County. In addition to I-80 and I-505, the CTP identifies local roadway segments within the Vacaville city limits and roadway segments within the county, adjacent to the City limits as Routes of Regional Significance.

4.1.4.4 Local Regulations

This section summarizes applicable City regulations guiding transportation planning in the City.

City of Vacaville General Plan. The City of Vacaville General Plan, sets forth the following objectives and policies relevant to transportation:

- **Goal COS-12:** Maintain and Improve Air Quality.
 - **Policy COS-P12.3:** Encourage project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips and promote energy efficiency.
- **Goal TR-3:** Take proactive steps to reduce Greenhouse Gas Emissions caused by Vehicle Miles Travelled in Vacaville.
 - **Policy TR-P3.1:** Pursue land use strategies that better balance jobs and housing, leading to a reduced proportion of Vacaville resident commute trips that leave the City.
 - **Policy TR-P3.2:** Pursue an overall land use / transportation relationship that becomes more efficient over time, as measured by improved VMT efficiency (i.e., VMT per dwelling unit or per thousand square feet of floor space).
 - **Policy TR-P3.3:** Evaluate development proposals using VMT measurement techniques and significance thresholds from the Senate Bill (SB) 743 Implementation Guidelines for the City of Vacaville.
 - **Policy TR-P3.5:** A proposed residential development project exceeding a level of 15 percent below existing citywide VMT per capita may indicate a significant transportation impact.
 - **Policy TR-P3.6:** A proposed employment project exceeding a level of 15 percent below existing citywide VMT per employee may indicate a significant transportation impact.
 - **Policy TR-P3.7:** A proposed retail project that increases existing citywide total VMT may indicate a significant transportation impact.
 - **Policy TR-P3.8:** Consider the potential effect on VMT when evaluating proposed transportation improvements.

- **Policy TR-P3.9:** Require feasible mitigation measures to reduce potentially significant VMT impacts and monitor whether those measures are achieving the intended outcomes.
- **Goal TR-5:** Provide roadway capacity on Vacaville city streets for typical weekday peak hour (7:00 to 9:00 AM and 4:00 to 6:00 PM) traffic volumes without significant delay.
- **Policy TR-P5.1:** Endeavor to maintain LOS C as the LOS goal at all intersections and interchanges to facilitate the safe and efficient movement of people, goods, and services. Strive to design improvements to provide LOS goal of C based on the City's most recent 20+ year traffic forecast including signalized and unsignalized intersections.
- **Policy TR-P5.2:** At signalized and all-way stop control intersections, endeavor to maintain LOS mid-D. At two-way stop control intersections, attempt to maintain LOS D.
- **Policy TR-P5.3:** To allow for infill development and higher density development at transit centers, endeavor to maintain LOS D at signalized and all-way stop control intersections in the Downtown Urban High Density Residential Overlay District or other Priority Development Areas (PDA) designated by the City. At two-way stop controlled intersections in these areas, endeavor to maintain an overall LOS mid D.
- **Policy TR-P5.4:** The City may allow LOS that is worse than the established LOS operating goal for a particular location as an interim level of service where improvements are programmed by the City that will improve the service to the desired.
- **Policy TR-P5.5:** The City may allow LOS that is worse than the established LOS policy goals for a particular location on the basis of specific findings described in adopted City Policies or standards.
- **Policy TR-P5.6:** Require all roads to comply with the City's Standard Specification for Public Improvements document for the City's roadway network.
- **Policy TR-P5.7:** Roadway improvements implemented by the City using the Development Impact Fee Program or other funding sources shall be designed based on the level of service operating goals prescribed in Policies TR-P5.1, TR-P5.2, and TR-P5.3.
- **Policy TR-P5.8:** Require roadway improvements implemented by development projects to be designed based on the level of service standards prescribed in Policies TR-P5.2 and TR-P5.3.
- **Policy TR-P5.9:** Implement Transportation Element improvements summarized in Table TR-1 and illustrated in Figure TR-5 prior to deterioration in levels of service below the stated standard operating goals, with the exception of situations that are described in Policies TR-P5.4 and TRP5.5.

- **Goal TR-6:** Require necessary transportation improvements from new development.
 - **Policy TR-P6.1:** As part of development approvals, require (through conditions of approvals) that necessary traffic improvements be constructed in time to accommodate trips generated by the project.
 - **Policy TR-P6.2:** In order to ensure that adequate roadway capacity is provided for the buildout of the General Plan and that new development does not preclude the construction of adequate circulation facilities, require all new development to provide right-of-way dedications consistent with this Transportation Element (Figure TR-6).
 - **Policy TR-P6.4:** For locations where the LOS would exceed operating goals described in Policies TR-P4.2 and TR-P4.3 without the addition of traffic from a proposed development, the City may require incremental fair share traffic contributions from the proposed development.
- **Goal TR-8:** Protect residential neighborhoods from through-traffic.
 - **Policy TR-P8.1:** Discourage unnecessary through-traffic in residential areas through circulation system design and planning.
 - **Policy TR-P8.3:** Consider traffic calming measures consistent with the City's traffic calming policies and approved by the City as part of development proposals in an effort to lower vehicle speeds and enhance mobility for bicyclists and pedestrians.
- **Goal TR-9:** Provide a balanced, multimodal transportation network that meets the needs of all users.
 - **Policy TR-P9.3:** Require that new development applications include transit amenities, such as bus stops, bus bays, transit shelters, benches, and on-site drop-off locations, as appropriate, or explain why these features are infeasible or unnecessary.
 - **Policy TR-P9.4:** Require that new development applications design roadway networks to accommodate transit vehicles and facilitate efficient transit routes.
 - **Policy TR-P9.5:** Where existing street widths or traffic volumes do not support creation or maintenance of striped bicycle lanes or shoulders, but where cyclists can be safely accommodated and other conditions permit, consider use of mechanisms such as "sharrows" (i.e. markings painted on roadways indicating that auto traffic is expected to share the lane with cyclists), pavement markings, or "share the road" signage to indicate to both drivers and bicyclists that bicycle use is permitted and should be expected.
 - **Policy TR-P9.6:** Require that new development applications design roadway networks to accommodate on-street bicycle lanes, and only allow bicycle routes with sharrows when on-street bicycle lanes are impractical or infeasible.

- **Policy TR-P9.8:** Prioritize transportation improvements that support and enhance travel by transit, bicycle, and pedestrian modes to and from designated Priority Development Areas (PDA).
- **Goal TR-10:** Increase bicycling by improving the network of bikeway and support facilities.
 - **Policy TR-P10.2:** Continue to designate bike lanes and cross-city bike paths to facilitate non-motorized trips.
 - **Policy TR-P10.4:** Require that new development applications include bike paths or bike lanes, when appropriate.
 - **Policy TR-P10.5:** Enhance, complete, and improve bicycle connections between neighborhoods and between neighborhoods and significant destinations, such as parks, schools, transit stops and transit centers, shopping centers, and employment centers.
- **Goal TR-11:** Ensure safe, pleasant, and convenient pedestrian paths, sidewalks, and trails to accommodate all segments of the population.
 - **Policy TR-P11.1:** Develop a series of continuous pedestrian walkways within the Downtown and residential neighborhoods.
 - **Policy TR-P11.2:** Design separated pedestrian paths and trails to be convenient, visible, and safe for all pedestrian transportation needs.
- **Goal TR-14:** Reduce congestion and driving through transportation systems management (TSM) and transportation demand management (TDM).
 - **Policy TR-P14.1:** Cooperate with public agencies and other entities to promote local and regional public transit serving Vacaville.
 - **Policy TR-P14.4:** Encourage Transportation Demand Management (TDM) programs that limit vehicle use, such as ridesharing and public transit, over those that extend the commute hour, such as flex-time and staggered work hours, to provide greater benefits to regional air quality.

City of Vacaville General Plan Transportation Update Element and Energy Conservation Action Strategy Update EIR (ECAS). The City of Vacaville ECAS update sets forth the following measures related to transportation:

Measure T/LU-3

Implement Transportation Demand Management for New Development.
New projects that are subject to CEQA review will be required to develop and implement transportation demand management programs.
Transportation demand management programs are used widely throughout California to reduce the number of trips taken by single occupancy vehicles. New residential, office, retail, and industrial developments will be held to

similar standards. Residential developments will separate parking from leases and charge for off-street parking.

4.1.5 Impacts and Mitigation Measures

This section analyzes the potential of the proposed project to result in impacts on the transportation network. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

4.1.5.1 Thresholds of Significance

The proposed project would result in a significant impact related to transportation if it would:

- Threshold TRA-1:** Conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Threshold TRA-2:** Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b).

4.1.5.2 Project Impacts

This section analyzes potential project-specific and cumulative impacts to the transportation and circulation network in the study area. As discussed in Chapter 3.0 of this EIR, the proposed project would include the construction of 20 single-family residential estate lots for the future development of custom-built homes. The proposed project would be accessed via an extension of Preserve Lane.

As discussed in Section 4.17 of the Initial Study (**Appendix B**), implementation of the City's **Standard Conditions of Approvals (SCOAs) 192 through 210** would ensure that the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses. Additionally, the proposed project would not alter or block adjacent roadways, and implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. Therefore, these topics are not further addressed in the impact analysis below.

Impact TRA-1 **The proposed project could conflict with applicable plans, ordinances, or policies addressing the circulation system.**

This section discusses the proposed project's impacts related to conflicts with applicable plans, ordinances, and policies related to transportation. As discussed in more detail below, the proposed project would be consistent with applicable plans, ordinances, and policies that address the circulation system.

Roadway Facilities. Vehicles would access the project site via an extension of Preserve Lane with a secondary emergency access route along McMurtry Lane. The proposed project would extend McMurtry Lane to the north and remove the existing cul-de-sac at Preserve Lane within the Reserves at Browns Valley Development to connect McMurtry Lane to Preserve Lane. A 22-foot-wide fire access road would be constructed around the perimeter of the development and connect

to a new multi-use path on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development.

Construction activities associated with the proposed project would result in an increase in traffic on local roadways during the construction period due to heavy equipment transport to and from the site, arrival and departure of construction workers, and import/export of construction material; however, traffic associated with construction would be short-term and temporary.

The City of Vacaville currently operates at a Level of Service (LOS) A for the majority of its roadway network during both AM and PM peak hours. Although, the proposed project is anticipated to generate an additional 22 AM and 22 PM peak hour trips, this increase is not expected to cause any intersections within the City to exceed an LOS mid-D. As outlined in the General Plan, LOS mid-D is considered acceptable for the proposed project area, and the additional trips generated by the project would not conflict with the applicable goals and policies related to the City's transportation system as outlined above.

Although the proposed project would not conflict with Goal TR-5, it would conflict with Policy TR-P3.5, which outlines that residential developments exceeding a level of 15 percent below the existing citywide VMT per capita would create a significant transportation impact. According to the VMT Analysis ⁵ prepared for the proposed project (**Appendix C**), the project would exceed the City's Base Year VMT threshold of 73.4 by 33.4 percent and the City's Cumulative Year threshold of 65.1 by 28.1 percent, resulting in an increase in the total VMT generated by the City of Vacaville. Therefore, the proposed project would conflict with Policy TR-P3.5, and this impact would be **potentially significant**.

Pedestrian Facilities. According to the U.S. Census Bureau,⁶ pedestrian trips comprise approximately 1.1 percent of the total commute mode share in the City of Vacaville. The proposed project would generate additional pedestrian traffic in the area. However, the proposed project would not generate a significant increase in pedestrian and bicycle traffic in the area in comparison to the existing volumes, given the size and nature of the proposed project. A travel survey conducted by Caltrans estimates that each household makes approximately 9.2 trips per day.⁷ Based on the percentage commute mode share above, the proposed project is estimated to generate approximately 2 pedestrian trips⁸ per day. The volume of pedestrian trips generated by the project would not exceed the carrying capacity of the sidewalks and crosswalks nearby. In the project vicinity, pedestrian

⁵ Fehr & Peers. 2024a. *Technical Memorandum, McMurry Creek Estates Rezone VMT Analysis*. January.

⁶ United States Census Bureau. 2021. 5-year ACS Data Table B08134: Means of Transportation to Work by Travel Time to Work. Website: <https://data.census.gov/table?q=B08134:%20Means%20of%20Transportation%20to%20Work%20by%20Travel%20Time%20to%20Work&g=160XX00US0681554> (accessed July 17, 2024).

⁷ California Department of Transportation (Caltrans). 2014. *California Household Travel Survey: More Californians are Walking, Biking, and Riding Transit*. Website: <https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/mile-marker/mm-2014-q2-bike-ped-survey-a11y.pdf> (accessed July 17, 2024).

⁸ 9.2 household trips x 20 households x 0.011 pedestrian trips = 2.02 pedestrian trips per day

facilities include sidewalks in most areas with one exception being the northwestern side of McMurtry Lane, beyond Cheyenne Estates.

Goal TR-10 of the City's General Plan Amended Transportation Element states, "Ensure safe, pleasant, and convenient pedestrian paths, sidewalks, and trails to accommodate all segments of the population."⁹ The proposed project would construct a new multi-use path on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development. Additionally, the proposed project would construct sidewalk facilities consistent with the General Plan along the extension of Preserve Lane. Therefore, the proposed project would be consistent with the City's plans for pedestrian facilities.

The proposed project would not change the design of any existing pedestrian facilities nor create any new safety problems for pedestrians in the area. While the proposed project would increase the potential pedestrians in the area, the volumes added would not significantly impact any existing facilities. As such, the proposed project would not cause substantial changes to the pedestrian traffic in the area and would not significantly impact the design of any existing pedestrian facilities. Therefore, impacts to pedestrian facilities would be **less than significant**.

Bicycle Facilities. United States Census Bureau data indicate that bicycle trips comprise approximately 1.2 percent of the total commute mode share in Vacaville.¹⁰ The low volume of bicycle trips generated by the proposed project would not exceed the bicycle-carrying capacity of streets surrounding the site, and the increase in bicycle trips would not require new off-site bicycle facilities.

There currently are no bike facilities along Preserve Lane; however, the southwestern portion of McMurtry Lane beyond Cheyenne Estates to the east and Browns Valley Road, which connects to McMurtry Lane, provides Class II Bike Lanes within the vicinity of the project site. A multi-use path would also be constructed on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development. The proposed project would not preclude, modify, or otherwise affect existing or proposed bicycle projects or relevant policies identified in the City of Vacaville General Plan.

The proposed project would not change the design of any existing bicycle facilities nor create any new safety problems for bicyclists in the area. While the proposed project would increase the potential bicyclists in the area, the volumes added would not significantly impact any existing bicycle facilities. Therefore, impacts to bicycle facilities would be **less than significant**.

Transit Facilities. As stated above in Section 4.1.2.1, Existing Transportation and Circulation System, bus service in Vacaville is provided by Vacaville City Coach, FAST, and YOLOBUS. City Coach provides local bus service to and from the vicinity of the project site. The nearest bus stop for City Coach, Route 2, is located on Tipperary Drive at Browns Valley Road, approximately one mile south of the project site.

⁹ City of Vacaville. 2021a. *City of Vacaville General Plan Transportation Element*, Chapter III. Pages TR36-19. amended September 28, 2021.

¹⁰ Ibid.

According to the United States Census, transit trips comprise approximately 0.46 percent of the total commute mode share in Vacaville.¹¹ In addition to commuting trips, additional transit trips to nearby schools, parks, and shopping areas could occur due to the proposed project. The low volume of transit trips generated by the project would not exceed the carrying capacity of the existing transit service to the site.

The proposed project, by itself, would not require additional transit service to the area or improvements to existing transit service frequencies. The proposed project would not preclude, modify, or otherwise affect existing or proposed transit projects or policies identified in the City of Vacaville General Plan. Therefore, impacts to transit facilities would be **less than significant**.

Based on the above, the proposed project would conflict with Policy TR-P 3.5 in the City of Vacaville General Plan Transportation Element, as the proposed project would exceed the City's VMT threshold by 33.4 percent in the Base Year and exceed the City's cumulative VMT threshold by 28.1 percent in the Cumulative Year. Potential mitigation measures were identified in the Fehrs & Peers VMT Analysis and evaluated for feasibility and the potential to reduce impacts. The potential mitigation measures that could decrease the impact to VMT included increasing the proposed project's residential density and incorporating affordable and low-income housing. These measures would require a change in the project description and would result in the project no longer meeting its objectives. Although implementation of these mitigation measures would reduce the proposed project's VMT by 14 percent, this reduction would still be less than the 33.4 percent increase in VMT anticipated for the Base Year and the 28.1 percent increase for the Cumulative Year from the proposed project. Therefore, the mitigation measures would not reduce the VMT impacts to a less than significant level and significant and unavoidable impacts would remain. Moreover, adding affordable housing or significantly changing the project size or layout of units could make the project potentially unviable. Therefore, the proposed project would result in a **significant and unavoidable adverse impact** to roadway facilities under Threshold TRA-1.

Impact TRA-2 The proposed project would exceed applicable VMT thresholds of significance.

The analysis in this section is based on the McMurry Creek Estates Rezone VMT Analysis Memorandum for the McMurry Creek Estates prepared by Fehr & Peers.¹² A copy of the VMT Analysis is included in **Appendix C** of this report.

As detailed in the VMT Threshold of Significance for Residential Land Uses in Section 4.13, Methodology, the proposed project would cause a significant transportation impact if it would generate an average VMT per dwelling unit that is greater than 85 percent of the citywide average for that land use type. However, if the above threshold is exceeded, the project's VMT impact could be found to be less than significant if it does not cause the total VMT generated by the City of Vacaville to increase.

¹¹ City of Vacaville. 2021a. *City of Vacaville General Plan Transportation Element*, Chapter III. Pages TR36-19. amended September 28, 2021.

¹² Fehr & Peers. 2024a. *Technical Memorandum, McMurry Creek Estates Rezone VMT Analysis*. January.

As stated in the VMT Analysis, the City's travel demand model was based on Base Year (2015) and Cumulative (2050) year conditions. As such, the citywide daily average VMT per capita for residents within Vacaville in 2020 was found to be 86.4.

The estimated daily VMT per capita for the proposed project in the Base Year is 98.0, approximately 33.4 percent higher than the citywide VMT. Additionally, the VMT per capita for the proposed project in the Cumulative Year is 83.4, which is 28.1 percent higher than the cumulative city-wide VMT. VMT is the measurement of the amount and distance a person drives based on the location and land use type of a project. Therefore, any residential use on the project site would be anticipated to have the same per capita VMT.

The City's SB 743 Implementation Guidelines provide specific VMT metrics by land use, based on outputs from the City's travel demand model for the Base Year (2015) and Cumulative (2050) conditions. As part of the proposed project, the land use designation would be changed from Hillside Agriculture (HA) to Residential Estates (RE) and the RE-12 pre-zoning district would be applied to the project site. The thresholds for single-family unit uses are presented in **Table 4.1.A**, below and are based on average VMT per dwelling unit (DU). As shown in the table, the Base Year citywide average VMT per DU is 86.4, and the significance impact threshold is 73.4, which represents 85 percent of the citywide average for that land use type. The proposed project would exceed the Base Year threshold of 73.4 VMT per dwelling unit by 33.4 percent. Additionally, as shown in **Table 4.1.B**, the proposed project would result in a net increase of 2,508 VMT in the Base Year and would cause the total VMT generated by the City of Vacaville to increase to 6,788,308 VMT for the Base Year. Similarly, the proposed project would result in a net increase of 4,964 VMT in the Cumulative Year and would cause the total VMT generated by the City of Vacaville to increase to 9,575,684 VMT for the Cumulative Year. As a result, the project would lead to **significant impacts** to VMT.

Table 4.1.A: Average VMT per Dwelling Unit Generated by the City of Vacaville

Travel Demand Model	Land Use	Unit	(Average VMT per DU)	Threshold (Average VMT per DU)	Project VMT Per DU	Meets Criteria 1	Comparison with Threshold	Meets Criteria 1	Meets Criteria 2
Base Year (2015)	Single-Family Unit	Dwelling Unit (DU)	86.4	73.4	98.0 ¹	No	+33.4%	NO	NO
Cumulative Year (2050)	Single-Family Unit	Dwelling Unit (DU)	76.6	65.1	83.4	NO	+28.1	NO	NO

Source: SB 743 Implementation Guidelines for City of Vacaville (Fehr & Peers 2021).

¹ VMT for this TAZ is -4.9 percent to 0 percent of the regional average.

SB = Senate Bill

TAZ = Traffic Analysis Zone

VMT = vehicle miles traveled

Table 4.1.B: Total VMT Generated by the City of Vacaville

Scenario	No Project	With Proposed Project	Increase
Base Year	6,785,800	6,788,308	2,508
Cumulative	9,570,720	9,575,684	4,964

Source: Fehr & Peers (2021).

VMT = vehicle miles traveled

Based on the proposed pre-zone and current land use changes, the proposed project would result in a net increase of 2,508 VMT in the Base Year and 4,964 VMT in Cumulative year scenarios. Total VMT generated in the Base Year by the City of Vacaville plus the proposed project would amount to 6,788,308 VMT. Additionally, the total VMT generated in the Cumulative Year by the City of Vacaville plus the proposed project would amount to 9,575,684 VMT. The total VMT generated by City including the Base Year and Cumulative year is presented in **Table 4.1.B** above. Since the proposed project would cause the total VMT generated by the City of Vacaville to increase, the VMT impact would also be **potentially significant** according to Threshold TRA-2.

Based on the above, the proposed project would result in **significant and unavoidable adverse impacts** to VMT under Threshold TRA-2. In order to reach a less than significant impact level for Threshold TRA-2, the proposed project's VMT would need to be reduced by 33.4 percent in the Base Year, and 28.1 percent cumulatively. Potential mitigation measures were identified in the Fehrs & Peers VMT Analysis and evaluated for feasibility and the potential to reduce impacts. The potential mitigation measures that could decrease the impact to VMT include increasing the proposed project's residential density and incorporating affordable and low-income housing. These measures would require a change in the project description and would result in the project no longer meeting its objectives. Although implementing these mitigation measures would reduce the proposed project's VMT by 14 percent, this reduction would still be less than the 33.4 percent increase in VMT anticipated for the Base Year and the 28.1 percent increase for the Cumulative Year. Therefore, the mitigation measures would not reduce the VMT impacts to a less than significant level, and significant and unavoidable impacts would remain. Moreover, adding affordable housing or significantly changing the project size or layout of units could make the project potentially unviable. As no mitigation measures are feasible to reduce the VMT impacts of the proposed project, there would be a **significant and unavoidable adverse impact** related to VMT.

4.1.5.3 Cumulative Impacts

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "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. These impacts can result from a combination of the proposed project together with other projects causing related impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Cumulative transportation impacts can occur when project impacts are combined with the impacts of proposed, approved, and reasonably foreseeable projects. The cumulative geographic study area for VMT transportation includes the projects listed in **Table 4.A** in Chapter 4.0, Setting, Impacts, and Mitigation Measures. As described above, the proposed project would exceed the established VMT threshold in the Base Year and Cumulative condition. As such, VMT impacts are considered significant and unavoidable. Implementation of the proposed project, in addition to other recently completed, planned, and reasonably foreseeable projects within the City, could result in a cumulative VMT impact. Therefore, the proposed project's cumulative VMT impact would be considered **significant and unavoidable**.

5.0 OTHER CEQA CONSIDERATIONS

As required by the California Environmental Quality Act (CEQA), this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable effects.

5.1 GROWTH INDUCEMENT

A project is considered growth-inducing if it would directly or indirectly foster substantial economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are only sparsely developed or are underdeveloped. Typically, development projects on sites that are designated for development and surrounded by existing suburban uses are not considered adversely growth-inducing because growth in areas that already have development and infrastructure available to serve new development is generally considered environmentally beneficial.

Implementation of the proposed project would result in direct population growth within the City of Vacaville (City) specifically through the construction of 20 dwelling units. As discussed in Section 4.14, Population and Housing, of the Initial Study (**Appendix B**), the proposed project could increase the local population by approximately 51 persons. The anticipated population growth associated with the proposed project represents less than a 1 percent increase to the City's current population. Furthermore, the proposed project represents approximately 2.5 percent of the population growth anticipated through 2040. As such, the proposed project would neither directly nor indirectly lead to substantial or unforeseen economic or population growth but would instead contribute to the anticipated local and regional housing supply.

Additionally, the project site is bounded by undeveloped lands to the north and west, and single-family residential uses to the south and east. The Reserve at Browns Valley Phase 3 (Rogers Ranch), which includes 29 single-family residential lots, is located to the south of the project site, and Cheyenne Estates at Browns Valley development (Cheyenne Estates), which includes 221 single-family residential lots, is located to the east. The proposed project would not require the extension of utilities or roads into undeveloped areas that are not planned for the expansion of infrastructure or directly or indirectly lead to development of greenfield sites that are not planned for development. Due to the location of the project site, the presence of existing uses in the vicinity of the site, and consistency with proposed development within the project area, development of the proposed project would not induce unplanned growth in the area. Therefore, the growth that would occur as a result of the proposed project would not be substantial or adverse.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES

CEQA requires an assessment of whether the proposed project would result in significant irreversible changes to the physical environment. The *State CEQA Guidelines* discuss three categories of significant irreversible changes that should be considered. Each is addressed below.

5.2.1 Changes in Land Use Which Commit Future Generations

As previously stated in Chapter 3.0, Project Description, the proposed project is located within the City's Sphere of Influence (SOI) and the Urban Growth Boundary (UGB) and is generally surrounded by undeveloped lands to the north and west, and single-family residential uses to the south and east. As part of the proposed project, approximately 15.73 acres of land from Solano County into the City of Vacaville would be annexed to develop a subdivision consisting of 20 single-family residential estate lots and associated roadway and utility improvements. To maintain consistency with the City's General Plan and its Zoning Ordinance, the proposed project would require a General Plan Amendment to change the General Plan designation for the site from Hillside Agriculture (HA) to Residential Estates (RE) and a Zoning Map Amendment to Pre-Zone the site as Residential Estates (RE-12). In the future, the site could be rezoned, in which case, at the end of the useful life of the proposed project, the use could change. Therefore, the proposed project would not commit future generations to a significant change in land use.

5.2.2 Irreversible Damage from Environmental Accidents

No significant environmental damage, such as an accidental spill or explosion of a hazardous material, is anticipated to occur with development of the proposed project. As described in Section 4.9, Hazards and Hazardous Materials, of the Initial Study (**Appendix B**), the project site does not include any active storage sites listed on the State Water Resources Control Board's (SWRCB) Leaking Underground Storage Tanks database or the SWRCB's site cleanup program database,¹ which are two of the component databases that comprise the California Environmental Protection Agency (Cal/EPA) Hazardous Waste and Substances Sites List (Cortese List) of known hazardous materials compiled pursuant to Government Code Section 65962.5. Active sites are not listed for the project on other components of the Cortese List, including the California Department of Toxic Substances Control (DTSC) hazardous waste and substance list.² Additionally, no properties with recognized environmental conditions or historical recognized environmental conditions were identified within 0.5 mile of the project site. No irreversible changes, such as those which might result from construction of a large-scale mining project; a hydroelectric dam project; or other institutional project, would result from development of the proposed project.

¹ State Water Resources Control Board (SWRCB). 2023. GeoTracker. Website: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4420+McMurtry+Lane%2C+Vacaville%2C+CA+95688> (accessed March 15, 2024).

² California Department of Toxic Substances Control (DTSC). 2023. Hazardous Waste and Substances Site List (Cortese). Website: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+228CORTESE%29 (accessed March 15, 2024).

5.2.3 Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. As discussed in Section 4.2, Agriculture and Forestry Resources, of the Initial Study (**Appendix B**), the State Department of Conservation (DOC) designates the site as “Grazing Land” and “Urban and Built-Up Land.” Therefore, the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to another use, and no impact would occur. In addition, as discussed in Section 4.12, Mineral Resources, of the Initial Study (**Appendix B**), the project site does not contain known mineral resources and does not serve as a mining reserve; thus, development of the proposed project would not result in the loss of access to mining reserves. Refer to the Initial Study included in **Appendix B** for a discussion of impacts related to agricultural and mining resources.

Construction of the proposed project would require the use of energy, including energy produced from non-renewable resources. Energy consumption would also occur during the operational period of the proposed project. The proposed project is expected to be relatively energy efficient and would incorporate green building measures in compliance with the latest California Green Building Standards Code (CALGreen Code) standard building measures for residential buildings and Title 24 requirements. As discussed in Section 4.6, Energy, of the Initial Study (**Appendix B**), the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design, equipment uses, and transportation. With implementation of **Mitigation Measure AIR-1**, in Section 4.3, Air Quality and **Standard Condition of Approval (SCOA) 78**, construction energy impacts would be less than significant. Additionally, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State’s available energy sources. Therefore, the proposed project would not result in a significant impact associated with the consumption of non-renewable resources.

5.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

The environmental topic analyzed in Chapter 4.0 represented the topic that generated the greatest potential controversy and potential for adverse impacts associated with development of the proposed project. As discussed in more detail in the Initial Study (**Appendix B**), the following topics are not addressed in this Environmental Impact Report (EIR) because impacts related to these topics either would not occur, would be less than significant, or would be reduced to a less than significant level with the implementation of mitigation measures. A summary of the conclusions provided in the Initial Study analysis for each of the topics scoped out of the EIR is provided below.

5.3.1 Aesthetics

As discussed in Section 4.1, Aesthetics, of the Initial Study, the project site is located on two parcels that are largely undeveloped within a rural residential area. Views to the north and west consist primarily of the grassy rolling hillsides of the English Hills and Vaca Mountains, which are considered scenic views within the City; however, the City’s General Plan does not designate any official scenic vistas. Development of the proposed project would result in the construction of 20 residential lots for future custom-built homes and associated site improvements and would match the existing design theme and general character of the surrounding residential uses to the south and east and

would be visually cohesive with the surrounding landscape. As noted in the Initial Study, there are no officially designated State scenic highways in Vacaville and the proposed project would not adversely affect important public view corridors within the vicinity of the project site. Additionally, the proposed project would comply with the City's objectives and policies related to scenic quality and project design. Indoor and exterior lighting included in the proposed project would generally blend in with surrounding development; however, compliance with **SCOAS 206 and 209**, identified in the Initial Study, would be required to ensure that light or glare from the proposed project would not adversely affect day or nighttime views in the area. Therefore, potential impacts related to scenic vistas, scenic resources, scenic regulations, and light and glare would be **less than significant**.

5.3.2 Agriculture and Forestry Resources

As discussed in Section 4.2, Agriculture and Forestry Resources, of the Initial Study, the proposed project site consists primarily of vacant grassland, with the exception of existing residential structures and vacant livestock enclosures along the western edge of the site adjacent to McMurry Lane. The project site is classified as "Grazing Land" by the State Department of Conservation and is largely surrounded by lands classified as "Grazing Land" with "Urban and Built-Up Land" to the east. The proposed project would change the General Plan designation for the project site from HA to RE and rezone the site to RE-12. The project site is largely undeveloped but is currently used for residential and ranching purposes. The site is not actively farmed and lacks connectivity to surrounding farming infrastructure. Surrounding uses are vacant lands to the north and west and residential land uses to the south and east. The project site is not used for agricultural production nor does it support forestry resources. Therefore, there would be **no impact** to agricultural and forestry resources.

5.3.3 Air Quality

As discussed in Section 4.3, Air Quality, of the Initial Study, the proposed project would generally implement the applicable measures outlined in the 2017 Sacramento Regional 2008 8-Hour Ozone and Further Reasonable Progress Plan. Additionally, the proposed project would be consistent with the 2021 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the population growth assumptions for the region. Therefore, the project would not disrupt or hinder implementation of a control measure from an applicable air quality plan.

Construction emissions associated with the project would be less than significant for reactive organic gasses (ROG), nitrogen oxides (NO_x), and suspended particulate matter (particulate matter less than 2.5 microns in size [PM_{2.5}] and particulate matter less than 10 microns in size [PM₁₀]) exhaust emissions and would not result in the generation of substantial emissions. The Yolo-Solano Air Quality Management District (YSAQMD) requires the implementation of Construction Mitigation Measures (best management practices [BMPs]) to reduce construction fugitive dust impacts. With implementation of **Mitigation Measure AIR-1**, as identified in the Initial Study, construction of the proposed project would not substantially contribute to an air quality violation.

The primary emissions associated with the proposed project are regional in nature, meaning that air pollutants are rapidly dispersed on release or that, in the case of vehicle emissions associated with the project, emissions are released in other areas of the Sacramento Valley Air Basin. The daily and annual emissions associated with project operational trip generation, energy, and area sources

would not exceed the significance criteria for daily ROG, nitrogen dioxide (NO₂), or PM₁₀ or PM_{2.5} emissions; therefore, the proposed project would not have a significant effect on regional air quality.

The proposed project site is located in a rural area within close proximity to existing residential uses that could be exposed to diesel emission exhaust during the construction period. The closest sensitive receptors to the project site include the single-family homes located south of the project site at within 50 feet. Construction activities would affect localized air quality during the construction phases of the proposed project. Short-term emissions from construction equipment during these site preparation activities would include directly emitted PM (PM_{2.5} and PM₁₀) and toxic air contaminant (TACs) such as diesel particulate matter (DPM). Generation of these short-term emissions could potentially expose sensitive receptors to substantial pollutant concentrations of TACs, resulting in a localized health risk. However, construction contractors would be required to implement construction fugitive dust impacts, as required by **Mitigation Measure AIR-1** above. With implementation of **Mitigation Measure AIR-1**, project construction emissions would be below YSAQMD significance thresholds. The proposed project does not include stationary sources that would emit air pollutants or TACs, such as large boilers, emergency generators, or manufacturing facilities or result in a substantial increase in diesel vehicles (i.e., delivery trucks). As such, project operations would not result in TAC generation from on-site sources during long-term operations and would not result in the creation of a significant health risk at nearby sensitive receptors.

Implementation of the proposed project would not create objectionable odors affecting a substantial number of people or subject persons to objectionable odors.

Implementation of **Mitigation Measure AIR-1**, as identified in the Initial Study, would ensure that potential impacts of the proposed project to air quality would be **less than significant with mitigation incorporated**.

5.3.4 Biological Resources

As discussed in Section 4.4, Biological Resources, of the Initial Study, the project site is primarily vacant and generally consists of nonnative annual grassland; however, the project site provides moderate suitable habitat for five special-status plants. **Mitigation Measure BIO-1** would be required to reduce potential impacts to special-status plants. Additionally, the project site provides potentially suitable habitat for northwestern pond turtle, western burrowing owl, valley elderberry longhorn beetle, Swainson's hawk, and white-tailed kite. **Mitigation Measures BIO-2 through BIO-21** would be required to reduce potential impacts to northwestern pond turtle, western burrowing owl, valley elderberry longhorn beetle, Swainson's hawk, and white-tailed kite to a less than significant level.

The project site contains a 0.311-acre seasonal wetland that would be permanently impacted as a result of the proposed project. **Mitigation Measures BIO-22 and BIO-23** would reduce impacts to federally protected wetland resources to less than significant levels. The project site is composed of annual grasslands with scattered trees and shrubs. Although the proposed project site would provide shade, structure, and potential hiding spots for predators and prey, there are no major wildlife movement corridors that pass through the project site. Implementation of **Mitigation**

Measures BIO-1 through BIO-21 would ensure that temporary impacts to migrating special-status wildlife species would be less than significant.

While the proposed project is not anticipated to remove any trees during construction, implementation of **Mitigation Measure BIO-24** would reduce potential construction-related impacts to trees to a less than significant level if any tree removal does occur.

The project site lies within the Draft Solano Multispecies Habitat Conservation (HCP) Plan Area.³ The Solano HCP has been developed to support the issuance of a Section 10(a)1(B) incidental take permit under the federal Endangered Species Act of 1973 (as amended). Implementation of **Mitigation Measures BIO-1 through BIO-23** would ensure that the proposed project would not conflict with the provisions of the HCP. Therefore, potential impacts related to biological resources would be **less than significant with mitigation incorporated**.

5.3.5 Cultural Resources

As discussed in Section 4.5, Cultural Resources, of the Initial Study, the existing ranch property in the southern portion of the Project Area and a Historic Pacific Gas & Electric (PG&E) Transmission Line Segment located in the western portion of the Project Area are considered historic-era cultural resources; however, these resources were determined not eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The proposed project could result in potentially significant impacts related to the potential accidental discovery of archaeological resources or human remains during site preparation activities. With implementation of **Mitigation Measures CULT-1 and CULT-2**, identified in the Initial Study, these impacts would be reduced to a less than significant level. **Mitigation Measures CULT-1 and CULT-2** would ensure that potential impacts to previously unknown archaeological resources or human remains would be **less than significant with mitigation incorporated**.

5.3.6 Energy

As discussed in Section 4.6, Energy, of the Initial Study, energy usage on the project site during construction would be temporary in nature; however, in order to increase energy efficiency on the site during project construction, implementation of **Mitigation Measure AIR-1** would be required to reduce construction energy impacts to less than significant levels. The expected energy consumption during construction and operation of the proposed project would be consistent with typical usage rates for residential uses. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources, and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level and because the proposed project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the 2023 Integrated Energy Policy Report. Additionally, the proposed project would be constructed to California Green Building Standards Code (CALGreen Code) standards, which would help to reduce energy and natural gas consumption. The proposed project would be constructed using energy-efficient modern building materials and construction practices,

³ LSA. 2012. *Solano Multispecies Habitat Conservation Plan*. October.

and would use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (Title 20, California Code of Regulations [CCR] Sections 1601 through 1608). The proposed project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and not result in any irreversible or irretrievable commitments of energy. Therefore, potential operational impacts related to energy use would be **less than significant with mitigation incorporated**.

5.3.7 Geology and Soils

As discussed in Section 4.7, Geology and Soils, of the Initial Study, the proposed project is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. Compliance with existing regulations, including **Mitigation Measure GEO-1** and **SCOAs 104 through 106** would ensure that potential impacts related to strong seismic ground shaking and seismic-related ground failure, including liquefaction or landsliding, would be less than significant.

Grading and earthmoving during project construction would have the potential to result in erosion and loss of topsoil on the project site. Additionally, operation of the proposed project would increase the amount of impervious surface area resulting in increased stormwater runoff. Implementation of **Mitigation Measure HYD-1**, which would require preparation of a Stormwater Pollution Prevention Plan (SWPPP), would reduce this impact to a less than significant level. Additionally, implementation of **Mitigation Measures GEO-2** would ensure that potential impacts of the proposed project to paleontological resources would be **less than significant with mitigation incorporated**.

5.3.8 Greenhouse Gas Emissions

As discussed in Section 4.8, Greenhouse Gas Emissions, of the Initial Study, the proposed project would generate greenhouse gas (GHG) emissions during both the construction and operation periods. According to California Emissions Estimator Model (CalEEMod), it is estimated that construction of the proposed project would generate approximately 262.5 metric tons of carbon dioxide equivalent (CO₂e). Since the YSAQMD does not have an adopted threshold of significance for construction-related GHG emissions, project construction impacts associated with GHG emissions would be considered **less than significant**.

The proposed project is consistent with most aspects of the City of Vacaville's Energy and Conservation Action Strategy (ECAS), and the project is not expected to obstruct the attainment of the State's long-term GHG reduction goal for 2050. Therefore, the proposed project would be consistent with the City's ECAS and would not generate GHG emissions that may have a significant effect on the environment. Therefore, impacts related to GHG emissions would be **less than significant**.

5.3.9 Hazards and Hazardous Materials

As discussed in Section 4.9, Hazards and Hazardous Materials, of the Initial Study, the proposed project would not include the routine transport, use, or disposal of significant quantities of hazardous materials. Implementation **Mitigation Measure HYD-1**, which includes preparation of a SWPPP, would reduce impacts of the potential release of hazardous materials into surrounding

water ways during construction activities to a less than significant level. Therefore, impacts related to the release of hazardous materials into the environment would be **less than significant with mitigation incorporated**. A review of the SWRCB's Leaking Underground Storage Tanks database, the DTSC, and the DTSC EnviroStor database did not identify any hazardous materials of concern at the project site or within 0.5 mile of the project site. The project site is not located on a site included on a list of hazardous materials sites, nor is it located within an airport land use plan or within two miles of any airport. The proposed project would not substantially alter any adjacent roadways, and; therefore, would not be expected to impair the function of nearby evacuation routes. Compliance with existing regulations, including the California Building Code, the California Fire Code, the Vacaville Fire Department, and the Solano County Fire Protection District would ensure that the proposed project would not expose people to loss, injury, or death involving wildland fires. Therefore, impacts related to hazards and hazardous materials would be **less than significant with mitigation incorporated**.

5.3.10 Hydrology and Water Quality

As discussed in Section 4.10, Hydrology and Water Quality, of the Initial Study, the proposed project would involve construction activities that would disturb over one acre of soil, and therefore would be required to comply with the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit [CGP]) as specified in **Mitigation Measure HYD-1**. The proposed project would also be required to comply with the NPDES General Permit for Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) and would also be required to comply with the VMC as described in **Mitigation Measure HYD-2**. Adherence to the CGP and the VMC, as specified in **Mitigation Measures HYD-1 and HYD-2**, would ensure that the proposed project would not violate any water quality standards or waste discharge requirements associated with State or City requirements. With implementation of **Mitigation Measures HYD-1 and HYD-2**, construction impacts related to surface water quality standards, waste discharge requirements, and surface water quality would be less than significant.

Operation of the proposed project would increase the amount of impervious surface area on the project site. The increase in impervious surface area could result in increased stormwater runoff (both flow rate and volume) from the project site relative to pre-project conditions, which may result in hydromodification impacts. Project operations would be subject to the requirements of the Small Phase II MS4 Permit. With implementation of the **Mitigation Measures HYD-2, HYD-3, and HYD-4**, which require compliance with the requirements of the VMC, Small Phase II MS4 Permit, and the *Storm Drain Design Standards Section DS 4* developed by the City, operational impacts related to a violation of any water quality standards or waste discharge requirements would be **less than significant with mitigation incorporated**.

As implementation of the proposed project would not contribute to a substantial depletion of groundwater supplies and the project site is not a significant source of groundwater recharge, the proposed project would not result in a significant decrease in groundwater recharge that would result in a net deficit in aquifer volume or a lowering of the local groundwater table level.

The proposed project would result in a net increase in impervious surface coverage of approximately 213,856 square feet, which could have the potential to increase the volume and rate of stormwater runoff discharged from the project site. However, the proposed project would include an on-site stormwater collection system to direct on-site storm water flows to an approximately 15,000-square-foot landscaped detention pond located at the northern end of the project site. Implementation of **Mitigation Measures HYD-1 through HYD-4**, which require BMPs to reduce pollutants of concern in stormwater runoff in compliance with the CGP, the Small Phase II MS4 Permit, and City regulations would ensure that the proposed project would result in less than significant impacts related to the discharge of polluted runoff during project construction and operations. Therefore, implementation of **Mitigation Measures HYD-1 through HYD-4** would ensure that pollutants would be treated and prevented from reaching downstream receiving waters during a rain event.

The project is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB), which has adopted a Water Quality Control Plan that designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. Implementation of **Mitigation Measures HYD-1 through HYD-4** would ensure that the proposed project would not degrade or alter water quality, which would cause the receiving waters to exceed the water quality objectives or impair the beneficial uses of receiving waters. Additionally, the proposed project would connect to Vacaville's Municipal Water System, which would be partially obtained from groundwater. The 2020 Urban Water Management Plan (UWMP) completed for the City indicates that the City does not expect any water supply shortages in future years, even in a drought. Therefore, construction and operational impacts related to conflicts with, or obstruction of water quality control plans or sustainable groundwater management plans would be **less than significant with mitigation incorporated**.

5.3.11 Land Use and Planning

As discussed in Section 4.11, Land Use and Planning, of the Initial Study, the proposed project would not create any physical barriers to travel in the vicinity of the project site. The proposed project would include the development of single-family residential uses on a primarily undeveloped site surrounded primarily by vacant lands to the north and west, and residential uses to the east and south. The proposed project would extend McMurtry Lane to the north and remove the existing cul-de-sac at Preserve Lane within the Reserves at Browns Valley Development to connect McMurtry Lane to Preserve Lane. Additionally, a 22-foot-wide fire access road would be constructed around the perimeter of the development and connect to a new multi-use path on the eastern side of the proposed development, allowing access to White Stone Court, Rolling Sage Circuit, and Peacock Way within the Cheyenne Estates development. Therefore, the proposed project would not physically divide an established community.

The proposed project is located within the City's SOI and the UGB. According to the Vacaville General Plan, the SOI is a boundary that identifies land that the City may annex in the future for which urban services, if available, would be provided. The UGB indicates the maximum allowable extent of urbanization. Beyond this boundary, only agricultural or open space uses are typically permitted. The proposed project would require a General Plan Amendment to change the General Plan designation for the site from HA to RE and would apply the RE-12 pre-zoning district to the

project site. The Residential Estate designation is generally characterized by very low-density residential uses, while the RE-12 district is intended to provide for residential development in a semi-rural setting on lots with a minimum lot size of 12,000 square feet and permits residential densities between 0.5 and 3.0 dwelling units per acre. The proposed project would have a density of 2.56 units per acre. The proposed project would not conflict with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts related to land use and planning for CEQA purposes would be **less than significant**.

5.3.12 Mineral Resources

As discussed in Section 4.12, Mineral Resources, of the Initial Study, The City of Vacaville General Plan identifies three areas with the potential to contain mineral resources including along Cement Hill, in the Vaca Mountains, and the western hills, none of which are in the nearby vicinity of the project site. Therefore, development of the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and there would be **no impact** related to mineral resources.

5.3.13 Noise

As discussed in Section 4.13 Noise, of the Initial Study, implementation of the proposed project would include construction activities that would result in a substantial temporary increase in ambient noise levels in the vicinity of the project site; however, it is expected that average noise levels during construction at the nearest sensitive use to the south would approach a 65 A-weighted decibel equivalent continuous sound level (dBA L_{eq}) during the grading phase. Average noise levels during other construction phases would range from 51 dBA L_{eq} to 63 dBA L_{eq} . This is well below the Federal Transit Administration's (FTA) limit of 90 dBA L_{eq} for construction noise. Therefore, no noise reduction measures are required. The proposed project would generate long-term noise impacts from traffic noise sources; however, the increase in noise from the proposed project would be less than 3 dBA resulting in a less than perceptible increase in noise. Therefore, all off-site traffic noise impacts would be less than significant, and the proposed project would not create a substantial permanent increase in ambient noise levels.

The proposed project would generate construction-period noise and vibration impacts from the proposed project from the operation of typical heavy construction equipment; however, these levels would not exceed the 0.2 inch per second peak particle velocity (PPV) guideline that is considered safe for non-engineered timber and masonry buildings. Therefore, impacts resulting in generation of excessive ground-borne vibration and ground-borne noise would be less than significant. Further, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with aircraft activity and impacts related to construction-period noise. Therefore, the proposed project would result in **less than significant** impacts to noise and vibration.

5.3.14 Population and Housing

As discussed in Section 4.14 Population and Housing, of the Initial Study, the proposed project would result in the substantial construction of 20 single-family residential estate lots for the future development of custom-built homes. Based on the household size of 2.56 persons per household,

the proposed project would increase the local population by approximately 51 persons.⁴ The population of the City was estimated to be approximately 101,918 persons as of July 1, 2022.⁵ The anticipated population growth associated with the proposed project represents less than a 1 percent increase to the City's current population. The City's population is projected to grow by 1,987 persons to a total of 105,065 persons by 2040.⁶ The proposed project represents approximately 2.5 percent of the population growth anticipated through 2040. Therefore, the proposed project would not result in substantial unplanned population growth in the area, and this impact would be less than significant. The proposed project would not include the removal of any existing residential uses and therefore would not require the construction of replacement housing elsewhere. Therefore, impacts related to population and housing would be **less than significant**.

5.3.15 Public Services

As discussed in Section 4.15 Public Services, of the Initial Study, the Vacaville Fire Department (VFD) would provide adequate service to the project site. In addition, the project Applicant would be required to pay a fire development impact fee that would be directed towards maintaining adequate service levels, ensuring that any impact to fire protection that could result from the proposed project would be offset by development fees and in effect, reduce potential impacts to a less than significant level.

Because the proposed project would represent less than 1 percent of the overall projected growth for Vacaville, new police protection facilities would not be required to serve the site. In addition, the project Applicant would be required to pay a police development impact fee that would be directed towards maintaining adequate service levels, ensuring that any impact to police protection that could result from the proposed project would be offset by development fees, and in effect, reduce potential impacts to a less than significant level.

Furthermore, in January 2006, Community Facilities District No. 10 ("CFD 10 Cheyenne") was formed to provide fire and law enforcement services within the district. As a result, the proposed project would be required to annex into CFD No. 10 to provide ongoing property tax contribution for fire and police services to this district.

The proposed project would be subject to the payment of development impact fees, which under Senate Bill 50 are deemed to be full and complete mitigation for the generation of new students. The proposed project would include private and public open space and contribute development impact fees that would address infrastructure and service needs and would not result in substantial deterioration of parks or other public facilities. Therefore, the proposed project's impacts to public services would be **less than significant**.

⁴ 2.56 persons per household x 20 units = 51 persons

⁵ United States Census Bureau. 2022. Quick Facts. Website: <https://www.census.gov/quickfacts/fact/dashboard/solanocountycalifornia/PST045222> (accessed January 2, 2024).

⁶ Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2017. *Projections 2040*. Website: projections.planbayarea.org (accessed July 2023).

5.3.16 Recreation

As discussed in Section 4.16 Recreation, of the Initial Study, development of the proposed project could increase the use of parks within the vicinity of the project site, including Ridgeview Park, Browns Valley Park, Centennial Park, Trower Park, and Alamo Creek Park, and parks within the region, including Lagoon Valley Regional Park. Although the proposed project would incrementally increase the use of these facilities, this minor increase in use is not expected to result in substantial physical deterioration of local parks, trails, and community centers. In addition, the project Applicant would be required to pay a park and recreation development impact fee and a greenbelt preservation fee that would be directed towards funding the development of additional park sites and recreation facilities and the acquisition of greenbelt property surrounding Vacaville. These fees would ensure that any impact to parks that could result from the proposed project would be offset by development fees, and in effect, reduce potential impacts to a less than significant level. Additionally, the proposed project does not include or require the construction or expansion of existing public recreational facilities. Therefore, the proposed project's impacts on recreational facilities would be **less than significant**.

5.3.17 Tribal Cultural Resources

As discussed in Section 4.18, Tribal Cultural Resources, of the Initial Study, no known tribal cultural resources, as defined by Public Resources Code Sections 5020.1(k) and 5024.1, are located within or in the immediate vicinity of the site. Potential impacts to potential tribal cultural resources would be reduced to a less than significant level with implementation of **Mitigation Measures CULT-1 and Mitigation Measures TCR-1 through TCR-6** as identified in the Initial Study.

Assembly Bill (AB) 52 states that prior to the release of an EIR for public review, a lead agency must provide the opportunity to consult with local tribes. The City sent letters describing the proposed project and maps depicting the project site to Native American tribes that the Native American Heritage Commission (NAHC) identified as traditionally and culturally affiliated with the project area on February 12, 2024 the City received a letter from the Yocha DeHe Cultural Resources Department regarding a request for a formal consultation on the proposed project. On May 16, 2024, during the consultation, Eric from Yocha DeHe Wintun Nation, requested that the proposed project include cultural sensitivity training, and spot-monitoring 1–2 times per week. Additionally, the Yocha DeHe Wintun Nation sent the City mitigation measures for tribal cultural resources, which the City accepted with no modifications or revisions. Given that no additional requests for consultation were received or additional information as to the presence of known tribal cultural resources in the area were provided by tribal representatives, it is concluded that, with implementation of **Mitigation Measures CULT-1 and Mitigation Measures TCR-1 through TCR-6** as identified in the Initial Study, impacts to tribal resources would be **less than significant with mitigation incorporated**.

5.3.18 Utilities and Service Systems

As discussed in Section 4.19 Utilities and Service Systems, of the Initial Study, the proposed project would be adequately served by wastewater, water, and stormwater facilities, and existing water entitlements and solid waste capacity would be sufficient. Therefore, impacts to utilities and service systems would **less than significant**.

5.3.19 Wildfire

As discussed in Section 4.20, Wildfire, of the Initial Study, the proposed project site is located in a High Fire Hazard Severity Zone (HFHSZ) as mapped by the California Department of Forestry and Fire Protection (CAL FIRE) and Solano County. In its existing condition, the project site is designated as a State Responsibility Area (SRA) in a HFHSZ.⁷ Furthermore, the project site is located within a wildland-urban interface (WUI) intermix zone.⁸ Upon annexation of the 15.73-acre project site into the City of Vacaville, the project site would be redesignated into a Local Responsibility Area (LRA).⁹ The proposed project would construct emergency access lanes around the perimeter of the project site. Emergency vehicles would be able to access the project via Preserve Lane (Public Street) as well as two emergency vehicle accesses (i.e., McMurtry Lane and White Stone Court). The proposed project would not require or result in any long term or permanent lane closures on roadways adjacent to the site. Additionally, the proposed project would not impair the implementation of, or physically interfere with, an adopted emergency response plan. Therefore, the proposed project would have a **less than significant impact** to an adopted emergency response plan or emergency evacuation plan, the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and the exacerbation of fire risks due to the installation or maintenance of associated infrastructure. The proposed project would result in potential impacts to the exposure of 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 during construction and operation of the proposed project. Implementation of **Mitigation Measure GEO-1** and **Standard Conditions of Approval (SCOAs) 104 through 106** and **Mitigation Measures HYD-1 through HYD-4** would reduce impacts to on-site occupants related to post-wildfire flooding and landslide risks to a less than significant level and impacts would be **less than significant with mitigation incorporated**.

5.4 SIGNIFICANT UNAVOIDABLE IMPACTS

The proposed project would result in a significant and unavoidable impact related to transportation. Specifically, the proposed project would exceed the applicable vehicle miles traveled (VMT) threshold of significance, and no feasible mitigation measures are available to reduce this impact to a less than significant level. Refer to Chapter 4.0 of this Draft EIR for additional discussion of this impact.

⁷ Solano County. 2023. State Responsibility Area. Fire Hazard Severity Zones in State Responsibility Area - Solano County. June. Website: <https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.Azureedge.net/> (accessed May 23, 2024).

⁸ United States Forest Service (USFS). 2020. Wildland Urban Interface Map. Website: <https://usfs.maps.arcgis.com/home/webmap/viewer.html?layers=454bddfa18784660a472685ac7965881> (accessed April 26, 2024).

⁹ Ibid.

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6.0 ALTERNATIVES

In accordance with the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines* (Section 15126.6), an Environmental Impact Report (EIR) must describe a reasonable range of alternatives to the project, or to the location of the project, which could attain most of the project's basic objectives while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. An EIR does not need to 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.

As an EIR identifies ways to mitigate or avoid significant effects that a project may have on the environment, the discussion of alternatives should focus on alternatives to the project or its location that are capable of avoiding or substantially lessening significant effects of the project. The EIR needs to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project, the significant effects of the alternative should be discussed, but in less detail than the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

6.1 PROPOSED PROJECT

6.1.1 Project Characteristics

As described in more detail in Chapter 3.0, Project Description, the proposed project would involve the annexation of 15.73 acres of land from Solano County into the City of Vacaville to develop a subdivision consisting of 20 single-family residential estate lots and associated roadway and utility improvements. The residential estates would be executive-style custom homes on lots ranging from 12,412 to 63,749 square feet in size.

6.1.2 Project Objectives

The following objectives have been established for the proposed project:

- Encourage development within the City of Vacaville Sphere of Influence (SOI);
- Encourage development within the City of Vacaville's Urban Growth Boundary (UGB);
- Encourage carefully planned new development in undeveloped portions Vacaville;
- Preserve and enhance the existing character and sense of place in residential neighborhoods;
- Promote the City's Economic Development Strategy; and
- Support the City's Strategic Plan goals.

6.2 SELECTION OF ALTERNATIVES

Section 21100 of the Public Resources Code and Section 15126.6 of the *State CEQA Guidelines* require an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives

to the proposed project that would feasibly attain most of the basic objectives of the proposed project and would avoid or substantially lessen any of the significant environmental impacts.

The potential environmental effects of implementing the proposed project are analyzed in Section 4.1 of this Draft EIR. The proposed project has been described and analyzed in the previous chapters and in the Initial Study (included as **Appendix B**), with an emphasis on evaluating significant impacts resulting from the project and identifying mitigation measures to avoid or reduce these impacts to a less than significant level. It should be noted that aside from the significant unavoidable impact related to vehicle miles traveled (VMT), all of the impacts identified for the proposed project can be mitigated to a less than significant level with implementation of the recommended mitigation measures.

The two alternatives to the proposed project that are discussed and evaluated in this chapter are the following:

- **No Project Alternative.** Under the No Project Alternative, the proposed project would not be developed and the project site would generally remain in its current condition. The project site would continue to be occupied by the existing single-family home, trailer, livestock enclosures, and associated storage structures. No modifications to existing site access, easements, or infrastructure would occur.
- **Partial Build Alternative.** Under the Partial Build Alternative, the project site would only be built out with 10 single-family residential lots. Similar to the proposed project, the Partial Build Alternative would include 3.7 acres of landscaping for fire protection around the perimeter of the proposed lots, and 2.44 acres of designated open space and include associated roadway and utility improvements. Under this alternative, the annexation of the project site into the City of Vacaville City Limits, the General Plan Amendment, the Zoning Map Amendment to Pre-Zone as Residential Estates (RE-12), the Tentative Subdivision Map Approval and Planned Development Approval would still be required, similar to the proposed project.

These alternatives represent a reasonable range of potential alternatives to the proposed project in light of the objective of reducing the significant unavoidable impact identified in this EIR. One other potential alternative was also considered, as discussed later in this chapter; however, while this alternative would substantially reduce or avoid the environmental impacts of the proposed project, this alternative would not be a feasible option and would not meet all of the project objectives. This alternative was therefore not selected for further analysis.

The purpose of this discussion of alternatives to the proposed project is to enable decision-makers to evaluate the project by considering how alternatives to the project as proposed might reduce or avoid the project's impacts on the physical environment. The analysis in this chapter provides both a quantitative and qualitative evaluation of the environmental impacts that could be associated with each alternative and compares those potential impacts to those identified for the proposed project as described in Chapter 4.0 of this EIR.

If the City of Vacaville decision-makers were to decide to move forward with any of the development alternatives as identified in this chapter, additional site planning and design work and analysis would be required for the environmental impacts associated with the alternative, and specific mitigation measures for each potentially significant impact would need to be developed and considered.

6.2.1 No Project Alternative

The following provides a description of the No Project Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the No Project Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the No Project Alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the project.

The No Project Alternative would not require any grading or site work because no new development would occur on the project site. The project site would remain developed with the existing single-family home and associated storage structures. No modifications to existing site access or infrastructure would occur. This alternative would not increase vehicle trips to and from the project site over existing conditions. Therefore, no traffic impacts would occur, and the No Project Alternative's impacts would be less than those of the proposed project. Additionally, the significant and unavoidable impact related to VMT would not occur as no new trips would be created.

The No Project Alternative would avoid the significant impacts associated with the proposed project, and no mitigation measures would be required; however, none of the project objectives would be achieved.

6.2.2 Partial Build Alternative

The following provides a description of the Partial Build Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the Partial Build Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the Partial Build Alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the project.

The Partial Build Alternative would develop the same use as the proposed project on the same project site. As such, it can be assumed that construction methods, equipment, and activities would be similar for both the proposed project and this alternative. It can also be assumed that alterations to topography and vegetation on the site would be similar for both developments. The same regulations, ordinances, standards, and policies applicable to the proposed project would also be applicable to this alternative. Due to the similarity in the development type, design, use, and location to the proposed project, this alternative satisfies the primary project objectives. However, because residential development under this alternative would be reduced by approximately 50 percent, this alternative would not satisfy the project objectives to the same degree as the proposed project.

Under the Partial Build Alternative, the project site would only be built out with 10 single-family residential lots. Similar to the proposed project, the 15.73-acre project site would be annexed into the City of Vacaville for the development of residential lots ranging from 12,412 to 63,749 square feet in size. It is assumed that roadway and infrastructure improvements identified for the proposed project would remain the same under the Partial Build Alternative and would be constructed consistent with City standards and regulations. Therefore, consistent with the proposed project, the Partial Build Alternative would result in less than significant impacts to inadequate emergency access.

As the Partial Build Alternative would have a 50 percent reduction in residential development, it is assumed that this alternative would reduce the pedestrian and bicycle trips to and from the project site and reduce the VMT generated by the project. Therefore, the Partial Build Alternative would not conflict with applicable programs, plans, ordinances, or policies addressing the circulation system, and impacts under this alternative would be less than significant. Additionally, the build out of only 10 single-family residential units would qualify as a “small project” under the Interim Senate Bill (SB) 743 Implementation Guidelines for the City of Vacaville Screening Thresholds. Under these Screening Thresholds, small projects would be considered less than significant if they would generate 110 trips per day or less. According to the guidelines, this trip generation would equate to 11 single-family dwelling units. Therefore, the Partial Build Alternative would qualify as a small project, would result in less than significant impacts to VMT, and no significant unavoidable impacts related to VMT would occur. The level of impact associated with this environmental topic would be reduced to a level less than significant under the Partial Build Alternative compared to the proposed project.

The Partial Build Alternative would avoid the significant impacts associated with the proposed project, and no mitigation measures would be required; however, the project would not fully achieve the project’s objectives of promoting the City’s Economic Development Strategy and supporting the City’s Strategic Plan goals due the reduced number of housing units available on the project site.

6.3 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR FURTHER ANALYSIS

In accordance with Section 15126.6(c) of the *State CEQA Guidelines*, an EIR should identify alternatives considered for analysis but rejected as infeasible and briefly explain the reasons for their elimination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR is failure to meet most of the basic project objectives, infeasibility, or inability to avoid or substantially reduce significant environmental impacts. Alternatives that have been initially considered and rejected as infeasible include the following, which have been rejected, as detailed below, either because they would create new or more severe impacts compared to the proposed project, are repetitive of other alternatives, would not meet the project objectives and requirements, or are otherwise considered infeasible.

- **Off-Site Locations.** Although relocation of the proposed project to an area with low VMT could avoid or reduce the less than significant VMT impact of the project, an alternative location was not considered for analysis because the project sponsor does not own or would not feasibly

otherwise be able to gain control of a suitable vacant site within the City. Therefore, such an alternative was ultimately not selected for further analysis in the EIR.

- **Mixed-Use Alternative.** Although a Mixed-Use Use Alternative could result in a VMT decrease due to a more efficient mix of uses on the project site and in the region, this alternative would not be consistent with the existing land use designation for the project site. In addition, this alternative would not meet the basic project objectives of preserving and enhancing the existing character and sense of place in residential neighborhoods or encouraging carefully planned new development in undeveloped portions of Vacaville.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the above analysis, the No Project Alternative would have the fewest impacts and would be the environmentally superior alternative. Under CEQA, if the No Project Alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from among the other alternatives (*State CEQA Guidelines*, Section 15126.6(e)(2)). While the No Project alternative would be environmentally superior in the technical sense in that contribution to the aforementioned impacts would not occur, it would also fail to achieve any of the project's objectives.

As detailed in **Table 6.A**, the Partial Build Alternative would reduce impacts to conflicts with applicable programs, plans, ordinances, or policies addressing the circulation system to less than significant and would eliminate the significant and unavoidable VMT impact identified for the proposed project. While the Partial Build Alternative would only partially achieve the project objectives, the overall impacts associated with the development of the Partial Build Alternative would be less than the impacts identified for the proposed project. As such, the Partial Build Alternative would be the environmentally superior alternative.

Table 6.A: Proposed Project and Project Alternatives Impact Comparison

Environmental Impacts	Proposed Project (Without/With Mitigation)	No Project Alternative (Without/With Mitigation)	Partial Build Alternative (Without/With Mitigation)
4.2 Transportation			
The proposed project would not conflict with an applicable plan, ordinance, or policy, including the congestion management program, addressing all components of the circulation system.	SU	NI	LTS
The proposed project would exceed the applicable VMT threshold of significance.	SU	NI	LTS

Source: LSA (2024).

NI = No Impact

LTS = Less than Significant

PS = Potentially Significant

SU = Significant and Unavoidable

VMT = vehicle miles traveled

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8.0 REFERENCES

Chapter 2.0: Summary

Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. May 31, 2000. Website: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990> (accessed September 21, 2022).

Chapter 3.0: Project Description

City of Vacaville. 2015. *Vacaville General Plan Land Use Element*. Website: <https://www.ci.vacaville.ca.us/home/showpublisheddocument/5416/638157981726430000> (accessed June 21, 2024).

City of Vacaville. 2022. City Coach. Route 2. Website: <https://citycoach.com/find-your-route/route-2/> (accessed February 29, 2024).

City of Vacaville. 2023. Planning Commission, Staff Report 2023. October. Website: https://vacaville.granicus.com/MetaViewer.php?view_id=&clip_id=1915&meta_id=107805 (accessed February 12, 2024).

City of Vacaville. n.d. Residential Activity. Rice-McMurtry. Website: <https://www.cityofvacaville.gov/government/community-development/planning-and-development/development-activity/residential-activity/rice-mcmurtry> (accessed September 11, 2023).

Chapter 4.0: Setting, Impacts, and Mitigation Measures

City of Vacaville. 2024. Cumulative Projects in the Vicinity of the Project Site.

Section 4.1: Transportation

California Department of Transportation (Caltrans). 2014. *California Household Travel Survey: More Californians are Walking, Biking, and Riding Transit*. Website: <https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/mile-marker/mm-2014-q2-bike-ped-survey-a11y.pdf> (accessed July 17, 2024).

California Department of Transportation (Caltrans). 2020a. *Transportation Impact Study*. May.

California Department of Transportation (Caltrans). 2020b. *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*. May. Website: <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf> (accessed July 30, 2024).

City of Vacaville General Plan. 2015. Safety Element.

City of Vacaville. 2021a. *City of Vacaville General Plan Transportation Element*, Chapter III. Pages TR36-19. amended September 28, 2021.

City of Vacaville. 2021b. *Vacaville General Plan and ECAS EIR*.

City of Vacaville 2021c. *City of Vacaville General Plan Transportation Element and Energy Conservation Action Strategy Update*. July. Website: <https://www.cityofvacaville.gov/home/showpublisheddocument/19100/637685179483230000> (accessed July 30, 2024).

Fehr & Peers. 2021. Interim SB 743 Implementation Guidelines for City of Vacaville.

Fehr & Peers. 2024a. *Technical Memorandum, McMurtry Creek Estates Rezone VMT Analysis*. January.

Fehr & Peers. 2024b. *Technical Memorandum, McMurtry Creek Estates Wildfire Evacuation Assessment*. February.

Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. Website: https://opr.ca.gov/ceqa/docs/20190122-743_Technical_Advisory.pdf (accessed June 2024).

Solano County. 2022. *Multi-Jurisdictional Local Hazard Mitigation Plan*. Website: <https://www.solanocounty.com/civicax/filebank/blobdload.aspx?blobid=37784> (accessed July 24, 2024).

United States Census Bureau. 2021. 5-year ACS Data Table B08134: Means of Transportation to Work by Travel Time to Work. Website: <https://data.census.gov/table?q=B08134:%20Means%20of%20Transportation%20to%20Work%20by%20Travel%20Time%20to%20Work&g=160XX00US0681554> (accessed July 17, 2024).

United States Forest Service. 2020. Wildland Urban Interface Map. Website: <https://usfs.maps.arcgis.com/home/webmap/viewer.html?layers=454bddfa18784660a472685ac7965881> (accessed April 26, 2024).

Chapter 5.0: Other CEQA Considerations

Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2017. *Projections 2040*. Website: projections.planbayarea.org (accessed July 2023).

California Department of Toxic Substances Control (DTSC). 2023. Hazardous Waste and Substances Site List (Cortese). Website: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+228CORTESE%29 (accessed March 15, 2024).

Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map (FIRM) No. 06095C0163E. May 4.

LSA Associates, Inc. (LSA). 2012. *Solano Multispecies Habitat Conservation Plan*. October.

Solano County. 2023. State Responsibility Area. Fire Hazard Severity Zones in State Responsibility Area - Solano County. June. Website: <https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/> (accessed May 23, 2024).

State Water Resources Control Board (SWRCB). 2023. GeoTracker. Website: [https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4420+McMurtry+Lane %2C+Vacaville%2C+CA+95688](https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4420+McMurtry+Lane%2C+Vacaville%2C+CA+95688) (accessed March 15, 2024).

United States Census Bureau. 2022. Census Quick Facts. Website: <https://www.census.gov/quickfacts/fact/dashboard/solanocountycalifornia/PST045222> (accessed January 2, 2024).

United States Forest Service (USFS). 2020. Wildland Urban Interface Map. Website: <https://usfs.maps.arcgis.com/home/webmap/viewer.html?layers=454bddfa18784660a472685ac7965881> (accessed April 26, 2024).

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