# Centennial Park Master Plan Project

## Public Review Draft
## Initial Study/Mitigated Negative Declaration

*Prepared for:*

**City of Vacaville**
**Community Development Department**
650 Merchant Street
Vacaville, CA 95688

*Prepared by:*

**HELIX Environmental Planning, Inc.**
1180 Iron Point Road, Suite 130
Folsom, CA 95630

August 2024 | 04776.00004.001

This page intentionally left blank

# TABLE OF CONTENTS

# TABLE OF CONTENTS (Cont.)



## LIST OF TABLES



## LIST OF APPENDICES

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AB | Assembly Bill |
| ADA | Americans with Disabilities Act |
| ADT | Average Daily Traffic |
| ALUC | Airport Land Use Compatibility |
| amsl | above mean sea level |
| APE | Area of Potential Effect |
| APN | Assessor's Parcel Number |
| BMP | Best Management Practice |
| BTU | British Thermal Units |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CAD | Computer Aided Design |
| CalEEMod | California Emissions Estimator Model |
| CalEPA | California Environmental Protection Agency |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Caltrans | California Department of Transportation |
| CAP | Climate Action Plan |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CDFW | California Department of Fish and Wildlife |
| CESA | California Endangered Species Act |
| CEQA | California Environmental Quality Act |
| City | City of Vacaville |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | Carbon monoxide |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon Dioxide Equivalent |
| CRA | Cultural Resources Assessment |
| CRHR | California Register of Historical Resources |
| CWA | Clean Water Act |
| dB | decibel |
| dBA | decibel with A-weighting |
| DPM | diesel particulate matter |
| DTSC | Department of Toxic Substances Control |
| ECAS | Energy and Conservation Action Strategy |
| EIR | Environmental Impact Report |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |

# ACRONYMS AND ABBREVIATIONS (Cont.)

| | |
|---|---|
| FMMP | Farmland Mapping and Monitoring Program |
| ft | foot or feet |
| GHG | Greenhouse Gas |
| HELIX | HELIX Environmental Planning, Inc. |
| IS/MND | Initial Study/Mitigated Negative Declaration |
| KOP | Key Observation Point |
| MBTA | Migratory Bird Treaty Act |
| MBtu | million British Thermal Unit |
| MIG | MIG, Inc. |
| MMRP | Mitigation Monitoring and Reporting Program |
| MRZ | Mineral Resource Zone |
| NAAQS | National Ambient Air Quality Standards |
| NAHC | Native American Heritage Commission |
| $NO_x$ | Nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSLU | Noise-sensitive land use |
| NWIC | Northwest Information Center |
| $O_3$ | Ozone |
| OS | Open Space |
| OSHA | The California Division of Occupational Safety and Health |
| Pb | Lead |
| PFC | Perfluorocarbon |
| PG&E | Pacific Gas & Electric |
| PM | Particulate Matter |
| $PM_{10}$ | Coarse PM, 10 micrometers or less in diameter |
| $PM_{2.5}$ | Fine PM, 2.5 micrometers or less in diameter |
| PPB | Parts Per Billion |
| PPM | Parts Per Million |
| PPV | peak particle velocity |
| PR | Parks and Recreation |
| PRC | Public Resources Code |
| RC | remote-controlled |
| RCNM | Roadway Construction Noise Model |
| RWQCB | Regional Water Quality Control Board |

# ACRONYMS AND ABBREVIATIONS (Cont.)

| | |
|---|---|
| SB | Senate Bill |
| SCH | State Clearinghouse |
| SEIR | Supplemental Environmental Impact Report |
| sf | square foot |
| $SO_2$ | Sulfur dioxide |
| $SF_6$ | Sulfur Hexafluoride |
| SVAB | Sacramento Valley Air Basin |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TAC | Toxic Air Contaminant |
| TCR | Tribal Cultural Resource |
| TMDL | Total Maximum Daily Load |
| TNM | Traffic Noise Model |
| Tribe | Yocha Dehe Wintun Nation |
| USACE | United States Army Corps of Engineers |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UWMP | Urban Water Management Plan |
| VFD | Vacaville Fire Department |
| VMT | vehicle miles traveled |
| VPD | Vacaville Police Department |
| YSAQMD | Yolo-Solano Air Quality Management District |

# INITIAL STUDY INFORMATION SHEET

| | | |
|---|---|---|
| 1. | Project title: | Centennial Park Master Plan Project |
| 2. | Lead agency name and address: | City of Vacaville – Community Development Department<br>650 Merchant Street<br>Vacaville, CA 95688 |
| 3. | Contact person and phone number: | Albert Enault, Senior Planner<br>(707) 449-5364<br>albert.enault@cityofvacaville.com |
| 4. | Project location: | Centennial Park which is located north of the intersection of Allison Drive and Browns Valley Parkway (501 Browns Valley Parkway) |
| 5. | General plan designation: | Public Park, Public Open Space |
| 6. | Zoning: | Parks and Recreation (PR), Open Space (OS) |

7. Description of project:

The proposed project includes the expansion of the existing Centennial Park to encompass approximately 276 acres. The additional amenities to be developed would include a dog park, bike skills course including a maintenance building and restroom, 18-hole disc golf course, multi-purpose recreation center and outdoor seating area, tennis courts, soccer complex expansion including a maintenance building, water play area, skate park, remote-controlled (RC) car track, basketball courts, ballfield maintenance building and restroom, event pavilion with restrooms, pollinator garden, nature playscape area, sand volleyball courts, trails, group picnic areas, and landscaping. The Centennial Park Master Plan project is anticipated to be developed in five phases as funding becomes available. The project would also include the expansion of parking from approximately 380 existing parking spaces to over 1,000 parking spaces (plus designated overflow parking areas for special events) and would extend the Allison Parkway access point in the northern portion of the project site. See figures in Appendix A.

8. Surrounding land uses and setting:

The project site is surrounded by residential properties (single-family residences) to the west, Putah South Canal to the east with Nut Tree Airport beyond, undeveloped lands to the south, and mixed land uses (institutional, commercial, etc.) to the north.

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement:

- California Department of Fish and Wildlife (CDFW)
- Regional Water Quality Control Board (RWQCB)
- United States Army Corps of Engineers (USACE)

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The Yocha Dehe Wintun Nation (Tribe) is the only regionally affiliated representatives that have requested formal notification on projects in the City of Vacaville. The City sent an email to the Yocha Dehe Wintun Nation on April 3, 2024 to initiate consultation under AB 52. On April 24, 2024, the Lead Agency (City), HELIX, and Yocha Dehe Wintun Nation held a virtual consultation meeting. On April 25, 2024, the Tribe sent a letter recommending that cultural monitors be present during all ground disturbance, including backhoe trenching and excavations, as well as Cultural Sensitivity Training. The Tribe's requests have been included as mitigation measures in Sections 7.V, Cultural Resources, and Section 7.XVI, Tribal Cultural Resources.

# 1.0 INTRODUCTION

## 1.1 Initial Study

HELIX Environmental Planning, Inc. (HELIX) has prepared this Initial Study on behalf of the City of Vacaville per the requirements of the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000, et seq.), and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). The City of Vacaville (City) certified an Environmental Impact Report (EIR) for the City of Vacaville General Plan in August 2015 (State Clearinghouse [SCH] No. 2011022043) and certified a Supplemental EIR (SEIR) for the City of Vacaville General Plan in September 2021. This Initial Study/Mitigated Negative Declaration (IS/MND) addresses whether the proposed Centennial Park Master Plan project (proposed project) may cause significant effects on the environment beyond what was analyzed in the City of Vacaville General Plan EIR and SEIR. Consistent with PRC Section 20183.3 and State CEQA Guidelines Section 15152 and 15162, this Initial Study focuses on any effects on the environment that are specific to the proposed Centennial Park Master Plan project, or to the parcels on which the project would be located, which were not analyzed as potentially significant effects in the EIR or SEIR prepared for the General Plan, or for which substantial new information shows that identified efforts would be more significant than described in the EIR or SEIR.

This Initial Study relies on State CEQA Guidelines environmental review procedures that allow for the tiering off of a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs or negative declarations on narrower projects. The following subsections of Section 15152 of the State CEQA Guidelines state the following with respect to tiering from a certified EIR:

a) "Tiering" refers to using the analysis of general matters contained in a broader EIR with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on issues specific to the later project.

b) Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program or lesser scope, or to a site-specific EIR or negative declaration.

e) Tiering under this section shall be limited to situations where the project is consistent with the general plan and zoning of the city or county in which the project is located, except that a project requiring a rezone to achieve or maintain conformity with a general plan may be subject to tiering.

f) A later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR. A negative declaration shall be required when the provisions of Section 15070 are met.

    1) Where the lead agency determines that a cumulative effect has been adequately addressed in the prior EIR, that effect is not treated as significant for the purposes of the later EIR or negative declaration, and need not be discussed in detail.

2) When assessing whether there is a new significant cumulative effect, the lead agency shall consider whether the incremental effects of the project would be considerable when viewed in the context of past, present, and future projects.

3) Significant environmental effects have been adequately addressed if the lead agency determines that:

   A) They have been mitigated or avoided as result of the prior environmental impact report and findings adopted in connection with that prior environmental report; or

   B) They have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

g) When tiering is used, the later EIRs or negative declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later EIR or negative declaration should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR.

None of the circumstances listed in State CEQA Guidelines Section 15152 requiring the preparation of a subsequent EIR are present, and the proposed project is consistent with the general plan and zoning of the City; therefore, an IS/MND tiering off of the General Plan EIR, including the SEIR, may be prepared. The Centennial Park Master Plan project is anticipated to be developed in five phases over numerous years as funding becomes available. Implementation of Phase I would occur immediately upon project approval, however, subsequent CEQA may be warranted for Phases II through V if there are future, major changes to the project design.

CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. This Initial Study is a public document that assesses the environmental effects of the proposed project. The document has been prepared as required by CEQA and in compliance with the State CEQA Guidelines (14 California Administrative Code 1400 et seq.).

## 1.2 Purpose and Document Organization

The purpose of this IS/MND is to evaluate the potential environmental impacts of the proposed project. This document is divided into the following sections:

**1.0 Introduction** – This section provides an introduction and describes the purpose and organization of the document.

**2.0 Project Background** – This section provides information on the City of Vacaville General Plan, Centennial Park Master Plan, and project-specific technical studies prepared and incorporated into the analysis included in this IS/MND.

**3.0 Project Location and Setting** – This section provides information on the existing physical conditions of the project site, as well as a brief description of the existing use.

**4.0 Project Description** – This section discusses the proposed project in detail.

**5.0 Environmental Factors Potentially Affected** – This section identifies which environmental subject areas would be potentially affected by this project. Environmental subject areas with a check mark indicate that the proposed project would result in a "New Significant Impact" or "Less than Significant with Mitigation Incorporated" for that environmental subject area.

**6.0 Determination** – This section provides a determination if the project will or will not have a new significant impact on the environment compared to the General Plan EIR and SEIR. This section determines if the appropriate CEQA document is a negative declaration, MND, EIR, or nothing further is required as the environmental impacts of the project were previously analyzed in a prior CEQA document, and potential significant impacts have been avoided or mitigated.

**7.0 Environmental Initial Study Checklist** – This section provides a description of the environmental setting and impact analysis for each of the environmental subject areas. Project impact analysis is provided in response to subject-specific questions for each environmental subject area analyzed in the City's General Plan EIR and SEIR, and an impact determination is made for each question. Impact determinations may be "no new impact," "less than significant impact," "less than significant impact with mitigation incorporated," or "new significant impact" in response to the questions included in the environmental checklist for each environmental subject area.

**8.0 References** – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

**9.0 Initial Study Preparers** – This section identifies who worked on this MND.

# 2.0 PROJECT BACKGROUND

## 2.1 City of Vacaville General Plan

The City of Vacaville General Plan (General Plan) is intended to guide the City's actions through the year 2035. The approximately 276-acre project site features the existing 35.7-acre Centennial Park, and the proposed project would expand this park to encompass the entire 276-acre project site as envisioned in the General Plan, providing recreational and park services to the entire City. Centennial Park is classified as a Community Park in the General Plan Parks and Recreation Element; as per the General Plan, new community parks must be a minimum of 10 acres in size and may be up to 40 acres as needed to serve the planned service area. Centennial Park is a notable exception to the size standard in that it is intended to ultimately encompass 276 acres and serve residents of the entire city (City of Vacaville 2015).

An EIR for the General Plan was certified by the City (SCH No. 2011022043) on August 11, 2015, the same day the General Plan was adopted. On September 28, 2021, City Council certified a Final Supplemental EIR (SEIR) for the General Plan for the adoption of the new Traffic and Circulation Element and updated Energy and Conservation Action Strategy (ECAS). The EIR found that implementation of the General Plan would have significant and unavoidable impacts to Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Population and Housing, and Traffic and Transportation. The SEIR found that adoption of the new Traffic and Circulation Element would have significant and unavoidable vehicle miles traveled (VMT) impacts in the Traffic and Transportation section.

## 2.2 Centennial Park Master Plan

The City of Vacaville Parks and Recreation Department is responsible for developing short-term and long-term plans and strategies that build upon existing recreation facilities and services, provide an equitable balance of recreational resources, and adapt to future recreation needs. To assist in this planning effort, the City commissioned The Sports Management Group to conduct a "Recreation Needs Assessment" that was presented to City Council in 2013. The Needs Assessment identified current and future recreational needs and interests; identified the gaps in programs, services, and facilities; and developed short-term, mid-term, and long-term recommendations that address deficiencies and service delivery. The Needs Assessment was also intended to serve as the foundation for other long-range planning activities in the City. This effort included a statistically valid telephone survey and an on-line survey that included questions specific to Centennial Park.

The City then contracted with MIG, Inc. (MIG) in 2017 to prepare the Centennial Park Master Plan (Appendix B). MIG and City staff utilized the data generated from the Recreation Needs Assessment mentioned above as a foundation for beginning work on the draft Centennial Park Master Plan. MIG completed the administrative draft of the Centennial Park Master Plan in June 2020. Since the development of the 2020 administrative draft master plan, several changes have been made to Centennial Park. An interim soccer field was constructed on the west side of the Horse Creek Soccer Complex by the Vacaville United Soccer Club, and an additional gravel parking lot was constructed to the south of the soccer complex. The City also constructed an interim dog park west of the new field.

From October through December of 2017, MIG and the City conducted eleven "pop-up" surveys throughout Vacaville to solicit input on the Centennial Park Master Plan. As part of the community

engagement process, MIG also prepared a survey to provide a way for community members to give feedback about their city's parks and recreation system which included site-specific questions about Centennial Park. The survey launched on February 20, 2018 and closed on May 7, 2018 with 589 responses.

An Ad Hoc Committee comprised of City staff and members of the Community services Commission participated in early stages of the planning process for Centennial Park. The proposed project has been reviewed in two meetings with the Community Services Commission with opportunity to provide input and feedback on the Centennial Park Master Plan, and ultimately members of the Community Services Commission approved final plans. In addition, the Final Plans for Council Adoption for the Master Plan have been presented to the Vacaville City Council. In July 2023, HELIX drafted the Centennial Park Master Plan based on the 2020 administrative draft master plan, public outreach efforts, and commission and council engagement. It is anticipated that the adoption of the Centennial Park Master Plan will coincide with the approval of this Initial Study.

## 2.3 Project-Specific Technical Studies

The following project specific technical reports, assessments, and/or surveys were prepared or conducted to support the impact analysis included in this IS/MND and are incorporated by reference:

- Visual Simulations, June 2024, prepared by HELIX Environmental Planning, Inc.
- Air Quality/Greenhouse Gas Analysis, June 2024, prepared by HELIX Environmental Planning, Inc.
- Biological Resources Assessment, June 2024, prepared by HELIX Environmental Planning, Inc.
- Cultural Resources Assessment, June 2024, prepared by HELIX Environmental Planning, Inc.
- Phase I Environmental Site Assessment, May 2024, prepared by Kleinfelder.
- Noise Evaluation, June 2024, prepared by HELIX Environmental Planning, Inc.

# 3.0 PROJECT LOCATION AND SETTING

The proposed project would be located on the existing Centennial Park site that is surrounded by existing urban development. The site is bordered by Browns Valley Parkway to the south, the Putah South Canal to the east with Nut Tree Airport beyond, residential developments (single-family residences) to the west, and industrial land uses to the north. The project site is situated in a portion of the Los Putos Land Grant as depicted on the U.S. Geological Survey (USGS) *Allendale & Elmira, California* 7.5-minute quadrangle map. See Figure 1 for a site and vicinity map and Figure 2 for an aerial map in Appendix A. All figures are in Appendix A of this Initial Study.

The project site is located approximately 800 feet west of the Nut Tree Airport runway. Nut Tree Airport compatibility areas include properties in the vicinity of the Nut Tree Airport, such as the proposed project, which may be affected by aircraft operations, as well as areas where aircraft operations may be affected by other uses. The project site is in Airport Land Use Compatibility (ALUC) Area C, Outer

Approach/Departure Area or Adjacent to Runway, and Area E, Adjacent to Runway or Final Approach, and the proposed project is an allowed land use in both areas (City of Vacaville 2024).

Based on historical records reviewed as part of the Phase I ESA (Appendix F), the project site was developed as early as 1937 with a residential-sized structure in the northwest corner of the site. By at least 1952, a landfill and sewage treatment plant were located in the southwestern and southern portions of the site, respectively. By 1993, both the landfill and sewage treatment plant appeared closed. Between 1993 and 2006, the southern portion of the project site was redeveloped as Centennial Park with recreational trails and athletic fields. The landfill on the site was closed with an activity and use limitation (AUL) in place.

The site as it currently exists is generally flat with elevation ranging from approximately 116 ft above mean sea level (amsl) in the southern portion of the project site to 148 ft amsl in the northern portion of the project site. The site contains a few man-made mounds and shallow depressions, including two plateau areas with existing dirt piles in the northern portion of the project site and a borrow pit located in the southern portion of the project site. Mature trees and shrubs are interspersed throughout the property along the Horse Creek north, middle, and south forks. A 6-foot (ft) chain-link fence runs the length of the western boundary of the project site. The ground surface throughout the project site, to the extent that it was visible, has been moderately disturbed by vehicle traffic and other human activity. The undeveloped area of the park site has been cleared and has existing paved access roads leading from Browns Valley Parkway in the south to Allison Parkway in the north.

# 4.0 PROJECT DESCRIPTION

The proposed project includes the expansion of the existing 53.4-acre[1] Centennial Park to develop the approximately 276-acre project site with additional passive and active park amenities. The existing Centennial Park currently includes the Horse Creek Soccer Complex, baseball fields, tennis courts, a roller hockey court, a dog park, internal access roads, surface parking areas, and landscaping. In accordance with Vacaville Municipal Code (VMC) Section 12.28.020, the park would maintain operating hours beginning from one-half hour after sunrise and one-half hour after sunset, except for areas specifically lit for nighttime use. The existing tennis courts and dog park are proposed to be demolished and redeveloped in other locations within the Centennial Park site, and a perimeter fence would be added around the existing roller hockey court to prevent vehicular access except as needed for special event overflow parking.

The additional amenities to be developed would include a new dog park, bike skills course including a maintenance building and restroom, 18-hole disc golf course, multi-purpose recreation center and outdoor seating area, new lighted tennis courts, soccer complex expansion including a maintenance building, water play area, skate park, RC car track, basketball courts, ballfield maintenance building and restroom, event pavilion, pollinator garden, nature playscape area, sand volleyball courts, trails, group picnic areas, and landscaping. The project would also include the expansion of parking from approximately 380 existing parking spaces to over 1,000 parking spaces and would extend the Allison Parkway access point in the northern portion of the project site to parking areas intended to serve the

[1] The size of Centennial Park at the time of certification of the 2021 General Plan EIR was 35.7 acres. Since then, additional improvements were completed between 2013 to 2019 which expanded the park to a total of 53.4 acres.

bike park. Refer to Figure 3, Master Plan, in Appendix A for the location of existing and proposed additional park facilities and improvements.

The Centennial Park Master Plan project is anticipated to be developed in five phases over numerous years as funding becomes available. Figure 4, Phasing Plan, in Appendix A shows the anticipated construction phase of each project component discussed in detail below.

## 4.1 Phase I Project Components

### Bike Skills Course

The proposed project includes the construction of a 30-acre bike skills course that would include a spectator viewing plaza, bike parking area, bike park maintenance building, Wi-Fi access, restroom, trash and recycling receptacles, shaded group picnic area, paved area providing Americans with Disabilities Act (ADA) parking, turnaround and drop-off area, and may include perimeter fencing. An overflow gravel parking lot would be constructed. A new paved entrance leading off of Allison Parkway in the northern portion of the project site would be constructed, leading up the hill to the limited parking area, turnaround, and drop off area. A paved parking area west of the entry road would provide daily-use parking for at least 40 vehicles, along with a gravel-surfaced overflow parking lot to serve for special events. The main entrance from Allison Parkway would be designed to accommodate truck trips required for construction as well as long-term access for maintenance and emergency vehicles and trash and recycling pickup.

The bike skills course would consist primarily of natural surface cycling terrain for the flow trails, two paved pump tracks (one for beginners and one for more advanced riders). The entire facility would be designed to incorporate routes with a range of difficulty levels from novice to experienced. Space is reserved south of the parking lot for a racetrack facility as an optional, future addition. The bike park would be elevated approximately 65 to 85 feet on a constructed hill. The shaded group picnic area would include one medium shelter (designed to shade four 8-foot tables) and one small shelter (designed to shade two 8-foot tables). The maintenance building is anticipated to be approximately 200-sf for secure storage. There would be limited security lighting at the bike skills course, and it would not be open outside of normal park operating hours (half an hour after sunrise to half an hour after sunset). A gravel-surfaced perimeter trail would provide a new pedestrian and bicycle linkage around the outside of the bike park hill as well as providing access for maintenance and emergency vehicles.

Approximately 934,000 cubic yards of dirt would be imported intermittently over the span of 3.5 years for the construction of this project component, with import projected to start immediately upon project approval. The import of soil is anticipated to require 51 truck trips per day and the duration of the construction is anticipated to be intermittent and take between 3 to 6 years, including time indicated above for the import of the soil.

### Great Meadow Trails and Overlook

Within the Nature Exploration Zone, several habitat areas along both the south and middle forks of Horse Creek are proposed to be restored with native plant species. These restoration areas would include amenities for passive recreation such as trails and benches. A new footbridge would be constructed across the south fork of Horse Creek, and two creek overlooks would be constructed along

the south and middle forks of Horse Creek. Pedestrian bridges would link the two proposed playgrounds together.

Benches, picnic tables, informational signage, and trash/recycling receptacles would serve the needs of the public using the trails, and plants would be surrounded by protective barriers. The proposed trail would be a 12-foot-wide asphalt paved multi-use and maintenance trial and would connect the Horse Creek Soccer Complex to Allison Parkway in the north. A soft, unpaved surface trail with an observation point elevated up to 30 feet on a constructed hill complete with overlook structures is to be located west of the proposed detention basins in the north/central portion of the project site. Pedestrian circulation would consist of walking trails located within the project site. All trails would be designed to meet applicable City design guidelines.

Outdoor fitness stations and two small picnic shelters sized to shade two 8-foot-long picnic tables would be constructed along the multi-use trial, and a medium group picnic shelter (sized to shade five 8-foot long picnic tables) would be constructed at the north fork of Horse Creek. Restoration planting would occur for the following zones: oak woodland, native California grassland, oak forest, riparian buffer, and wetland.

The trails would be constructed within a meadow area and would require the import of up to 1,400,000 cubic yards of dirt over 7 years intermittently, with import projected to start in the third quarter of 2025. The import of soil is anticipated to require 54 truck trips per day and the duration of the construction is between 3 to 7 years, including the import of the soil. The Great Meadow is approximately 115 acres including trails, the overlook, and restoration areas.

## Dog Park

The proposed project includes the construction of a 25.4-acre dog park in the southwestern portion of the project site, north of the proposed skate and RC car parks. The dog park would be lighted and fenced and portions would be elevated approximately five feet during construction. The dog park would include an area for small dogs with a separately fenced area for big dogs, as well as shade structures and a decomposed granite pedestrian trail. The park would feature varied terrain, including areas of soft pavement and turfgrass with hard surfacing installed in high traffic areas. A small, fenced agility area and water-play area would also be included. Support infrastructure for the dog park would include dog-washing and watering stations, hand-washing stations, and waste management receptacles. There would be trees and benches throughout the project site, as well as informational signage.

The dog park would be located above a capped landfill, and there would be no ground disturbance, excavation, or cut within the capped landfill area. Approximately 60,000 cubic yards of dirt would be imported over 3 to 6 months for construction of this project component, following the completion of, or in conjunction with, dirt import for the Great Meadow. The import of soil is anticipated to require 23 to 47 truck trips per day, and the duration of the construction would be up to 6 months. Clean fill would be applied to elevate the park during construction, specifically in the area of the smaller fenced section, to make the grade more natural and to support landscaping.

A parking lot would be constructed adjacent to the dog park primarily to serve that facility.

### Disc Golf Course

Within the Great Meadows, the project would include nine holes of the 18-hole beginner/intermediate disc golf course would be developed as part of Phase I and located in the northern portion of the project site, north of the middle fork of Horse Creek and south of the north fork of Horse Creek. The remaining nine holes would be developed in conjunction with the area south of the north fork of Horse Creek.

### Allison Parkway Access Improvements

An improved gate entry would be constructed to secure park access along Allison Parkway at the northern boundary of the project site. A PG&E public utility easement and sewer line transects the project site and runs north to south leading from Allison Parkway in the northern portion of the project site to Allison Drive in the south. There is an existing maintenance and access road along this same alignment that doubly serves as part of the park's internal, non-vehicular, trail system.

The proposed project would also improve and raise the maintenance/access road leading from Allison Parkway in the northern portion of the project site to Allison Drive in the south up to 10 feet to improve visibility, access, and surfacing conditions, as approved by PG&E. Construction of the Allison Parkway/Allison Drive access road improvements would require the import of approximately 659 cubic yards of soil to raise Allison Parkway, as well as refurbishing the gravel surfacing to maintain all-weather access. The import of soil is anticipated to require a total of 33 truck trips, and the duration of the construction of the road improvements is anticipated to take up to 3 months.

## 4.2 Phase II Project Components

### Multi-Purpose Recreation Center

The proposed project includes the construction of an approximately 75,000-sf Multi-Purpose Recreation Center with a maximum height of 30 feet west of the existing ballfields and south of the existing Horse Creek Soccer Complex. The recreation center would also include outdoor seating and access to surface parking spaces within the park and will be designed to be oriented to provide both physical and visual connections to the wetland/detention basin area located along the southeast corner of the project site.

The new structure would include a lobby, event and meeting space, sports and fitness facilities, administrative office space, storage, and childcare facilities. Sports and fitness facilities would include a multi-use gymnasium with up to four full-sized and one-half hardwood floor multi-use sport courts, fitness area, and indoor track. A locker room and restroom with showers would serve the needs of the sports and fitness facilities. Event and meeting spaces would consist of a flexible event space with meeting/activity rooms. The flexible event space would feature installation of partitions, adjustable lighting, audio/visual equipment, a fully equipped catering kitchen, and a wrap-around outdoor patio with seating and access to views of wetlands and exterior amenities. The meeting/activity rooms would feature audio/visual equipment as well as a countertop with sink located in each room, and the event/meeting spaces would be served by a restroom facility located inside the recreation center. Indoor amenities at the recreation center will be analyzed and determined with a Feasibility Study to create a multi-functional space to support multiple sports, administration and activities.

Exterior amenities would include decks overlooking the wetland areas, plaza spaces with room for curb-side passenger drop-off, and designated zones with tables for outdoor dining as well as food-trucks or

other temporary vendors. There would be a front and rear plaza with shade structures and comfortable furnishings at the entryways of the multi-purpose recreation center, and outdoor gathering area adjacent to the event space and a vehicular drop-off area at the entry that would accommodate emergency services and fire access. A bike and vehicular parking area designed to serve the multi-purpose recreation center would be located adjacent to the building. The center would be lit during nighttime events and would feature dimmed, solar-powered security lighting at key points.

### Tennis Courts

The proposed project includes the construction of six tennis courts southeast of the existing ballfields. A new parking lot north of the new courts would serve the tennis courts as well as the surrounding recreation amenities. The tennis courts would be lighted during the operating hours of the park and would be fenced with direct access provided to the new parking lot immediately to the north. The four existing tennis courts, planned to be demolished to allow for the construction of the skate park and RC car track in Phase IV of the project would remain in-service until the new courts (part of Phase II) are ready for public use.

### Trails and Pedestrian Access south of Pine Tree Creek

Phase II includes the construction of new trails, picnic areas, and tree plantings south of Pine Tree Creek and grading and landscaping improvements along the park's frontage with Browns Valley Parkway. A new bridge is proposed to provide trail access across Pine Tree Creek which would connect the area south of the creek to the rest of the park. This new trail connection could also accommodate part of the existing 5k race loop that routes through the more northern portions of the park. Other trail connections to this area could provide access to the loop trail around the existing wetlands south of the proposed Multi-Purpose Recreation Center. The perimeter trail around the wetlands would be provided with overlooks, seating, and interpretive signage explaining the purpose and value of the wetlands.

### Detention Basins

Two detention basins are proposed along the eastern boundary of the project site, north of the Horse Creek Soccer Complex and south of the proposed bike skills course and would hold approximately 40 acre-feet total to accommodate overflows from the development associated with the soccer field and parking lot anticipated to be constructed in Phase III. Two boardwalk/loop trails (one half-mile trail and one quarter-mile trail) would lead from the Multi-Purpose Recreation Center and loop around the proposed detention basins. Amenities of these trails would include interpretive signage, a wildlife viewing platform with benches, and a medium-size picnic shelter. Access to the loop as well as trailhead parking would be provided at the north end of the trail, at the easternmost parking lot of the project site.

## 4.3 Phase III Project Components

### Horse Creek Soccer Complex Expansion

The proposed project includes the expansion of the existing Horse Creek Soccer Complex to include one additional lighted full-size soccer field east of the existing complex, a dumpster enclosure, and a soccer facilities maintenance building. A soft surface maintenance road and materials storage area would be located along the western border of the additional full-size field, and the two currently existing

maintenance buildings would remain. The existing fence along the complex's east side would be reconfigured to include the expanded area, thus enclosing the entire complex. A restroom building and concession stand would be added to the soccer complex to serve the proposed new field, and screen plantings would be placed along the fence line. A parking lot is proposed east of the existing Horse Creek Soccer Complex and south of the additional field proposed and would include a passenger drop-off area. A new park access road would serve the new parking lot and continue along the east side of the soccer complex to provide a roadway linkage crossing Horse Creek and connecting with the loop road provided in the Creekside Discovery Zone (part of Phase V).

### Renovated Ballfield Complex

Centennial Park's existing four baseball fields, roller-hockey court, restroom, and concession stand are proposed to be upgraded in their existing location. An entry plaza and additional shade/shelters would be provided within the sports complex and provide a welcoming environment between the parking areas east and west of the baseball fields. Pedestrian access throughout the complex would be maintained with a centrally located pedestrian plaza and bike parking area.

### Trails and Pedestrian Access in Phase III

A trailhead plaza would be constructed along the eastern boundary of the project site, north of the existing wetland and south of the proposed parking lot constructed to provide parking for the expanded Horse Creek Soccer Complex. A trail would be constructed around the existing wetland, and a pedestrian connection would be constructed utilizing the existing, large culvert under Allison Drive approximately 700 feet north of the intersection of Allison Drive and Browns Valley Parkway.

## 4.4 Phase IV Project Components

Several Phase IV components are located where there are existing, heavily-used park amenities such as the interim dog park, Field E of the soccer complex, and existing tennis courts. None of these existing amenities would be removed or demolished until replacement facilities (planned for construction in Phases II and III) are complete and ready for use.

### Water Play and Central Lawn Area

The proposed project includes the construction of a water play area and central lawn west of the existing Horse Creek Soccer Complex (fields A through D). The multi-purpose lawn would provide space for events and informal performances, while the wetland-themed water play area would be located nearby. To create a more consistent surface for the central lawn area, approximately three feet of fill may be required to raise the grade of the existing, interim soccer field E. A new restroom building, as well as several reservable picnic shelters, would also be provided around the central lawn area. The water play area would feature a splash pad with in-ground splash fountain features and seat walls. There would be two small picnic structures at the splash pad and two at the central lawn, each designed to shade three 8-foot-long tables, as well as an additional large picnic shelter with stage at the central lawn designed to shade ten 8-foot-long tables. Shade trees would be planted throughout the area and screen plantings would be placed along the soccer complex western fence. The central lawn and play areas may include misters or other low-flow water features designed to help keep park users cool.

### Skate Park

The proposed project includes the construction of a one-acre skate park east of the proposed RC car track. The skate park site currently contains four tennis courts surrounded by 10-foot high fencing. The existing courts would not be removed until new courts (provided in Phase II) are ready for use. The lighted skate park would be constructed with concrete bowls and/or a concrete pad with above-ground skate features to provide varying difficulty levels. Shaded seating would be provided to serve both skaters and spectators, and a reservable picnic shelter, sized to shade four 8-foot tables, would be located adjacent to the skate park to accommodate group gatherings and celebrations. Trash and recycling receptacles would be provided to accommodate truck pickup access.

### RC Car Track

The proposed project includes the construction of a paved RC car track north of the existing roller hockey court and would be fenced and gated as part of the proposed project. Only non-internal combustion engine vehicles (meaning primarily electric powered vehicles) would be allowed on the RC track. A small shade structure would provide protection for operators and spectators.

### Basketball Courts

The proposed project includes the construction of three lighted basketball courts in what is currently an open area of the project site immediately west of Field 2 in the existing ballfield complex. Benches would be placed around the basketball courts.

### Riparian Habitat Restoration

Phase IV of the proposed project includes additional restoration of the riparian corridor for the north fork of Horse Creek that transects the northern portion of the site and runs from west to east. Most of this creek area was restored and a paved trail with interpretive signage was installed in 2015/2016. Additional trail connections would link the existing trail with new trails provided along with development of the Great Meadow (Phase I). Trail linkage would also be provided across the middle tributary of Horse Creek to the Creekside Discovery Zone (Phase V) via a pedestrian bridge.

## 4.5 Phase V Project Components

### Event Pavilion and Pollinator Garden

An event pavilion with trellises and an event lawn would be constructed in the west/central portion of the project site and would include restrooms, food prep area, power receptacles, and area lighting. The event pavilion would be designed as part of an enclosed event space and would be located northwest of the nature play area. The pavilion would be surrounded to the north, west, and south by an outdoor event lawn/seating area, and newly planted “orchard” of shade trees planted in a pattern reminiscent of fruit and nut orchards. The large event pavilion would be sized to accommodate approximately 200 people including space for dining tables on a hard surface and would feature a raised platform with backdrop to serve as an informal stage or dance floor, a lawn seating area seized to accommodate approximately 1,000 people, a sink/counter for food preparation and cleanup, restrooms, table and chair storage, and a private dressing and preparation area for weddings and events. Designated spaces for trash and recycling receptacles would be provided.

A pollinator garden would be established west of the nature playscape area at the entry to the event pavilion. The pollinator garden would include native plants and would feature trail connections to creek corridors located nearby. The event pavilion and pollinator garden area would include an entry plaza and would be accessible from the parking lot south of the pavilion, and from a circular driveway provided for convenient passenger loading and drop-off. Two parking spaces would be provided for delivery vehicles (such as catering, flowers, etc.)

### Disc Golf Course

Within the Great Meadows, the project would develop the second set of nine holes for the 18-hole beginner/intermediate disc golf course as part of Phase V, located in the west/central portion of the project site, south of the middle fork of Horse Creek and north of the south fork of Horse Creek.

### Nature Playscape

A nature playscape would be constructed north of the water play area, across the south fork of Horse Creek. The nature playscape would feature a central shade pergola with six benches, a designated play area for children aged 5-12+ years old, and a play area for children aged 2-5 years old which would include features such as mounded landforms, swings, custom climbing towers, a play stream with sand and water play area, a play beaver den and lodge play area, a small Creekside discovery loop trail, and trash and recycling receptacles. The play areas would be surfaced with resilient safety surfacing such as synthetic or wood fiber and would be shaded by trees. Restroom and maintenance buildings would be constructed between the proposed nature playscape and proposed parking lot located northwest of the Horse Creek Soccer Complex. Restrooms would be ADA accessible, lighted, and have the same operating hours as the park facilities.

### Sand Volleyball Courts

The proposed project includes the construction of three lighted sand volleyball courts north of the existing Horse Creek Soccer Complex and east of the proposed nature playscape area, in the Creekside Discovery Zone. Three medium picnic shelters, sized to shade four 8-foot-long tables each, would make up the group picnic area and would be serviced by a restroom building/information kiosk. Benches, shade trees, posting board, and trash and recycling receptacles would be located throughout this area.

### Vehicular Access and Creekside Trails

Existing access roads would be extended to form a complete loop with two new vehicular bridge crossings that would cross the middle fork of Horse Creek north of the existing Horse Creek Soccer Complex as well as the south fork of Horse Creek northwest of the proposed water play area. Additionally, a pedestrian bridge would be constructed adjacent to the west of the vehicular crossing over the south fork of Horse Creek.

## 4.6 Other Park Amenities and Utilities

### Picnic and Passive Areas

The proposed project includes the construction of five designated group picnic areas with tables and shade covers in different portions of the project site including adjacent to the proposed event pavilion,

immediately west of the proposed fenced bike skills course, north of the existing Horse Creek Soccer Complex, adjacent to the south of the nature playscape area, and south of Pine Tree Creek. All designated group picnic areas would be accessible using the proposed pedestrian trail system and would be provided with water, BBQs, and trash/recycling receptacles.

Benches would be provided at appropriate locations in the accessible play areas, dog park, and along the trails. Additionally, a habitat restoration zone would be established for the portion of south fork of Horse Creek that occurs along the western boundary of the project site.

## Parking

There are three existing parking lots at Centennial Park. Two are located in the southwestern portion of the project site and one is located immediately north of the existing baseball fields. Upon buildout of the park as proposed in the Centennial Park Master Plan, seven paved parking lots and one gravel overflow parking lot would be constructed on the project site in addition to the existing parking lots. The gravel overflow parking lot and one of the paved parking lots would be located in the northern portion of the project site leading to the proposed bike skills course. The other six proposed parking lots would be located in the southern portion of the project site to support the proposed recreational facilities as follows: north of the proposed tennis courts, west of the proposed Multi-Purpose Recreation Center, south of the proposed water play area where the existing dog park is located to expand the existing ballfield parking lot, immediately east of the existing Horse Creek Soccer Complex, east of the proposed dog park, and north of the proposed nature playscape area.

Currently at Centennial Park, there are 364 total existing standard stalls and 16 ADA compliant stalls, totaling 380. The proposed project would add, with all the paved parking lots and not including overflow parking lots, 900 standard stalls and 73 ADA-compliant stalls for a total of 973 additional stalls. At full buildout, the total number of standard and ADA parking stalls would be 1,353 (not including overflow parking lots).

## Vehicular Access Improvements

There are three existing vehicular access points into the existing Centennial Park. Two are located in the southern portion of the project site via Browns Valley Parkway, and the other is located in the northern portion of the project site via Allison Parkway. No additional vehicle access points would be constructed as part of the project, and pedestrian entryways at the north and south end of the project site would feature gated entryways that are proposed as part of this project.

The proposed project would expand the access loop leading between the existing ingress point via Allison Drive at Browns Valley Parkway into the project site, looping around the existing Horse Creek Soccer complex and proposed recreational facilities north of the creek, and then re-crossing the creek to tie back to the existing access road that leads to the ingress point at the park's southwest corner. The project also proposes to improve and raise the maintenance/access road leading from Allison Parkway in the northern portion of the project site to improve visibility and access. All ingress and egress points connecting to City streets would be designed to meet applicable City design requirements.

## Landscaping

The proposed landscaping plant palette is divided into oak woodland and forest, native California grassland, wetlands, and riparian buffer. The corresponding species to be planted may include but are not limited to the following:

- **Oak Woodland and Forest:** Coast live oak (*Quercus agrifolia*), California Buckeye (*Aesculus californica*), Toyon (*Heteromeles arbutifolia*), California Coffeeberry (*Frangula (Rhamnus*) *californica*), Coyote Brush (*Baccharis pilularis*), Common Yarrow (*Achillea millefolium*), Louis Edmunds Baker's Manzanita (*Arctostaphylos bakeri 'Louis Edmunds'*), Wayside Hooker's Manzanita (*Arctostaphylos hookeri 'Wayside'*), Blue Grama Grass (*Bouteloua gracilis*), Foothill Sedge (*Carex tumulicola*), Bush Anemone (*Carpenteria californica*), Western Redbud (*Cercis occidentalis*), Soap Plant (*Chlrogalum pomeridianum*), Bush Monkey Flower (*Diplacus aurantiacus*), Canyon Prince Wild Rye (*Elymus condensatus 'Canyon Prince'*), California Fuchsia (*Epilobium canum*), California Primrose (*Oenothera californica*), Firecracker Penstemon (*Penstemon eatonii*), Chaparral Currant (*Ribes malvaceum*), and California Aster (*Symphyotrichum chilense).*

- **Native California Grassland:** California poppy (*Eschscholzia californica*), Meadow Barley (*Hordeum californicum*), Purple Needle Grass (*Stipa pulchra*), Bicolored lupine (*Lupinus bicolor*), Small Fescue (*Festuca microstachys*), Narrow Leak Milkweed (*Asclepias fascicularis),* Brickelbush (*Brickellia californica*), Foothill Sedge (*Carex tumulicola),* Point Sierra Mountain Lilac (*Ceanothus maritimus 'Point Sierra'*), California Buckwheat (*Eriogonum fasciculatum*), Golden Yarrow (*Eriophyllum confertiflorum*), Yellow Douglas Iris (*Iris douglasiana 'Yellow'*), Spider Lupine (*Lupinus benthamii*), Deergrass (*Muhlenbergia rigens*), California Wildrose (*Rosa californica*), Checker Bloom (*Sidalcea malviflora*), California Goldenrod (*Solidago veluntina ssp. Californica*), and Narrow Leaf Mule Ears (*Wyethia angustifolia*).

- **Wetlands:** Spike Rush (*Eleocharis macrostachya*), Annual Hairgrass (*Deschampsia danthonioides*), Clustered Field Sedge (*Carex praegracilis*), Common Bog Rush (*Juncus effusus*), Spreading Rush (*Juncus patens*), Box Elder (*Acer negundo*), California Mugwort (*Artemisia douglasiana*), Mulefat (*Baccharis salicifolia*), Pacific Reedgrass (*Calamagrostis nutkaensis*), Scarlet Monkeyflower (*Erythranthe cardinalis*), California Sunflower (*Helianthus californicus),* Red Fescue (*Festuca rubra), and* Cardinal Flower (*Lobelia cardinalis).*

- **Riparian Buffer:** Valley Oak (*Quercus lobata*), California Sycamore (*Platanus racemosa*), Oregon Ash (*Fraxinus latifolia*), Black Elderberry (*Sambucus nigra*), Western Redbud (*Cercis occidentalis*), Big Leaf Maple (*Acer macrophyllum*), California Buckeye (*Aesculus californica*), Western Columbine (*Aguilegia formosa*), Emory Baccharis (*Baccharis emoryi*), Field Sedge (*Carex praegracilis*), Desert Willow (*Chilopsis linearis*), Fireweed (*Epilobium angustifolium*), Creeping Oregon Grape (*Mahonia aquifolium*), Scarlet Monkey Flower (*Mimulus cardinalis*), and California fuchsia (*Zauschenaria californica*)

## Trash and Recycling

A new dumpster enclosure would be constructed and located adjacent to the parking lot south of Horse Creek Soccer Complex and adjacent to the Multi-Purpose Recreation Center for ease of collection. Additional trash and recycling toters would be placed at key areas such as the various picnic areas, event

center, dog park, and as needed elsewhere for proper maintenance of the park. Waste management services would continue to be Vacaville Recology who hauls solid waste to the Hay Road landfill (including recycling). Green waste would be removed by park and maintenance crews.

## Utilities

### Water

Water infrastructure would be required for a majority of the proposed project components, as would irrigation for the landscaping. Existing water infrastructure includes a 12-inch public potable water main leading into the project site from the intersection of Allison Drive and Browns Valley Parkway and another 12-inch public potable water main that runs along Allison Parkway in the northern portion of the project site before heading west to connect to the 8-inch public potable water system serving the single family residences to the west of the project site. The proposed project would, as required according to the park component being constructed, tie into those existing water mains to provide potable water for project activities.

City policy encourages the use of raw or reclaimed water for landscape irrigation, and raw water may be sourced from the Solano Irrigation District (SID) which currently provides water to the Nut Tree airport complex east of the project site. However, Centennial Park is currently outside of SID's service boundary and would need to be annexed into their service area. Upon annexation into the SID's service boundary, the proposed project could tie into an existing 36-inch SID water line that runs along the park's Browns Valley Parkway frontage.

### Sewer

The project site features a vitrified clay pipe (VCP) running south along Allison Parkway and leading to Allison Drive in the southern portion of the project site. A portion of this pipe segment consists of 15-inch diameter VCP, while approximately 1,200 linear feet (LF) of the segment consists of 12-inch diameter VCP (Figure 17). The City of Vacaville has a proposed project that would upsize the 12-inch diameter VCPs to 15-inch diameter VCPs to accommodate flow capacity required by full buildout of the proposed Centennial Park project. The proposed project would require sewer tie-ins at key locations (to serve the bike park, soccer complex, family fun center, and recreation center) along the existing sewer transmission line.

### Stormwater

The project site contains two existing stormwater detention basins: South Horse Creek Basin #1 and South Horse Creek Basin #2. These stormwater detention basins are located along the eastern boundary of the project site and included in Figure SAF-6, Existing and Proposed Drainage Facilities, of the General Plan. Full buildout of the park would include the proposed construction of two proposed detention basins in the northern portion of the project site along the eastern boundary that would hold approximately 40 acre-feet combined to serve the needs of the park during construction and ongoing operation. Public stormwater mains run south from the Browns Valley Parkway and Allison Drive intersection, as well as along Allison Parkway in the northern portion of the project site.

### Electricity

Security lighting would be present on portions of the project site and would be shielded, downfacing, and dimmable in accordance with VMC Section 14.09.240.110. PG&E currently provides electrical services to Centennial Park and has an easement located in the project site. Electricity may also be provided by solar collectors to be mounted to the roof of the Multi-Purpose Recreation Center and independent shelters over key parking lots, if feasible.

## 4.7 Soil Import and Construction Activities

### Soil Import

Phase I would require the import of approximately 2,394,659 cubic yards of clean fill (soil) to raise the ground level and create terrain for the following project components:

- Bike Skills Course – 934,000 cubic yards
- Great Meadow Trails and Overlook – 1,400,000 cubic yards
- Dog Park – 60,000 cubic yards
- Allison Parkway Access Improvements – 659 cubic yards

Soil import is anticipated to commence immediately upon project approval and be complete in the first quarter of 2033. Hauling soil to the project site would require approximately 68 truckloads (136 one-way trips) per workday, intermittently over the 8.5-year soil import period. Some soil may be stockpiled on the project site before being placed in the project component areas.

### Construction Schedule and Equipment

Construction would take place in five phases, with each phase being carried out as funding becomes available. Phase I is anticipated to commence immediately upon project approval and permit issuance. Table 1, Construction Schedule and Duration, below provides the estimated construction timeline and duration by phase. This schedule is an estimated schedule that is subject to change as funding becomes available.

**TABLE 1.**
**CONSTRUCTION SCHEDULE AND DURATION**

| Phase | Commencement | Duration |
|---|---|---|
| Phase I | Spring 2025 | Fall 2035 |
| Phase II | Spring 2029 | Fall 2034 |
| Phase III | Spring 2030 | Fall 2035 |
| Phase IV | Spring 2035 | Fall 2040 |
| Phase V | Spring 2040 | Fall 2045 |

*Construction phases overlap.

Construction of park facilities and associated improvements would utilize standard construction equipment. Equipment used would vary for each phase of project construction but is expected to

include, but not be limited to, excavators, bulldozers, dump trucks, backhoes, cranes, steam rollers, chippers, and various trucks and smaller vehicles. Additionally, hand-operated mechanical equipment such as chainsaws, drills, compactors, and similar tools may be used.

A construction vehicle and equipment staging area would be located west of the proposed Allison Parkway entryway improvements. Another staging area would potentially be located in the Great Meadows area of the project to serve proposed construction activity in the Nature Exploration Zone.

Construction vehicle access for the southern portion of the project site would lead in from the gated ingress point on Browns Valley Parkway and loop eastward toward the egress point at the intersection of Browns Valley Parkway and Allison Drive, so as not to require construction vehicles to go through an unprotected left turn. The northern portion of the site would be accessed from the Allison Parkway ingress/egress point located in the northern portion of the property and would have an emergency vehicle turnaround in the parking lot area.

## 4.8 Required Permits and Approvals

A listing and brief description of the approvals and/or regulatory permits required to implement the Centennial Park Master Plan project are provided below. This environmental document is intended to address the environmental impacts associated with the following discretionary actions and approvals.

### City of Vacaville

- **Design Review of Master Plan**
- **Grading Permit**
- **Building Permit**
- **Consideration of the Environmental Document:** The City of Vacaville will act as the Lead Agency as defined by CEQA and will have authority to determine if the environmental document is adequate under CEQA and the State CEQA Guidelines.
- **Project Approval:** The City of Vacaville Planning Commission will consider approval of the project and the entitlements described above.

### Agencies

- **California Department of Fish and Wildlife (CDFW):** The California Department of Fish and Wildlife requires a Lake and Streambed Alteration Agreement (LSAA) when a project activity may substantially adversely affect fish and wildlife resources. Fish and Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following:
    - Divert or obstruct the natural flow of any river, stream, or lake;
    - Change the bed, channel, or bank of any river, stream, or lake;
    - Use material from any river, stream, or lake; or
    - Deposit or dispose of material into any river, stream, or lake.

- **Central Valley Regional Water Quality Control Board (CVRWQCB):** A National Pollutant Discharge Elimination System General Permit to Discharge Storm Water Associated with Construction Activity (Construction General Permit) would be required for construction of the proposed project. The project applicant and/or construction contractor would be required to file a Notice of Intent with the CVRWQCB. Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain state certification that the discharge complies with other provisions of CWA. The RWQCB administers the certification program in California and may require State Water Quality Certification before other permits are issued.

- **Pacific Gas & Electric (PG&E):** A PG&E public utility easement transects the project site and runs north to south leading from Allison Parkway in the northern portion of the project site to Allison Drive in the south. There is an existing maintenance and access road along this public utility easement that doubly serves as part of the park's internal, non-vehicular, trail system. PG&E would be responsible for the approval of the proposed improvements within the public utility easement to raise the maintenance/access road leading from Allison Parkway in the northern portion of the project site to Allison Drive in the south up to 10 feet to improve visibility, access, and surfacing conditions.

- **Solano Irrigation District (SID):** Raw water may be sourced from the Solano Irrigation District (SID) for landscape irrigation. Centennial Park is currently outside of SID's service boundary and would need to be annexed into SID's service area.

- **United States Army Corps of Engineers (USACE):** The Clean Water Act (33 USC 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters, and Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). If implementation of the proposed project would require the discharge of dredged or fill material into waters of the U.S., then a Section 404 permit from the USACE would be required.

# 5.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "New Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

| | | |
|---|---|---|
| ☐ Aesthetics | ☐ Agriculture and Forestry Resources | ☐ Air Quality |
| ☒ Biological Resources | ☒ Cultural Resources | ☒ Energy |
| ☒ Geology, Soils, and Mineral Resources | ☒ Greenhouse Gas Emissions | ☒ Hazards and Hazardous Materials |
| ☐ Hydrology and Water Quality | ☐ Land Use and Planning | ☒ Noise |
| ☐ Population and Housing | ☒ Public Services and Recreation | ☒ Traffic and Transportation |
| ☒ Tribal Cultural Resources | ☐ Utilities and Service Systems | ☒ Mandatory Findings of Significance |

# 6.0 DETERMINATION

On the basis of this initial evaluation:

| | |
|---|---|
| ☐ | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| ☒ | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| ☐ | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| ☐ | I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect I) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| ☐ | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. |

| | |
|---|---|
| Signature | Date |
| Albert Enault, Senior Planner | City of Vacaville |
| Printed Name | For |

# 7.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

The lead agency has defined the column headings in the environmental checklist as follows:

A. "New Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "New Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "New Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No New Impact" applies where a project does not create a new impact in that category compared to the determinations made for that category in the City's General Plan EIR or SEIR.

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

a) Earlier Analyses Used. Identifies where earlier analyses are available for review.

b) Impacts Adequately Addressed. Identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Incorporated," describes the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

# I. AESTHETICS

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Except as provided in Public Resources Code Section 21099, would the project: | | | | | |
| a) | Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☒ |
| b) | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☒ |
| c) | Substantially degrade the existing visual character or quality of public views of the site and its surroundings? | ☐ | ☐ | ☐ | ☒ |
| d) | Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The project site is an existing 53.4-acre park that was planned to be expanded to include all 276 acres in the City's General Plan. Centennial Park is an exception to the City's size standard of new community parks being a minimum of 10 acres and a maximum of 40 acres in size in that it is intended to serve the entire City, as per the General Plan. Elevation on the project site is relatively flat and ranges from approximately 133 feet amsl in the northwestern portion to 111 feet amsl in the southern portion. The ground surface throughout the project site, to the extent that it was visible, has been moderately disturbed by vehicle traffic and other human activity. The undeveloped area of the park site has been cleared and has existing paved access roads leading from Browns Valley Parkway in the south to Allison Parkway in the north. The project site is surrounded by existing urban development. The site is bordered by Browns Valley Parkway to the south, the Putah South Canal to the east, residential developments (single-family residences) to the west, and mixed land uses (institutional, commercial, etc.) to the north. Lighting in the vicinity of the project site includes existing lighting for the baseball fields, soccer fields, and other park amenities, street lighting along the bordering streets, lighting from the Nut Tree Airport to the east, and lighting from the residential neighborhoods to the west.

### Existing Viewer Sensitivity, Viewer Groups, Viewer Exposure, and Viewer Awareness

The viewer groups in the project vicinity are recreationists, residents, cyclists, and motorists. For residents, viewer sensitivity is high due to their long-term, constant presence in the area and the moderate to high visual quality of the surrounding scenery. It is also presumed that all of these viewer groups were drawn to the project area because of the park and open spaces, although motorists/cyclists may travel the project area's roadways solely to reach a destination. For the purpose of this analysis, it is assumed motorist/cyclist sensitivity is moderate while recreationist and resident sensitivity is high because Centennial Park is a destination for recreational usage.

### Key Observation Points

Four key observation points (KOPs) were identified and analyzed for the proposed project (see Figure 5 in Appendix A for the locations of the KOPs). Existing, pre-project photographs for these KOPs are shown in Figures 6, 8, 10, and 12. Post-project visual simulations were prepared for each KOP, and KOPs A, B, C, and D were selected to display the visual results of the proposed project as viewed from public vantage points for the primary viewer groups potentially affected. Post-project simulations are included inn Appendix A as Figures 7, 9, 11, and 13. Descriptions of the pre-project conditions of each KOP is provided below.

KOP A: Allison Drive and Browns Valley Parkway Intersection

KOP A, located at the intersection of Allison Drive and Browns Valley Parkway, represents the views of motorists and cyclists passing the intersection heading west on Brown Valley Parkway or north on Allison Drive. This view is better observed by recreationists walking along the sidewalk at the southeast corner of Centennial Park facing northwest. This view facing northwest is undeveloped grassland with dense and sparse tree canopies in the foreground, expanding into the middle ground, and a clear view of a tree lined horizon in the background with an open sky view. This view is dominated by grasslands of a light color. Man-made visual elements include the field light posts in the background. Overall, the elements in this view—expanses of grassland, spread out trees of various sizes— are comprised of complementary colors, textures, and elements that create a harmonious landscape with few visual encroachments. The visual character is natural with very few man-made visual encroachments. KOP A and the views it represents is of moderately high visual quality.

KOP B: Dog Park View

KOP B, located on-site, southwest of the project site boundary, represents the view of recreationists traveling along the outer pedestrian trail facing east into the site. The view is towards the east and the foreground is comprised of grasslands with no trees, the middle ground is comprised of a tree-lined dirt pedestrian path, and the background is comprised of grasslands and a riparian area. Man-made visual elements include light post wiring that crosses the foreground view of the sky. The visual character is natural with few encroachments related to development; the view is softened by the grassland with a break in the middle ground by the trees. KOP B and the views it represents is of moderately high visual quality.

KOP C: Pedestrian Path View

KOP C, located on-site, northwest of the project site boundary, represents the view from the paved pedestrian path along the site perimeter and the neighboring residentials. The view is towards the east and the foreground is comprised of flat topography with some light-yellow grasses and is intersected by a paved pedestrian path that curves to the right and flows into the middle ground. The background is comprised of flat topography with grass-covered landscaping, open sky views and warehouses at the horizon line. Existing trees towards the horizon line which partially obstruct some of the buildings. Man-made visual elements consist of buildings along the horizon. The visual character is rural with some man-made visual encroachments; the view is softened with flat grasslands and a smooth paved path. KOP C and the views it represents are of moderate visual quality.

KOP D: Allison Parkway View

KOP D, located in the center of Allison Parkway about 50 feet from the project boundary facing south towards the site, represents the view of a motorist or cyclist. The view facing south consists of the asphalt roadway in the foreground, white fencing, and a gate. Behind the gate are trees on opposite ends for the middle ground. The background consists of mounding grassy hills with an emergency road crossing the center from the middle ground to the background, sky views are obstructed by trees in the middle ground. The visual character is rural with some man-made visual encroachments; the view has moderately high vividness. KOP D and the views it represents are of low visual quality.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

No federal regulations are applicable to aesthetics in relation to the proposed project.

#### State Laws, Regulations, and Policies

State Scenic Highway Program: State Scenic Highways are designated by the California Department of Transportation (Caltrans) to promote the protection and enhancement of the natural scenic beauty of California's highways and adjacent corridors. Caltrans is the State agency responsible for the planning, construction, and maintenance of highway, bridge, and rail transportation. California's Scenic Highway Program was created by the Legislature in 1963. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. There are no roadways in the City of Vacaville that are designated as a State Scenic Highway.

California Building Code: The California Building Code, Part 2 of Title 24 in the California Code of Regulations (CCR), is based on the International Building Code and combines three types of building standards from three different origins:

- Building standards that have been adopted by State agencies without change from building standards contained in the International Building Code.
- Building standards that have been adopted and adapted from the International Building Code to meet California conditions.
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the International Building Code that have been adopted to address particular California concerns.

The California Building Code includes standards for outdoor lighting that are intended to improve energy efficiency, and to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal LU-1. Preserve, Promote, and Protect the Existing Character and Quality of Life Within Vacaville.**

- Policy LU-P1.5: With the exception of Priority Development Areas, require that infill projects be designed to complement the neighborhood and surrounding zoning with respect to the existing scale and character of surrounding structures, and blend, rather than compete, with the established character of the area.

**Goal COS-1. Protect and Enhance Habitat for Sensitive Species and Natural Communities**

- Policy COS-P1.6: Require that new development minimize the disturbance of natural habitats and vegetation. Require revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.

- Policy COS-P1.9: Require that new development include provisions to protect and preserve wetland habitats that meet one of the following conditions:

    - The wetlands contribute to the habitat quality and value of reserve/preserve lands established or expected to be established in perpetuity for conservation purposes.

    - The wetlands are contiguous to riparian or stream corridors, or other permanently protected lands.

    - The wetlands are located within or contiguous to other high value natural areas.

**Goal COS-2. Preserve and Restore Vacaville's Creeks.**

- Policy COS-P2.1: Discourage undergrounding of creeks and encourage daylighting of existing culverted creeks.

- Policy COS-P2.2: Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception.

- Policy COS-P2.5: Encourage restoration and expansion of riparian and floodplain habitat within channelized streams and flood channels where feasible, such as old Alamo Creek and old Ulatis Creek channels east of Leisure Town Road.

- Policy COS-P2.7: Require creek areas in new developments to be visible from the public right-of-way to ensure safety, maintenance, access, and integration into the neighborhood.

**Goal COS-8. Maintain and Enhance the Quality of Vacaville's Scenic and Visual Resources.**

- Policy COS-P8.1: Preserve scenic features and the feel of a city surrounded by open space, and preserve view corridors to the hills and other significant natural areas.

- Policy COS-P8.2: Retain major ridgelines and hillsides as open space.

**Goal SAF-1. Minimize Exposure to Geologic Hazards, Including Slope Instability, Subsidence, and Expansive Soils, and to Seismic Hazards, Including Ground Shaking, Fault Rupture, Liquefaction, and Landslides.**

- Policy SAF-P1.2: Prohibit development on ridges and slopes at or exceeding 25 percent.

Vacaville Land Use and Development Code

The Vacaville Land Use and Development Code has a number of sections requiring design review and stipulating aesthetic standards, such as ensuring that a project's proposed building type, intensity, design, and size is appropriate for the location and is compatible with adjacent uses and resources (VMC Section 14.09.113). It also provides standards for architectural design, variety in housing types and massing, configuration of subdivisions, and site improvements such as landscaping and fencing (Section 14.09.074). Additionally, the Land Use and Development Code has provisions for regulating lighting and minimizing glare (VMC Section 14.09.127.110).

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Aesthetics are discussed in Chapter 4.1 of the General Plan EIR (City of Vacaville 2013). The EIR concluded that implementation and construction of the General Plan would substantially degrade the existing visual character or quality of public views, and impacts would be significant and unavoidable. The General Plan EIR did not identify any mitigation measures for Aesthetics.

### Discussion of Impacts

a) Have a substantial adverse effect on a scenic vista?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would result in a less-than-significant impact to scenic vistas. While the General Plan does not designate official scenic vistas, the General Plan states that important scenic views in the City include views of the rural and undeveloped lands surrounding the City and Vacaville's hillside areas. The General Plan also states that views of the surrounding countryside, ridgelines, and hilltops are important contributors to the identity of the City. While the proposed project would expand the existing Centennial Park, the proposed expansion includes passive and active park amenities, riparian habitat restoration, landscaping, pedestrian trails, and other amenities. The project components proposed in Phase I would require large quantities of imported soil for the development of the bike skills course, Great Meadows trails and overlook, and new dog park. The proposed improvements would elevate some areas with soil import, introduce new lighting sources, and potentially construct new City facility buildings. However, these improvements are expected to be less-than-significant because: (1) there are no scenic resources on the project site or immediate area that would obstructed from public view; (2) the proposed lighting and structure improvements are setback more than 30 feet from existing residential homes and roadways to ensure no immediate impact to views of the surrounding areas; and (3) the project would

introduce new landscaping to further enhance the natural community appearance of the existing environment. Therefore, the project would result in a less than significant impact and would have *no new impact* on scenic vistas compared to what was analyzed in the General Plan EIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would not substantially damage scenic resources, and impacts would be less than significant. There are no State scenic highways in the City of Vacaville, and the project site does not contain any rock outcroppings or historic buildings. The site does contain several native and non-native trees with ruderal weeds; however, the existing trees and vegetation are not considered a scenic resource as defined by the Open Space and Conservation Element of the General Plan. Additionally, the proposed project would improve the views of the project site from Allison Parkway and would add visually pleasing amenities such as park amenities and landscaping. Therefore, the project would have a less than significant impact on scenic resources, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings?

**No new impact.** Chapter 4.1 of the General Plan EIR determined that implementation of the General Plan would alter the existing rural and agricultural appearance of undeveloped areas in the City of Vacaville, and that this would have a significant and unavoidable impact. No mitigation measures were suggested. To assess the proposed project's impact on the existing visual character and quality of public views of the site and its surroundings, post-project simulations of the KOPs are discussed in detail below and refer to Figures 7, 9, 11, and 13 for the post-project simulations.

<u>KOP A: Allison Drive and Browns Valley Parkway Intersection</u>

At KOP A, the proposed project would result in higher visual quality than the existing setting. The high quality is attributed to the formal park entry landscape design, planting design, and providing more usability of the site as shown in the foreground, open lawn in the middle ground, sport courts and denser tree placement in the background. Once designed, the sports complex in the background would be eye catching for pedestrians entering or passing through the site and the paved path would create an enhanced connection into the site. Although the proposed project includes landscaping along Allison Drive and Browns Valley Parkway, open sky views would still be visible in the middle ground post-project. The visual character of the project site would be altered but a manicured and urban landscape would replace the foreground, middle ground, and background. The visual quality of the site post-project would be high.

<u>KOP B: Dog Park View</u>

At KOP B, the proposed project would result in a slightly lower visual quality than the existing view. At this viewpoint, the foreground would remain the same while the middle ground would receive more trees, and the background would be the most impacted. Views of the existing riparian area in the background would be replaced by a fenced dog park, shade structures and a restroom. Although the visual quality would be slightly reduced, the visual quality upon full buildout would be moderate at this location due to the new amenities provided on site and additional trees.

KOP C: Pedestrian Path View

At KOP C, the proposed project would result in a higher visual quality than the existing view. The entire view would be enhanced with more tree placements in the foreground, middle ground, and background. In the background, mounded grasslands with pedestrian trails spread throughout would replace the flat grassland. Under the proposed project, the paved pedestrian path would remain intact in the middle ground but would be lined with trees, increasing visual interest and providing habitats for wildlife. The visual quality would be moderately high.

KOP D: Allison Parkway View

At KOP D, the proposed project would result in a slightly higher visual quality than the existing view. The foreground would remain relatively similar, with the asphalt road with the addition of new road lines for clear delineation of entry and exit points for vehicles to the site. The current white fence would be replaced with a chain-link fence and two new pipe gates. New crushed fines pedestrian trail and asphalt access road would be added in the middle ground, as well a paved parking lot and decomposed granite overflow parking area. The background would consist of mounded topography with asphalt pump tracks, the access road would be lined with trees from the middle ground all the way to the background. The visual character of the project site would be altered with an enhanced landscape design which would increase the visual quality from low to moderate.

As shown in Figures 5 through 13, views of the riparian area in the background of KOP B be slightly impeded, but views at KOPs A, C, and D would increase in visual quality as a result of the proposed project. As described in the summary of each KOP above, recreationists, residents, motorists, and cyclists would see an increase in visual quality of the site, but the views at KOP B would decrease slightly to be moderate in visual quality. Additionally, the General Plan EIR concluded that implementation of the General Plan would result in a significant and unavoidable impact to the visual character and quality of the City of Vacaville. Therefore, the proposed project would have a less than significant impact on the existing visual character or quality of public views, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and impacts would be less than significant.

Lighting in the vicinity of the project site includes existing lighting on-site for the baseball fields, soccer fields, and other park amenities, street lighting along the bordering streets, lighting from the Nut Tree Airport to the east, and lighting from the residential neighborhoods to the west. Additional or updated lighting is proposed at the bike skills course, dog park, tennis courts, Horse Creek Soccer Complex expansion, renovated ballfield complex, skate park, basketball courts, nature playscape, and sand volleyball courts. Additionally, the Multi-Purpose Recreation Center proposes lighting during the daytime and nighttime. Lighting during nighttime events would feature dimmed, solar-powered security lighting at key points. All lighting present on the project site would be shielded, downfacing, and dimmable and would comply with all lighting and glare regulations set forth in VMC Section 14.09.127.110. Therefore, compliance with VMC Section 14.09.127.110 would minimize impacts from proposed lighting on the project site. Based on this assessment, the project would have a less than

significant impact on daytime and nighttime views in the area, and there would be *no new impact* as compared to what was evaluated in the General Plan EIR.

# II. AGRICULTURE AND FORESTRY RESOURCES

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (farmlands of concern under CEQA), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| b) | Conflict with an existing Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) | Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) | Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmlands of concern under CEQA to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The majority of agricultural land within the City of Vacaville General Plan EIR Project site is classified as grazing land. Throughout the northern and southern limits of the EIR Project site, the agricultural land is predominantly grazing land, with the exception of prime farmland and farmland of statewide importance at the southeastern boundary and one area of prime farmland in the Gibson Canyon area. Isolated woodlands that could fall under California Public Resource Code Section 12220(g) are scattered throughout the southwestern and northern portions of the EIR Project site and are primarily located on hillsides and vacant and agricultural lands.

No agricultural activities or timber management occur on or near the project site, and the project site is not designated for those land uses. The California Important Farmland Finder Interactive Map prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation (CDC) classifies the project site as grazing land and urban and built-up land, and immediately adjacent areas are also grazing land and urban and built-up land (CDC 2024a). Urban and built-up land is defined by the California Department of Conservation as land occupied by structures or infrastructure with a building density of at least one unit to one and one-half acres, or approximately six structures to a 10-acre parcel. Grazing land is defined by land on which the existing vegetation is suited to the grazing of livestock (CDC 2024a).

## Regulatory Framework

### Federal Laws, Regulations, and Policies

No federal regulations are applicable to agricultural and forestry resources in relation to the proposed project.

### State Laws, Regulations, and Policies

Farmland Mapping and Monitoring Program

The FMMP, administered by the CDC, produces maps and statistical data for use in analyzing impacts on California's agricultural resources (CDC 2024b). FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are as follows (CDC 2024b):

> ***Prime Farmland:*** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.
>
> ***Farmland of Statewide Importance:*** Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Farmland of Statewide Importance must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.
>
> ***Unique Farmland***: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. These lands are usually irrigated but might include non-irrigated orchards or vineyards, as found in some climatic zones. Unique Farmland must have been cropped at some time during the 4 years before the FMMP's mapping date.
>
> ***Farmland of Local Importance:*** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (CDC 2024c). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

Z'berg-Nejedly Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'Berg-Nejedly Forest Practices Act (FPA), which took effect January 1, 1974. The act established the Forest Practice Rules (FPRs) and charged the politically appointed Board of Forestry to oversee their implementation. CAL FIRE works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A Timber Harvest Plan (THP) must be prepared by a

Registered Professional Forester (RPF) for timber harvest on non-federal timberland, with limited exceptions.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following goals and/or policies from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

- **Goal COS-1. Protect and Enhance Habitat for Sensitive Species and Natural Communities**
    - Policy COS-P1.4: Continue to protect mature trees and existing native non-agricultural trees.
    - Policy COS-P1.6: Require that new development minimize the disturbance of natural habitats and vegetation. Require revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.
    - Policy COS-P1.14: Require that new development that would result in the loss or conversion of woodland resources develop and implement a plan that clusters impacts in order to reduce tree removal and impacts to trees to the maximum extent feasible.
- **Goal COS-3. Support Solano County Efforts to Preserve Existing Agricultural Lands Located in the Planning Area.**
    - Policy COS-P3.1: Maintain a compact urban form and locate new development to minimize the loss of agricultural and open space resources.

Vacaville Land Use and Development Code

The Vacaville Land Use and Development Code contains two agricultural zoning code districts: Agriculture (AG) and Agricultural Hillside (AH). The AG district accommodates long-term commercial animal-raising and crop cultivation, and typical uses and structures accessory to farm or ranch operation, such as grazing, farm employee housing, and seasonal roadside stands. The Land Use and Development Code lists specific intentions informing the standards in the AG district. The AH district is an area designated for low intensity agricultural uses on privately-held, typically steeply sloped, hillside lands. In the AH district, only one dwelling unit per 20 acres is permitted. Similar to the AG district, uses and structures accessory to agriculture, such as livestock stables and corrals, are also allowed in the AH district.

While the Land Use and Development Code does not contain a zoning district for forest or timberland, development within the Open Space (OS) zoning district is subject to the following provision regarding woodland under Section 14.09.101.100 of the Code:

> **Woodland Vegetation and Habitat.** All development shall be found by the decisionmaker to minimize the disruption of woodland vegetation and wildlife habitat consistent with the provisions of the Fire Protection Standards referenced in this section.

In addition, Section 14.09.131 of the Land Use and Development Code includes tree preservation requirements that apply to any tree with a circumference of 31 inches or more when measured at 4.5 feet above ground level. Removal of such trees requires a tree removal permit, which is issued by the City based on the condition of the tree, tree species, number of existing trees, sound forestry practices, the size of the tree, replacement trees, and the location of the tree.

The City requires a 500-foot agricultural buffer between residential and agricultural uses. The agricultural buffer is intended to protect viable agricultural operations (particularly crops that require irrigation, tilling, and spraying) from the intrusion of urban uses.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

As discussed in Chapter 4.2, Agriculture and Forestry Resources, of the EIR, implementation of the General Plan Update would convert prime, unique, or farmland of statewide importance to non-agricultural uses and designate lands with active Williamson Act contracts for non-agricultural use which would result in significant and unavoidable impacts to agriculture resources. The Vacaville Land Use and Development Code does not contain a zoning district for forest or timberland. Therefore, the General Plan Update would not conflict with or rezone existing forest or timberland uses to non-forest uses, and there would be no impact to forest or timberland.

### Discussion of Impacts

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would convert 2,640 acres of farmlands of concern under CEQA to non-agricultural uses, and impacts would be significant and unavoidable. As noted above, the California Important Farmland Finder Interactive Map prepared pursuant to the FMMP of the CDC classifies most of the project site as grazing land and urban and built-up land (CDC 2024a). Therefore, the proposed project would not convert farmlands of concern under CEQA to non-agricultural use, and there would be no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. There would be *no new impact* compared to what was evaluated in the General Plan EIR

b) Conflict with an existing Williamson Act contract?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would designate 206 acres of land with active Williamson Act contracts for non-agricultural uses, and impacts would be significant and unavoidable. The project site is not in Williamson Act contract. Therefore, the proposed project would have no impact and would not conflict with a Williamson Act contract. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

**No new impact.** The General Plan EIR concluded that the Vacaville Land Use and Development Code does not contain a zoning district for forest or timberland, and therefore, the proposed General Plan

Update would not conflict with or rezone existing zoning for forest or timberland. The proposed project would have no impact on zoning of forest land, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would result in a less-than-significant impact related to the loss of forest land. Forest land, under PRC Section 12220(g), is defined as:

"Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

While the project site hosts multiple native trees, it is not classified as forest land and is currently used as a park and open space. Additionally, the proposed project would integrate the existing trees into the project design to the maximum extent feasible to minimize tree removal. Therefore, the proposed project would have no impact and would not convert forest land to non-forest use, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmlands of concern under CEQA to non-agricultural use or conversion of forest land to non-forest use?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not involve other changes in the existing environment that could result in conversion of farmlands of concern under CEQA to non-agricultural use or conversion of forest land to non-forest use, and impacts would be less than significant. As discussed under questions a) through d) above, the project site is not in agricultural or forest land use and would not result in the conversion of such lands to non-agricultural or non-forest use. Therefore, there would be no impact on farmland or forest land, and *no new impact* compared to what was evaluated in the General Plan EIR.

# III. AIR QUALITY

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☐ | ☒ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? YSAQMD further defines the thresholds of significance as follows:<br>• Generation of ROG or $NO_x$ emissions for construction or operations in excess of 10 tons per year; or<br>• Generation of $PM_{10}$ emissions for construction or operations in excess of 80 pounds per day. | ☐ | ☐ | ☐ | ☒ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? YSAQMD further defines the threshold of significance as follows:<br>• Emissions would be considered cumulatively considerable when an exceedance of CO air quality standards results from project CO emissions combined with and CO emissions from other planned projects. | ☐ | ☐ | ☐ | ☒ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☐ | ☒ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☐ | ☒ |

The California Emissions Estimator Model (CalEEMod) version 2022.1 was used to quantify project-generated construction and operational emissions for Phase I through Phase V. The model output sheets are included in Appendix C to this Initial Study.

### Affected Environment

The project site is located within the Sacramento Valley Air Basin (SVAB). The SVAB encompasses eleven counties, including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo counties, as well as the westernmost portion of Placer County and the northeastern half of Solano County. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The intervening terrain is relatively flat. Hot dry summers and mild rainy winters characterize the Mediterranean climate of the SVAB. During the year, the temperature may range from

20 to 115 degrees Fahrenheit (°F), with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March (City 2013).

Air Quality in the SVAB is regulated by the U.S. Environmental Protection Agency (USEPA) at the federal level, by the California Air Resources Board (CARB) at the State level, by the Yolo-Solano Air Quality Management District (YSAQMD) at the regional level, and by the City of Vacaville at the local level.

### Regulatory Framework

#### Criteria Pollutants

Criteria pollutants are defined and regulated by State and federal law as a risk to the health and welfare of the public and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources, including carbon monoxide (CO); reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs]);[2] nitrogen oxides ($NO_X$); sulfur dioxide ($SO_2$); coarse particulate matter ($PM_{10}$); fine particulate matter ($PM_{2.5}$); and lead. Of these primary pollutants, CO, $SO_2$, $PM_{10}$, $PM_{2.5}$, and lead are criteria pollutants. ROGs and $NO_X$ are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. The principal secondary criteria pollutants are ozone and nitrogen dioxide ($NO_2$). In addition to being primary pollutants, $PM_{10}$ and $PM_{2.5}$ can be secondary pollutants formed by chemical reactions in the atmosphere.

Ambient air quality is described in terms of compliance with State and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise.

The USEPA has established national ambient air quality standards (NAAQS) for criteria pollutants. As permitted by the Clean Air Act (CAA), California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air pollutant constituents.

CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for these standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. The area air quality attainment status of the YSAQMD is shown in Table 2, Yolo-Solano Air Quality Management District Attainment Status. The YSAQMD is currently in nonattainment for State $PM_{10}$ standards and federal $PM_{2.5}$ standards. The YSAQMD is in State and federal nonattainment for ozone (1-hour and 8-hour) standards. Concentrations of all other pollutants meet State and federal standards.

[2] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs, and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

**TABLE 2.**
**YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT ATTAINMENT STATUS**

| Pollutant | State of California Attainment Status | Federal Attainment Status |
|---|---|---|
| Ozone (1-hour) | Nonattainment | Nonattainment |
| Ozone (8-hour) | Nonattainment | Nonattainment |
| Coarse Particulate Matter ($PM_{10}$) | Nonattainment | Unclassified |
| Fine Particulate Matter ($PM_{2.5}$) | Unclassified | Attainment/Nonattainment |
| Carbon Monoxide (CO) | Attainment | Attainment |
| Nitrogen Dioxide ($NO_2$) | Attainment | Attainment |
| Lead | Attainment | Attainment |
| Sulfur Dioxide ($SO_2$) | Attainment | Attainment |
| Sulfates | Attainment | No Federal Standard |
| Hydrogen Sulfide | Attainment | No Federal Standard |
| Visibility Reducing Particles | Attainment | No Federal Standard |

Source: YSAQMD 2022a

For all non-attainment categories except particulate matter, attainment plans are required to demonstrate a five percent-per-year reduction in non-attainment air pollutants or their precursors, averaged over consecutive three-year periods, unless an approved alternative measure of progress is developed (YSAQMD 2007).

The YSAQMD is within the Sacramento Federal Nonattainment Area (SFNA), which is classified as a "serious" nonattainment area for the 2015 ozone standard. The most recent federal ozone attainment plan is the Sacramento Regional 2015 National Ambient Air Quality Standards (NAAQS) 8-hour Ozone Attainment & Reasonable Further Progress Plan (2015 Ozone NAAQS Plan). The purpose of the 2015 Ozone NAAQS Plan is to demonstrate how the SFNA meets the Clean Air Act (CAA) and Reasonable Further Progress requirements and attainment of 2015 ozone NAAQS of 70 parts per billion (ppb; SCAQMD et al., 2023). Additionally, the most recent State ozone plan is the Triennial Assessment and Plan Update that summarized emissions trends from 2015-2017, forecasts future emissions, and reviews efforts made by the YSAQMD to improve air quality (YSAQMD 2019).

The SFNA has been identified by the USEPA as an area that is required to develop a mitigation plan to minimize the public exposure from $PM_{2.5}$ emissions generated during wildfire events. Therefore, the Wildfire Mitigation Plan for the Sacramento Federal Nonattainment Area for $PM_{2.5}$ was prepared to outline the actions each air district will take to notify the public and minimize air quality impacts from emissions when wildfires increase $PM_{2.5}$ concentration in the region (EDCAQMD et al., 2018).

**Toxic Air Contaminants**

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term chronic health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals.

Noncarcinogenic TACs differ in that there is assumed to be a relatively safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655[a]) defines TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." All substances that are listed as hazardous air pollutants pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) are designated as TACs. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

**Diesel Particulate Matter**

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is 2.5 microns or less in diameter (CARB 2023a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of the total known cancer risk related to air toxins in California is attributable to DPM (CARB 2023a).

**Yolo-Solano Air Quality Management District**

YSAQMD has adopted several attainment plans to achieve State and federal air quality standards and comply with California and federal CAA requirements. The most recent federal ozone attainment plan is the 2015 Ozone NAAQS Plan (SCAQMD et al., 2023) and the most recent State ozone plan is the Triennial Assessment and Plan Update (YSAQMD 2019). YSAQMD continuously monitors its progress in implementing attainment plans and must periodically report to CARB and the EPA.

In addition to YSAQMD's primary role of controlling stationary sources of pollution, YSAQMD is required to implement transportation control measures and identify indirect source control programs to reduce mobile source emissions. To accomplish this, YSAQMD works closely with cities, including the City of Vacaville, and with counties and regional transportation planning agencies (City 2013).

YSAQMD regulates agriculture emissions through a permitting process for stationary agriculture emission sources, confined animal facilities, and agriculture engines. YSAQMD has also enhanced its participation in the California Environmental Quality Act (CEQA) by actively reviewing and commenting on prepared environmental documents, such as those prepared by the City of Vacaville (City 2013).

*Rules and Regulations*

All projects under the jurisdiction of the YSAQMD are required to comply with the applicable rules and regulations under YSAQMD. Applicable rules and regulations under YSAQMD include, but are not limited to, the following (YSAQMD 2007):

- **Rule 2.5, Nuisance:** To restrict discharge from any source quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

- **Rule 2.11, Particulate Matter:** To limit release or discharge into the atmosphere, from any source, particulate matter in excess of 0.3 grains per cubic foot of exhaust volume as calculated standard conditions.

- **Rule 2.14, Architectural Coatings:** To limit the quantity of volatile organic compounds (VOC) in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the YSAQMD.

- **Rule 3.1, General Permit Requirements:** To provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

**City of Vacaville General Plan**

The General Plan includes the following goals and policies that would help to mitigate air quality impacts from mobile and area air pollutant sources (City 2015):

- **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.

    - **Policy COS-P12.4**. Require that development projects implement best management practices and Best Available Control Technologies to reduce air pollutant emissions associated with the construction and operation of the project.

    - **Policy COS-P12.5.** Require dust control measures as a condition of approval for subdivision maps, site plans, and all grading permits.

    - **Policy COS-12.8.** Evaluate residential development or other projects with sensitive receptors proposed within the buffer distances identified by the California Air Resources Board's Air Quality and Land Use Handbook to ensure sensitive receptors would not be exposed to an increased cancer risk or to ground-level concentrations of non-carcinogenic toxic air contaminants. Permitted stationary air pollutant sources can be identified through the Yolo Solano Air Quality Management District.

**Sensitive Receptors**

Residential areas are located throughout the City of Vacaville, as are schools and parks. Vacaville hospitals include Vaca Valley Hospital in central Vacaville and Kaiser Permanente Hospital in northeast Vacaville. Several convalescent hospitals are also located throughout the City (City 2013). The closest

sensitive receptors are single-family residences located approximately 30 feet west of the project site. The closest school to the project site is Edwin Markham Elementary School approximately 1,000 feet (0.19 mile) to the southwest.

### Methodology and Assumptions

Criteria pollutant and precursor emissions, and GHG emissions for the project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1. CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The model calculates emissions of criteria pollutants, ozone precursors, and GHGs, including $PM_{10}$, $PM_{2.5}$, ROGs, $NO_X$, and $CO_2e$. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, C, and D (CAPCOA 2023). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. The CalEEMod output files are included in Appendix C to this IS/MND.

Construction Assumptions

Construction of the project is anticipated to take place in five phases, with each phase being carried out as funding becomes available. Phase I is anticipated to commence immediately upon project approval and permit issuance. Table 1, Construction Schedule and Duration, in Section 4.7 provides the estimated construction timeline and duration by phase. This schedule is an estimated schedule that is subject to change as funding becomes available.

It is anticipated that each of the five phases would include the following construction activities: site preparation, grading, building construction, paving, and architectural coating. The duration of each construction activity was estimated based on the construction schedule outlined in Table 1 in Section 4.7. It was assumed that no demolition would be required. It was also assumed that building construction would include all park related structures, including fencing, lighting, landscaping, etc. Phase I included a soil import construction activity phase based on the duration of soil import provided by the project engineer.

Construction equipment assumptions for all five phases were based on estimates from CalEEMod defaults. However, an off-highway truck which is equivalent to a water truck was added to the site preparation and grading construction activity of each phase. Additionally, under Phase I, a loader and an off-highway truck were added to the grading construction activity for the transferring of soil, and the construction equipment during the building construction activity was reduced due to the small building size proposed under this phase.

Construction trips assumptions for all five phases were based on estimates from CalEEMod defaults. However, building construction trips for all five phases were estimated based on up to 10 worker trips and one vendor delivery per day. Hauling truckload trips of asphalt/concrete/aggregate that would be

imported during the paving construction activity for all five phases were estimated assuming 12-inches of uncompressed depth and 16 CY per tandem trailer load.

Construction emissions modeling assumed implementation of dust best management practices (watering exposed areas twice per day) would comply with the requirements of YSAQMD Rule 2.11, Particulate Matter and with the City General Plan Policy COS-P12.5.

Operational Assumptions

Operational assumptions for all five phases were based on estimates from CalEEMod defaults. It was assumed that since the project site is located within a developed area in the City of Vacaville, all project operational trips would be on paved public roads.

### Standards of Significance

To help public agencies evaluate air quality impacts, the YSAQMD has developed the *Handbook for Assessing and Mitigating Air Quality Impacts*, which was adopted July 11, 2007. Table 3 shows the project-level thresholds of significance as established by the YSAQMD for particulate matter less than 10 micrometers in diameter ($PM_{10}$), carbon monoxide (CO), and the precursors to ozone, which are reactive organic gases (ROG) and nitrogen oxides ($NO_x$). The thresholds apply to both construction and operational impacts.

**TABLE 3.**
**THRESHOLDS OF SIGNIFICANCE FOR CRITERIA POLLUTANTS OF CONCERN**

| Pollutant | Thresholds of Significance |
|---|---|
| ROG | 10 tons/year |
| $NO_x$ | 10 tons/year |
| $PM_{10}$ | 80 lbs/day |
| CO | Violation of a State ambient air quality standard for CO |

Source: YSAQMD 2007

The YSAQMD has also established thresholds for development projects that have the potential to expose the public to TACs from stationary sources. If a project were to exceed the following thresholds, it would be considered to have a significant air quality impact. These thresholds are based on the YSAQMD's Risk Management Policy.

- Probability of contracting cancer from the Maximally Exposed Individual (MEI) equals to 10 in one million or more.

- Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index equal to 1 for the MEI or greater.

While the District's Risk Management Policy provides a basis for a threshold for TACs from stationary sources, this policy does not cover TACs from mobile sources. The District has no permitting or other regulatory authority over mobile sources. While the district continues to evaluate a threshold of significance for mobile source TAC, no specific mobile source TAC threshold is proposed at this time.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Air Quality is discussed in Chapter 4.3 of the General Plan EIR (City 2013). The EIR concluded that implementation and construction of the General Plan would have a less than significant impact related to the violation of ozone air quality standards and would not contribute substantially to an existing or projected air quality violation. However, it would increase $PM_{10}$ emissions by more than 80 pounds per day and would result in a significant project-level and cumulative impact.

Motor vehicle emissions are regulated by the California ARB and the federal EPA. Therefore, the General Plan does not have the authority to reduce $PM_{10}$ tailpipe emissions. When considering regional emissions, a change to the General Plan land use map to restrict housing growth would not necessarily lead to a reduction in vehicle miles traveled (VMT) to a level sufficient to avoid this impact; people would still travel to and from Vacaville to work or shop, therefore the existing land use patterns would not change. In addition, the Energy and Conservation Action Strategy Update (ECAS) included many measures to reduce VMT in Vacaville, which would contribute to a reduction in $PM_{10}$ emissions. No additional mitigation is available to reduce this impact, which resulted in a significant and unavoidable impact.

### Discussion of Impacts

a) Conflict with or obstruct implementation of the applicable air quality plan?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not conflict with plans adopted for the purpose of reducing air pollutant emissions, and the impact would be less than significant. The YSAQMD is currently in nonattainment for State $PM_{10}$ standards and federal $PM_{2.5}$ standards. The YSAQMD is in State and federal nonattainment for ozone (1-hour and 8-hour) standards. The YSAQMD subsequently prepared the 2015 Ozone Plan and the Triennial Assessment and Plan Update in order to achieve attainment of the applicable ozone and PM standards. The YSAQMD has also established thresholds for development projects that have the potential to expose the public to TACs from stationary sources. If a project were to exceed the following thresholds, it would be considered to have a significant air quality impact.

The YSAQMD is currently in nonattainment for State $PM_{10}$ standards and federal $PM_{2.5}$ standards. The YSAQMD is in State and federal nonattainment for ozone (1-hour and 8-hour) standards. The YSAQMD subsequently prepared the 2015 Ozone Plan and the Triennial Assessment and Plan Update in order to achieve attainment of the applicable ozone and PM standards. The YSAQMD has also established thresholds for development projects that have the potential to expose the public to TACs from stationary sources. If a project were to exceed the following thresholds, it would be considered to have a significant air quality impact.

As shown in the discussion for question b) below, the project's construction-generated emissions and operational-generated emissions of ROG, $NO_X$, and $PM_{10}$ would not exceed YSAQMD thresholds. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plans, and impacts would be less than significant. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?

**No new impact.** The General Plan EIR concluded that the mobile-source air pollutant emissions associated with the implementation of the General Plan Update would exceed the significance criterion of 80 pounds per day of $PM_{10}$ and would result in a significant and unavoidable impact.

Construction Emissions

CalEEMod version 2022.1.1 was used to quantify project-generated construction emissions. Construction activities were assumed to commence 2025 and be completed in 2045. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

The project's construction emissions of ROG, $NO_X$, and $PM_{10}$ are compared to the YSAQMD construction thresholds in Table 4. *Maximum Daily Construction Emissions* and in Table 5. *Annual Construction Emissions*. The YSAQMD does not have a recommended threshold for construction-generated CO, SOx, or $PM_{2.5}$; however, daily maximum construction emissions for CO, SOx, and $PM_{2.5}$ are shown for full disclosure. Construction emissions modeling assumes implementation of dust best management practices (watering exposed areas twice per day) would comply with the requirements of YSAQMD Rule 2.11, Particulate Matter and with the City General Plan Policy COS-P12.5.

As shown in Table 4, the proposed project construction period emissions of $PM_{10}$ would not exceed the YSAQMD daily emission thresholds. Therefore, the impact related to construction-generated emissions of $PM_{10}$ would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

**TABLE 4.**
**MAXIMUM DAILY CONSTRUCTION EMISSIONS**

| Year/Phase/Activity | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG | NOx | CO | SOx | $PM_{10}$ | $PM_{2.5}$ |
| 2024 Soil Import | 0.9 | 17.0 | 9.0 | 0.1 | 3.0 | 1.1 |
| 2025/ Phase 1 Soil Import, Site Preparation, Grading | 4.7 | 49.6 | 42.9 | 0.1 | 12.2 | 6.4 |
| 2026/ Phase 1 Soil Import, Grading | 4.0 | 42.6 | 37.2 | 0.1 | 7.8 | 3.5 |
| 2027/ Phase 1 Soil Import, Grading | 3.8 | 40.5 | 36.8 | 0.1 | 7.7 | 3.4 |
| 2028/ Phase 1 Soil Import, Grading | 3.8 | 38.6 | 36.7 | 0.1 | 7.6 | 3.4 |
| 2029/ Phase 1 Soil Import, Grading/ Phase 2 Site Preparation, Grading | 7.1 | 64.4 | 68.0 | 0.2 | 16.7 | 8.4 |

| Year/Phase/Activity | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| 2030/ Phase 1 Soil Import, Grading, Building Construction/ Phase 2 Building Construction/ Phase 3 Site Preparation, Grading | 8.0 | 71.1 | 82.3 | 0.2 | 17.4 | 8.7 |
| 2031/ Phase 1 Soil Import, Grading/ Phase 2 Building Construction/ Phase 3 Building Construction | 5.5 | 50.4 | 63.2 | 0.2 | 8.5 | 3.8 |
| 2032/ Phase 1 Soil Import, Grading/ Phase 2 Building Construction/ Phase 3 Building Construction | 5.3 | 48.2 | 62.0 | 0.2 | 8.4 | 3.7 |
| 2033/ Phase 1 Soil Import, Grading, Building Construction/ Phase 2 Building Construction/ Phase 3 Building Construction | 5.2 | 46.6 | 61.1 | 0.2 | 8.3 | 3.6 |
| 2034/ Phase 1 Building Construction/ Phase 2 Building Construction, Architectural Coating, Paving/ Phase 3 Building Construction | 6.2 | 19.4 | 33.6 | 0.1 | 1.3 | 0.6 |
| 2035/ Phase 1 Building Construction, Architectural Coating, Paving/ Phase 3 Building Construction, Architectural Coating, Paving/ Phase 4 Site Preparation, Grading | 5.5 | 33.3 | 50.9 | 0.1 | 9.4 | 5.1 |
| 2036/ Phase 4 Building Construction | 0.9 | 7.3 | 13.1 | 0.0 | 0.4 | 0.2 |
| 2037/ Phase 4 Building Construction | 0.9 | 7.2 | 13.0 | 0.0 | 0.4 | 0.2 |
| 2038/ Phase 4 Building Construction | 0.9 | 7.1 | 12.9 | 0.0 | 0.4 | 0.2 |
| 2039/ Phase 4 Building Construction | 0.8 | 6.9 | 12.9 | 0.0 | 0.4 | 0.2 |
| 2040/ Phase 4 Building Construction, Architectural Coating, Paving/ Phase 5 Site Preparation, Grading | 5.9 | 25.7 | 37.3 | 0.1 | 9.2 | 4.8 |
| 2041/ Phase 5 Building Construction | 0.8 | 6.7 | 12.8 | 0.0 | 0.3 | 0.2 |
| 2042/ Phase 5 Building Construction | 0.8 | 6.7 | 12.7 | 0.0 | 0.3 | 0.2 |
| 2043/ Phase 5 Building Construction | 0.8 | 6.6 | 12.7 | 0.0 | 0.3 | 0.2 |
| 2044/ Phase 5 Building Construction | 0.8 | 6.5 | 12.6 | 0.0 | 0.3 | 0.2 |
| 2045/ Phase 5 Building Construction, Architectural Coating, Paving | 1.4 | 7.2 | 13.7 | 0.0 | 0.4 | 0.2 |
| **Maximum Daily Emissions** | **8.0** | **71.1** | **82.3** | **0.2** | **17.4** | **8.7** |
| *Threshold* | *None* | *None* | *None* | *None* | *80* | *None* |
| ***Exceed Threshold?*** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide; CO=carbon monoxide; SOx=sulfur oxides; $PM_{10}$=particulate matter 10 microns or less in diameter; $PM_{2.5}$=particulate matter 2.5 microns or less in diameter

As shown in Table 5, the proposed project construction period emissions of ROG and $NO_X$ would not exceed the YSAQMD annual emission thresholds. Therefore, the impact related to construction-generated emissions of ROG and $NO_X$ would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

**TABLE 5.**
**ANNUAL CONSTRUCTION EMISSIONS**

| Year | Phase | ROG (Tons/year) | $NO_X$ (Tons/year) |
|---|---|---|---|
| 2024 | Phase 1 | 0.0 | 0.6 |
| 2025 | Phase 1 | 0.4 | 4.2 |
| 2026 | Phase 1 | 0.6 | 5.8 |

| Year | Phase | ROG (Tons/year) | $NO_X$ (Tons/year) |
|---|---|---|---|
| 2027 | Phase 1 | 0.6 | 5.5 |
| 2028 | Phase 1 | 0.5 | 5.2 |
| 2029 | Phase 1 – Phase 2 Combined | 0.8 | 7.3 |
| 2030 | Phase 1 – Phase 3 Combined | 0.9 | 8.2 |
| 2031 | Phase 1 – Phase 3 Combined | 0.7 | 6.5 |
| 2032 | Phase 1 – Phase 3 Combined | 0.7 | 6.3 |
| 2033 | Phase 1 – Phase 3 Combined | 0.4 | 3.4 |
| 2034 | Phase 1 – Phase 3 Combined | 0.5 | 2.2 |
| 2035 | Phase 1, Phase 3 – Phase 4 Combined | 0.5 | 3.1 |
| 2036 | Phase 4 | 0.1 | 1.0 |
| 2037 | Phase 4 | 0.1 | 0.9 |
| 2038 | Phase 4 | 0.1 | 0.9 |
| 2039 | Phase 4 | 0.1 | 0.9 |
| 2040 | Phase 4 – Phase 5 Combined | 0.5 | 2.2 |
| 2041 | Phase 5 | 0.1 | 0.9 |
| 2042 | Phase 5 | 0.1 | 0.9 |
| 2043 | Phase 5 | 0.1 | 0.9 |
| 2045 | Phase 5 | 0.1 | 0.9 |
| | **Total Maximum Annual Construction Emissions** | **0.9** | **8.2** |
| | *Threshold* | *10* | *10* |
| | ***Exceed Threshold?*** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide

Operational Emissions

The project's operational emissions of ROG, $NO_X$, and $PM_{10}$ are compared to the YSAQMD operational thresholds in Table 6, *Maximum Daily Operational Emissions* and in Table 7, *Annual Operational Emissions*. The YSAQMD does not have a recommended threshold for operational CO, SOx, or $PM_{2.5}$; however, daily maximum operational emissions for CO, SOx, and $PM_{2.5}$ are shown for full disclosure.

As shown in Table 6, the proposed project operation period emissions of $PM_{10}$ would not exceed YSAQMD daily emission thresholds. Therefore, the impact related to operational emissions of $PM_{10}$ would be less than significant, and *no new impact* would occur compared to what was evaluated in the General Plan EIR.

**TABLE 6.**
**MAXIMUM DAILY OPERATIONAL EMISSIONS**

| Phase | Operational Start Date | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|---|
| | | ROG | NOx | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Phase 1 | 10/1/2035 | 0.8 | 0.5 | 3.7 | 0.0 | 0.9 | 0.2 |
| Phase 2 | 10/1/2034 | 10.0 | 6.0 | 40.7 | 0.1 | 8.9 | 2.4 |
| Phase 3 | 10/1/2035 | 0.5 | 0.1 | 0.4 | 0.0 | 0.1 | 0.0 |
| Phase 4 | 10/1/2040 | 0.4 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 |
| Phase 5 | 10/1/2045 | 3.4 | 2.1 | 15.5 | 0.0 | 4.5 | 1.2 |
| | **Maximum Emissions** | 10.0 | 6.0 | 40.7 | 0.1 | 8.9 | 2.4 |
| | *Threshold* | None | None | *None* | *None* | *80* | *None* |
| | ***Exceed Threshold?*** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007

ROG=reactive organic gases; NOx=nitrogen oxide; CO=carbon monoxide; $SO_2$=sulfur dioxide; $PM_{10}$=particulate matter 10 microns or less in diameter; $PM_{2.5}$=particulate matter 2.5 microns or less in diameter

As shown in Table 7, the proposed project operational emissions of ROG and NOx would not exceed the YSAQMD annual emission thresholds. Therefore, the impact related to operational emissions of ROG and NOx would be less than significant, and there would be *no new impact* compared to what was evaluated in the EIR.

**TABLE 7.**
**ANNUAL OPERATIONAL EMISSIONS**

| Phase | Operational Year | ROG (Tons/year) | NOx (Tons/year) |
|---|---|---|---|
| Phase 1 | 2035 | 0.1 | 0.0 |
| Phase 2 | 2034 | 1.5 | 0.9 |
| Phase 3 | 2035 | 0.1 | 0.0 |
| Phase 4 | 2040 | 0.1 | 0.0 |
| Phase 5 | 2045 | 0.3 | 0.1 |
| | **Total Annual Operational Emissions** | **2.1** | **1.0** |
| | *Threshold* | *10* | *10* |
| | **Exceed Threshold?** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide

Final Operational Emissions

The project's final operational emissions of ROG, $NO_X$, and $PM_{10}$ are compared to the YSAQMD operational thresholds in Table 8, *Maximum Daily Final Operational Emissions in 2046,* and in Table 9, *Annual Final Operational Emissions in 2046*. The YSAQMD does not have a recommended threshold for operational CO, SOx, or $PM_{2.5}$; however, daily maximum final operational emissions for CO, SOx, and $PM_{2.5}$ are shown for full disclosure.

As shown in Table 8, the proposed project final operation period emissions of $PM_{10}$ would not exceed YSAQMD daily emission thresholds. Therefore, the impact related to final operational emissions of $PM_{10}$ would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

**TABLE 8.**
**MAXIMUM DAILY FINAL OPERATIONAL EMISSIONS IN 2046**

| Source | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG | NOx | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Mobile | 8.6 | 7.0 | 50.4 | 0.1 | 14.5 | 14.4 |
| Area | 4.2 | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 |
| Energy | 0.0 | 0.8 | 0.7 | 0.0 | 0.1 | 0.1 |
| **Total Daily Emissions** | 12.9 | 7.9 | 54.3 | 0.1 | 14.6 | 14.5 |
| *Threshold* | None | None | *None* | *None* | *80* | *None* |
| ***Exceed Threshold?*** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide; CO=carbon monoxide; $SO_2$=sulfur dioxide; $PM_{10}$=particulate matter 10 microns or less in diameter; $PM_{2.5}$=particulate matter 2.5 microns or less in diameter

As shown in Table 9, the proposed project final operational emissions of ROG and NOx would not exceed the YSAQMD annual emission thresholds. Therefore, the impact related to final operational emissions of ROG and NOx would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

**TABLE 9.**
**ANNUAL FINAL OPERATIONAL EMISSIONS IN 2046**

| Source | ROG (Tons/year) | $NO_X$ (Tons/year) |
|---|---|---|
| Mobile | 1.01 | 0.81 |
| Area | 0.73 | 0.00 |
| Energy | 0.01 | 0.15 |
| Water | NA | NA |
| Waste | NA | NA |
| Refrigerants | NA | NA |
| **Total Annual Operational Emissions** | **1.74** | **0.97** |
| *Threshold* | *10* | *10* |
| **Exceed Threshold?** | **No** | **No** |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide

Combined Construction and Operational Emissions

The project's combined construction and operational daily emissions were compared to the to the YSAQMD construction and operational thresholds in Table 10, *Combined Construction and Operational Daily Emissions.*

As shown in Table 10, the proposed project combined construction and operational emissions of $PM_{10}$ would not exceed the YSAQMD daily emission thresholds. Therefore, the impact related to combined construction and operational-generated emissions of $PM_{10}$ would be less than significant, and *no new impact* would occur.

**TABLE 10.**
**COMBINED CONSTRUCTION AND OPERATIONAL DAILY EMISSIONS**

| Year | Activity | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|---|
| | | ROG | NOx | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| 2024 | Phase (P) 1 Construction | 0.9 | 17.0 | 9.0 | 0.1 | 3.0 | 1.1 |
| 2025 | P1 Construction | 4.7 | 49.6 | 42.9 | 0.1 | 12.2 | 6.4 |
| 2026 | P1 Construction | 4.0 | 42.6 | 37.2 | 0.1 | 7.8 | 3.5 |
| 2027 | P1 Construction | 3.8 | 40.5 | 36.8 | 0.1 | 7.7 | 3.4 |
| 2028 | P1 Construction | 3.8 | 38.6 | 36.7 | 0.1 | 7.6 | 3.4 |
| 2029 | P1, P2 Construction | 7.1 | 64.4 | 68.0 | 0.2 | 16.7 | 8.4 |
| 2030 | P1, P2, P3 Construction | 8.0 | 71.1 | 82.3 | 0.2 | 17.4 | 8.7 |
| 2031 | P1, P2, P3 Construction | 5.5 | 50.4 | 63.2 | 0.2 | 8.5 | 3.8 |
| 2032 | P1, P2, P3 Construction | 5.3 | 48.2 | 62.0 | 0.2 | 8.4 | 3.7 |
| 2033 | P1, P2, P3 Construction | 5.2 | 46.6 | 61.1 | 0.2 | 8.3 | 3.6 |
| 2034 | 2034 Combined P2 Operation and P1, P3 Construction | 11.3 | 16.8 | 59.2 | 0.1 | 9.5 | 2.7 |
| 2035 | 2035 Combined P1-P3 Operation and P1, P2, P4 Construction | 16.8 | 39.8 | 95.7 | 0.2 | 19.3 | 7.7 |

| Year | Activity | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|---|
| 2036 | 2036 Combined P1-P3 Operation and P4 Construction | 12.2 | 13.8 | 57.9 | 0.1 | 10.3 | 2.8 |
| 2037 | 2037 Combined P1-P3 Operation and P4 Construction | 12.1 | 13.7 | 57.8 | 0.1 | 10.3 | 2.8 |
| 2038 | 2038 Combined P1-P3 Operation and P4 Construction | 12.1 | 13.6 | 57.8 | 0.1 | 10.3 | 2.8 |
| 2039 | 2039 Combined P1-P3 Operation and P4 Construction | 12.1 | 13.4 | 57.7 | 0.1 | 10.3 | 2.8 |
| 2040 | 2040 Combined P1-P4 Operation and P4, P5 Construction | 17.5 | 32.3 | 82.3 | 0.2 | 19.2 | 7.5 |
| 2041 | 2041 Combined P1-P4 Operation and P5 Construction | 12.5 | 13.2 | 57.7 | 0.1 | 10.3 | 2.8 |
| 2042 | 2042 Combined P1-P4 Operation and P5 Construction | 12.5 | 13.2 | 57.7 | 0.1 | 10.3 | 2.8 |
| 2043 | 2043 Combined P1-P4 Operations and P5 Construction | 12.4 | 13.1 | 57.7 | 0.1 | 10.3 | 2.8 |
| 2044 | 2044 Combined P1-P4 Operations and P5 Construction | 12.4 | 13.1 | 57.6 | 0.1 | 10.3 | 2.8 |
| 2045 | 2045 Combined P1-P5 Operation and P5 Construction | 16.4 | 15.9 | 74.1 | 0.2 | 14.9 | 4.0 |
| | **Maximum Daily Emissions** | **16.8** | **71.1** | **82.3** | **0.2** | **19.3** | **8.7** |
| | *Threshold* | None | None | None | None | 80 | None |
| | *Exceed Threshold?* | No | No | No | No | No | No |

Source: CalEEMod (Output data is provided in Appendix C); YSAQMD 2007
ROG=reactive organic gases; NOx=nitrogen oxide; CO=carbon monoxide; $SO_2$=sulfur dioxide; $PM_{10}$=particulate matter 10 microns or less in diameter; $PM_{2.5}$=particulate matter 2.5 microns or less in diameter

Overall, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? YSAQMD further defines the threshold of significance as follows:

- Emissions would be considered cumulatively considerable when an exceedance of CO air quality standards results from project CO emissions combined with and CO emissions from other planned projects

**No new impact.** The General Plan EIR concluded that the implementation of the General Plan Update would exceed the $PM_{10}$, threshold on the project-level and therefore, would result in a significant cumulative impact.

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or "cumulatively considerable," meaning they add considerably to a significant environmental impact. Cumulative impacts can result from individually minor but collectively significant projects (CEQA Guidelines Section 15355). Project emissions that are not consistent with the air quality attainment plan (AQAP) or SIP, or that exceed YSAQMD thresholds, would have a significant cumulative impact.

As outlined under question b), the project's construction, operational, and combined construction and operational emissions would not exceed the YSAQMD daily emission thresholds for $PM_{10}$. Additionally, proposed project construction and operational emissions of ROG and $NO_X$ would not exceed the YSAQMD annual emission thresholds. Therefore, construction and operation of the proposed project would not violate an air quality standard or contribute to an existing or projected air quality violation.

The project would have a less than significant cumulative impact, and *no new impact* compared to what was evaluated in the General Plan EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

**No new impact.** The General Plan EIR concluded the increase in exposure of sensitive receptors to TACs from development allowed by the General Plan Update would be less than significant.

CARB and OEHHA have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptor locations. Examples of these sensitive receptor locations are residences, schools, hospitals, and daycare centers. The closest sensitive receptors are single-family residences located approximately 30 feet west of the project site. The closest school to the project site is Edwin Markham Elementary School approximately 1,000 feet (0.19 mile) to the southwest.

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has to the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). In addition, concentrations of mobile source DPM emissions disperse rapidly and are typically reduced by 70 percent at approximately 500 feet (CARB 2005). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations.

The proposed project would not exceed the applicable thresholds of significance for air pollutant emissions during construction and operation, as mentioned under question (2). As such, the proposed project would not produce substantial emissions of criteria air pollutants, CO, or TACs; therefore, adjacent residents would not be exposed to significant levels of pollutant concentrations during construction. Once operational, the project would not be a source of TACs, nor is the project located within the specified buffer area of a TAC-generating use (e.g., gas station, dry cleaning facility, warehouse distribution center, high volume roadway) as established in the *Air Quality and Land Use Handbook – A Community Health Perspective* (CARB 2005). Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and would result in a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

e) Create objectionable odors affecting a substantial number of people?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would neither introduce new people into an area significantly impacted by existing odors nor would it create odors affecting a substantial number of people, and impacts would be less than significant. The project could produce odors during construction activities resulting from heavy diesel equipment exhaust and VOC released during application of asphalt. Additionally, hauling soil to the project site would require approximately 68 truckloads (136 one-way trips) per workday, intermittently over the 8.5-year soil import period during Phase I. The odor of these emissions may be objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not be at a level that would affect a substantial number of people. Any odors emitted during construction activities, including any odors related to truck trips for soil import during construction, would be temporary, short-term, and intermittent in nature, and would cease upon the facility maintenance. As a result, impacts associated with temporary odors during construction are not considered significant.

The YSAQMD provides a list of common types of facilities that are known to generate odors, including, but not limited to, wastewater treatment facilities, chemical and fiberglass manufacturing, painting operations, agricultural operations, and asphalt plants (YSAQMD 2007). As a park, the project would not result in odors affecting a substantial number of people. Solid waste generated by the project is not anticipated to increase and would continue to be collected by a contracted waste hauler, ensuring that any odors resulting from on-site waste would be managed and collected in a manner to prevent the proliferation of odors. Additionally, the YSAQMD regulates odors through Rule 2.5, Nuisance, that restricts the discharge from any source quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property. Although not anticipated, if odor complaints are made during operation of the project, the YSAQMD would ensure all odor complaints are addressed, and any potential odors are minimized or eliminated.

Overall, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

# IV. BIOLOGICAL RESOURCES

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans (including the current Draft of the Solano HCP), policies, regulations, or by the CDFG or USFWS? | ☐ | ☒ | ☐ | ☐ |
| b) | Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS? | ☐ | ☒ | ☐ | ☐ |
| c) | Result in a substantial adverse effect on federally regulated wetlands as defined by the Porter-Cologne Water Quality Control Act through direct removal, filling, hydrological interruption, or other means? | ☐ | ☒ | ☐ | ☐ |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☐ | ☒ |
| e) | Conflict with any applicable land use plans, policies, regulations, or ordinances, of an agency with jurisdiction over the project, adopted for the purpose of protecting biological resources or avoiding and mitigating impacts to biological resources? | ☐ | ☐ | ☐ | ☒ |
| f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

The discussion below is based on the Biological Resources Assessment (BRA) prepared by HELIX and included as Appendix D.

### Affected Environment

The project site consists primarily of an existing public park and undeveloped land that is dominated by annual grassland and wetland complexes with four drainages that convey water from the west to the east and ultimately flow to the Sacramento River. Public access is available in the project site, and the public uses abundant walking pathways that occur throughout the project site. The walking pathways occur along restoration areas that support riparian habitat and wetland complexes. In addition to walking trails, the southern portion of the project site supports parking lots, fields for baseball, soccer, tennis, and a dog park. Undeveloped portions of the project site are regularly maintained and disked.

Disking is likely a result of creating fire breaks to protect surrounding residences and businesses from potential wildfire risk. Surrounding land uses include undeveloped land to the south, the Putah South Canal and Nut Tree Airport to the east, residences to the west, and commercial buildings to the north. Generally, the surrounding area is developed with very little connectivity to adjacent natural vegetation communities. All drainages that drain through the project site emanate from culverts that carry drainages that have been placed underground beneath residential developments to the west of the project site.

The California Natural Diversity Data Base (CNDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, and U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) databases were reviewed in June 2024 during preparation of the Biological Resources Assessment (HELIX 2024a; Appendix D). The project site is characterized by urban, annual grassland, ruderal, ditch, perennial marsh, seasonal marsh, valley foothill riparian, vernal pool system grassland, intermittent drainage, and perennial drainage (Figure 14, Biological Communities).

See Appendix D for detailed information on the regulatory framework, methodology of desktop reviews and on-site surveys, and detailed discussions of existing habitats communities on-site. The results and conclusions of the findings of the report are provided in the discussion of impacts below.

### Methodology

Biological studies conducted for the project site consisted of a special-status species evaluation that included a desktop review and database searches to identify known biological resources in the project site and vicinity, as well as a reconnaissance-level biological and wetland field survey.

#### Special-Status Species Evaluation

For the purposes of the BRA prepared for the proposed project, special-status species are those that fall into one or more of the following categories, including those:

- Listed as endangered or threatened under the FESA (including candidates and species proposed for listing);
- Listed as endangered or threatened under the CESA (including candidates and species proposed for listing);
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- Designated as a SSC by the CDFW;
- Considered by CDFW to be a Watch List species with potential to become a SSC;
- Defined as rare or endangered under Section 15380 of the CEQA; or
- Having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, or 3.

In order to evaluate special-status species and/or their habitats with the potential to occur in the project site and/or be impacted by the proposed project, HELIX obtained lists of regionally occurring special-status species from the following information sources:

- California Department of Fish and Wildlife (CDFW). 2024. *California Natural Diversity Database* (CNDDB); For: *Dixon, Winters, Merritt, Monticello Dam, Dozier, Mt. Vaca, Fairfield North, Elmira, and Allendale* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [May 31, 2024];

- California Native Plant Society (CNPS). 2024. *Inventory of Rare and Endangered Plants* (online edition, v8-03 0.39) For: *Dixon, Winters, Merritt, Monticello Dam, Dozier, Mt. Vaca, Fairfield North, Elmira, and Allendale* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [May 31, 2024]; and

- U.S. Fish and Wildlife Service (USFWS). 2024a. *Information for Planning and Consultation* (IPaC) Centennial Park Master Plan Project. Accessed [May 31, 2024].

Appendix B of the BRA includes these lists of special-status plant and animal species occurring in the project region and Appendix C of the BRA includes an evaluation of the potential for these species to occur in the project site.

**Biological Surveys**

The biological and wetland reconnaissance survey was conducted on March 12 and 14, 2024, by HELIX Senior Scientist Patrick Martin. The weather during the field survey was clear and cool with an average temperature in the 50s with 20 to 30 mile per hour winds and light intermittent precipitation. The project site was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the project site with the potential to support special-status species and sensitive habitats. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed on-site during the surveys were recorded, and all biological communities occurring on-site were characterized. Following the field survey, the potential for each species identified in the database query to occur within the project site was determined based on the site survey, soils, habitats present within the project site, and species-specific information.

## Regulatory Framework

**Federal Laws, Regulations, and Policies**

Endangered Species Act

The U.S. Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3) (19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

In the context of the proposed Project, FESA consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) would be initiated if Project activities resulted in the potential for take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA; 16 United States Code [USC], Sec. 703, Supp. I, 1989) regulates and prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 CFR §10.13. The MBTA protects whole birds, parts of birds, and bird eggs and nests and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior (April 16, 2003, Migratory Bird Permit Memorandum). Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction. This international treaty for the conservation and management of bird species that migrate through more than one country is enforced in the United States by the USFWS. Additionally, as discussed below, §3513 of the California Fish and Game Code states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. This provides California Department of Fish and Wildlife (CDFW) with enforcement authority for Project-related impacts that would result in the "take" of bird species protected under the MBTA. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof." Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Jurisdictional Waters

On May 25, 2023, the United States Supreme Court issued a decision in the case of Sackett v. Environmental Protection Agency (Supreme Court of the United States, 2023), which will ultimately influence how federal waters are defined. The May 25, 2023, Supreme Court decision in Sackett v. Environmental Protection Agency determined that "the Clean Water Act (CWA) extends to only those 'wetlands with a continuous surface connection to bodies that are "waters of the United States" in their own right,' so that they are 'indistinguishable' from those waters." The U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers (USACE) after review issued a final rule to replace the 2023 rule that amends the "Revised Definition of "Waters of the U.S." to conform key aspects of the regulatory text to the U.S. Supreme Court's May 25, 2023 decision in the case of *Sackett v. Environmental Protection Agency*.

Unless considered an exempt activity under Section 404(f) of the Federal Clean Water Act, any person, firm, or agency planning to alter or work in "waters of the U.S.," including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403). Activities exempted under Section 404(f) are not exempted within navigable waters under Section 10.

The Clean Water Act (33 USC 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found in 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there were no practicable alternative that would have less adverse impacts.

**State Laws, Regulations, and Policies**

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. "Take" under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the "take" of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code

has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW has informed non-federal agencies and private parties that they must avoid take of any fully protected species in carrying out projects. However, Senate Bill 618 (2011) allows the CDFW to issue permits authorizing the incidental take of fully protected species under the CESA, so long as any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These "special-status" species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity; plants ranked as 1A, 1B, 2A, 2B, and 3 are generally considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey). Fish and Game Code Subsection 3513 states that it is unlawful to take or possess any migratory

nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act. The Attorney General of California has released an opinion that the Fish and Game Code prohibits incidental take.

California Food and Agriculture Code Section 403

This section directs the California Department of Food and Agriculture (CDFA) to prevent the introduction and spread of injurious pests including noxious weeds.

CDFA Code Section 7271 designates the CDFA as the lead department in noxious weed management responsible for implementing state laws concerning noxious weeds. Representing a statewide program, noxious weed management laws and regulations are enforced locally in cooperation with the County Agricultural Commissioner.

Under state law, noxious weeds include any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed (CDFA Code Section 5004).

Jurisdictional Waters

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the CWA is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within Waters of the United States, and also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On May 28, 2020, the SWRCB implemented the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California (SWRCB 2019). The Procedures consist of four major elements:

I. A wetland definition;
II. A framework for determining if a feature that meets the wetland definition is a water of the state;
III. Wetland delineation procedures; and
IV. Procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the State" includes all "Waters of the U.S."

More specifically, a wetland is defined as: "*An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation*." The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands (SWRCB 2019).

Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of streambeds…except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

**Local Laws, Regulations, and Policies**

Solano County Water Agency

*Multispecies Habitat Conservation Plan*

The Solano Multispecies Habitat Conservation Plan (Solano HCP) is currently in the draft stages and is not a final document or plan as of the date of this report. If the Solano HCP becomes final prior to Project initiation, the Project proponent may apply for coverage under the Solano HCP.

The proposed Solano HCP establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within Solano County (Solano County Water Agency 2012).

The following general construction best management practices and avoidance and minimization measures from the Solano HCP would apply to the proposed project:

**General Construction Best Management Practices**

- Vehicular/Equipment Operation:

1. When working in or adjacent to wetlands (e.g., vernal pools, seasonal wetlands, and marshes), streams, and riparian areas, the number of new temporary access routes or use of existing access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. The boundaries of all new and existing access routes shall be clearly marked or flagged. These areas shall be outside of preserved riparian, wetlands, and other sensitive areas.

2. All fueling and maintenance of vehicles and other mechanized equipment shall be conducted in designated areas located at least 100 feet away from any aquatic habitat where possible. Each designated fueling/maintenance area shall be protected by a containment barrier designed to prevent any spilled or leaked fuel or other contaminants from running into an aquatic habitat. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

3. All vehicles and other mechanized equipment used during construction shall be checked for oil, fuel, and coolant leaks prior to initiating work. Any equipment found to be leaking fluids shall not be used in or around aquatic habitat features.

4. The potential for wildfires shall be reduced by parking vehicles away from vegetation and by the use of shields, protective mats, and other fire prevention methods when welding, grinding, or conducting other activities that are likely to create a fire hazard. All construction sites shall have adequate sources of water, shovels, and fire extinguishers available for immediate use. All vehicles and heavy equipment used on construction sites shall have on-board fire extinguishers.

5. During the dry season, vehicles shall never be parked or idled so that the undercarriage is in contact with vegetation.

6. In order to reduce the risk of spreading harmful pathogens into natural areas, vehicles and construction equipment that have been off-road in natural areas shall have their tires thoroughly cleaned (by manual scrubbing down or cleaning with a pressure washer) before the vehicle/equipment is allowed to be used in other natural areas. If the vehicle or equipment was operated in a creek or stream, the tires shall also be decontaminated by one of the following procedures:

    a. Allowing the tires to completely dry (for at least 24 hours) before being allowed use or entry in or in the vicinity of another creek or stream.

    b. Cleaning with a 5-percent bleach solution or 99-percent copper sulfate pentahydrate solution (3/4 teaspoon per gallon of water).

    c. Vehicular cleaning work shall be conducted in self-contained work areas at least 100 feet from any aquatic habitat; wash water shall not be disposed of in any natural areas.

- Work Area Maintenance/Hazardous Materials:

1. Food, trash, and other solid wastes shall be disposed of in properly contained, covered refuse containers and regularly removed from the various structures and facilities. Following construction, all trash and construction debris shall be removed from the work area.

2. Building material storage areas containing hazardous or potentially toxic materials shall have an impermeable membrane between the ground and the hazardous material and shall be bermed to prevent the discharge of pollutants to groundwater and storm water runoff.

3. Materials deleterious or toxic to fish and wildlife including, but not limited to, asphalt, tires, concrete, construction materials, treated wood, and creosote-containing materials must be stockpiled in bermed containment areas that are lined with an impermeable membrane and designed to hold 125 percent of the total capacity of stored materials. All such materials may not be stored within 100 feet from the edge of any water body for more than 48 hours. Contaminated absorbent materials shall be stored in each containment area. Water collected in containment areas shall be disposed of according to federal, State, and local regulations.

4. An emergency response and cleanup plan shall be prepared prior to beginning work at the site. The plan shall detail the methods to be used to contain and clean up spills of petroleum products or other hazardous materials in the work area.

5. Containers for storage, transportation, and disposal of contaminated absorbent materials shall be provided on the project site. Petroleum products and contaminated soils shall be disposed of according to federal, State, and local regulations.

- Erosion Control and Water Quality Management:

1. A Storm Water Pollution Prevention Plan (SWPPP), prepared in accordance with the State Water Resources Control Board (SWRCB), National Pollutant Discharge Elimination System (NPDES) Construction General Permit, shall be implemented for all construction activities where required under SWRCB regulations. The SWPPP shall include Best Management Practices (BMPs) for controlling sediment, turbidity, and the release of other pollutants into aquatic habitats during construction. The SWPPP shall be subject to the approval of the Regional Water Quality Control Board (RWQCB) prior to the start of work.

2. Seed mixes shall be composed of native or noninvasive naturalized species. No invasive exotic plant species shall be allowed, including those identified in the California Exotic Pest Plant Council's database, which is accessible at: http://www.cal-ipc.org/ip/inventory/weedlist.php.

3. Any concrete structures below the tops of banks of creeks, wetlands, or other aquatic habitats shall be poured in tightly sealed forms and shall not be allowed contact with surface waters until the cement has fully cured (minimum of 30 days). During that time, the poured concrete shall be kept moist, and runoff from the concrete shall not be allowed to enter aquatic habitats. Commercial sealants may be

applied to the poured concrete surface in locations where the exclusion of water flow for a long period is difficult. If a sealant is used, water shall be excluded from the site until the sealant is dry and fully cured according to the manufacturer's specifications.

4. Water that contacts wet concrete and has a pH greater than 9.0 shall be pumped out and disposed of outside an aquatic habitat.

5. No substances toxic to aquatic life shall be discharged or allowed to leach into an aquatic habitat. Every reasonable precaution to protect aquatic habitats from pollution with fuels, oils, bitumens, calcium chloride, dust suppressants, and other harmful materials shall be implemented.

6. If cofferdams and pumps are used to isolate and dry channel work areas, the water pumped from a work area shall not be allowed to re-enter the stream channel until sediment has settled out using a settling pond, silt basin, Baker tank, or similar detention/settling device. 7. Booms with attached silt curtains with filtering capabilities shall be used around dredging areas to minimize the spread of resuspended sediments in the water column.

- Diversion and Dewatering:

1. Water drafting, pumping, or other water diversion shall be done in a manner that is not harmful to fish or other aquatic or semiaquatic life. Pump in-flow tubes or hoses shall be screened in a 0.5-millimeter mesh-screened cage to exclude aquatic wildlife that may otherwise be harmed in the process.

2. Any equipment or structures placed in the active channel for water drafting, pumping, or diversion shall be done in a manner that: (a) prevents pollution or siltation, (b) provides sufficient water to pass downstream to maintain adequate flows and temperature for aquatic life below the obstruction, and (c) restores normal flows to the affected stream reach immediately upon completion of work.

- Worker Training:

When working in or adjacent to sensitive habitat areas, construction personnel shall receive training concerning sensitive species and habitat occurring in the project area. Training shall be provided by a qualified biologist and shall include:

1. Descriptions of the sensitive habitats, special-status, and regulatory requirements for protection of biological resources potentially occurring with work areas;

2. All routine measures required to protect the species/Natural Community during work and the possible State and/or federal penalties for not complying with these requirements;

3. The requirement to stop all work and notify a supervisor or the project biologist if a special-status species is observed in the project site; and

4. Construction personnel shall report to their supervisor any observed incident of death or injury to any State or federally listed threatened or endangered species or damage to a protected habitat area. The supervisor shall immediately notify the City and shall report to the United States Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Association, National Marine Fisheries Service (NOAA NMFS), and/or California Department of Fish and Wildlife (CDFW), as appropriate. The report shall be made to the appropriate agencies within 24 hours of the incident and shall include pertinent information such as the date, time, location, species or habitat, and possible cause of the incident (if known).

- Exclusion Fencing:

1. Exclusion fencing, when required, shall be installed and maintained between project work areas and adjacent preserved habitat during all work activities. Exclusion fencing shall be installed prior to required preconstruction surveys and will consist of silt fabric, plywood, aluminum, or other City-approved material. Exclusion fences shall be designed and installed to achieve species and habitats protection objectives based on recommendation from a qualified biologist or as required under applicable permits from USFWS, CDFW, US Army Corps of Engineers, or RWQCB. In general, fences shall be pulled taut at each support to prevent folds or snags. A-5 Support poles will be located on the inside of the exclusion area. Construction personnel will also install an orange plastic-mesh construction fence 1 foot on the development side of the exclusion fence to increase visibility unless the exclusion fence is composed of high visibility materials. Exclusion fencing shall be inspected weekly and repaired immediately when damage is observed during construction work.

**Solano County HCP Avoidance and Minimization Measures**

*Valley Floor Grassland and Vernal Pool*

This section provides avoidance and minimization measures for species and sensitive habitats in the Valley Floor Grassland and Vernal Pool Natural Community.

Habitat Avoidance. Maximum avoidance as determined during the City's environmental review, is required in the following locations where:

1. The wetlands contribute to the habitat quality and value of reserve/preserve lands established (or expected to be established) in perpetuity for conservation purposes;

2. The wetlands are adjacent to or contiguous with riparian or stream corridors, or other permanently protected lands; and

3. The wetlands are located in or contiguous to High Value Vernal Pool Conservation Areas.

Where temporary or permanent fill is proposed in any vernal pools or other seasonal wetlands, the project proponent shall provide documentation explaining why avoidance is not practicable.

Site Design Standards. The following site design standards shall apply to all development activities that would affect Valley Floor Grassland and Vernal Pools:

1. All avoided areas shall be preserved and managed consistent with General Plan Policies COS-P1.2 and COS-P1.3 and Action COS-A1.4.

2. Development shall be designed to minimize direct and indirect impacts to wetlands and edge effects to preserved areas.

3. The applicant shall incorporate measures into the project design to accomplish the following:

    a. Preserve and maintain sufficient unaltered watershed area to prevent significant adverse changes in water quality and the volume and timing of inflows to preserved wetlands.

    b. Avoid changes in nutrient input from adjacent upland sources into preserved wetlands.

    c. Provide sufficient upland habitat to support associated amphibian and terrestrial fauna and vernal pool plant pollinator species.

    d. Accommodate linkages/corridors between individual aggregations of vernal pools in a larger vernal pool complex.

    e. Provide a terrestrial buffer to protect the core wetland and associated upland habitat from edge effects associated with surrounding land uses (i.e., prohibit backyards from backing up to preserves, place firebreaks on the development side of preserve/development boundaries, and provide for a vegetated buffer between roads and preserve boundaries).

    f. Minimize the potential for spread of invasive species from the development into preserved lands.

4. Development shall not isolate existing populations or suitable habitat areas. To maintain connectivity between adjacent reserves, a corridor shall be established linking these areas.

Buffer Criteria for Development Activities. Vegetated buffers shall be established around preserved vernal pools and seasonal wetlands. Buffers shall be consistent with the following criteria:

1. Vegetated buffers shall consist of valley floor grassland and vernal pool vegetation and/or other natural vegetation (i.e., oak savanna/woodland, coastal marsh or riparian habitats, if applicable).

2. Buffers shall not contain any irrigated or landscaped lands, fire breaks, or public or maintenance access trails or roads.

3. Buffers shall be preserved in perpetuity and managed consistent with Policy COS-1.3.

Biological Monitor. A qualified biologist shall monitor all ground-disturbing activities within 100 feet of preserved habitats (or as otherwise specified for species-specific avoidance requirements) to ensure that no unnecessary take of listed species or destruction of their habitat occurs. The biologist

shall have the authority to stop all activities that may result in such take or destruction until appropriate corrective measures have been completed. The biologist shall immediately notify the City of any unauthorized impacts and shall report to the USFWS and CDFW within 24 hours of any activities that result in take of listed species.

The biological monitor shall provide instructions to all on-site construction personnel regarding the presence of listed species, the measures required by law to avoid impacts to vernal pool species and their habitat, and the possible penalties for not complying with these requirements.

Habitat Protection During Work Activities. Vernal pool habitat and adjacent grassland/upland areas within the immediate work areas shall be identified and marked in the field prior to staging and construction/ground-disturbing activities.

1. Exclusion fencing shall be installed prior to any required preconstruction surveys and maintained between project work areas and adjacent preserved habitat during all work activities. Exclusion fencing will consist of silt fabric, plywood, aluminum, or other material approved by a qualified biologist or mandated in respective State or federal permits. In California tiger salamander habitat, the base of the fence will be buried a minimum of 3 to 5 inches in the ground to prevent animals from crawling under and be a minimum of 3 feet in height above ground to serve as a barrier for animals moving on the ground surface. Exclusion fences shall also include provisions (e.g., ramps, one-way doors, or exit funnels) for California tiger salamanders and reptile and amphibian species to leave the work area. The fence will be pulled taut at each support to prevent folds or snags. Construction personnel will also install an orange plastic-mesh construction fence 1 foot on the development side of the exclusion fence to increase visibility unless the exclusion fence is composed on high visibility materials. Exclusion fencing shall be inspected weekly and repaired immediately when damage is observed during construction work.

2. The following activities are prohibited, except as otherwise identified in an approved management plan, in all protected vernal pool and grassland habitat: (a) alteration of existing topography or any other alteration or uses for any purposes, including the exploration for or development of mineral extraction; (b) erection of any new structures; (c) dumping, burning, and/or burying of rubbish, garbage, or any other wastes or fill materials; (d) building of any new roads or trails; € killing, removal, or alteration of any existing native vegetation; (f) placement of storm water drains; and (g) use of pesticides or other toxic chemicals inconsistent with the product labeling.

*Riparian, Stream, and Freshwater Marsh*

The Riparian, Stream, and Freshwater Marsh Natural Community avoidance and minimization measures apply to all freshwater, aquatic, marsh and riparian habitats in Vacaville, excluding vernal pools and seasonal wetlands associated with the Valley Floor Grassland and Vernal Pool Natural Community.

Habitat Avoidance. Consistent with General Plan Conservation and Open Space Element Goal COS2 and associated policies, project proponents shall avoid activities that will result in the loss of riparian or stream habitat that meet any one of the following conditions:

1. Riparian, stream, and associated buffer habitats located in Priority Drainages and Watersheds.

2. More than 300 feet of channel in first or second order streams lacking woody riparian vegetation.

3. Second order streams with riparian vegetation.

4. Third, fourth, and higher order streams in non-priority watersheds.

5. Activities that will create a significant barrier to wildlife movement along the stream corridor and/or significantly affect hydrological connectivity.

If project proponents are proposing to fill any portion of a stream or permanently remove riparian habitat in any of the conditions described above, they must provide documentation explaining why avoidance is not practicable and/or would not contribute to the General Plan Conservation Element goals, policies, and actions. In general, the level of documentation required for a project varies by the significance of the project. Activities involving perpendicular crossings for roads or utility lines are preferable and will generally require less documentation than longitudinal impacts.

Setbacks and Buffer Zones. Native vegetated buffer zones shall be established between development and stream corridors to protect riparian and stream habitats in accordance with the following standards:

1. For infill projects (must be 5 acres or less in size and be located between two adjacent developments bordering the stream channel (one upstream and one downstream), buffer zone widths shall, at a minimum, correspond to existing buffer widths found in the existing adjacent developed areas or a minimum of 1.5 times the drip line of trees and shrubs at maturity, whichever is greater. To the maximum extent practicable, buffer zones shall be widened to accomplish all of the following: (a) restoration of historic riparian vegetation stands; (b) establishment of protected zones of riparian vegetation that are at least the width of four mature riparian tree canopies; and (c) incorporation of existing native perennial upland vegetation (e.g., native grassland, oak woodland, elderberry stands, and other native shrubs).

2. For projects in the urban expansion areas along third or higher order streams and lower order streams that support riparian vegetation, buffer zones shall extend at least 100 feet from either: (a) the top of the bank, or (b) the outside edge of the existing riparian vegetation, whichever distance is greater.

3. Development may encroach into the buffer zone required under Conditions 1 and 2 provided that offsets are provided elsewhere in the buffer zone. The offsets shall be situated in the remainder of the buffer zone and shall be equal or greater in size to the encroachment areas. Under no circumstances shall the total area of all encroachments exceed 25 percent of the total buffer zone area or length as specified in Condition 2.

4. The outer edges of the buffer (not to exceed 25 percent of the buffer width along third or higher order streams and lower order streams that support riparian vegetation) may also be used for public access and passive recreation such as hiking, wildlife viewing, and bicycling. For avoided first and second order streams lacking riparian vegetation, public access is limited to no more than 5 percent of the outer edge of the buffer.

5. For projects in the urban expansion areas along avoided first and second order streams lacking riparian vegetation, stream setbacks shall be at least 25 feet from the top of the bank.

6. For those projects that involve reconstruction/restoration of channelized streams (including both widening of riparian corridors and re-establishment of watercourse meander patterns), setbacks shall be at least 50 feet from either: (a) the top of the bank, or (b) the edge of the restored riparian corridor, whichever distance is greater. Creating meanders from a straight watercourse will require a wide area that encompasses the meanders and the additional 50 feet buffer from the top of bank (of the edge of the meandering watercourse) or edge of riparian vegetation (of a non meandering watercourse). This area should provide a sufficient buffer for the watercourse and can support other native upland communities such as grasslands and oak woodlands.

7. All buffers and avoided habitats shall be preserved and managed consistent with General Plan Policies COS-P1.2 and COS-P1.3 and Action COS-A1.4.

*Project Implementation and Construction*

This section addresses the mandatory avoidance and minimization requirements for the post-project approval/project implementation and construction requirements.

Riparian Tree Protection. Where trees and/or riparian shrubs are present and will be preserved, the following measures shall be implemented:

1. Ground disturbance shall avoid the drip line of the riparian trees and shrubs. Temporary construction fencing shall be placed at the edge of the work outside the edge of the tree drip lines. No construction work, storage of equipment or materials, or other disturbance shall be allowed in the protected areas.

2. Excavation work within a distance of 1.5 times the radius of the drip line or within a 25-foot radius of the drip lines, whichever is greater, of native riparian trees shall be done with hand tools or with light mechanized equipment (e.g., mini or light excavator or backhoe) in order to minimize disturbance or damage to roots.

3. An air spade or the equivalent shall be used to aerate and loosen any compacted soil in the structural root zone of protected trees to minimize physical injury to the tree roots.

4. Branch or root pruning of native riparian trees, if required, shall be conducted under the supervision of a Certified Arborist.

5. Equipment staging areas/storage areas shall not be located within a distance of 1.5 times the radius of the drip line or within a 25-foot radius of the drip line, whichever is greater, of native riparian trees.

6. Fill, gravel, or other construction materials shall not be stockpiled in the drip lines of native riparian trees.

Dewatering Activities. Water drafting, pumping, or other water diversion shall be done in a manner that is not harmful to fish or other aquatic or semi-aquatic life:

1. Pump inflow tubes or hoses shall be screened within a 0.5 millimeter mesh-screened cage to exclude aquatic wildlife that may otherwise be harmed in the process.

2. Prior to dewatering, a qualified biologist shall capture and relocate any native fish or other native vertebrate species found at the project site. Captured animals shall be relocated to another suitable water body preapproved by CDFW unaffected by the work or downstream of the work area (Transportation of exotic wildlife, without appropriate permits, is prohibited under California Fish and Game Code). All nonnative invasive species shall be captured, removed from the project site, and humanely euthanized.

3. All dewatering shall be pumped into a temporary siltation pond/desilting basin, Baker tank, or similar detention device in order to allow adequate time for settling of sediments prior to their release downstream in accordance with the approved SWPPP.

4. Following adequate settling time, water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

5. If coffer dams are used, turbid water pumped out of the dam shall not re-enter the channel until the sediment has settled out to prevent any increase in turbidity in downstream waters.

Habitat Protection and Site Restoration. The following measures shall be implemented to minimize impacts to stream and riparian habitats:

1. Disturbed areas shall be hydroseeded or stabilized using other erosion control measures prior to October 15. Hydroseed mixes used along and immediately above stream banks to stabilize disturbed areas shall not contain fertilizers or nonnative invasive species. When necessary, the City, in consultation with CDFW, may grant extensions of this deadline on a case-by-case basis.

2. Streambed and bank construction work shall not create any physical barriers to fish migration such as artificial berms or a uniformly flat channel profile.

3. Bank stabilization projects shall also incorporate bioengineering techniques and other measures to promote re-establishment of native vegetation (e.g., anchored rootwads or ballast bucket plantings in riprap). The use of hardscape such as rock riprap and floodwalls shall be minimized.

4. All debris, sediment, rubbish, vegetation, or other material removed from the channel banks, channel bottom, or sediment basins shall be disposed of at an approved upland disposal site.

5. Excess drainage from the construction site shall be routed away from riparian, stream, and freshwater marsh habitats.

6. Any riprap placed such that it will encounter water shall incorporate large woody cover (logs), other applicable bioengineering techniques, and/or vegetation planting depending on the character of the surrounding (natural) stream banks.

7. During construction, inspection of in-stream habitat and performance of sediment control devices shall occur at least once a day when there are surface waters in the channel to ensure devices are functioning properly.

8. Where erosion control blankets are placed in riparian zones, plantings of native riparian trees and shrub species shall occur in small openings in the erosion control blanket.

9. Plastic monofilament or wire mesh straw waddles or erosion control blankets shall not be used. Only erosion control materials (e.g., blankets, roles, and mats) with a minimum 2-inch square mesh made of natural coir fibers or other netting approved by CDFW shall be used.

Valley Elderberry Longhorn Beetle. 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. The following measures apply to all activities that would entail ground-disturbing activities within 100 feet of elderberry plants:

1. A minimum setback of 20 feet from the drip line of each elderberry plant shall be established between the development and all elderberry plants containing stems measuring 1 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, and facility access roads). The setback shall be fenced and flagged consistent with the general construction avoidance and minimization measures for exclusion fencing in order to prevent encroachment of equipment and materials.

2. 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.

3. All contractors shall be briefed 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.

4. Signs shall be placed 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. 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.

5. Routine trimming of overgrown and overhanging elderberry shrubs that may pose a human safety threat along pathways, trails, bike paths, roadways shall adhere to the following restrictions:

    a. Only branches and stems less than 1 inch in diameter may be trimmed or cut.

    b. Trimming may only occur between September 1 and March 14. Trimming is recommended from November through the first two weeks in February, when plants are dormant and have lost their leaves.

c. Trimming shall not occur after the shrubs have leafed out (when adult valley elderberry longhorn beetles are likely to be active).

d. Vegetation clearing within 5 feet of elderberry shrub stems shall be done by hand (e.g., pulling or clipping).

6. 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.

7. 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 the City.

8. 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 1 inch in diameter or greater at ground level.

9. Fire fuel breaks (disked land) may not be included within the 100-foot setback; however, vegetation in the setback may be cleared by mowing (e.g., mower, mechanical trimmers, or hand tools) to less than 2 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 5 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).

10. A qualified biologist shall be retained to monitor implementation and compliance of all the above measures.

Tricolored Blackbird. The following measures are for development activities that are within 250 feet of suitable tricolored blackbird breeding habitat:

1. During the breeding season (February 1 through August 31), a qualified biologist shall conduct pre-construction surveys for all development activities in known or suitable nesting habitat areas no more than 15 days prior to scheduled work. Suitable nesting habitat includes any of the following: (a) dense vegetation near open water; (b) emergent marsh vegetation, especially cattails and tules; (c) thickets of willow, blackberry, wild rose, or thistles; (d) silage and other grain fields such as sorghum.

   Pre-construction surveys shall be conducted for each phase of development. If ground-disturbing activities are delayed or suspended for more than 15 days following completion of the preconstruction survey, a qualified biologist shall resurvey the site and shall conduct a second follow-up survey at least five days prior to the start of construction activities.

2. A minimum 250-foot buffer shall be established between work activities and any active nests. Construction buffers may be reduced under the following conditions:

   a. A site-specific analysis prepared by a qualified biologist indicates that construction activities would not adversely affect nesting birds. The City, in

consultation with CDFW, must approve the analysis in writing before construction can proceed.

b. Nesting birds do not exhibit significant adverse reaction to construction activities (e.g., changes in behavioral patterns or reactions to noise) based on sufficient monitoring (minimum of three consecutive days following construction initiation). Construction will stop if a significant adverse reaction is observed during any of the monitoring days and will only commence again with a 250-foot buffer once behavioral patterns return to preconstruction activities.

c. Additional monitoring shall be required any time there is a change in heavy equipment use or activity that results in greater noise levels. A change in heavy equipment use or greater noise levels that may require additional monitoring will be determined by a qualified biologist.

d. Monitoring is continued at least once a week through the nesting cycle until the young have fledged and left the nest area.

e. Monitoring reports are submitted to the City.

3. The qualified biologist has the authority to stop work at any time if signs of disturbance to the nesting colony are noted. If adverse effects are identified, construction activities shall cease immediately, and construction shall not resume until City and CDFW are consulted to determine if construction may continue under modified restrictions or shall be suspended until nesting activity is complete.

Swainson's Hawk. The following avoidance and minimization measures are applicable to almost all development activities in the City. These measures are primarily intended for compliance with the Federal MBTA and California Fish and Game Code, Sections 3503 and 3503.5, regarding protection requirements for active bird nests. Removal of known Swainson's hawk nests may also require an incidental take permit from CDFW. While the long-term viability of protecting traditional Swainson's hawk nest sites in urban environments is questionable, Swainson's hawk has been documented to persist and continue to nest in urban settings for many years. Therefore, the following measures require protection of traditional nest sites in urban areas where retention of the nest tree or associated grove of trees does not create a health or safety hazard or is impracticable from a project design and cost consideration.

- **Nest Tree Preservation.** Trees with active Swainson's hawk nests or with historically active nests (i.e., occupied within the last ten years) shall be avoided to the maximum extent practicable. Applicants proposing to remove an otherwise healthy nest tree shall provide written justification for the tree removal to the City and CDFW. Sufficient rationale for 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. Nest trees shall only be removed if there is a biological basis that the use of the tree is unlikely under post project conditions. The City and CDFW will be responsible for approval of the requests to remove healthy nest trees.

- **Pre-Construction Nest Surveys.** Between March 1 and August 31, a qualified biologist shall conduct pre-construction surveys to identify and subsequently avoid nesting areas for Swainson's hawk. Swainson's hawk in this region is typically incubating during June and active nests can be difficult to find. As such, June surveys may not be acceptable for determining the absence of Swainson's hawk nests. Surveys shall be conducted within 15 days of the anticipated start of construction and shall be designed and of sufficient intensity to document nesting within 0.25 miles (1,320 feet) of planned work activities. If a lapse in project-related construction work of 15 days or longer occurs, additional pre-construction surveys shall be required before project work may be reinitiated.

- **Active Nest Buffers.** Construction work (including grading, earthmoving, and any operation of construction equipment) shall not occur within a 0.25-mile buffer zone around an active Swainson's hawk nest except as provided below. Construction work may commence in the buffer zone when a qualified 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.

The size of nest site buffer zones may be reduced only under the following conditions:

1. A site-specific analysis prepared by a qualified 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 City and CDFW must approve this analysis before construction may begin within 0.25 miles of a nest. Construction period nest buffers are more likely to be approved later in the nesting cycle, when the likelihood of nest abandonment is less (e.g., after the young have hatched).

2. Monitoring by a qualified biologist is conducted for a sufficient time (during all construction activities for a minimum of ten consecutive days following the initiation of construction), and the nesting pair does not exhibit adverse reactions to construction activities (e.g., changes in behavioral patterns, reactions to construction noise).

3. Monitoring is continued at least once a week through the nesting cycle at that nest. This longer-term monitoring may be reduced to a minimum of 2 hours in the morning and 2 hours in the afternoon during construction activities; however, additional and more frequent monitoring may be required if any adverse reactions are noted.

4. Weekly monitoring reports shall be submitted to the City and CDFW during construction and monitoring activities.

If adverse effects are identified, construction activities shall cease immediately and construction shall not be resumed until the qualified biologist, in consultation with the City and CDFW, has determined that construction may continue under modified restrictions, or that nesting activity is complete.

- **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 above documents that adverse effects will not occur.

Burrowing Owl. The following avoidance and minimization measures are applicable to almost all development activities in the City. These measures are primarily intended for compliance with the Federal MBTA and California Fish and Game Code, Sections 3503 and 3503.5, regarding protection requirements for active bird nests.

- **Pre-Construction Surveys.** Between February 1 and August 31, a qualified biologist shall conduct pre-construction surveys in known or suitable habitat areas to identify and subsequently avoid nesting areas for burrowing owls. An initial pre-construction survey shall be conducted within 14 days of the anticipated start of construction, followed by a second survey within 24 hours of the start of construction. All surveys shall follow standard CDFW protocols. If a lapse in project-related construction work of 14 days or longer occurs during the nesting season, an additional preconstruction survey shall be required within 24 hours before project work may be reinitiated.

- **Vegetation Management.** If burrowing owls or suitable nesting habitat are identified on site during the initial pre-application surveys, applicants shall allow vegetation to grow over the entire project site (except for required fuel breaks) to a height of 36 inches or more above the ground, unless impracticable due to surrounding or adjacent land uses. The increased vegetation height, if in place by the beginning of the nesting season (e.g., retention of previous year's growth or planting during the previous winter), will discourage burrowing owl use of the site.

- **Construction Buffers and Exclusion.** The following measures shall be implemented for new construction activities within 160 to 250 feet of an active nest or burrow (depending on the season):

1. During the non-breeding season (September 1 through January 31), a circular exclusion zone with a radius of 160 feet shall be established around occupied burrows.

2. If a buffer cannot be established during the non-breeding season, burrowing owls shall be evicted from the entire construction area using passive relocation techniques. The Applicant shall prepare an Exclusion Plan for review and approval by the City and CDFW. This plan shall address the following minimum requirements:

    a. Protocols to confirm that the burrow(s) is unoccupied by burrowing owls and other species prior to destruction. Protocols shall include:

        1) one-way doors in place a minimum of 48 hours prior to burrow excavation;

        2) twice daily monitoring to confirm evidence that owls have been excluded from the burrow; and

        3) scoping of the burrows to confirm absence.

    b. Procedures for how the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible; this 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.

c. Removal of other potential owl burrow surrogates or refugia on site.

d. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take.

e. 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.

f. Reports describing the exclusion activities shall be submitted to the City and CDFW.

3. During the breeding season (February 1 through August 31), a qualified biologist shall establish a circular exclusion zone with a radius of 250 feet around each occupied burrow. No construction related activity (e.g., site grading, staking, surveying, or any use of construction equipment) shall occur in the exclusion zone during the breeding season. Once the breeding season is over, passive relocation may proceed as described in Condition 2 above.

4. Construction buffer widths may be reduced from the 250-foot-wide breeding season buffers and 160-foot-wide non-breeding season buffers in accordance with the following requirements:

    a. A site-specific analysis prepared by a qualified biologist indicates that the nesting pair(s) or wintering owl(s) would not be adversely affected by construction activities. The City and CDFW must approve this analysis in writing before construction can proceed.

    b. Monitoring by a qualified biologist is conducted for a sufficient time (during all construction activities for a minimum of ten consecutive days following the initiation of construction), the nesting pair does not exhibit adverse reactions to construction activities (e.g., changes in behavioral patterns or reactions to noise), and the burrows are not in danger of collapse due to equipment traffic.

    c. Monitoring is continued at least once a week through the nesting/wintering cycle at that site, and no change in behavior by the owls is observed. This longer-term monitoring may be reduced to a minimum of 2 hours in the morning and 2 hours in the afternoon during construction activities; however, additional and more frequent monitoring may be required if any adverse reactions are noted.

    d. Monitoring reports are submitted to City and CDFW.

If adverse effects are identified, construction activities shall cease immediately, and construction shall not be resumed until the qualified biologist, in consultation with the City and CDFW, has determined that construction may continue under modified restrictions or that nesting activity is complete.

City of Vacaville

*General Plan*

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal COS-1: Protect and Enhance Habitat for Sensitive Species and Natural Communities.**

- Policy COS-P1.1: Support the Solano County Water Agency and federal and State agencies' efforts to prepare and implement the Solano HCP.

- Policy COS-P1.2: Manage natural open space lands, where feasible, in a manner consistent with wildlife protection.

- Policy COS-P1.3: Protect the existing wildlife movement corridors within the designated Vacaville-Fairfield Greenbelt area and create new wildlife corridors, including creek corridors and utility easements, where feasible, to enable free movement of animals, to minimize wildlife-urban conflicts, and to establish open space linkages.

- Policy COS-P1.4: Continue to protect mature trees and existing native non-agricultural trees.

- Policy COS-P1.5: Require new development proposals to provide baseline assessments prepared by qualified biologists. The assessment shall contain sufficient detail to characterize the resources on, and adjacent to, the development site. The assessment shall also identify the presence of important and sensitive resources, such as wetlands, riparian habitats, and rare, threatened, or endangered species affected by the development.

- Policy COS-P1.6: Require that new development minimize the disturbance of natural habitats and vegetation. Require revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.

- Policy COS-P1.7: Encourage new development to incorporate native vegetation into landscape plans.

- Policy COS-P1.8: Prohibit the use of invasive, non-native species, as identified by the State or County Department of Agriculture or other authoritative sources, in landscaping on public property or in common areas in private developments.

- Policy COS-P1.9: Require that new development include provisions to protect and preserve wetland habitats that meet one of the following conditions:

    - The wetlands contribute to the habitat quality and value of reserve/preserve lands established or expected to be established in perpetuity for conservation purposes.

    - The wetlands are contiguous to riparian or stream corridors, or other permanently protected lands.

    - The wetlands are located within or contiguous to other high value natural areas.

- Policy COS-P1.10: Where avoidance of wetlands is not practicable or does not contribute to long-term conservation of the resources, require new development to provide for off-site mitigation that results in no net loss of wetland acreage and functional value within the watersheds draining to the Delta or Suisun Marsh.

- Policy COS-P1.11: Require that, as appropriate, new policy plans or specific plans contain a resource management component and associated funding mechanisms that includes policies to protect preserved natural communities.

- Policy COS-P1.12: Until the Solano Habitat Conservation Plan (HCP) is adopted, comply with all of the Avoidance, Minimization, and Mitigation Measures listed in the Draft Solano HCP (see Appendix A for a list of the Avoidance and Minimization Measures that are applicable to Vacaville). In addition, require that development projects provide copies of required permits, or verifiable statements that permits are not required, from the California Department of Fish and Wildlife (2081 Individual Take Permit) and US Fish and Wildlife Service (Section 7 Take Authorization) prior to receiving grading permits or other approvals that would permit land disturbing activities and conversion of habitats or impacts to protected species. In cases where environmental review indicates that such permits may not be required, the Community Development Director may establish time limits of not less than 45 days from the submission of an adequate request for concurrence response from an agency. If the agency has not responded or requested a time extension of no more than 90 days to complete their assessment, within the established time frame, applicable grading permits or other authorizations may be provided, subject to other City requirements and review. However, the City's issuance of grading permits or other authorizations does not absolve the applicant's obligations to comply with all other State and federal laws and regulations.

- Policy COS-P1.13: Require that new development avoid the loss of special-status bat species as feasible.

- Policy COS-P1.14: Require that new development that would result in the loss or conversion of woodland resources develop and implement a plan that clusters impacts in order to reduce tree removal and impacts to trees to the maximum extent feasible.

**Goal COS-2: Preserve and Restore Vacaville's Creeks.**

- Policy COS-P2.1: Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception.

- Policy COS-P2.3: Require creekway and riparian area protection during construction, such as providing adequate setbacks from the creek bank and riparian areas, and creekway and riparian area restoration after construction.

- Policy COS-P2.4: Implement the City's Creekways Policy in all new development approvals to balance recreation and conservation within creekway areas. Integrate creeks with trails and other recreational open space and encourage public access along creek corridors where compatible with protection of the creek's natural resources and flood control functions.

- Policy COS-P2.5: Encourage restoration and expansion of riparian and floodplain habitat within channelized streams and flood channels where feasible, such as old Alamo Creek and old Ulatis Creek channels east of Leisure Town Road.

- Policy COS-P2.6: Promote invasive species control programs to reduce potential for infestations to occur and incorporate control programs as part of on-going operational and maintenance activities along creek corridors.

- Policy COS-P2.7: Require creek areas in new developments to be visible from the public right-of-way to ensure safety, maintenance, access, and integration into the neighborhood.

**Goal COS-14: Protect the Quality and Supply of Surface Water and Groundwater Resources**

- Policy COS-P14.1: Protect the Alamo, Encinosa, Gibson and Ulatis Creek watersheds by minimizing point and nonpoint source pollutants.

- Policy COS-P14.2: Integrate City planning and programs with other watershed planning efforts, including BMPs, guidelines, and policies of both the Sacramento and San Francisco Bay Regional Water Quality Control Boards.

- Policy COS-P14.3: Encourage pest-tolerant landscapes using native plants to minimize the need for pesticides.

- Policy COS-P14.4: Continue educational programs and outreach to promote water quality protection and limit pollution from pesticides and nutrients from businesses, homes, and landscaped areas.

- Policy COS-P14.5: Require the implementation of BMPs to minimize erosion, sedimentation, and water quality degradation resulting from construction or from new impervious surfaces.

- Policy COS-P14.6: Protect existing open spaces, natural habitat, floodplains, and wetland areas that serve as groundwater recharge areas.

- Policy COS-P14.7: Protect groundwater recharge and groundwater quality when considering new development projects.

*Tree Preservation*

In addition to protections for riparian habitat and other protected habitats outlined above in the General Plan 2035 (City of Vacaville 2015), the City supports the preservation and maintenance of mature trees on private and public property in order to promote the public health, safety, and general welfare. Policy RS-P-6 addresses oak woodlands and heritage tree protection, through the adoption of an ordinance to protect oak woodlands as defined in Senate Bill (SB) 1334 and heritage oak trees. The Plan defines heritage trees as the following: (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California, with a diameter of 10 inches above natural grade, or (c) any tree or group of trees specifically designated by the County for protection because of its historical significance, special character, or community benefit.

Additionally, the City recognizes individual rights to develop private property that have trees located on them and the need to maintain and improve public property with trees. The City supports the need to enhance the attractiveness of City streets and neighborhoods, enhance the value of property, retain natural beauty and the environment, provide habitat for wildlife, and preserve the character of the community. The City may trim or prune trees on public property at the discretion of the Director of Public Works; providing that such trimming and pruning shall not endanger the long-term health of the trees. The City may remove trees subject to the approval of a tree removal permit by the Director of Public Works.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Biological Resources are discussed in Chapter 4.4 of the General Plan EIR. The EIR concluded that, due to compliance of the Solano County HCP, federal and state regulations, and policies and actions included in the General Plan, implementation of the General Plan would have a less than significant impact on biological resources. The EIR also concluded that development of the General Plan could contribute to the cumulative loss of habitats, riparian areas, and special-status plants and wildlife. The area in the proposed General Plan south of the city limits, east of Peabody Road and west of Vanden Road that is designated Public/Institutional, combined with the area planned for development in the Northeast Fairfield Specific Plan, could preclude retention of a viable corridor for maintaining connectivity between these two regions of the county, resulting in a significant and unavoidable impact to wildlife corridors. No mitigation measures were identified in the General Plan EIR, as the General Plan would comply with all measures included in the Solano County General Plan. Those measures are included in the Mitigation Measures for biological resources.

### Discussion of Impacts

a) Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans (including the current Draft of the Solano HCP), policies, regulations, or by the CDFG or USFWS?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that with implementation of applicable General Plan Update policies, potential impacts to species identified as a candidate, sensitive, or special-status species would be less than significant.

The biological and wetland reconnaissance survey was conducted on March 12 and 14, 2024, by HELIX Senior Scientist Patrick Martin. The project site was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the project site with the potential to support special-status species and sensitive habitats. All plant and animal species observed on-site during the surveys were recorded, and all biological communities occurring on-site were characterized. Following the field survey, the potential for each species identified in the database query to occur within the project site was determined based on the site survey, soils, habitats present within the project site, and species-specific information.

Plants

Based on the literature review, published information, soil types present in the project site, and the habitats present in the project site, the following 17 special-status plant species have the potential to occur in the project site and immediate vicinity: bitterscale (*Atriplex depressa*), vernal pool smallscale (*Atriplex persistens*), papoose tarplant (*Centromadia parryi* ssp. *parryi*), hispid bird's-beak (*Chloropyron*

*molle* ssp. *hispidum*), recurved larkspur (*Delphinium recurvatum*), dwarf downingia (*Downingia pusilla*), San Joaquin spearscale (*Extriplex joaquinana*), adobe-lily (*Fritillaria pluriflora*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Contra Costa goldfields (*Lasthenia conjugens*), legenere (*Legenere limosa*), little mousetail (*Myosurus minimus* ssp*. apus*), Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*), beared popcornflower (*Plagiobothrys hystriculus*), California alkali grass (*Puccinellia simplex*) two-forked clover (*Trifolium amoenum*), and saline clover (*Trifolium hydrophilum*). Other special-status plants identified in the database query occur on alkaline flats or playas, saline wetlands, in vernal lakes or lake margins, volcanic soil, serpentinite soil, and in other native or naturalized habitat types that do not occur in the project site.

While none of the above special-status plant species were observed during the reconnaissance-level field survey, the field survey was conducted outside of the blooming period for most of the species, and there is suitable habitat present for all on-site. Project construction and activities would require grading and ground disturbance that could have a significant impact on special-status plants should they be present on-site, however, implementation of Mitigation Measure BIO-1 requiring special-status plant surveys within the appropriate identification (blooming) period prior to the initiation of any ground-disturbing activities would reduce potential impacts to special-status plants to a less than significant level.

Wildlife

Based on field observations, literature review, and published information, a total of 14 special-status wildlife species have the potential to occur in the project site and immediate vicinity: Crotch's bumble bee (*Bombus crotchii*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), western spadefoot (*Spea hammondii*), California tiger salamander (*Ambystoma californiense*), northwestern pond turtle (*Actinemys marmorata*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), and pallid bat (*Antrozous pallidus*). In addition, other migratory birds and raptors protected under federal, State, and local laws/policies also have potential to occur within the project site or nest in the vicinity of the project site.

Although habitat for California tiger salamander (*Ambystoma californiense*) was determined to be present, the project site is fragmented and surrounded entirely by urban development which significantly reduces the suitability of habitat for this species (USFWS 2017). Nearby CNDDB records for this species are in the Jepson Prairie, south of Interstate 80 (CDFW 2024), which Interstate 80, busy roads, and urban development provides a complete barrier for dispersal of this species from known and unknown populations (USFWS 2017).

*Crotch's Bumble Bee*

While Crotch's bumble bee was not observed on-site during the March 12, 2024 and March 14, 2024 reconnaissance surveys, the annual grassland and ruderal vegetation communities within the project site provide suitable habitat for this species. Rodent burrows within the project provide suitable nesting habitat for this species, and floral resources within the project site provide foraging habitat. There is one CNDDB reported occurrence within a 5-mile radius of the project site, and the project site is within the current range of this species. There is potential for direct and indirect effects to Crotch's bumble bee if this species were to utilize the project site for nesting, overwintering, or foraging during the

implementation of this project. Implementation of Mitigation Measure BIO-2 would require preconstruction surveys to confirm the presence or absence of Crotch's bumble bee before the implementation of project-related activities to reduce any potential impacts to Crotch's bumble bee to a less than significant level.

*Valley Elderberry Longhorn Beetle*

Although elderberry (*Sambucus* spp.) shrubs that could provide habitat for valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) were not detected in the project site in March 2024, focused surveys for elderberry shrubs were not conducted and some riparian areas were composed of dense vegetation that made detection of elderberry shrubs difficult. Suitable riparian habitat is present in the project site, and while the riparian habitat in the project site is not contiguous with other occupied riparian habitat with documented occurrences of valley elderberry longhorn, there is suitable habitat for elderberry shrubs on-site. Implementation of the valley elderberry longhorn beetle avoidance and minimization measure in the Solano HCP would reduce potential impacts to a less than significant level.

*Special-Status Branchiopods*

Special-status branchiopods that include vernal pool fairy shrimp, a federally threatened species, and vernal pool tadpole shrimp, a federally endangered species have a high potential to occur in various aquatic features within the project site. Vernal pool fairy shrimp occur in a variety of seasonally inundated habitats, particularly low-alkalinity seasonal pools in grasslands. Vernal pool tadpole shrimp was not observed in the project site during reconnaissance-level surveys conducted in March 2024, however protocol surveys were not completed for this species. Vernal pool habitat including large pools provide habitat for this species in vernal pool system grassland habitat in the project site, and there is potential for direct and indirect effects to vernal pool tadpole shrimp from the proposed project if this species were to occur in the project site. Implementation of Mitigation Measure BIO-3 requiring a complete protocol-level survey, consisting of one wet-season survey and one dry-season survey, where project components are proposed in vernal pool habitat would reduce potential impacts to be less than significant.

*Amphibians*

- Western Spadefoot - Western spadefoot was not observed in the project site during surveys conducted in March 2024, however the vernal pool system grassland habitat in the project site contains suitable upland and aquatic habitats for this species. There is potential for direct and indirect effects to western spadefoot as this species could forage, breed, and overwinter within the project site, or in the vicinity of the project site, and potentially be impacted by the proposed project during the breeding season or during dry season dormancy. Implementation of Mitigation Measure BIO-4 which recommends avoiding construction during breeding season for western spadefoot (October to May) to the extent possible and conducting preconstruction surveys would reduce impacts to a less than significant level.

- California Tiger Salamander - California tiger salamanders are generally restricted to vernal pools and seasonal ponds, including many constructed stock ponds, in grassland and oak savannah plant communities from sea level to about 1,500 feet in central California. There is potential for direct and indirect effects to California tiger salamander as this species could forage, breed, and

overwinter within the project site and potentially be impacted by the proposed project during the breeding season or during dry season dormancy if occupied dry season burrows were impacted by construction. Interstate 80 and urban development provides at least a partial barrier for dispersal of this species from known populations and unknown populations, and given the distance of the project site from known populations of this species, there is a low likelihood for this species to occur on-site.

- Northwestern Pond Turtle - Northwestern pond turtle was not observed in the project site during surveys conducted in March 2024, however, the four drainages that include intermittent and perennial drainages in addition to marsh and other wetland habitats in the project site provide suitable habitat for this species. Drainages in the project site supported several large beaver dams with large impoundments which provide excellent habitat for northwestern pond turtle. Nesting habitat is present in riparian, ruderal and annual grassland habitat, which could provide upland egg-laying habitat for this species. There is potential for direct and indirect effects to northwestern pond turtle as this species could nest and winter within the project site, or in the vicinity of the project site, and potentially be impacted by the proposed project during the nesting season and wintering season. However, implementation of Mitigation Measure BIO-5 requiring preconstruction surveys for northwestern pond turtles would reduce potential impacts to a less than significant level.

*Pallid Bat*

The project site contains suitable roosting habitat in tree hollows and bird boxes, which are installed throughout the project site. Preferred rocky areas with crevices are not present in the project site. While there are no CNDDB reported occurrences within a 5-mile radius of the project site, and no pallid bat was identified in the reconnaissance-level survey, there is potential for direct and indirect effects to pallid bat if this species were to roost within or adjacent to project site. Implementation of Mitigation Measure BIO-6 requiring preconstruction surveys for pallid bats would reduce potential impacts to a less than significant level.

*Avian Species*

White-tailed kite was observed foraging at the site during surveys on March 12, 2024 and March 14, 2024. According to the BRA, there are five additional special-status avian species that have the potential to use the site for foraging and nesting: Tri-Colored Blackbird, Burrowing owl, Swainson's hawk, Northern Harrier, and Grasshopper Sparrow.

- Tri-Colored Blackbird – Suitable foraging habitat is present for this species in ruderal areas and in annual grassland habitat within the project site. Suitable nesting habitat is present for this species in fresh emergent vegetation in valley foothill riparian, intermittent drainages, perennial drainages, seasonal marsh and perennial marsh habitats within the project site. Fresh emergent wetland vegetation present in the project site provides expansive emergent vegetation that would provide suitable nesting habitat for this species. Fresh emergent wetlands in the drainages are further enhanced by the presence of larger beaver dams that naturally impound the drainages. There is potential for direct and indirect effects to tricolored blackbird from the proposed project if this species were to occur in the project site, however implementation of Mitigation Measure BIO-7 and the tri-colored blackbird avoidance and minimization measure from the Solano HCP would reduce potential impacts to a less than significant level.

- Grasshopper Sparrow – Suitable foraging habitat is present in the project site, and potential small mammal prey species are abundant. There are two CNDDB reported occurrences within a 5-mile radius of the project site with the nearest record located 2.2 miles east of the project site (CDFW 2024). The record documents this species nesting in 2001 (CDFW 2024). While no grasshopper sparrows were observed on-site during the site visit, due to the presence of suitable habitat (annual grassland) on-site, there is potential for it to be present on the project site, as well as potential for direct and indirect effects from the proposed project. Implementation of Mitigation Measure BIO-7 which requires a preconstruction nesting bird survey during the avian breeding season (February 1 through August 31) would reduce potential impacts to a less than significant level.

- Burrowing Owl – Suitable nesting and foraging habitat is present in the project site as it consists of annual grassland and ruderal areas with small mammal burrows that could provide habitat for burrowing owls. The project site also supports a population of California ground squirrels, which provide burrow habitat for burrowing owls. This species is known to occur in the vicinity of the project site during the nesting season and the wintering season and suitable habitat is present. No burrowing owls or sign (pellets, feathers, whitewash) were observed in the project site during the site visits conducted in March 2024, however there are several CNDDB recorded occurrences within a 5-mile radius of the project site. This species could breed or overwinter in the project site, and thus there is potential for direct and indirect effects to burrowing owl from the proposed project if this species were to occur in the project site. Implementation of Mitigation Measure BIO-7 and the burrowing owl avoidance and minimization measure from the Solano HCP would reduce potential impacts to a less than significant level.

- Swainson's Hawk – The project site provides suitable nesting habitat for Swainson's hawk since trees are present in the project site and in areas adjacent to the project site. Suitable foraging habitat is also present in the project site and potential small mammal prey species are abundant. This species was not observed in the project site during the site visit conducted in March 2024, which is during the early nesting season for this species, however there are several CNDDB reported occurrences of this species within a 5-mile radius of the project site and this species is abundant in the region. As suitable nesting and foraging habitat is present, and due to the reported occurrences of this species in the vicinity of the project site, there's potential for direct and indirect effects to Swainson's hawk from the proposed project if this species were to occur in the project site. Implementation of Mitigation Measure BIO-7 and the Swainson's hawk avoidance and minimization measure from the Solano HCP would reduce any potential impacts to Swainson's hawk to a less than significant level.

- Northern Harrier – Northern harriers breed in a variety of open habitats including marshes, wet meadows, weedy shorelines, grasslands, weed fields, pastures, sagebrush flats, desert sinks, and croplands. Northern harriers nest on the ground in patches of dense, tall vegetation in undisturbed areas. Northern harrier was not observed in the project site during several biological surveys in March of 2024, however small mammal prey is abundant on portions of the project site and in adjacent areas and could support this species. There is potential for direct and indirect effects to northern harrier from the proposed project if this species were to nest in the project site, however implementation of Mitigation Measure BIO-7 would reduce potential impacts to northern harrier to a less than significant level.

- White-Tailed Kite – White-tailed kite was observed foraging in the project site during the site visits in March 2024 although a nest or breeding behaviors were not detected. There is suitable foraging and nesting habitat for white-tailed kite on-site. There is potential for direct and indirect effects to white-tailed kite if this species were to nest within or adjacent to project site, however implementation of Mitigation Measure BIO-7 would reduce potential impacts to white-tailed kite due to construction or implementation of the proposed project to less than significant.

As noted above, there are six special-status avian species that have the potential to use the site for nesting and foraging. The project site and immediate vicinity also provides nesting and foraging habitat for a variety of nesting migratory birds and raptors. Project activities such as clearing, grading, and other ground disturbing activities during the avian nesting season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance. Needless destruction of nests, eggs, and chicks would be a violation of the Fish and Game Code and a significant impact. As an effort to avoid take, the City will require the implementation of Mitigation Measure BIO-7 as well as measures included in the Solano HCP. Impacts to avian species, both common and special-status, are expected to be less-than significant with mitigation measures incorporated**.**

As described above, the project could have potential effects on species identified as a candidate, sensitive, or special-status species in local or regional plans. Implementation of Mitigation Measures BIO-1 through BIO-7, compliance with the avoidance and minimization measures included in the Solano HCP, compliance with applicable policies included in the General Plan, and compliance with the BMPs included in the Solano HCP, would reduce impacts to be *less than significant with mitigation incorporated*.

b) Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the Solano HCP and the General Plan Update policies and actions, in combination with federal and State laws, would reduce potential impacts to vernal pools and other seasonal wetlands to a less-than-significant level.

A total of 159.79 acres of habitats containing aquatic resources have been identified in the project site consisting of consisting of perennial marsh (17.30 acres), seasonal marsh (1.78 acres), perennial drainages (8.83 acres), intermittent drainages (1.16 acres) and vernal pool system grassland complex (130.72 acres). A total of 130.72 acres of vernal pool system grassland habitat is a complex of upland and wetland habitats, and the valley foothill riparian (14.88 acres) habitat also falls under the jurisdiction of Section 1600 of the California Fish and Game Code, which includes riparian areas.

In accordance with VMC Chapter 14.09.250 section 040, most of the proposed project components would be setback at least 40 feet from the existing, stable top of bank for all creeks, riparian areas, streams, and freshwater marshes. However, the proposed dog park would impact the seasonal marsh mapped along the western boundary of the project site, just south of the south fork of Horse Creek. Additionally, two new vehicular bridge crossings and a pedestrian bridge are proposed in Phase V that would cross the middle fork of Horse Creek north of the existing Horse Creek Soccer Complex as well as the south fork of Horse Creek northwest of the proposed water play area that may potentially impact

riparian habitat or other sensitive natural communities. With implementation of Mitigation Measure BIO-8 which requires acquiring permits from appropriate regulatory agencies and compensatory mitigation for permanent impacts to jurisdictional waters and/or riparian habitat at a minimum 1:1 ratio, impacts to riparian habitat or sensitive natural communities on-site would be *less than significant with mitigation incorporated*.

c) Result in a substantial adverse effect on federally regulated wetlands as defined by Section 404 of the Clean Water Act and/or State protected wetlands as defined by the Porter-Cologne Water Quality Control Act through direct removal, filling, hydrological interruption, or other means?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the Solano HCP and the General Plan Update policies and actions, in combination with federal and State laws, would reduce potential impacts to wetlands to a less-than-significant level.

As noted above, total of 159.79 acres of habitats containing aquatic resources have been identified in the project site consisting of consisting of perennial marsh (17.30 acres), seasonal marsh (1.78 acres), perennial drainages (8.83 acres), intermittent drainages (1.16 acres) and vernal pool system grassland complex (130.72 acres). A total of 130.72 acres of vernal pool system grassland habitat is a complex of upland and wetland habitats, and only portions of this habitat that meet wetland criteria would be considered as potential waters of the U.S. and/or waters of the State. The intermittent drainages and perennial drainages are likely considered waters of the U.S. and water of the State subject to USACE and RWQCB jurisdiction under Sections 404 and 401 of the CWA.

In accordance with VMC Chapter 14.09.250 section 040, most of the proposed project components would be setback at least 40 feet from the existing, stable top of bank for all creeks, riparian areas, streams, and freshwater marshes. However, the proposed dog park would impact the seasonal marsh mapped along the western boundary of the project site, just south of the south fork of Horse Creek. Additionally, two new vehicular bridge crossings and a pedestrian bridge are proposed in Phase V that would cross the middle fork of Horse Creek north of the existing Horse Creek Soccer Complex as well as the south fork of Horse Creek northwest of the proposed water play area that may potentially impact waters of the U.S. and/or waters of the State. With implementation of Mitigation Measure BIO-8 which requires acquiring permits from appropriate regulatory agencies and compensatory mitigation for permanent impacts to jurisdictional waters and/or riparian habitat at a minimum 1:1 ratio, impacts to riparian habitat or sensitive natural communities on-site would be *less than significant with mitigation incorporated*.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

**No new impact.** The General Plan EIR concluded that implementation of the Solano HCP and the General Plan Update policies and actions, in combination with federal and State laws, would reduce potential impacts to wildlife corridors to a less-than-significant level.

The four drainages in the project site provide a wildlife migration corridor for aquatic wildlife, and associated riparian habitat provides habitat for nesting birds and roosting bats. However, the project site is surrounded by urban development with busy roadways, and generally does not provide connectivity to adjacent habitat for wildlife. Implementation of the proposed project would not affect any wildlife migration corridors or disrupt the flow or water quality of the Ulatis Creek watershed. The

proposed project would have a less than significant impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

e) Conflict with any applicable land use plans, policies, regulations, or ordinances, of an agency with jurisdiction over the project, adopted for the purpose of protecting biological resources or avoiding and mitigating impacts to biological resources?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not conflict with any policies or ordinances protecting biological resources, and impacts would be less than significant.

Tree preservation in Vacaville is regulated under Chapter 14.09.131 (Tree Preservation) of the City of Vacaville Land Use and Development Code. Under the City's tree preservation ordinance, tree is defined as any live woody plant having one or more well defined perennial stems with an aggregate circumference of 31 inches or more, when measured at 4-1/2 feet above ground level.

Trees protected by the City of Vacaville are present in the project site in addition to trees associated with approximately 14.88 acre of valley foothill riparian habitat. Implementation of Phase I is anticipated to require the removal of two cottonwood trees and one willow tree located at the north gate in order to provide entry and exit lanes that properly align with existing traffic lanes on Allison Parkway. A tree permit will be required from the Director of Public Works with the City prior to removal of any public trees. Mitigation for tree removal typically includes planting of replacement trees on or off-site, payment of in-lieu fees, or preservation of trees on-site. Over 200 trees are planned to be planted as part of Phase I which would adequately mitigate for the removal of the three trees noted above. With issuance of a tree removal permit from the Director of Public Works and implementation of the planned replacement tree plantings, as well as compliance with General Plan policies and avoidance and minimization measures included in the Solano HCP, the proposed project would have a less than significant impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not conflict with any applicable HCP or natural community conservation plan as the Solano HCP is not an adopted conservation plan, and impacts would be less than significant. As of the date of this Initial Study, the Solano HCP has not yet been adopted. Therefore, the proposed project would have no impact on or conflict with any applicable HCP or natural community conservation plan, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

### Mitigation Measures

**BIO-1** **Special-Status Plants.** The Project site contains suitable habitat for bitterscale, vernal pool smallscale, papoose tarplant, hispid bird's-beak, recurved larkspur, dwarf downingia, San Joaquin spearscale, adobe-lily, Boggs Lake hedge-hyssop, Contra Costa goldfields, legenere, little mousetail, Baker's navarretia, bearded popcornflower, California alkali grass two-forked clover, saline clover. The Project site could also

potentially support elderberry shrubs which provide potential habitat for valley elderberry longhorn beetle. If present within the Project site, these species could be impacted by the proposed project through grading or vegetation removal activities. Loss of special-status plant populations and elderberry shrubs would represent a potentially significant impact.

The Project site provides potentially suitable habitat for Contra Costa goldfields, two-forked clover, which are both endangered species under ESA and Boggs Lake hedge-hyssop, an endangered species under CESA. To avoid potential impacts to these species, the following measures are provided as recommendations, but potential impacts to these species and/or potentially suitable habitat for these species may require informal or formal consultation with USFWS under the Endangered Species Act incidental take authorization or with CDFW under CESA if the species is present and expected to be impacted. To avoid potential impacts to all potentially occurring special-status plant species, the following measures are recommended:

- A qualified botanist should conduct a special-status plant survey within the appropriate identification (blooming) period prior to the initiation of any ground-disturbing activities that affect the Project site. If no special-status plants are observed, then a letter report documenting the methods and results of the survey should be prepared and submitted to the City and no further measures are recommended.

- If special-status plants are observed within the Project site, the location of the special-status plants should be marked with pin flags or other highly visible markers and may also be marked by GPS. The project proponent should determine if the special-status plant(s) on-site can be avoided by project design or utilize construction techniques to avoid impacts to the special-status plant species. All special-status plants to be avoided should have exclusion fencing or other highly visible material marking the avoidance area and the avoidance area should remain in place throughout the entire construction period.

- If special-status plants are found within the Project site and cannot be avoided, the project proponent should consult with the USFWS and CDFW depending on listing status to determine appropriate measures to mitigate the potential impact to special-status plant populations. These measures may include gathering seed from impacted populations for planting within nearby appropriate habitat, preserving or enhancing existing off-site populations of the plant species affected by the project, or restoring suitable habitat for special-status plant species habitat as directed by USFWS and CDFW.

**BIO-2** **Crotch's Bumble Bee.** The Project site contains suitable nesting, foraging, and overwintering habitat for Crotch's bumble bee. To avoid potential impacts to this species, the following mitigation measures derived from the CDFW Survey Considerations for CESA Candidate Bumble Species are recommended:

A qualified biologist familiar with California bumble bee species should conduct preconstruction surveys to confirm the presence or absence of Crotch's bumble bee

before the implementation of Project-related activities. Surveys should be conducted during the Colony Active Period (April to August) and when floral resources are present, ideally during peak bloom.

- Before Project implementation, at least three on-site surveys should take place, and each survey should ideally be spaced two to four weeks apart during the Colony Active Period (April to August). Surveys should occur during the day (at least an hour after sunrise and at least two hours before sunset, though ideally between 9 AM and 1 PM) on warm but not hot, sunny days (65 to 90 degrees F), with low wind (less than eight mph). Specific survey protocols should follow industry standards from related published protocols and can include modified implementation of the USFWS rusty patched bumble bee protocol and/or California Bumble Bee Atlas non-lethal protocol. Survey methodology should remain consistent with the Survey Considerations for CESA Candidate Bumble Species. Even if surveys from a particular project site failed to detect bumble bees one year, project proponents should perform a full round of surveys in each year that project activities will occur, or assume presence.

- If Crotch's bumble bee is not found during the multiple rounds of focused surveys within suitable nesting, foraging, and/or overwintering habitat, it is recommended that a biological monitor be on-site during initial vegetation removal or ground disturbing activities that take place during any of the Queen and Gyne Flight Period and Colony Active Period (April to October for Crotch's bumble bee).

- If a CESA-protected bumble bee individual or colony is identified in the Project site or within 25 feet, the project proponent may propose site-specific measures to avoid take (such as work-exclusion buffers) or consult with CDFW to obtain an Incidental Take Permit (ITP) if take of CESA-protected bumble bees may occur and be impacted by Project activities.

**BIO-3** **Special-Status Branchiopods.** Special-status branchiopods that include vernal pool fairy shrimp, a federally threatened species, and vernal pool tadpole shrimp, a federally endangered species have a high potential to occur in various aquatic features within the Project site. Listed invertebrate species are assumed to be present in suitable habitat within their range unless a complete protocol-level survey, consisting of one wet-season survey and one dry-season survey, results in no evidence of the listed species. The surveys should follow the (2017) USFWS Survey Guidelines for the Listed Large Branchiopods and be conducted by a USFWS-approved biologist.

If the species are found to be absent with survey results and the USFWS accepts the survey findings, then no mitigation for listed vernal pool invertebrates is likely required. If the species are present, or if the project proponent decides to assume presence without conducting the surveys, then mitigation for listed vernal pool invertebrates would be required. Assumed presence may be decided by the project proponent prior to construction and mitigation for assumed presence would be determined by the USFWS and CDFW.

If mitigation for listed vernal pool invertebrates is required and the Project has a federal nexus (e.g., is pursuant to a USACE permit, is federally funded, or occurs on federal land), impacts can be addressed through Section 7 consultation with the USFWS. If the Project does not have a federal nexus, the project proponent, through coordination with the USFWS, can prepare a Habitat Conservation Plan under Section 10 of FESA. Typically, the USFWS requires compensatory mitigation for impacts to these species at a 3:1 ratio (3:1 preservation of occupied habitat typically). Possible mitigation opportunities include offsite preservation of occupied offsite habitat or purchase of habitat credits at a qualified mitigation bank.

**BIO-4** **Western Spadefoot.** Western spadefoot has the potential to occur in the Project site within uplands and various aquatic resources. Upon completion of the Project, suitable habitat for this species in the Project site will continue to provide habitat for this species. Impacts that could harm special-status amphibians would be considered potentially significant. Impacts to this species may require permits or consultation with State and/or federal agencies. To avoid potential impacts to these species, the following measures are provided as recommendations, but consultation with State and/or federal agencies may be needed to refine these dependent upon the project design:

- If possible, conduct all grading and land disturbing activities outside of the breeding season for western spadefoot (breeding season is generally October to May for western spadefoot) to avoid potential impacts to dispersing individuals.

- A qualified biologist should conduct a pre-construction survey for western spadefoot within 24 hours prior to the start of grading or land disturbing activities. If the survey shows that there is no evidence of this species, then a letter report should be prepared to document the survey and be provided to the project proponent and no additional measures are recommended. If development does not commence within 24 hours of the survey, or halts for more than 7 days, then an additional survey is required prior to starting or resuming work.

- If western spadefoot is observed during the survey, no work shall occur until CDFW and/or USFWS has been consulted to determine appropriate mitigation and avoidance measures. Any western spadefoot observed during biological monitoring activities will be reported to the CNDDB.

**BIO-5** **Northwestern Pond Turtle.** Northwestern pond turtle may occur in the Project site and could potentially be impacted by the proposed Project. If present in the drainages, wetlands, or upland areas in the Project site at the time of construction, impacts to northwestern pond turtle could result from coming into contact with construction equipment or personnel, loss of habitat, displacement from current habitat, or loss of a nest. Upon completion of the Project, suitable habitat for this species in the Project site will continue to provide habitat for this species. Impacts that could harm northwestern pond turtle or result in loss of a nest would be considered potentially significant. Potential impacts to the federally proposed threatened northwestern pond turtle, and potentially suitable habitat for this species may require consultation with USFWS and/or

CDFW. To avoid potential impacts to this species, the following measures are provided as recommendations:

- A pre-construction survey should be conducted for northwestern pond turtle by a qualified biologist within seven days before construction and again 24 hours before the commencement of construction. If nesting sites for pond turtles are identified within the survey limits, a buffer area of 300 feet should be established between the nesting site and the aquatic habitat (e.g., pond) located near the nesting site. The buffer should be indicated by temporary fencing if construction has or will begin before the nesting period has ended (the period from egg laying to emergence of hatchlings is normally April to November). If a non-nesting northwestern pond turtle is found in the Project site during pre-construction surveys, construction activities should not start within 300 feet of the animal until the turtle has been relocated by a qualified biologist with appropriate approvals from USFWS and CDFW to a suitable location outside of the construction zone. No northwestern pond turtle shall be relocated without prior approval from USFWS and CDFW.

A qualified biological monitor(s) should be present during any dewatering or other work within suitable aquatic habitat that could harm turtles to relocate any northwestern pond turtles to suitable habitat outside of the work area. Before such work occurs, CDFW and USFWS will be notified of the intent to conduct northwestern pond turtle monitoring and potential relocation. Any northwestern pond turtles observed during biological monitoring activities will be reported to the CNDDB.

**BIO-6** **Pallid Bat.** If these bat species are roosting in the Project site at the time of construction, construction activities and construction-related disturbance (e.g., noise, vibration, increased human activity) could adversely affect pallid bat, by direct harm, loss of roost tree(s), or by causing individuals to leave the roost under suboptimal conditions and exposing them to stress or increased chance of predation, which would be a potentially significant impact. To avoid potential impacts to these species, the following measures are recommended:

A qualified wildlife biologist should conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

**BIO-7** **Nesting Migratory Birds and Raptors, including Special-Status Species.** The following measures are recommended to avoid or minimize impacts to nesting birds. If Project activities commence during the avian breeding season (February 1 through August 31), a qualified biologist should conduct a pre-construction nesting bird survey no more than 7 days prior to initiation of Project activities. The survey area should include suitable raptor nesting habitat within 500 feet of the Project boundary (inaccessible areas

outside of the Project site can be surveyed from the site or from public roads using binoculars or spotting scopes). Pre-construction surveys are not required in areas where Project activities have been continuous since prior to February 1, as determined by a qualified biologist. Areas that have been inactive for more than 14 days during the avian breeding season must be re-surveyed prior to resumption of Project activities. If no active nests are identified, no further measures are required. If active nests are identified, the following measure should be implemented:

- A species-specific buffer should be established by a qualified biologist around active nests and no construction activities within the buffer should be allowed until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest, or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer should be monitored by a qualified biologist to determine whether nesting birds are being impacted.

**BIO-8** **Wetlands or other Potential Jurisdictional Waters of the U.S. and State.** The perennial marsh (17.30 acres), seasonal marsh (1.78 acres), perennial drainages (8.83 acres), intermittent drainages (1.16 acres) and wetlands within the vernal pool system grassland complex (130.72 acres) within the Project site are likely to be considered regulated aquatic resources subject to USACE and/or RWQCB jurisdiction under Sections 404 and 401 of the CWA as well as CDFW jurisdiction under Section 1600 of the Fish and Game Code. Valley foothill riparian habitat (14.88 acres) along the drainages may also fall under CDFW jurisdiction under Section 1600 of the Fish and Game Code. If any impacts to the aquatic resources or associated riparian canopy over the drainages are expected, then a formal aquatic resources delineation should be submitted to the appropriate resource agencies to determine the extent of jurisdiction. If any aquatic resources are determined to be jurisdictional, the project proponent will be required to apply for the required permits with the U.S. Army Corps of Engineers and/or Regional Water Quality Control Board to fill aquatic resources and any mitigation measures contained in the permits will require implementation prior to filling any on-site features deemed subject to regulation. Impacts to riparian and stream habitats will likely also require a Lake and Streambed Alteration Agreement from CDFW. Compensatory mitigation for permanent impacts to jurisdictional waters and/or riparian habitat would be provided at a minimum 1:1 ratio to ensure no net loss.

If aquatic habitats are anticipated to be avoided during the implementation of project activities, then boundaries of these habitats should be clearly marked and avoided during construction. Highly visible material, such as orange construction fencing should be constructed at least 50 feet from the boundary of these habitats to establish an appropriate no-disturbance buffer. Erosion control measures should also be implemented around these habitats and all other measures outlined in the project's SWPPP and other general construction permits should be followed.

# V. CULTURAL RESOURCES

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| b) Cause a substantial adverse change in the significance of an archaeological resource as pursuant to CEQA Guidelines Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☒ | ☐ | ☐ |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☒ | ☐ | ☐ |

The discussion below is based on the Cultural Resources Assessment prepared by HELIX (HELIX 2024b), included as Appendix E.

### Affected Environment

Centennial Park is on the western edge of the Central Valley of California, just to the east of the English Hills and at the foot of a small ridge. The elevation of the park is roughly 150 feet above mean sea level. The natural soils range in color from a light gray brown to tan brown alluvial deposits, consisting of roughly 45 percent pea gravels. The three perennial drainages that run through the project area have been channelized and empty to the Putah Canal located to the east of the APE. The native vegetation for Centennial Park area has been described as California Prairie, consisting of bunchgrass communities, ranging from dense to somewhat open, punctuated with forbs (herbaceous flowering plants common in grasslands) (HELIX 2024b). Close to water ways within and near the project area, riparian trees including willow (s*alix lasiolepis*), alder (*rhamnus alnifolia*), and California Bay Laurels (*umbellularia californica*), are present.

### Methodology

Records Searches

HELIX Archaeologists conducted a records search at the Northwest Information Center (NWIC) on December 12, 2024, which revealed that 25 cultural resource surveys have been conducted within a 0.25-mile radius of the project's Area of Potential Effect (APE), and that 8 of these studies included the APE as part of their survey area. One cultural resource had been previously recorded within the proposed project's APE, and nine cultural resources have been previously recorded within a 0.25-mile radius of the APE. None of the resources are anticipated to be affected by the proposed project.

On January 12, 2024, HELIX requested that the Native American Heritage Commission (NAHC) conduct a search of their Sacred Lands File (SLF) for the presence of Native American sacred sites or human

remains in the vicinity of the proposed project area. A written response received from the NAHC on February 5, 2024, stated that the results of the SLF search were negative. Subsequently, on February 23, 2024, HELIX sent letters to twelve (12) Native American contacts that were recommended by the NAHC as potential sources of information related to cultural resources in the vicinity of the project area. The letters described the proposed project, provided location maps, and requested information regarding cultural resources in the immediate area, as well as any feedback or concerns they may have related to the proposed project, for informational purposes only. The Yocha Dehe Wintun Nation responded to HELIX's letter and requested AB 52 consultation with the City of Vacaville. The City sent an email to the Yocha Dehe Wintun Nation on April 3, 2024 to initiate consultation under AB 52. As of the date of this report, no other responses have been received from the other Native American contacts. For more information about AB 52 consultation between the City and Yocha Dehe Wintun Nation, see Section 7.XVI, Tribal Cultural Resources.

Pedestrian Survey

HELIX Staff Archaeologist Jentin Joe conducted an intensive pedestrian survey of the project area between January 23 and 30, 2024. A single day of additional survey was conducted by HELIX staff on May 1, 2024. The survey involved the systematic investigation of the APE's ground surface by walking in parallel 15-meter (m) transects. During the survey, the ground surface was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, fire-affected rock, prehistoric ceramics), soil discoloration that might indicate the presence of a prehistoric cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations, wells) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as gopher holes, burrows, cut banks, and drainage banks were also visually inspected.

HELIX staff prepared a Department of Parks and Recreation (DPR) 523I – Continuation Sheet/Site Update form for the one resource identified in the records searches to be existing on-site (resource P-48-001025) to note the absence of this resource within the boundaries of the currently proposed APE, and to recommend the segment of this resource reported as lying within the currently proposed APE as ineligible for listing in the NRHP or CRHR on the grounds that it does not retain integrity to its period of historic significance. Ultimately, the APE was thoroughly inspected during HELIX's pedestrian survey, and no prehistoric or historic-era cultural materials or features were observed.

## Regulatory Framework

### Federal Laws, Regulations, and Policies

National Historic Preservation Act of 1966 (16 USC 470)

The National Historic Preservation Act of 1966 (16 USC 470), enacted in 1966, declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the NRHP, established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes in preserving their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

Section 106

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in or eligible for inclusion in the NRHP, and that the ACHP must be afforded an opportunity to comment on such undertakings through a process outlined in 36 CFR Part 800. The Section 106 process involves the identification of historic properties within the APE; the determination of whether the undertaking will cause an adverse effect on historic properties; and the resolution of those adverse effects through consultation with parties to the Section 106 review process, most prominently including the California State Historic Preservation Officer (SHPO) and Native American tribes.

National Register of Historic Places

The National Register was authorized by Section 101 of the NHPA as the nation's official list of cultural resources worthy of preservation. Properties listed in the National Register consist of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. Properties listed in or eligible for listing in the National Register are considered in planning and environmental review, and effects to such properties are primarily addressed under Section 106.

The criteria for determining a resource's eligibility for National Register listing are defined at 36 CFR Part 60.4 and are as follows:

> . . .the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> A) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B) That are associated with the lives of persons significant in our past; or
>
> C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D) That have yielded, or may be likely to yield, information important in prehistory or history.

Under Criteria A, B, and C, the National Register places an emphasis on a resource appearing as it did during its period of significance to convey historical significance; under Criterion D, properties convey significance through the information they contain.

National Register Bulletin *How to Apply the National Register Criteria for Evaluation* states that in order for a property to qualify for listing in the National Register, it must meet at least one of the National Register criteria by (1) being associated with an important historic context, *and* (2) retaining historic integrity of those features necessary to convey its significance (National Park Service 1997). The historic context of a resource will define the theme(s), geographical limits, and period of significance by which to evaluate a resource's significance (National Park Service 1997:7).

Generally, cultural properties must be 50 years of age or more to be eligible for listing in the National Register. According to the National Park Service (1997:2), “properties that have achieved significance within the past 50 years shall not be considered eligible” unless such properties are “of exceptional importance.”

In addition to meeting one or more of the significance criteria, a cultural resource must retain its historic integrity to be considered eligible for listing in the National Register. Historic integrity is defined as the ability of a resource to convey its significance. The evaluation of integrity must be grounded in an understanding of a resource’s physical features and its environment, and how these relate to its significance. “The retention of specific aspects of integrity is paramount for a property to convey its significance” (National Park Service 1997:44). There are seven aspects of integrity to consider when evaluating a cultural resource: location, design, setting, materials, workmanship, feeling, and association (National Park Service 1997:44-45).

- *Location* is the place where the historic property was constructed or the place where the historic event occurred. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons.

- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.

- *Setting* is the physical environment of a historic property. Setting refers to the character of the place in which the property played its historical role. Physical features that constitute the setting of a historic property can be either natural or manmade, including topographic features, vegetation, paths or fences, or relationships between buildings and other features or open space.

- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of the artisan's labor and skill in constructing or altering a building, structure, object, or site.

- *Feeling* is a property’s expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.

- *Association* is the direct link between an important historic event or person and a historic property.

For archaeological resources, the term “integrity” is used to describe the level of preservation or quality of information contained within a district, site, or excavated assemblage. Integrity is relative to the specific significance which the resource conveys. Although it is possible to correlate the seven aspects of integrity with standard archaeological site characteristics, those aspects are often unclear for evaluating the ability of an archaeological resource to convey significance under Criterion D. Under Criterion D, the

integrity of archaeological resources is judged according to the ability of the site to yield scientific and cultural information that can be used to address important research questions (Little et al. 2000:35-42).

Resources that have a significant association with an important historic context, meet the age guidelines, and possess integrity will generally be considered eligible for listing in the National Register.

**State Laws, Regulations, and Policies**

California Environmental Quality Act

CEQA requires that proposed projects be analyzed to determine whether it may cause significant effects to the environment, including historical resources. Pursuant to CEQA, a historical resource is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). In addition, resources included in a local register of historic resources, or identified as significant in a local survey conducted in accordance with state guidelines, are also considered historic resources under CEQA. According to CEQA, the fact that a resource is not listed in, or determined eligible for listing in the CRHR, or is not included in a local register or survey, shall not preclude a CEQA Lead Agency from determining that the resource may be a historic resource as defined in California PRC Section 5024.1.7.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC §5024.1(a)). Certain properties, including those listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) and as a California Historical Landmark. This includes Points of Historical Interest such as sites, buildings, features or events that are of local (city or county) significance; those designated after December 1997 and recommended by the State Historical Resources Commission are listed in the CRHR. A resource, either an individual property or a contributor to a historic district, may also be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, per the California Code of Regulations, Title 14, Chapter 11.5, Section 4850 et seq:

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or

Criterion 2: It is associated with the lives of persons important to local, California, or national history; or

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master, or possesses high artistic values.

Criterion 4: It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or

specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

California Health and Safety Code 7050.5

Health and Safety Code 7050.5 establishes that the intentional disturbance, mutilation, or removal of interred human remains is a misdemeanor. This code also requires that upon the discovery of human remains outside of a dedicated cemetery excavation, disturbance of land shall cease until a county coroner makes a report. The code also requires that the county coroner contact the NAHC within 24-hours if he or she determines the remains to be of Native American origin.

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands (PRC §5097.94). The NAHC is responsible for bring forth actions regarding the prohibition or mitigation of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. PRC §5097.94 and §5097.98 specify steps to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner, including repatriation under the Native American Graves and Repatriation Act of 2001 and assisting landowners with developing agreements with appropriate Native American groups for the dignified treatment of Native American burials and associated cultural material.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal COS-6. Protect and Enhance Cultural Resources for their Aesthetic, Scientific, Educational, and Cultural Values.**

- Policy COS-P6.1: Consult with those Native American Tribes with ancestral ties to the Vacaville city limits regarding proposed new development projects and land use policy changes.

- Policy COS-P6.2: Require that a records search of the California Historical Resources Information System be conducted and reviewed by a cultural resources professional for proposed development areas to determine whether the site contains known prehistoric or historic cultural resources and the potential for as-yet-undiscovered cultural resources.

- Policy COS-P6.3: Require that areas found to contain significant historic or prehistoric artifacts be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation.

- Policy COS-P6.4: Require that if cultural resources, including archaeological or paleontological resources, are uncovered during grading or other on-site excavation activities, construction shall stop until appropriate mitigation is implemented.

- Policy COS-P6.5: Require that any archaeological or paleontological resources on a development project site be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure, unless the City identifies superior mitigation. If resources are documented, coordinate with descendants and/or stakeholder groups, as warranted.

- Policy COS-P6.6: Treat human remains discovered during implementation of public and private projects within the city with respect and dignity.

- Action COS-A6.1: Consult with Native American Tribes with ancestral ties to Vacaville to discuss tribal cultural resources and to create agreed upon parameters defining what type of projects will be routinely referred to the Tribes (e.g. project types, projects located in specific geographic locations).

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Cultural Resources are discussed in Chapter 4.5 of the General Plan EIR (City of Vacaville 2013). The EIR concluded that implementation and construction of the General Plan would have a less than significant impact to historic architectural, archaeological, paleontological, and other cultural resources. The General Plan includes goals and policies to reduce any potential impacts and would comply with federal and state laws. No mitigation measures were included in the General Plan, and the impact determination was “less than significant”.

### Discussion of Impacts

The discussion below is based on the Cultural Resources Assessment prepared by HELIX (HELIX 2024b), included as Appendix E to this document.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update goals, policies, and actions, as well as compliance with federal and State laws, would reduce potential impacts to archaeological deposits as well as historical architectural resources to a less-than-significant level. The records search conducted by HELIX on December 12, 2024, determined that 9 previously recorded cultural resources are located within 0.25 mile of the current APE, but outside of the APE itself, and that one additional cultural resource was located within the APE. HELIX staff prepared a DPR 523I – Continuation Sheet/Site Update form for the one resource identified in the records searches to be existing on-site (resource P-48-001025) to note the absence of this resource within the boundaries of the currently proposed APE, and to recommend the segment of this resource reported as lying within the currently proposed APE as ineligible for listing in

the NRHP or CRHR on the grounds that it does not retain integrity to its period of historic significance. Ultimately, the APE was thoroughly inspected during HELIX's pedestrian survey, and no prehistoric or historic-era cultural materials or features were observed. The proposed project is not anticipated to affect any of the 10 sites. No other archaeological resources within the APE or in the project vicinity have been previously documented and listed within the CHRIS records system.

On January 12, 2024, HELIX requested that the NAHC conduct a search of their Sacred Lands File for the presence of Native American sacred sites or human remains in the vicinity of the proposed project site. A written response received from the NAHC on February 5, 2024, stated that the results of the Sacred Lands File search were negative. On February 23, 2024, HELIX sent letters to 12 Native American contacts that were recommended by the NAHC as potential sources of information related to cultural resources in the vicinity of the project site. The letters advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as any feedback or concerns related to the proposed project. The Yocha Dehe Wintun Nation responded to HELIX's letter and requested AB 52 consultation with the City of Vacaville. The City sent an email on April 3, 2024, to the Yocha Dehe Wintun Nation to initiate consultation under AB 52. As of the date of this report, no other responses have been received from the other Native American contacts. For more information about AB 52 consultation between the City and Yocha Dehe Wintun Nation, see Section 7.XVI, Tribal Cultural Resources.

The results of records searches conducted by HELIX and the negative findings of the pedestrian survey led HELIX to recommend that there would be no effect on historical resources or historic properties, including archaeological and built-environment resources, as a result of project implementation. No additional studies or archaeological work are recommended by HELIX. However, HELIX recommends that the Worker Awareness Training Program (Mitigation Measure CUL-1) and Accidental Discovery of Cultural Resources protocols (Mitigation Measure CUL-2) are implemented to prepare the project team for the unlikely event that human remains or cultural resources are encountered during excavation and construction activities. Without mitigation, the impact is potentially significant. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the impact to less than significant. Therefore, the impact on historical and archaeological resources pursuant to PRC Section 15064.5 would be *less than significant with mitigation incorporated* for questions a) and b).

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update goals, policies, and actions, as well as compliance with federal and State laws, would reduce potential impacts to paleontological resources to a less-than-significant level. Vacaville lies in a geological transition zone between the Sacramento Valley to the east and the Coast Ranges to the west. The deposits underlying the Vacaville area comprise a variety of rock types dating from various geologic periods, with certain formations containing fossils, some of which may be paleontologically significant. Fossils are the preserved remains of ancient organisms. Mineralized organisms are the most commonly known type of fossils and usually consist of hard material such as bone, shell, and wood. Many common fossils have shapes that can look very bone-like and are usually preserved after being quickly buried in sediment.

The project site is not known to contain unique geologic features or be sensitive for paleontological resources, however, it is possible that ground disturbing construction associated with buildout of the park could impact unknown paleontological resources. Because there is potential for inadvertent

discovery of paleontological or unique geological resources, Mitigation Measure CUL-3 would be implemented, in accordance with General Plan Policy COS-P6.4 and COS-P6.5, to reduce potential impacts to a less-than-significant level. With implementation of Mitigation Measure CUL-3, potential impacts to paleontological resources would be *less than significant with mitigation incorporated*.

d) Disturb any human remains, including those interred outside of formal cemeteries?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update goals, policies, and actions, as well as compliance with federal and State laws, would reduce potential impacts to human remains to a less-than-significant level.

Surveys conducted by HELIX staff did not find indications of precontact cultural resources. However, the possibility exists that ground-disturbing activities during construction may inadvertently uncover previously unknown buried human remains or cultural resources. Although it is highly unlikely that there would be an impact to human remains from buildout of the proposed park, there is always the possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains. Therefore, implementation of Mitigation Measure CUL-4, Accidental Discovery of Human Remains, would ensure that impacts related to the inadvertent discovery of human remains remain less than significant. Impacts would be *less than significant with mitigation incorporated*.

### Mitigation Measures

**CUL-1** **Worker Awareness Training Program**. All construction personnel involved in ground disturbing activities shall be trained in the recognition of possible cultural resources and protection of such resources. The training will inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Construction personnel will be instructed that cultural resources must be avoided and that all travel and construction activity must be confined to designated roads and areas. The training will include a review of the local, state, and federal laws and regulations related to cultural resources, as well as instructions on the procedures to be implemented should unanticipated resources be encountered during construction, including stopping work in the vicinity of the find and contacting the appropriate environmental compliance specialist.

**CUL-2** **Accidental Discovery of Cultural Resources.** In the event that cultural resources are exposed during ground-disturbing activities, construction activities should be halted within 100 feet of the discovery. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resources cannot be avoided during the remainder of construction, an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards should then be retained, in coordination with the City to assess the resource and provide appropriate management recommendations. If the discovery proves to be CRHR- or NRHP-eligible, additional work, such as data recovery excavation, may be warranted and should be discussed in consultation with the City.

**CUL-3** **Accidental Discovery of Paleontological Resources.** In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities, all ground disturbing activities within 100 feet of the discovery

shall halt, and a qualified paleontologist shall be procured to evaluate the discovery and make treatment recommendations.

**CUL-4** **Accidental Discovery of Human Remains.** Although considered highly unlikely, there is always the possibility that ground disturbing activities during construction may uncover previously unknown human remains. In the event of an accidental discovery or recognition of any human remains, PRC Section 5097.98 must be followed. Once project-related earthmoving begins and if there is a discovery or recognition of human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the specific location or any nearby area reasonably suspected to overlie adjacent human remains until the Solano County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

    a. The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;

    b. The descendent identified fails to make a recommendation; or

The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

# VI. ENERGY

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☒ | ☐ | ☐ |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☒ | ☐ | ☐ |

### Affected Environment

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2020, the California power mix totaled 272,576 gigawatt hours (GWh). In-State generation accounted for 51 percent of the State's power mix. The remaining electricity came from out-of-State imports (CEC 2021a).

**TABLE 11.**
**CALIFORNIA ELECTRICITY SOURCES 2020**

| Fuel Type | Percent of California Power |
|---|---|
| Coal | 2.74 |
| Large Hydro | 12.21 |
| Natural Gas | 37.06 |
| Nuclear | 9.33 |
| Oil | 0.01 |
| Other (Petroleum Coke/Waste Heat) | 0.19 |
| Renewables (Excluding Large Hydro) | 33.09 |
| Unspecified | 5.36 |

Source: CEC 2021a

Natural gas provides the largest portion of the total in-State capacity and electricity generation in California, with nearly 45 percent of the natural gas burned in California used for electricity generation in a typical year. Much of the remainder is consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2021b).

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUV). In 2015, 15.1 billion gallons

of gasoline were sold in California (CEC 2021c). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2-billion gallons of diesel were sold in California (CEC 2021d).

Pacific Gas and Electric (PG&E) provides electricity and natural gas supplies to the City.

### Regulatory Framework

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCR]). Title 24 requires that the design of building shells and building components conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

In May 2012, the California Energy Commission adopted the 2013 Building and Energy Efficiency Standards, which will become effective on January 1, 2013. These standards are approximately 24 percent more energy efficient for residential buildings and 30 percent more energy efficient for non-residential buildings compared to the 2008 Building and Energy Efficiency Standards (City 2013).

The City General Plan includes policies and actions to prevent energy waste and encourage renewable energy generation (City 2015):

- **Policies COS-P10.3** and **COS-P10.4** specifically encourage the use of solar voltaic panels, solar water heaters, and solar pool heaters.
- **Policies COS-P10.2** and **COS-P11.2** take a performance-based approach by encouraging grid-neutral development and requiring new developments be designed to promote energy efficiency.
- **Policy COS-P10.1** and **Action COS-A11.2** allow for innovative energy efficiency technologies and renewable energy generation in the City, provided they do not conflict with General Plan goals or have a significantly adverse impact on the environment.
- **Action COS-A11.1** commits the City to take the lead as a role model in pursuing grants to retrofit Vacaville public facilities.
- **Policy COS-P11.3** promotes energy conservation by the private sector by establishing a recognition program for local businesses that pursue energy efficiency.

The ECAS includes an array of measures in the Green Building, Renewable Energy and Low Carbon Fuels, and Energy Conservation sectors to promote energy conservation and the development of renewable energy in the City of Vacaville.

### Methodology and Assumptions

Operational energy demands were estimated based on CalEEMod defaults.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Energy impacts were not discussed in the City of Vacaville General Plan EIR nor the Supplemental EIR.

### Discussion of Impacts

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

**Less than significant with mitigation incorporated.** Operational energy demands were estimated based on CalEEMod defaults. As outlined in Section 7.III, Air Quality, operational energy demands would not exceed YSAQMD standards for $PM_{10}$, ROG, and $NO_X$. Therefore, impacts from operational energy demands would be less than significant.

Additionally, as outlined in Section 7.VIII, Greenhouse Gas Emissions, consistency with the City's ECAS serves as the applicable threshold of significance for evaluating GHG emissions in the City. The project's consistency with the applicable 1) communitywide measures and 2) municipal GHG reduction measures included in the ECAS is evaluated in Table 14, *Consistency with City of Vacaville ECAS.* As shown on Table 14, the proposed project would be consistent with the applicable 1) communitywide measures and 2) municipal GHG reduction measures included in the ECAS with implementation of Mitigation Measures GHG-1 through GHG-3. Therefore, with implementation of Mitigation Measures GHG-1 through GHG-3, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The impact would be *less than significant with mitigation incorporated* for questions a) and b).

### Mitigation Measures

**GHG-1** **Building Design to Maximize Building Energy Efficiency.** Prior to approving final Multi-Purpose Recreation Center building plans, the City shall consider building orientation, shade, prevailing winds, landscaping, and sun screens to maximize building energy efficiency. Additionally, the City shall implement as many green building principles as possible into the design plans, such as LEED Silver, Build-It-Green, GreenPoint standards, or a comparable rating from a different rating system.

**GHG-2** **Weather-Based ET Controller Irrigation Systems and Drought-Tolerant Native Landscaping.** As part of the project design process and during project construction, the City shall ensure weather-based evapotranspiration (ET) controller irrigation systems are installed in landscaped areas on the project site. Additionally, the City shall ensure drought-tolerant native landscaping is installed throughout the project site, where appropriate.

**GHG-3** **Recycled Water Landscaping.** As part of the project design process and during project construction, the City shall consider maximizing the use of recycled water or other non-potable water for landscaping on the project site as it is available.

# VII. GEOLOGY, SOILS, AND MINERAL RESOURCES

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. | ☐ | ☒ | ☐ | ☐ |
| b) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. | ☐ | ☒ | ☐ | ☐ |
| c) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. | ☐ | ☒ | ☐ | ☐ |
| d) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. | ☐ | ☐ | ☐ | ☒ |
| e) | Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☐ | ☒ |
| f) | Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☒ | ☐ | ☐ |
| g) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property? | ☐ | ☒ | ☐ | ☐ |
| h) | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |
| i) | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

#### Geology

Geology, soils, and mineral resources are discussed in Chapter 4.6 of the EIR prepared for the General Plan. Vacaville is vulnerable to seismic activity with several prehistoric earthquake faults in the area. The

Vaca fault zone runs through the EIR Study Area and contains several northwest-southeast trending faults running along the base of the Coast Ranges, including the Vaca-Kirby Hills Fault and unnamed faults. As described in the City of Vacaville General Plan EIR Chapter 4.6, the USGS indicates that these faults that run through the EIR Study Area have not been active in the past 11,700 years, but fault displacement has been recorded within the past 700,000 years. Because the faults within the EIR Study Area are not active, there are no Alquist-Priolo Earthquake Fault Zones within the Study Area, although there are several in western Solano County. Regionally, the Green Valley and Cordelia Faults southwest of Vacaville near Fairfield are active and therefore have Earthquake Fault Zones.

Landslides and slope instability are characterized by the movement of soils and surficial deposits and bedrock down steep slopes. This movement results from wet weather, adverse structures, seismic shaking, and/or improper grading and drainage. Other factors include steep slopes where extensive grading or vegetation removal has occurred and weak or shallow soils. Because Vacaville includes portions of the foothills of the Vaca Mountains, there is a potential for landslides throughout the western portions of Vacaville. The vast majority of the EIR Study Area is flatland with some sloped areas having had small, scattered landslides. Very small areas on the northern and western edges of the city limit have had mapped landslides; however, these areas are sparsely developed.

#### Soils

The primary soil types in the Vacaville area are silty, sandy, and clay loams, with a smaller portion being made up of purely clay soils (City of Vacaville 2013). Though not all types of clay are expansive, soils with a clay component are more prone to expansion. Approximately 64 percent of Vacaville's soils contain at least some clay component. Vacaville is generally characterized by areas of very low, low, and moderate risk of liquefaction. However, areas along and adjacent to Vacaville's major water ways, Ulatis and Alamo Creeks, feature high and very high levels of liquefaction susceptibility. These creeks and associated areas of increased liquefaction susceptibility cross through the community and include central areas of the city.

#### Minerals

According to the USGS, the EIR Study Area contains limited mineral resources that are being extracted. Stone quarries in the Vaca Mountains produced dimensioned and ornamental stone. Although the western hills contain sandstone and conglomerates that may be used for sands, gravel, and stone, none of these resources are currently being mined. There are no MRZ-2 zones mapped in the EIR Study Area, but there are some MRZ-3 zones.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

##### United States Geological Survey

The United States Geological Survey (USGS) is a federal agency focused on providing impartial and reliable earth and life science information. In particular, USGS collects, monitors, and analyzes data on a wide variety of topics, including geology, soils, and related hazards (e.g. earthquakes). As part of its

mission the USGS creates a range of maps including some which delineate areas of earthquake hazard, identify faults and fault activity, and describe areas where mineral resources are located.

California Department of Conservation

The California Department of Conservation is a State agency which provides services and information that promote environmental health, economic vitality, informed land use decisions and sound management of our state's natural resources.2 Within the California Department of Conservation are four distinct departments: the Division of Land Resource Protection, the California Geologic Survey, the Division of Oil, Gas, and Geothermal Resources, and the Office of Mine Reclamation. The California Geologic Survey's role is to provide scientific products and services about the state's geology, seismology and mineral resources that affect the health, safety, and business interests of the people of California.3 One of the services the California Geologic Survey provides is Alquist-Priolo Earthquake Fault Zone maps, which are described more fully in below in Section A.2.a, Alquist-Priolo Earthquake Fault Zoning Act.

**State Laws, Regulations, and Policies**

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed by the California Legislature in 1972 to mitigate the hazard of surface faulting to structures. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. According to the Act, local agencies must regulate most development in fault zones established by the State Geologist. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the city or county with jurisdiction must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690 through 2699.6) addresses seismic hazards other than surface fault rupture, such as liquefaction and seismically-induced landslides. The Seismic Hazards Mapping Act specifies that the Lead Agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into project plans to reduce hazards associated with seismicity and unstable soils.

California Building Code, 2010

The California Code of Regulations (CCR), Title 24, is also known as the California Building Standards Code. The California Building Standards Code combines three types of building standards from three different origins:

- Building standards that have been adopted by State agencies without change from building standards contained in the International Building Code.

- Building standards that have been adopted and adapted from the national model code standards to meet California conditions.

- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Part 2 of Title 24 is the California Building Code (CBC). Title 24 is published in its entirety every three years by order of the California Legislature, and Title 24 building regulations and standards have the force of law. The 2010 CBC incorporates, by adoption, the 2009 International Building Code of the International Code Council, with California amendments. In turn, Division 14.20 of Vacaville's Land Use and Development Code adopts the 2010 CBC as the building code for the city. The CBC requires strict building standards for essential facilities and structures on soft soil where shaking intensity from a potential earthquake is high.

Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act of 1975 (SMARA) was enacted in response to land use conflicts between urban growth and essential mineral production. SMARA requires the State Geologist to classify land according to the presence or absence of significant mineral deposits. Local governments must consider this information before land with important mineral deposits is committed to land uses incompatible with mining.

SMARA provides for the evaluation of an area's mineral resources using a system of Mineral Resource Zone (MRZ) classifications that reflect the known or inferred presence and significance of a given mineral resource.

- MRZ-1. Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

- MRZ-2. Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

- MRZ-3. Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

- MRZ-4. Areas where available information is inadequate for assignment into any other MRZ.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal SAF-1.** Minimize Exposure to Geologic Hazards, Including Slope Instability, Subsidence, and Expansive Soils, and to Seismic Hazards, Including Ground Shaking, Fault Rupture, Liquefaction, and Landslides.

- Policy SAF-P1.2: Prohibit development on ridges and slopes at or exceeding 25 percent.

- Policy SAF-P1.3: Evaluate and consider the geologic and soil hazards for any proposed extension of urban or suburban land uses into areas that are characterized by slopes from 15 to 25 percent.

- Policy SAF-P1.6: Require preparation of a soils report prior to issuing a building permit, except where the Building Official determines that a report is not needed.

- Policy SAF-P1.7: Require comprehensive geologic and engineering studies of new critical structures, such as hospitals, fire and police stations, utility centers and substations, emergency communications facilities, overpasses, and bridges, regardless of location.

- Policy SAF-P1.8: To the extent practical, do not allow facilities and structures that are public, high-occupancy, or critical in disaster situations (e.g., hospitals, fire and police stations, and bridges) to be sited in areas highly susceptible to damage resulting from earthquakes. If locating such a facility or structure in a high-risk area is deemed essential to the public welfare, require that they be sited, designed, and constructed with consideration of the potential for damage.

- Policy SAF-P1.9: Limit cut slopes to 2:1 (50 percent slope) except where an engineering geologist can establish that a steeper slope would perform satisfactorily over the long term. Where practicable, require more gentle slopes than the 2:1 standard. Encourage use of retaining walls, rock-filled crib walls, or stepped-in buildings as alternatives to high cut slopes.

- Policy SAF-P1.10: Require contour rounding and revegetation to preserve natural qualities of sloping terrains, mitigate the artificial appearance of engineered slopes, and control erosion. Encourage the use of native trees and shrubbery in revegetation areas.

- Policy SAF-P1.11: Require financial protection for public agencies and individuals as a condition of development approval for projects that are in areas where geologic conditions indicate a potential for high maintenance or repair costs.

- Action SAF-A1.1: Consider implementing a hazard-reduction program for existing development in high-risk zones. This would include inspection of structures for conformance with the Building Code and could give priority for inspection to emergency and critical facilities, older structures, and public facilities.

**Goal COS-14.** Protect the Quality and Supply of Surface Water and Groundwater Resources.

- Policy COS-P14.5: Require the implementation of BMPs to minimize erosion, sedimentation, and water quality degradation resulting from construction or from new impervious surfaces.

Vacaville Land Use and Development Code

There are several references to geology and soils in the City of Vacaville's Land Use and Development Code. Standards for public improvements required of developers are set forth in Section 14.12.176. Section 14.26.030 adopts the Stormwater Management Plan's Best Management Practices, including erosion control measures. Additionally, Section 14.26.030 grants the Public Works Director the authority to require monitoring and analysis reports of any person engaged in an activity or owning or operating a facility which, in some way, may contribute to stormwater pollution (e.g. resulting from erosion or loss of topsoil). Chapter 14.19 is the Vacaville Grading Ordinance, which regulates grading and earthmoving

in the city, and there are standards establishing appropriate grading methods and requiring erosion control measures in Section 14.19.244. Finally, the VMC also stipulates in Section 14.11.152.010 that preliminary geologic and seismic safety reports must be submitted with a tentative map, if a project area is within a geologic or seismic hazard area or in a hillside area.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Geology, soils, and mineral resources are discussed in Chapter 4.6 of the EIR prepared for the General Plan. The proposed General Plan would allow development that would bring more structures, residents, and visitors to Vacaville, an area vulnerable to seismic activity and geologic hazards. Together with other growth in Solano County, the proposed General Plan would add cumulatively to the overall population growth and development in this seismically active region. However, risks related to geologic and soil hazards tend to be site-specific, and the application of the geotechnical and engineering standards found in the CBC and the Land Use and Development Code, together with the implementation of the policies in the proposed General Plan, is considered sufficient to reduce the cumulative risk to residents and other occupants of Vacaville and Solano County to a less than significant level.

### Discussion of Impacts

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with fault rupture, and the impact would be less than significant.

According to the Vacaville General Plan, the Vaca-Kirby Hills Fault system is the only fault system that passes through the Vacaville Planning Area. The Vaca Fault has not experienced displacement within the past 11,700 years, and there is no evidence for displacement along the Kirby Hills Fault during the last 700,000 years. The California Geological Survey has defined an active fault as one that has had surface displacement in the last 11,000 years, or has experienced earthquakes in recorded history. Therefore, none of the faults mapped within the EIR Study Area are active or potentially active. In addition, the proposed project is not within an Alquist-Priolo Earthquake Fault Zoning Map (CDC 2024), and the California Geological Survey does not include Vacaville on its list of cities that are affected by Alquist-Priolo Fault Zones. Nevertheless, due to the number of faults in the region of the General Plan EIR Study Area, the possibility of a rupture in the future exists as there is potential for the site to be exposed to seismic-related ground shaking.

Implementation of Mitigation Measure GEO-1 prior to the development of the Multi-Purpose Recreation Center and/or other proposed buildings to be constructed would reduce this potential impact to less than significant. The site-specific geotechnical report required in Mitigation Measure GEO-1 would assess the potential for geologically related impacts and make project-specific design recommendations for buildings to withstand probable seismically induced ground shaking. The design recommendations would encompass site preparation, foundation specifications, and protection measures for buried metal structures. The final structural designs would be subject to approval and follow-up inspection by the County. In addition, project construction would adhere to the specifications, procedures, and site conditions contained in the final design plans, which would be fully compliant with the seismic

recommendations provided by the California-licensed geotechnical engineer in accordance with CBC requirements.

Implementation of Phase I would require the import soil for the development of the bike skills course, Great Meadow trails and overlook, dog park, disc golf course, and Allison Parkway improvements, and no high occupancy buildings or structures are proposed. Therefore, implementation of Mitigation Measure GEO-1 in not required for the development of Phase I.

Adherence to the requirements of the CBC and Mitigation Measure GEO-1 would ensure that effects from exposing people or structures to risks associated with being located on a site near faults would be minimized, and impacts would be *less than significant with mitigation incorporated*.

b) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with ground shaking, and the impact would be less than significant.

The proposed project is not located within an Earthquake fault zone. While Vacaville is located within a seismically active region and earthquakes have the potential to cause ground shaking of significant magnitude, implementation of Mitigation Measure GEO-1 would reduce potential impacts to less than significant. The project would also be consistent with all seismic related Building Code requirements intended to protect structures and occupants from potential dangers of strong seismic shaking. There would be a *less than significant impact with mitigation incorporated* on strong seismic ground shaking.

c) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with ground failure and liquefaction, and the impact would be less than significant.

Soil liquefaction is a phenomenon in which loose and saturated cohesionless soils are subject to a temporary, but essentially total loss of shear strength, due to pore pressure build-up under the reversing cyclic shear stresses associated with earthquakes. According to Figure SAF-2 (Liquefaction Potential) of the Vacaville General Plan, the project is located in an area with very-low and medium susceptibility to liquefaction. The area of the project site along the Horse Creek North Fork is mapped as having a “very high” potential for liquefaction, however any park features to be constructed in this area would comply with the City’s requirement and be setback at least 40 feet from Horse Creek. Implementation of and consistency with Mitigation Measure GEO-1 as well as applicable building code requirements and local agency enforcement would reduce liquefaction impacts to be *less than significant with mitigation incorporated*.

d) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with landslides, and the impact would be less than significant. According to the Vacaville General Plan, the site is located in an area susceptible to few landslides. The site overall is not at a substantial slope or hillside and is in a level location compared to its surroundings. The site is generally flat with elevation ranging from approximately 115 ft amsl in the southern portion of the project site to 133 ft amsl in the northern portion of the project site. The site contains a few man-made mounds and shallow depressions, including two plateau areas with existing dirt piles in the northern portion of the project site and a borrow pit located in the southern portion of the project site. The project is not in a location at risk for landslides, and on-site improvements would be designed to stabilize the project site and protect construction workers and future patrons of the park from landslides. The project would have a less than significant impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

e) Result in substantial soil erosion or the loss of topsoil?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the Land Use and Development Code, would mitigate the risks associated with erosion and loss of topsoil, and the impact would be less than significant. Construction of proposed project components would require grading on-site to create level pads for proposed structures, parking areas, site furnishings, and walking paths throughout the site. It is also anticipated that import of approximately 2.4 million cubic yards of dirt would be required for the construction of the bike skills course, Great Meadow trails and overlook, dog park, and Allison Parkway improvements in Phase I. Soil erosion or loss of topsoil is not anticipated to occur because developed areas of the park would be stabilized, include paved surfaces, or include landscape plantings. Additionally, all ground disturbing activities associated with the project will be carried out pursuant to VMC Division 14.19 Grading, including Chapter 14.19.244.010 Grading Standards – Erosion Control Measures.

Furthermore, as described in Section 7.X, Hydrology and Water Quality, the project applicant or City will implement avoidance and minimization measures from the Solano HCP related to erosion control and water quality management, which requires the project applicant or City to comply with the NPDES General Construction Permit, as well as prepare a project-specific SWPPP for each phase of the project that requires the incorporation of BMPs set forth by the City's Stormwater Management Plan to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The purpose of the SWPPP is to identify potential sediment sources and other pollutants and prescribe BMPs to ensure that potential adverse erosion, siltation, and contamination impacts would not occur during construction activities. Therefore, implementation of avoidance and minimization measures from the Solano HCP related to erosion control and water quality management would reduce the temporary, short-term construction-related drainage and water quality impacts to a less than significant level, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

f) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with unstable geologic conditions, and the impact would be less than significant. Development of the proposed project would be required to adhere to CBC Regulations and would be required to incorporate appropriate engineering and geotechnical parameters. The project site is relatively level, and as noted under Mitigation Measure GEO-1, the project applicant will be required to provide a design-level geotechnical investigation for the construction of the Multi-Purpose Recreation Center or other proposed buildings, which will contain recommendations to reduce impacts associated with unstable soil. Impacts with regard to geologic unit or unstable soils would therefore be considered *less than significant with mitigation incorporated*.

g) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with expansive soils, and the impact would be less than significant. The site's near surface soils are considered moderately to highly expansive and prone to heave and shrink movements with changes in moisture content and, consequently, must be carefully considered in the design of grading, foundations, drainage, and landscaping. In addition, the proposed pad grading for the proposed Multi-Purpose Recreation Center or other proposed buildings may result in fills and cuts of variable thicknesses which will require mitigative grading to provide uniform support and to minimize potential settlement.

Due to the expansive soil conditions and expected variable pad conditions, the implementation of Mitigation Measure GEO-1 will bring detrimental effects of expansive soil movement to a less than significant level and help ensure the project is designed in accordance with design-level geotechnical investigation. There would be a *less than significant impact with mitigation incorporated.*

h) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

**No new impact.** The General Plan EIR concluded that because the General Plan Update requires that future development under the General Plan connect to public sewer services, no impacts associated with the use of septic tanks or alternative wastewater systems would occur. Septic tanks are not proposed as part of this project. Centennial Park is an existing park with an existing sewer system in place, and future buildout of the planned phases would connect to the City's sewer system. Therefore, the proposed project would have a less than significant impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

i) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

**No new impact.** The General Plan EIR concluded that because there are no MRZ-2 zones mapped in the City of Vacaville, and because the existing specific plans and the Solano County General Plan do not delineate any locally important mineral resource recovery sites, there are no known mineral resources that would be of value to the region and residents of the state and impacts related to mineral resources would be less than significant. Vacaville lies in a geological transition zone between the Sacramento Valley to the east and the Coast Ranges to the west. According to the U.S. Geological Survey, the Vacaville Planning Area contains limited mineral resources that are being extracted. The project site has not been designated by the Vacaville General Plan as an area containing mineral resources. Therefore, development of the project site would have no impact on mineral resources in the region, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

### Mitigation Measures

**GEO-1** **Site-Specific Geotechnical Investigation.** Prior to issuance of a grading and/or building permit for the proposed Multi-Purpose Recreation Center or other proposed building, a geotechnical firm with local expertise in geotechnical investigation shall prepare a site-specific geotechnical report. The report shall be prepared by a California-licensed geotechnical engineer or engineering geologist and be submitted to the City's Building Department for approval prior to the issuance of a grading permit. This report shall be based on data collected from subsurface exploration, laboratory testing of samples of surface mapping, and address the potential for surface fault rupture, ground shaking, slope failure, expansive soils, and unstable cut or fill slopes and make recommendations based on those findings. The project applicant shall implement recommendations identified in the site-specific geotechnical report.

# VIII. GREENHOUSE GAS EMISSIONS

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☒ | ☐ | ☐ |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☒ | ☐ | ☐ |

The CalEEMod version 2022.1.1 was used to quantify project-generated construction and operational emissions. The model output sheets are included in Appendix C to this IS/MND.

### Affected Environment

Global climate change refers to changes in average climatic conditions on Earth, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The GHGs defined under California's Assembly Bill (AB) 32, described below, include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents ($CO_2e$), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in $CO_2e$ takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only $CO_2$ were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of $CO_2e$. For consistency with United Nations Standards, modeling, and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (IPCC 2007): $CO_2$ – 1; $CH_4$ – 25; $N_2O$ – 298.

### Regulatory Framework

The primary GHG reduction regulatory legislation and plans (applicable to the project) at the State, regional, and local levels are described below. Implementation of California's GHG reduction mandates are primarily under the authority of CARB at the State level, YSAQMD at the regional level, and City of Vacaville at the local level.

**Executive Order S-3-05**: On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor's direction to state agencies to act within their authority to reinforce existing laws.

**Assembly Bill 32 – Global Warming Solution Act of 2006**: The California Global Warming Solutions Act of 2006, widely known as AB 32, required that CARB develop and enforce regulations for the reporting and verification of Statewide GHG emissions. CARB was directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

**Executive Order B-30-15**: On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California achieved the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

**Senate Bill 32**: Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a Statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

**Assembly Bill 197**: A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

**Assembly Bill 1493- Vehicular Emissions of Greenhouse Gases**: AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2023b).

**Executive Order S-01-07**: This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010.

Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. Therefore, CARB is continuing to implement the LCFS Statewide.

**Senate Bill 350**: Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce GHG emissions, and increase the use of clean energy.

**Senate Bill 375:** SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPOs). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

**Senate Bill 100**: Approved by Governor Brown on September 10, 2018, SB 100 requires that all retail sales of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

**Executive Order N-79-20**: EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for the implementation of zero emissions vehicles in California: first, 100 percent of in-State sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the State will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

**Assembly Bill 1279**: Approved by Governor Newsom on September 16, 2022, AB 1279, the California Climate Crisis Act, declares the policy of the State to achieve net zero GHG emissions as soon as

possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, Statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of $CO_2$ from the atmosphere (carbon capture), and an almost complete transition away from fossil fuels.

**Senate Bill 905**: Approved by Governor Newsom on September 16, 2022, SB 905, Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program, requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and $CO_2$ removal technologies and facilitate the capture and sequestration of $CO_2$ from those technologies, where appropriate. SB 905 is an integral part of achieving the State policies mandated in AB 1279.

**California Air Resources Board Scoping Plan**: The Scoping Plan is a strategy CARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants (SLCPs). The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030.

On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in SLCPs; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022).

**Yolo-Solano Air Quality Management District:** The YSAQMD has not established a threshold of significance for GHGs. The YSAQMD considers GHG impacts to be cumulative in nature and notes that lead agencies should evaluate whether a project's incremental direct and indirect GHG emissions are cumulatively considerable. The YSAQMD also notes that if the lead agency jurisdiction has adopted a Climate Action Plan or General Plan goals and policies with regard to GHGs, the environmental review should base its analysis on the provisions of those documents. If the lead agency jurisdiction has not adopted a Climate Action Plan or General Plan goals and policies, then the District recommends that lead agencies consider a project's total emissions in relation to the AB 32 and AB 32 Scoping Plan goals (and additional state goals as they are adopted) or the thresholds established by other jurisdictions (YSAQMD 2022b).

**City of Vacaville General Plan:** The General Plan includes the following goals and policies related to GHG emissions that may be applicable to the project (City 2015):

- **Goal COS-9.** Reduce greenhouse gas emissions and improve the sustainability of actions by City government, residents, and businesses in Vacaville.
    - **Policy COS-P9.1.** Maintain the Energy and Conservation Action Strategy.
    - **Policy COS-P9.2.** Promote land use patterns that reduce the number and length of motor vehicle trips.
    - **Policy COS-P9.7.** Continue to work with the Solano Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
    - **Policy COS-P9.8.** Promote green building practices in new development.

**City of Vacaville Energy and Conservation Action Strategy**. On September 28, 2021, the City of Vacaville adopted the Energy and Conservation Action Strategy Update (ECAS). The ECAS is a detailed, long-range strategy to reduce GHG emissions and achieve greater conservation of resources with regards to transportation and land use, energy, water, solid waste, and open space. The ECAS is utilized for tiering and streamlining future development within Vacaville, pursuant to CEQA Guideline Sections 15152 and 15183.5. It serves as the CEQA threshold of significance within the City for GHG emissions, by which all applicable developments within the City will be reviewed (City 2021).

### Methodology and Assumptions

See the discussion of methodology and assumptions under Section 7.III, Air Quality.

### Standards of Significance

The YSAQMD has not established a threshold of significance for GHGs. The YSAQMD notes that if the lead agency jurisdiction has adopted a Climate Action Plan or General Plan goals and policies with regard to GHGs, the environmental review should base its analysis on the provisions of those documents. If the lead agency jurisdiction has not adopted a Climate Action Plan or General Plan goals and policies, then the District recommends that lead agencies consider a project's total emissions in relation to the AB 32 and AB 32 Scoping Plan goals (and additional state goals as they are adopted) or the thresholds established by other jurisdictions (YSAQMD 2022b).

The ECAS will also be utilized for tiering and streamlining future development within the City, pursuant to CEQA Guideline Sections 15152 and 15183.5. It serves as the CEQA threshold of significance within the City for GHG emissions, by which all applicable developments within the City will be reviewed (City 2021). Therefore, project significance will be based on consistency with the City's ECAS.
the State's 2050 GHG reduction target of 80% below 1990 levels by 2050 (EO S-3-05; City 2021).

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Greenhouse Gas Emissions are discussed in Chapter 4.7 of the General Plan EIR (City 2013) and are further discussed in the Final SEIR (City 2021). The SEIR concluded that construction and operations associated with implementation of the proposed ECAS strategies, measures, and actions may result in GHG emissions, but these emissions would be more than offset by the long-term reductions in GHG emissions that the actions would enable. Therefore, the project would result in a less than significant

impact related to generation of GHG emissions. In addition, the SEIR concluded that the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and this impact would be less than significant.

Global climate change has a cumulative impact; a project's potential impact is determined through evaluation of its incremental contribution combined with the cumulative increase of all other sources of GHGs. Because of the inherently cumulative character of GHG impact analysis and the nature of the SEIR, analysis of cumulative impacts is incorporated into the analysis of Impacts GHG-1 and GHG-2. Therefore, the cumulative GHG impact of the project would be less than significant.

### Discussion of Impacts

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

**Less than significant with mitigation incorporated.** The General Plan EIR and SEIR concluded that implementation of the General Plan and ECAS Update would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and impacts would be less than significant.

Construction

Project construction GHG emissions were estimated using CalEEMod and are provided for full disclosure. Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 12, *Maximum Construction GHG Emissions Per Year*, the highest annual emissions for the entire construction period would be 2,252 MT $CO_2e$.

**TABLE 12.**
**MAXIMUM CONSTRUCTION GHG EMISSIONS PER YEAR**

| Project Phase | Maximum Emissions (MT $CO_2e$) |
|---|---|
| Phase 1 (Years 2024-2035) | 2,252 |
| Phase 2 (Years 2029-2034) | 2,069 |
| Phase 3 (Years 2030-2035) | 2,041 |
| Phase 4 (Years 2035-2040) | 711 |
| Phase 5 (Years 2040-2045 | 711 |
| **Highest Annual Emissions for Entire Construction Period** | **2,252** |

Source: CalEEMod, output data is provided in Appendix C.
Notes: Totals may not sum due to rounding.
MT = metric ton; $CO_2e$ = carbon dioxide equivalent

Operation

Project operational GHG emissions were estimated using CalEEMod and are provided for full disclosure. Table 13, 2046 *Total Operational GHG Emissions,* shows the total emissions in metric tons of $CO_2e$ per year for each operational source in 2046.

**TABLE 13.**
**2046 TOTAL OPERATIONAL GHG EMISSIONS**

| Project Phase | Emissions (MT $CO_2e$/year) |
|---|---|
| Mobile | 1,527.3 |
| Area | 1.1 |
| Energy | 267.8 |
| Water | 12.7 |
| Waste | 124.6 |
| Refrigerants | 0.1 |
| **Total** | 1,933.7 |

Source: CalEEMod, output data is provided in Appendix C.
MT = metric ton; $CO_2e$ = carbon dioxide equivalent

Consistency with City of Vacaville ECAS

Consistency with the City's ECAS serves as the applicable threshold of significance for evaluating GHG emissions in the City. The project's consistency with the applicable 1) communitywide measures and 2) municipal GHG reduction measures included in the ECAS is evaluated in Table 14, *Consistency with City of Vacaville ECAS*, below. ECAS measures which are not applicable to the project are not shown.

**TABLE 14.**
**CONSISTENCY WITH CITY OF VACAVILLE ECAS**

| Applicable Measures | Consistency Determination |
|---|---|
| **1. Communitywide Measures** | |
| **Transportation and Land Use** | |
| **LU-1:** Encourage all new residential, commercial, and public buildings and places of assembly to include a principal functional entry that faces a public space such as a street, square, park, paseo, or plaza, in addition to any entrance from a parking lot. For other, less public buildings such as warehouses, manufacturing, and storage buildings, encourage entries to ancillary office, break room, or staff uses to face a public space. | **Consistent**. As shown in Figure 4, Phasing Plan, the proposed park amenities, including the multi-purpose recreation center building and event pavilion building would face proposed on-site public roadways and parking lots. |
| **Green Building** | |
| GB-2: Require measures that reduce energy use through solar orientation by taking advantage of shade, prevailing winds, landscaping, and sun screens, unless prohibited by topographical conditions or other site-specific constraints. | **Consistent with mitigation**. Project buildings would be built to ensure maximum building energy efficiency, as outlined in Mitigation Measure GHG-1. |
| **Renewable Energy and Low Carbon Fuels** | |
| RE-5: Require that all new buildings be constructed to allow for the easy, cost-effective installation of future solar energy systems, unless prohibited by topographical conditions or other site-specific constraints. "Solar ready" features should include: proper solar orientation (i.e. south-facing roof area sloped at 20° to 55° from the horizontal); clear access | **Consistent**: Project buildings would be required to meet all requirements of Title 24 Part 6 Energy Efficiency and Title 24 Part 11 CALGreen, which includes requirements for onsite solar power and solar ready building. |

| Applicable Measures | Consistency Determination |
|---|---|
| on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank. | |
| **Energy Conservation** | |
| EC-1: Mandate the use of energy-efficient appliances in new development that meet Energy Star standards and the use of energy-efficient lighting technologies that meet or exceed Title 24 standards. | **Consistent**: Project buildings would be required to meet all requirements of Title 24 Part 6 Energy Efficiency and Title 24 Part 11 CALGreen, which includes requirements for all appliances and lighting to meet energy efficiency requirements. |
| **Water and Wastewater** | |
| WW-1.A: Support the conservation measures outlined in the City's Urban Water Management Plan and implement the City's Water Efficient Landscape requirements through the following sub-measures:<br>A. For all new development, require all water use and efficiency measures to comply with City Codes. | **Consistent:** Project would comply with all City ordinances for water efficient landscape. |
| **Solid Waste** | |
| SW-1.A: Support waste reduction through the following sub-measures:<br>A. Continue to require at least 50 percent diversion (i.e. reuse or recycling) of non-hazardous construction waste from disposal, consistent with CALGreen - the Statewide Green Building code. | **Consistent:** Project would comply with all CALGreen construction waste diversion requirements. |
| **Parks, Open Space, and Agriculture** | |
| N/A | |
| **Purchasing** | |
| N/A | |
| **Community Action** | |
| N/A | |
| **2. Municipal GHG Reduction Measures** | |
| **Transportation and Land Use** | |
| N/A | |
| **Green Building** | |
| GB-1: Encourage major new municipal buildings and facilities to meet LEED Silver, Build-It-Green, or GreenPoint standards, or achieve a comparable rating from a different rating system. | **Consistent with mitigation**. Project buildings would be required to meet green building standards, as outlined in Mitigation Measure GHG-1. |
| **Renewable Energy and Low Carbon Fuels** | |
| RE-1: Conduct a solar feasibility study and install solar panels on appropriate City facilities. | **Consistent:** Project buildings would be required to meet all requirements of Title 24 Part 6 Energy Efficiency and Title 24 Part 11 CALGreen, which includes requirements for onsite solar power and solar ready building. |
| **Energy Conservation** | |
| EC-2: Encourage the installation of reflective roofing on City facilities. | **Consistent:** Project buildings would meet all requirements for Title 24 Part 11 CALGreen, which includes requirements for cool roofs. |

| Applicable Measures | Consistency Determination |
|---|---|
| **Water and Wastewater** | |
| WW-1: Continue to install water-conserving fixtures in all new City facilities and retrofit existing City facilities with water-conserving fixtures as funding allows. | **Consistent:** Project buildings would be required to meet all requirements of Title 24 Part 11 CALGreen, which includes requirements for water efficient fixtures. |
| WW-2: Continue to install weather-based evapotranspiration (ET) controller irrigation systems at large landscape areas where appropriate and cost effective. | **Consistent with mitigation.** The project would be required to install controlled irrigation systems, as outlined in Mitigation Measure GHG-2. |
| WW-3: Continue to install drought-tolerant native landscaping at new City facilities and evaluate the cost effectiveness of replacing existing landscaping with drought-tolerant native landscaping, where appropriate. | **Consistent with mitigation.** The project would be required to install drought-tolerant native landscaping, as outlined in Mitigation Measure GHG-2. |
| WW-4: Encourage the use of recycled water or other non-potable water for City landscaping, including parks and medians, where available. | **Consistent with mitigation**. The project would use recycled water or other non-potable water for landscaping, as outlined in Mitigation Measure GHG-3. |
| **Solid Waste** | |
| N/A | |
| **Parks, Open Space, and Agriculture** | |
| N/A | |
| **Purchasing** | |
| N/A | |

Source: City 2021

Based on the above, the proposed project would be consistent with the applicable 1) communitywide measures and 2) municipal GHG reduction measures included in the ECAS with implementation of Mitigation Measures GHG-1 through GHG-3. Therefore, with implementation of Mitigation Measures GHG-1 through GHG-3, the project would not generate GHG emissions, either directly or indirectly, and the impact would be *less than significant with mitigation incorporated*.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**Less than significant with mitigation incorporated**. The General Plan SEIR concluded that implementation of the ECAS Update would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be less than significant.

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The original overall State plan and policy was AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. SB 32 extended the requirements of AB 32 by requiring further reductions of 40 percent below 1990 levels by 2030. AB 1279, the California Climate Crisis Act, was approved on September 16, 2022, and declares the policy of the State to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, Statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. The 2022 CARB Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. Statewide plans

and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the Statewide level; as such, compliance at the project level is not addressed. Therefore, the proposed project would not conflict with those plans and regulations.

As discussed in question (a), above, the project would be consistent with applicable 1) communitywide measures and 2) municipal GHG reduction measures included in the ECAS with implementation of Mitigation Measure GHG-1 through GHG-3. Therefore, the project would not conflict with the CARB's 2022 Scoping Plan and the ECAS and the impact would be *less than significant with mitigation incorporated*.

### Mitigation Measures

**GHG-1** **Building Design to Maximize Building Energy Efficiency.** Prior to approving final Multi-Purpose Recreation Center building plans, the City shall consider building orientation, shade, prevailing winds, landscaping, and sun screens to maximize building energy efficiency. Additionally, the City shall implement as many green building principles as possible into the design plans, such as LEED Silver, Build-It-Green, GreenPoint standards, or a comparable rating from a different rating system.

**GHG-2** **Weather-Based ET Controller Irrigation Systems and Drought-Tolerant Native Landscaping.** As part of the project design process and during project construction, the City shall ensure weather-based evapotranspiration (ET) controller irrigation systems are installed in landscaped areas on the project site. Additionally, the City shall ensure drought-tolerant native landscaping is installed throughout the project site, where appropriate.

**GHG-3** **Recycled Water Landscaping.** As part of the project design process and during project construction, the City shall consider maximizing the use of recycled water or other non-potable water for landscaping on the project site as it is available.

# IX. HAZARDS AND HAZARDOUS MATERIALS

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☐ | ☒ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☒ | ☐ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☐ | ☒ |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☒ | ☐ | ☐ |
| e) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wetlands? | ☐ | ☐ | ☐ | ☒ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |
| g) If located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| h) If within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The discussion below is based on the Phase I Environmental Site Assessment (ESA) performed by Kleinfelder, Inc. and included as Appendix F to this Initial Study (Kleinfelder 2024). The Site Assessment consisted of a review of several databases available from federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the Centennial Park property; and for off-site facilities within the search distances specified in the ASTM Standard.

Kleinfelder also performed a site reconnaissance on March 24, 2024, which included a visual inspection of the Centennial Park property to assist in identifying the presence or likely presence of hazardous

substances or petroleum hydrocarbons under conditions that indicate an existing release, a past release, or threat of release into structures, soil, groundwater, or surface water at the Subject Property (i.e., Recognized Environmental Conditions). Key Centennial Park Property Managers were contacted by Kleinfelder to obtain current and historical environmental information concerning the Centennial Park property.

Based on historical records reviewed, the project site (Centennial Park property) was developed as early as 1937 with a residential-sized structure in the northwest corner of the project site. By at least 1952, a landfill and sewage treatment plant were located in the southwestern and southern portions of the Subject Property, respectively. By 1993, both the landfill and sewage treatment plant appeared closed. Between 1993 and 2006, the southern portion of the project site was redeveloped as Centennial Park with recreational trails and athletic fields. The landfill on the project site was reportedly closed with an activity and use limitation (AUL) in place. Based on the presence of an AUL for the project site, the historical use of the project site as a landscape and sewage treatment plan represents a Controlled Recognized Environmental Condition (CREC).

The surrounding area was adjoined by a railroad from at least 1908 through 1980 and developed as mostly rural residential and agricultural until 1968 when Nut Tree Airport was constructed to the southeast. A single-family residential development adjacent to the west and commercial/industrial properties to the north were constructed by 1993. The project site is adjoined to the north by a church and industrial property followed by commercial/industrial properties and to the east-northeast by the Putah South Canal, commercial/industrial properties and Nut Tree Airport. The project site is adjoined to the south by Browns Valley Parkway followed by vacant land. The project site is adjoined to the west by single-family residential properties.

The project site is listed under the name Brown Sheet [Street] Landfill AKA Old Vacaville Landfill as a land disposal site. According to GeoTracker™ results included in the Phase I ESA, the cleanup status is listed as open as of January 1, 1965; however, according to reviewed documents, the landfill was closed in 1999.

As defined in the ASTM Standard, a REC is:

1) The presence of hazardous substances or petroleum products due to a release to the environment;

2) Likely presence of hazardous substances or petroleum products due to a release or likely release to the environment; or

3) Presence of hazardous materials or petroleum products under conditions that pose a material threat of a future release to the environment.

A CREC is defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use limitations, activity and use limitations, institutional controls, or engineering controls).

## Regulatory Framework

### Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, commonly known as Superfund, was established by the US Congress to address environmental health damaged caused by hazardous waste disposal sites. The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant threat to environmental health. CERCLA uses a hazard ranking system to determine whether a site should be placed on the National Priorities List for investigation and cleanup. CERCLA also established a trust fund, called Superfund, for site cleanup when no responsible party can be identified. CERCLA is administered by the US Environmental Protection Agency (EPA).

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA reflected the US EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. Specifically, SARA:

- Stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites.
- Required Superfund actions to consider the standards and requirements found in other State and federal environmental laws and regulations.
- Provided new enforcement authorities and settlement tools.
- Increased State involvement in every phase of the Superfund program.
- Increased the focus on human health problems posed by hazardous waste sites.
- Encouraged greater citizen participation in making decisions on how sites should be cleaned up.
- Increased the size of the trust fund to $8.5 Billion.

The Superfund Amendments and Reauthorization Act also required the US EPA to revise the Hazard Ranking System to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List.

Hazardous Materials Transportation Act

The Hazardous Material Transportation Act was enacted in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous materials in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 gives the US EPA the authority to control hazardous waste from the "cradle to grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid waste. The 1986 amendments to RCRA enabled the US EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

The federal Hazardous and Solid Waste Amendments are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the US EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

National Emissions Standards for Hazardous Air Pollutants

National Emissions Standards for Hazardous Air Pollutants guidelines require the removal of potentially friable asbestos containing building materials (ACBMs) prior to building demolition or renovation that may disturb the ACBM.

Other Federal Agencies

Other federal agencies that regulate hazardous materials include the Occupational Safety and Health Administration (OSHA), which addresses hazardous substances in the workplace, and the National Institute of Health, which conducts and supports research on the biological effects of, as well as identifies and defines, hazardous substances. In addition, the Department of Transportation houses the Pipeline and Hazardous Materials Safety Administration, which administers rules and regulations pertaining to the transport of hazardous materials. The following federal laws and guidelines also govern hazardous materials:

- Occupational Safety and Health Act of 1970
- Federal Insecticide, Fungicide, and Rodenticide Act of 1947
- Guidelines for Carcinogens and Biohazards
- Toxic Substances Control Act of 1976
- Federal Hazardous Materials Transportation Law of 1975

**State Laws, Regulations, and Policies**

California Environmental Protection Agency

The management of hazardous materials and waste within California is under the jurisdiction of the California EPA. The California EPA provides a cabinet level voice for the protection of human health and the environment and ensures the coordinated deployment of State resources.

The State of California Office of Environmental Health Hazard Assessment oversees implementation of many public health-related environmental regulatory programs within the California EPA, including implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the Governor to publish, at least annually, a list of chemicals known to the State to cause cancer or reproductive toxicity. Proposition 65 was intended by its authors to protect California citizens and the State's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

California Department of Toxic Substances Control

Within the California EPA, the California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, the DTSC has been authorized to implement the State's hazardous waste management program for the California EPA.

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports and works with local agencies on transportation issues. Caltrans is also the first-responder for hazardous material spills and releases that occur on those highway and freeway lanes and inter-city rail services.

State Water Resources Control Board

The Central Valley Regional Water Quality Control Board (RWQCB) is authorized by the State Water Resources Control Board to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the Central Valley RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the State are threatened, and to require remediation of the site, if necessary.

State of California Multi-Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan (SHMP) is the official statement of the State's hazard identification, vulnerability analysis, and hazard mitigation strategy. The SHMP is also a federal requirement under the Disaster Mitigation Act of 2000 for the State of California to receive federal funds for disaster assistance grant programs. The goal of the SHMP, prepared by the Office of Emergency Services (OES), is to guide implementation activities to achieve the greatest reduction of vulnerability, which results in saved lives, reduced injuries, reduced property damages, and protection for the environment.

California Fire Safety Regulations

There are a number of State regulations pertaining to wildfire hazards, including the following:

**Public Resources Code Fire Safe Regulations.** Section 4290 of the Public Resources Code covers Fire Safe Regulations, establishing minimum road standards; signing for streets, roads and buildings; private water supply resources; and wildland fuel modification. Section 4290 works in conjunction with building construction development standards in State Responsibility Areas (SRAs), which are State-identified

lands or areas for which the California Department of Forestry and Fire Protection (CAL FIRE) has the primary responsibility to manage the public safety during a fire incident. SRAs are defined based on land ownership, population density, and land use. SRAs in the EIR Study Area only occur outside of the city limits in the Gibson Canyon area, the area west of Alamo Drive and north of Interstate 80, and an area south of the city limits. In addition, Section 4291 of the PRC requires annular defensible space of 100 feet to be provided around all structures in or adjoining any mountainous area or land covered with forest, brush, grass, or other flammable material.

**Wildland-Urban Interface Code.** The California Building Commission adopted the Wildland-Urban Interface Codes in late 2005 with an effective date of January 2008. These codes include provisions for ignition-resistant construction standards in fire prone areas. More specifically, new buildings located in any fire hazard severity zone within SRAs, any locally-designated Very High Fire Hazard Severity Zone (VHFHSZ), or any Wildland-Urban Interface Fire Area must meet the requirements in the new codes. The updated fire hazard severity zones are used by building officials to determine appropriate construction materials for new buildings in the wildland-urban interface. These zones are also used by property owners to comply with natural hazards disclosure requirements at the time of property sale. The EIR Study Area contains Moderate and High Fire Hazard Severity Zones, but does not contain any VHFHSZs.

**California Fire Code.** This is the official Code for the State and all political subdivisions. It is located in Part 9 of Title 24 of the California Code of Regulations (Title 24 is commonly referred to as the California Building Standards Code). The California Fire Code is revised and published every three years by the California Building Standards Commission. It was most recently published in 2010.

**California Health and Safety Code.** This Code regulates the abatement of fire-related hazards. It also requires that local jurisdictions enforce the Uniform Building Code, which provides standards for fire-resistive building and roofing materials, and other fire-related construction methods.

**California Code of Regulations.** Title 19 of this Code establishes regulations related to fire prevention and engineering measures for new construction.

**Assembly Bill 337 (Bates Bill).** In response to the Oakland Hills fire of 1991, this bill was passed in 1992. It requires brush clearance and fire-resistant roof material (Class A, B, or C) to be used on all new construction that is located in any fire hazard severity zone.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal SAF-5 Protect Lives and Property From Wildland Fire Hazards**

- Policy SAF-P5.1: Reduce the risk from wildfires by restricting development in the wildland-urban interface.

- Policy SAF-P5.2: Require that all development in areas of potential wildland fire hazards, including agricultural areas east of Leisure Town Road, include the following:

- Fire breaks adjoining open space areas.
- Adequate access to adjoining open space areas.
- Clearance around structures and energy infrastructure.
- Fire-resistant groundcover.
- Fire-resistant roofing materials.
- Adequate emergency water flow.
- Adequate road dimension and signage to support the delivery of firefighting services and evacuation.

**Goal SAF-6 Minimize Risks From the Harmful Effects of Hazardous Materials and Waste**

- Policy SAF-P6.4: Require adequate separation between areas where hazardous materials are present and sensitive uses such as schools, residences, and public facilities.

**Goal SAF-7 Reduce Risk to Life and Property Associated with Emergencies and Natural and Human-Made Disasters.**

- Policy SAF-P7.8: Encourage existing development that is in the wildland-urban interface or a 100-year floodplain to have access to at least two emergency evacuation routes.

**Goal LU-29 Ensure that Development Near the Nut Tree Airport and Travis Air Force Base is Compatible with Airport Uses and Conforms to the Safety Requirements.**

- Policy LU-P29.3: Ensure that land uses in the vicinity of Nut Tree Airport, or potentially affected by Travis Air Force Base, are compatible with airport operations and are consistent with the Airport Land Use Compatibility Plans for both airports.

Vacaville Municipal Code

The VMC addresses a variety of hazards and related topics, including hazardous materials and waste, emergency preparedness, airport safety, and wildfires.

- Hazardous Materials. Section 14.09.127.080 of the Land Use and Development Code prohibits the release or emission of hazardous materials in excess of State or federally permitted levels, and requires hazardous material handling, use, transport, and storage to comply with Title 15, the Buildings and Construction portion of the VMC. Chapter 14.20 establishes where storage of particular hazardous materials is prohibited. Additionally, Health and Safety (Title 8) of the VMC regulates the burning and burying of hazardous waste.

- Emergency Response and Wildland Fires. Emergency organization, emergency functions, and an emergency response plan are codified in Chapter 2.52 of the VMC. Chapter 14.09 provides supplemental standards and zoning provisions relating to airports and safety in the vicinity of airports. Section 14.20.290, Development Standards for New Construction Adjacent to Open Space Lands Where Wildfire is a Threat, provides development standards that apply to new construction adjacent to open space where there is threat of wildfire. The stated purpose of Section 14.20.290 is to increase the protection of life and property from wildfire occurring on open lands. The standards in Section 14.20.290 are summarized below:

i. Section 14.20.290.020 requires that when development occurs on or adjacent to hillsides, the development must adhere to the City of Vacaville Fire Department Policy addressing hillside development. Where this policy is inconsistent with the requirements in Section 14.20.290, the Fire Chief shall have discretion to state the requirements for a project.

ii. Section 14.20.290.040 requires a fire buffer zone consisting of 50 feet of non-combustible defensible space between residential yards adjacent to open lands where wildfire is a threat.

iii. Section 14.20.290.050 requires a 20-foot-wide fire access road, when required by the Fire Chief, around the perimeter of a site where wildfire is a threat, and Section 14.20.290.060 requires a greenbelt of fire resistive, irrigated low-growth vegetation, when required by the Fire Chief. Section 14.20.290.070 states that a non-combustible fire break may be used in areas where it is not practical to apply a fire access road or greenbelt.

iv. Section 14.20.290.080 states that on streets directly adjacent to permanent open lands where wildfire is a threat, housing shall only be located on the side of the street opposite from the open space lands.

v. Section 14.20.290.100 requires that all fencing adjacent to open space lands be of noncombustible material.

vi. Sections 14.20.290.110 and 14.20.290.120 establish rear and side setback requirements.

vii. Section 14.20.290.130 requires a residential sprinkler system, when requested by the Fire Chief, where the distance from a building to a public water supply is beyond the minimum required distance, ingress and egress for fire protection is sub-standard, or where needed to minimize the chance of a larger fire.

viii. Section 14.20.290.140 establishes ingress and egress requirements for all structures and improvements.

ix. Section 14.20.290.150 requires that the on-site water supply comply with the City Water Master Plan.

x. Section 14.20.290.160 establishes residential construction standards for roofing materials, siding materials, eaves, attic and underfloor openings, and Section 14.20.290.170 establishes standards for accessory structures, such as decks, awnings, sheds, and porches.

- Airport Safety. Section 14.09.134 of the Land Use and Development Code addresses airport compatibility. Under Section 14.09.134.020, development within the Nut Tree Airport and Travis Air Force Base Land Use Compatibility Zones must comply with standards in the Nut Tree Airport Master Plan and Travis Air Force Base ALUCP, respectively.

Emergency Operations Plan

In 2006, the City of Vacaville adopted the Association of Bay Area Governments' Taming Natural Disasters report as its official Local Hazard Mitigation Plan. The Local Hazard Mitigation Plan offers methods to mitigate natural hazards and enhance disaster resistance. The Plan focuses on natural disasters, including earthquake hazards (surface faulting, ground shaking, liquefaction, landslides, and tsunamis), and weather-related hazards (flooding, landslides, wildfires, drought, and climate change).

Solano County Department of Resource Management

The Solano County Department of Resource Management is the Certified Unified Program Agency for Solano County, including all of its cities. As the Certified Unified Program Agency, the Department of Resource Management administers the following Unified Programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan) Program
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Hazardous Waste Generator and Hazardous Waste On-Site Treatment Programs
- Above Ground Storage Tank Program (Spill Prevention, Control and Countermeasure Plans)

Solano County Hazardous Materials Programs

The County has established hazardous material site mitigation through the Local Oversight and Spills, Leaks, Investigations, and Cleanup programs to ensure that cleanup meets State standards. Additionally, the County has a Waste Tire Enforcement program to monitor waste tire generation and disposal facilities.

Solano County Multi-Hazard Mitigation Plan

Solano County adopted its initial Multi-Hazard Mitigation Plan Annex in May 2006 as a participating jurisdiction in the Association of Bay Area Governments' Multi-Jurisdictional Local Government Hazard Mitigation Plan. The federal Disaster Management Act of 2000 requires local agencies to develop Local Hazard Mitigation Plans in order to qualify for grant funding for hazard mitigations. To maintain eligibility for funding, the plans are updated on a five-year cycle of monitoring, evaluating, and updating. An updated Solano County Multi-Hazard Mitigation Plan was completed in March 2012 and submitted to Federal Emergency Management Agency (FEMA) and California Emergency Management Agency (CalEMA) for review. The Solano County Multi-Hazard Mitigation Plan identifies the location and geographic extent of vulnerability to man-made and natural hazards, including floods, fire, and earthquakes, in Solano County. The plan lists and prioritizes hazard mitigations, which are actions that reduce the severity or intensity of risk from potential disasters and allow for quicker recovery from disaster.

Solano County Airport Land Use Commission

The Solano County Airport Land Use Commission (ALUC) guides airport development in the county and governs the area surrounding airports to prevent issues relating to noise and safety. Additionally, the ALUC prepares Airport Land Use Compatibility Plans (ALUCPs) and ensures that cities within Solano County have policies and regulations in compliance with ALUCP provisions.

All Compatibility Zones (A, B, C, D, E, and F) of the 1988 Nut Tree ALUCP are within the City's General Plan EIR Study Area. Zone A prohibits residential uses, and Zones B, C, D, and E limit allowable residential densities. Zones A, B, C, D, and E limit the maximum allowable number of persons per acre in and out of structures. Zone F limits assemblages under flight tracks as follows: captive groups should not exceed 100-person structures; and large assemblages should not exceed 300 persons grouped in close proximity (e.g., in theaters, auditoriums, conference facilities, etc.). Solano County is currently preparing an update to the Nut Tree Airport Master Plan.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

As discussed in Chapter 4.8 of the EIR prepared for the General Plan, due to proposed General Plan policies and other local, regional, State, and federal regulations, such as those that control the production, use, and transportation of hazardous materials and waste, direct and indirect impacts related to hazards and hazardous materials were considered less-than-significant.

### Discussion of Impacts

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and impacts would be less than significant. Site preparation and construction activities will result in the temporary presence of potentially hazardous materials including, but not limited to fuels and lubricants, paints, solvents, insulation, electrical wiring, and other construction related materials onsite. Although these potentially hazardous materials may be present onsite during construction, the applicant is required to comply with all existing federal, state and local safety regulations governing the transportation, use, handling, storage and disposal of potentially hazardous materials.

Prior to commencing construction, the project applicant or City will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for each phase of the project that includes Best Management Practices (BMPs), which will be implemented during all construction activities. This includes good housekeeping of construction equipment, stockpiles and active construction areas, ensures that spill and leak prevention procedures are established, and that clean up kit and materials are readily available for use on-site during all construction activities. Compliance with all existing federal, State, and local safety regulations governing the transportation, use, handling, storage, and disposal of potentially hazardous materials and implementation of avoidance and minimization measures from the Solano HCP related to erosion control and water quality management would ensure that impacts due to temporary construction would be less than significant. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts would be less than significant. Phase I of the project would require the import of approximately 2,394,659 cubic yards of clean fill (soil) to raise the ground level and create terrain for the following project components: bike skills course, Great Meadow trails and overlook, dog park, and Allison Parkway Access Improvements. The project applicant shall ensure that the soil to be imported is considered "clean fill" and does not exceed applicable Environmental Screening Levels for the proposed land use to prevent accidental conditions involving the release of hazardous materials into the environment. Implementation of Mitigation Measure HAZ-1 would require that imported fill be sampled and tested prior to delivery to the project site and reduce potential impacts to a *less-than-significant* level with mitigation incorporated.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and impacts would be less than significant. The nearest school is Edwin Markham Elementary School, 101 Markham Drive, Vacaville, CA 95688, approximately 0.21 mile southwest of the project site. The project would operate as a park and would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during construction or park operations. Therefore, impacts would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that implementation of the General Plan Update and US EPA oversight would minimize impacts related to sites included on a list of hazardous materials sites, and impacts would be less than significant. As part of the Phase I ESA report, Kleinfelder performed record searches of federal, State, and local databases to determine the presence of any listed sites within the project site or vicinity of the project site. Based on the results of the Phase I ESA, the following RECs and CRECs were revealed in connection with the Subject Property.

- **REC:** The soil piles of unknown origin located in the northwest portion of the Centennial Park property.

- **CREC:** The closed Brown Street Landfill/Vacaville landfill and former sewage treatment plant located in the southern portion of the Centennial Park property.

Although not considered a REC pursuant to ASTM Standard E 1527-21, the following Business Environmental Risks (BERs) have been identified:

- Agricultural use of the project from at least 1937 until at least 1974. It is common for residual concentrations of agrichemicals, including pesticides, arsenic, and lead associated with application for pest control, to be present in the shallow soils on agricultural sites. The pesticide concentrations in these situations are typically less than regulatory action levels, and the potential for further action to be required to address the pesticides is low.

Implementation of Mitigation Measure HAZ-2 would require the sampling of soil in formerly agricultural areas in the northern portion of the site for organochlorine pesticides and metals prior to ground-disturbing activities as well as the soil piles in the northern portion of the project site prior to disturbance of the soil piles which would minimize potential impacts to a less-than-significant level. Therefore, impacts would be *less than significant with mitigation incorporated*.

e) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wetlands?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wetlands, and impacts would be less than significant. According to the Safety Element of the Vacaville General Plan (pg. SAF-20), the California Department of Forestry (CDF) has developed a Fire Hazard Severity Scale that utilizes three criteria in order to evaluate and designate potential fire hazards in wildland areas. The criteria are fuel loading (vegetation), fire weather (winds, temperatures, humidity levels, and fuel moisture contents), and topography (degree of slope). Figure SAF-9 (CALFIRE Hazard Severity Zones) in the Safety Element shows the Fire Hazard Severity Zones surrounding the City of Vacaville, while Figure SAF-10 (Wildfire Risk Exposure) shows the local responsibility zones for wildfire risk exposure. According to Figure SAF-9, the project site is not located in any CAL FIRE hazard severity zones considered to have moderate or high fire hazard severity. There are no residences proposed to be constructed on-site, and the proposed project would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR, and because the project site is not located within a state responsibility area or very high fire hazard severity zone, risks associated with wildfire are not discussed further in this Initial Study.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant. Direct access to the existing park is provided via Allison Drive and Browns Valley Parkway in the south and Allison Parkway in the north. Construction activities are anticipated to be confined to the project site, and no road closures or detours are anticipated. The proposed project would be designed to incorporate all required Fire and Police Department standards to ensure that buildout of the proposed park would not interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the proposed project would have a less than significant impact on an adopted emergency response plan or emergency evacuation plan, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

g) If located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

**No new impact.** The General Plan EIR concluded that proposed land uses under the General Plan Update would be consistent with the land use compatibility zones of the Nut Tree ALUCP and Travis Air Force Base LUCP, and impacts would be less than significant. The project is located within the Nut Tree Airport Land Use Plan area zones C and E and is consistent with the Airport Master Plan zoning designation of Community Facilities & Open Space, as well as the land use designation of public parks/open space. No object greater than 200 feet tall would be located anywhere on the project site, and the project would comply with construction and operation standards in the Nut Tree Airport Master Plan ALUCP, respectively, and would have occupancy limits on all buildings intended to be used as gathering or event space. Therefore, there would be a less than significant impact to airports within two miles of the project site, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

h) If within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?

**No new impact.** The General Plan EIR concluded that, as the EIR Project site does not contain any private airstrips, there would be no impact associated with risks in the vicinity of a private airstrip. The proposed project is located within the General Plan EIR study area, and thus is not in the vicinity of a private airstrip. There would be no impact, and *no new impact* compared to what was evaluated in the General Plan EIR.

### Mitigation Measures

**HAZ-1** **Imported Soil Testing.** Prior to the import of soil to the Centennial Park project property, such soils shall be sampled for toxic or hazardous materials exceeding applicable Environmental Screening Levels for the proposed parks and recreation land uses as required by the City prior to importing to the property.

**HAZ-2** **Initial Screening Sampling On-Site.** Prior to ground disturbing activities in the northern portion of the project site, the project applicant or City shall sample soil in formerly agricultural areas for organochlorine pesticides and Title 22 metals to ensure the soils do not exceed applicable Environmental Screening Levels for the proposed parks and recreation land uses. The known soil piles stockpiled in the northern portion of the project site shall also be sampled prior to disturbance to ensure the soil piles can be safely redistributed throughout the project site.

# X. HYDROLOGY AND WATER QUALITY

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ☐ | ☒ |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☐ | ☒ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☐ | ☒ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | ☐ | ☐ | ☐ | ☒ |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☐ | ☒ |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | ☒ |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ |
| i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |
| j) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☒ |
| k) Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The topography of the project site is generally flat with slight rolling terrain with four drainages that drain from west to east across the project site. Elevation in the project site ranges between

approximately 116 feet amsl to 148 feet amsl. The project site is located in the Lower Sacramento watershed (HUC8 18020163). The Study Area is comprised of a network of four drainages that generally flow to the east and are tributary to Ulatis Creek. Ulatis Creek is tributary to Cache Slough and the Sacramento River. The project site is located just west of the Putah South Canal, however, this canal is located outside of the project site, and all on-site drainages pass underneath the Putah South Canal via culverts.

The Natural Resources Conservation Service has mapped nine soil units within the Study Area: Altamont clay, 2 to 9 percent slopes; Altamont clay, 9 to 30 percent slopes; Capay silty clay loam, 0 percent slopes, MLRA 17; Capay clay, 0 percent slopes, MLRA 17; Clear Lake clay, 0 to 2 percent slopes, MLRA 17; Corning gravelly loam, 0 to 12 percent slopes, MLRA 17; Rincon clay loam, 0 to 2 percent slopes; San Ysidro sandy loam, 2 to 5 percent slopes, and water (USDA, NRCS 2023).

Vacaville is located more than 10 miles inland from Suisun Bay, the nearest large water body, and is therefore not at risk of tsunamis.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

##### Floodplain Regulations

The Federal Emergency Management Agency (FEMA) is the federal agency responsible for disaster mitigation, preparedness, response, and recovery. FEMA issues Flood Insurance Rate Maps (FIRMs) identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, which is described as a flood that has a 1-in-100 chance of occurring in any given year. FEMA Flood Insurance Studies have identified several areas of potential flooding within the city that could occur during an estimated 100-year storm event.

##### Clean Water Act

The US Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes water quality control activities by the EPA as well as the states. Various elements of the CWA address water quality; they are discussed below.

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the EPA has designated the State Water Resources Control Board (SWRCB) and its Regional Water Quality Control Boards (RWQCBs) with authority to identify beneficial uses and adopt applicable water quality objectives.

Section 303(d) of the CWA requires states to develop a list of water bodies that do not meet water quality standards, to establish priority rankings for waters on the list, and to develop action plans, called Total Maximum Daily Loads (TMDL), to improve water quality. The list of impaired water bodies is typically revised every two years.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States from their storm sewer systems. NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and non-point source stormwater runoff. The SWRCB is responsible for issuing NPDES permits to cities and counties through the RWQCB. Large communities, which have the potential to cause large impacts to receiving waters, are issued a permit with requirements specific to the community. For smaller communities, the California SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2003-0005-DWQ) for Small Municipal Separate Storm Sewer System (MS4) operators to efficiently regulate stormwater discharges from small MS4s under a single permit. Permittees must develop and implement a Stormwater Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The City of Vacaville is considered a permittee under the statewide general permit.

**State Laws, Regulations, and Policies**

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. The Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals.

State Regulatory Agencies

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) for drinking water regulations, the California Department of Pesticide Regulation, the California Department of Fish and Game (CDFG), and the Office of Environmental Health and Hazard Assessment.

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. Vacaville is in the jurisdiction of the Central Valley RWQCB.

The Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins is the Central Valley RWQCB's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan establishes water quality objectives for total dissolved solids (TDS), mineral constituents, and turbidity on a watershed-by-watershed basis within the region, while objectives for total and fecal coliform bacteria, nutrients (total nitrogen and total phosphorus), pH, dissolved oxygen, and un-ionized ammonia are set on a region-wide basis.

Additionally, water quality objectives for toxic organic and toxic inorganic constituents are established by the corresponding State and federal drinking water standards for waters designated as municipal supply. The RWQCB also implements the federal California Toxics Rule Water Quality Standards for Toxic Pollutants (CTR) established by the US EPA in Title 40, Section 141.38 of the Code of Federal Regulations. The California Toxics Rule establishes numeric criteria for cyanide, metals, and toxic organic constituents.

Regional Water Quality Control Board (Central Valley Region)

- NPDES Construction General Permit. Construction activities that disturb 1 acre or more of land, and construction on smaller sites that are part of a larger project, must comply with a Construction General Permit that regulates stormwater leaving construction sites. Site owners must notify the State, prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), and monitor the effectiveness of the plan. The plan does not have to be submitted to the RWQCB, but must be on-site and available to inspectors. A SWPPP must include "Best Management Practices" (BMPs) designed to reduce potential impacts to surface water quality through the construction and life of the project. On September 2, 2009, the SWRCB adopted a new NPDES general permit pertaining to construction (Order No. 2009-0009 DWQ). The General Construction Permit for Discharges of Stormwater Associated with Construction and Land Disturbance Activities expands the regulatory requirements pertaining to the treatment and control of stormwater effluent resulting from demolition, construction, and development activities.

- NPDES Post-Construction Stormwater Quality. Discharges of urban runoff in the City of Vacaville are regulated under the NPDES Phase II General Permit (Water Quality Order No. 2003-0005-DWQ). This permit requires that permittees implement BMPs that reduce pollutants in stormwater runoff to the maximum extent practicable to protect water quality. See additional information about stormwater runoff requirements in Section A.3.c, Vacaville Stormwater Management Plan. At the time of publication of this document, the permit had expired and a new permit is tentatively scheduled for approval.

- California Fish and Game Code. The CDFG protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1601 to 1606 of the California Fish and Game Code. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the Department, incorporating necessary mitigation and obtaining a streambed alteration agreement. CDFG's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

- Assembly Bill 162 (Wolk). Assembly Bill (AB) 162 was approved by the Governor in 2007, and amended Sections 65302, 65303.4, 65352, 65584.04, and 65584.06, and added Sections 65300.2 and 65302.7, to the Government Code. The new and amended sections require cities and counties to address flood management in the Land Use, Conservation, Safety, and Housing Elements of their General Plans. This ensures that flood management is addressed in General Plans in the following ways:

    - Requires that areas subject to flooding, as identified by federal and State maps of floodplains, are identified in the Land Use Element for annual review.

    - Requires that rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for specified purposes are identified in the Conservation Element, upon the next Housing Element review on or after January 1, 2009.

    - Requires that flood hazard zones are identified and policies to avoid or minimize the unreasonable risks of flooding are established in the Safety Element, by the next Housing Element review on or after January 1, 2009.

    - Permits areas where the flood management infrastructure is inadequate and housing development is impractical to be excluded from the determination of land suitable for urban development in the Housing Element analysis.

- Senate Bill 5 (Machado). The Central Valley Protection Act of 2008 was enacted by Senate Bill (SB) 5.5 The requirements of SB 5 are as follows:

    - By July 1, 2008, the State must develop preliminary 100-year and 200-year flood maps for areas in the Central Valley that are protected by project levees. The State completed this mapping effort in 2008, and it does not affect the EIR Study Area because it is not protected by project levees.

    - The Central Valley Flood Protection Board (CVFPB) (formerly the Reclamation Board) adopted the Central Valley Flood Protection Plan (CVFPP) in June 2012. The CVFPP establishes a system-wide approach to improving flood management, including recommendations for structural and non-structural means for improving performance and eliminating the deficiencies of flood management facilities.

    - Within two years after the adoption of the CVFPP,7 communities within the Sacramento-San Joaquin Valley, including Vacaville, must amend their General Plans to include data and analysis, goals, and policies for the protection of lives and property from flooding, and related feasible implementation measures that are consistent with the CVFPP. Within one year of General Plan adoption, zoning ordinance amendments must be enacted to maintain consistency with the General Plan.

    - Counties must collaborate with cities within their jurisdiction to develop flood emergency plans.

- Note that the implications for the City of Vacaville from the two SB 5 requirements listed below are currently uncertain. The State has not clarified whether these requirements apply to

communities like Vacaville that are not protected by the State Project Levees and are not within the Sacramento-San Joaquin Watershed.

  - Cities and counties must revise the Safety Element of their General Plan in order to show 200-year flood maps and maps of levee protection zones.

  - By 2015, for areas with a population of 10,000 people or greater, local governments cannot approve new developments unless the land under review has 200-year flood protection, the city has conditioned the project to provide an adequate level of protection, or efforts are in place to provide that level of protection.

- Senate Bill 1278 (Wolk). SB 1278, approved in 2012, amends State flood protection laws, including the Central Valley Protection Act of 2008. Specifically:

  - Communities within the Sacramento-San Joaquin Valley must amend their General Plans to be consistent with the CVFPP within two years of July 2, 2013, rather than within two years of adoption of the CVFPP as had been previously required.

  - Communities within the Sacramento-San Joaquin Valley can make a finding that, based on substantial evidence in the record, a property in an undetermined risk area (i.e. an area with a population of 10,000 people or greater within a moderate flood hazard zone that does not have an urban level of protection) has met the urban level of flood protection (i.e. 200-year flood protection for leveed systems) in order to approve development.

  - By July 2, 2013, the State must release floodplain maps and data pertaining to facilities of the State Plan of Flood Control and the water surface elevation of flooding in urban areas in the event of their failure during a 200-year flooding event.

- Senate Bill 17 (Florez). Senate Bill (SB) 17, approved in 2007, makes a number of changes to the Reclamation Board. These changes include:

  - Renaming it the Central Valley Flood Protection Board;

  - Increasing the number of Board members;

  - Changing Board-appointment authority from solely at the discretion of the Governor to sharing appointment authority between the Governor and the Legislature;

  - Requiring adoption of a strategic flood protection plan by 2010;

  - Requiring establishment and regular update of levee construction, operation, and maintenance standards;

  - Requiring review of local and regional land use plans to ensure compliance with flood protection and public safety standards;

  - Prohibiting allocation of funds to a local public agency for a flood control project unless a determination is made that the project ensures adequate flood protection consistent with the law; and

  - Establishing procedures for the decertification of locally maintained flood control facilities as part of the State Plan of Flood Control.

- Assembly Bill 70 (Jones). Assembly Bill (AB) 70 was approved by the Governor in 2007 and added Section 8307 to the Water Code. The section was developed to distribute responsibility for flood control damage among State and local entities and it requires local governments to contribute their fair share to a flood's cost when they make unreasonable development decisions.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal COS-13. Promote Water Conservation as an Important Part of a Long-Term and Sustainable Water Supply.**

- Policy COS-13.1: Encourage and support water conservation programs.

- Policy COS-P13.4: Require new development to incorporate Best Management Practices (BMPs) for water use and efficiency and demonstrate specific water conservation measures.

- Policy COS-13.6: Whenever possible, use recycled or non-potable water for irrigation in landscaped areas.

- Action COS-A13.1: Revise the Land Use and Development Code to require water-use efficiency best management practices.

- Action COS-A13.2: Continue to implement the City's water-efficient-landscape requirements, which address the use of drought-tolerant plant materials and irrigation standards.

**Goal COS-14. Protect the Quality and Supply of Surface Water and Groundwater Resources**

- Policy COS-14.3: Encourage pest-tolerant landscapes using native plants to minimize the need for pesticides.

- Policy COS-P14.5: Require the implementation of Best Management Practices (BMPs) to minimize erosion, sedimentation, and water quality degradation resulting from construction or from new impervious surfaces.

- Policy COS-P14.6: Protect existing open spaces, natural habitat, floodplains, and wetland areas that serve as groundwater recharge areas.

- Policy COS-P14.7: Protect groundwater recharge and groundwater quality when considering new development projects.

- Action COS-A14.1: Work with the Solano Irrigation District, nearby cities, and/or Solano County to develop a recharge area map to guide future development. Developments proposed in areas identified as "valuable" to the recharge area shall mitigate adverse impacts to the greatest extent possible.

**Goal SAF-1. Minimize Exposure to Geologic Hazards, Including Slope Instability, Subsidence, and Expansive Soils, and to Seismic Hazards, Including Ground Shaking, Fault Rupture, Liquefaction, and Landslides.**

- Policy SAF-P1.1: Consider geologic conditions when designating land use and designing development in Vacaville. Where potential geologic or seismic risks are high and unmitigable, retain low-occupancy or open space forms of use.

- Policy SAF-P1.2: Prohibit development on ridges and slopes at or exceeding 25 percent.

- Policy SAF-P1.3: Evaluate and consider the geologic and soil hazards for any proposed extension of urban or suburban land uses into areas that are characterized by slopes from 15 to 25 percent.

- Policy SAF-P1.5: Require geotechnical studies prior to approving rezoning requests, specific plans, or subdivision maps in areas facing a high risk of landslides, as shown in Figure SAF-4 of the General Plan, and that are within a quarter-mile of a fault, as shown on Figure SAF-1 of the General Plan.

- Policy SAF-P1.10: Require contour rounding and revegetation to preserve natural qualities of sloping terrains, mitigate the artificial appearance of engineered slopes, and control erosion. Encourage the use of native trees and shrubbery in revegetation areas.

**Goal SAF-2. Collect, Convey, Store, and Dispose of Stormwater in Ways that Provide an Appropriate Level of Protection Against Flooding, Account for Existing and Future Development, and Address Applicable Environmental Concerns.**

- Policy SAF-P2.1: Continue to develop a comprehensive system of drainage improvements to minimize flood hazards, and maintain storm drainage infrastructure in good condition.

- Policy SAF-P2.2: Assess the adequacy of storm drainage utilities in existing developed areas, and program any needed improvements in coordination with new infrastructure that will serve developing areas.

- Policy SAF-P2.4: Design storm drainage infrastructure to serve dual purposes to the extent possible. This includes the following:

    - Drainage facilities integrated into recreation corridors with bike paths, sidewalks, and landscaping.

    - Drainage channels integrated with transportation and environmental corridors.

  - Active and passive recreation areas incorporated into detention basins where feasible.
  - Drainage facilities designed to incorporate natural infrastructure and support ecosystem health where feasible.

- Policy SAF-P2.5: Maintain open areas needed to retain stormwater and prevent flooding of urban or agricultural land.
- Policy SAF-P2.6: Require new development adjacent to creeks to dedicate 40 feet from the stable top of bank to the City. The decision maker may require more than 40 feet from the top of the bank to mitigate potentially significant environmental impacts in compliance with CEQA.
- Action SAF-A2.3: Continue to construct upstream regional flood-control detention basins.

**Goal SAF-3. Provide Effective Storm Drainage Facilities for Development Projects.**

- Policy SAF-P3.1: Evaluate the storm drainage needs for each project; this evaluation should account for projected runoff volumes and flow rates once the drainage area is fully developed. In the Alamo Creek watershed upstream of Peabody Road (including Alamo, Laguna, and Encinosa Creeks), require post-development 10-year and 100-year peak flows to be reduced to 90 percent of predevelopment levels. In the remainder of Vacaville, for development involving new connections to creeks, peak flows shall not exceed predevelopment levels for 10- and 100-year storm events.
- Policy SAF-P3.2: Continue to require development impact fees to fund necessary storm drainage improvements, including drainage detention basins.
- Policy SAF-P3.3: Require a storm drainage site-specific plan or storm drainage technical memorandum and calculations to be prepared for new development projects to ensure new development adequately provides for on-site drainage facilities necessary to protect the new development from potential flood hazards, and ensure that potential off-site impacts are fully mitigated.
- Policy SAF-P3.4: Require that new development designate storm drainage easements or routes when tentative maps or specific plans are approved.
- Action SAF-A3.1: Maintain the City's Storm Drainage Master Plan, which ensures that new development adequately provides for on-site and downstream off-site mitigation of potential flood hazards and drainage problems.

**Goal SAF-4. Protect People and Property From Flood Risk.**

- Policy SAF-P4.1: Prohibit development within the 100-year floodplain unless mitigation of flood risk is assured.
- Policy SAF-P4.2: Require that the lowest floor of any new construction be elevated a minimum of 1 foot above the 100-year flood elevation.

- Policy SAF-P4.4: Require that new development mitigate its additional runoff and mitigate removal of any floodplain areas.

**Goal SAF-7. Reduce Risk to Life and Property Associated with Emergencies and Natural and Human-Made Disasters.**

- Policy SAF-P7.3: Maintain an adequate level of disaster response preparedness through careful review of proposed developments and through staff training in and exercise of the local hazard mitigation plan.

- Policy SAF-P7.8: Encourage existing development that is in the wildland-urban interface or a 100-year floodplain to have access to at least two emergency evacuation routes.

Floodplain Management Ordinance

The City has adopted a Floodplain Management Ordinance (Section 14.18 of the Land Use and Development Code) that describes methods for reducing flood losses. The Floodplain Management Ordinance contains a number of provisions for flood hazard reduction, including:

- Residential construction, either new or a substantial improvement, must have the lowest floor, including the basement, elevated to, or above, the base flood elevation, the computed elevation to which floodwater is anticipated to rise during a 100-year storm event. A 100– year storm is defined as storm that has a 1 percent chance of occurring in any given year. Upon the completion of the structure, the elevation of the lowest floor must be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated.

- Nonresidential construction, either new or a substantial improvement, must either be elevated to conform to the requirements described above for residential construction, or be flood-proofed below the base flood elevation. If the structure is flood-proofed, it must be watertight with the wall substantially impermeable to the passage of water, have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy, and be certified by a registered engineer or architect.

- All preliminary subdivision proposals must identify the special flood hazard area and the elevation of the base flood.

- All subdivision plans must provide the elevation of the proposed structure(s) and pad(s). If the site is filled above the base flood elevation, the lowest floor and pad elevations must be certified by a registered professional engineer or surveyor.

- All subdivision proposals must be consistent with the need to minimize flood damage.

- All subdivision proposals must have public utilities and facilities located and constructed to minimize flood damage.

- All subdivisions must provide adequate drainage to reduce exposure to flood hazards

- Encroachments within designated floodways are prohibited, including fill, new construction, substantial improvement, and other new development, unless certification by a registered professional engineer is provided demonstrating that encroachments do not result in any increase in the base flood elevation during the occurrence of the base flood discharge.

Storm Drainage Master Plan

The City completed a Draft Storm Drainage Master Plan (SDMP) in 1996, and updated it in 2001. The SDMP evaluates the existing storm drain systems to identify existing deficiencies and required improvements. The focus of the SDMP is to identify improvements necessary to provide 100-year level flood protection to areas in Vacaville proposed for new development while maintaining, as a minimum, the existing level of protection in developed areas within the city that periodically flood. To this end, the SDMP outlined a staged capital improvements program to resolve existing storm drain deficiencies, and developed appropriate development impact fees for storm drainage facilities to ensure future development does not impact storm drainage for existing development within the city. The SDMP also provided a detailed inventory of existing storm drainage facilities.

Vacaville Stormwater Management Plan

The City has developed a Stormwater Management Plan that describes activities being performed and activities to be performed by the City to meet the requirements of the NPDES permit. Also, Section DS 4-13 of the City's Storm Drain Design Standards provides requirements for water quality control. This section requires that storm drain system improvements be designed to prevent any net detrimental change in runoff quality resulting from new development and requires that BMPs be implemented with development projects.

Vacaville Standard Specifications and Standard Drawings

City of Vacaville Standard Specifications and Standard Drawings require that detention basins be designed to the following criteria:

- New development shall mitigate the increase of the 10- and 100-year peak runoff from a project site over the predevelopment conditions (due to higher peak flows from the site, filling or building in overflow area, or altered flow paths).

- In the Alamo Creek Watershed upstream of Peabody Road, which includes Alamo Creek, Encinosa Creek, and Laguna Creek, the 10 and 100-year post-development peak flows shall be reduced to 90 percent of pre-development levels. Additionally, the five-year storm shall be evaluated in the Alamo Creek Watershed upstream of Peabody Road to ensure that drainage facilities do not increase the peak 5-year flows downstream in the open channels or to receiving waters.

- Detention facilities must be designed for the 100-year, 24-hour storm event.

Vacaville Municipal Code

The VMC has several sections relating to hydrology and water quality, including Sections 13.12 (Water), 13.14 (Control of Backflow and Cross-Connections), 13.20 (Water Conservation), and 14.26 (Urban Stormwater Quality Management and Discharge Control). These regulations provide guidelines for

water service provision, describe standards for connection sizes, protect and maintain the potable water system, conserve water use, reduce water consumption, and protect water quality. Chapter 14.19 of the Land Use and Development Code is the Vacaville Grading Ordinance, which regulates grading and earth moving in the city.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Hydrology, Drainage, and Water Quality are discussed in Section 4.9 of the EIR prepared for the General Plan. The EIR concluded that implementation of the General Plan would contribute to development in levee and dam inundation zones. Therefore, the direct and indirect hydrology impacts would be significant and unavoidable. Prior to the issuance of grading permits, the project applicant(s) of all projects disturbing one or more acres (including phased construction of smaller areas which are part of a larger project) shall obtain coverage under the State Water Resource Control Board's NPDES Stormwater Permit. The proposed project would disturb one or more acres, and thus would require an NPDES Stormwater Permit. No mitigation measures were included as part of the General Plan EIR.

### Discussion of Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

**No new impact.** The General Plan EIR concluded that with implementation of the NPDES Construction General Permit process and the General Plan Update goals, policies, and actions that protect water quality, impacts would be less than significant. Construction activities have the potential to result in runoff that contains sediment and other pollutants that could degrade water quality if not properly controlled. Sources of potential pollution associated with construction include fuel, grease, oil and other fluids, concrete material, sediment, and litter. These pollutants have the potential to result in impacts due to chemical contamination from the release of construction equipment and materials that could pose a hazard to the environment or degrade water quality if not properly managed.

Construction Impacts

The SWRCB mandates that projects that disturb one or more acres must obtain coverage under the NPDES General Construction Permit. Since the proposed project would involve the disturbance of one or more acres in each of the five phases anticipated, construction of the project components in each phase would be subject to these requirements. To minimize these potential impacts, the project applicant or City will implement avoidance and minimization measures from the Solano HCP related to erosion control and water quality management, which requires the project applicant or City to comply with the NPDES General Construction Permit, as well as prepare a project-specific SWPPP for each phase of the project that requires the incorporation of BMPs set forth by the City's Stormwater Management Plan to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The General Construction Permit also requires that prior to the start of construction activities, the project applicant or City must file Permit Registration Documents with the SWRCB, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. Therefore, implementation of avoidance and minimization measures from the Solano HCP related to erosion control and water quality management would reduce the temporary, short-term construction-related drainage and water quality impacts to a less than significant level, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

Operation Impacts

The project site contains four drainages that drain from west to east across the project site as well as two areas of the park that currently function as detention basins (South Horse Basin #1 and South Horse Basin #2). Two detention basins are proposed as part of the expansion of the Centennial Park project and would be constructed in Phase II in the northern portion of the project site along the eastern boundary of the park. The two detention basins are planned to be developed in conjunction with the planned expansion of the Horse Creek Soccer Complex and would be designed to accommodate 40 acre-feet of stormwater combined to serve the needs of the planned expansion. The detention basins would be constructed in accordance with Section 14.26.030.020 of the VMC, which require implementation and maintenance of post-construction BMPs to control the volume, rate, and potential pollutant load of stormwater runoff. Therefore, implementation of the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

**No new impact.** The General Plan EIR concluded that because the projected groundwater demand could be met with the water supply planned for under existing water management conditions, and because the General Plan and ECAS Update included policies, actions, and measures to protect groundwater recharge areas and promote water conservation, impacts would be less than significant. The City's 2020 Urban Water Management Plan (UWMP) calculated the past, current, and projected water use and water supply through 2045. The 2020 UWMP calculated the projected water supply available in 2045 to be 30.8 mgd. The City's future water demand (20.9 mgd) would be below the City's future (30.8 mgd) water supply allocations. Therefore, the 2020 UWMP determined the City's water supply would be adequate to offset future water demands projected for buildout of the General Plan, including projected full buildout of the 276-acre Centennial Park (City of Vacaville 2023). Development of the project would not result in the lowering of the aquifer or local groundwater table and groundwater reserves would not be impacted by the proposed expansion of Centennial Park, and the proposed project would have a less than significant impact to groundwater supplies and recharge. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site:

**No new impact.** The project site contains four drainages that drain from west to east across the project site as well as two areas of the park that currently function as detention basins (South Horse Basin #1 and South Horse Basin #2) along the eastern boundary. Two detention basins are proposed as part of the expansion of the Centennial Park project and would be constructed in Phase II in the northern portion of the project site along the eastern boundary of the park. The two detention basins are planned to be developed in conjunction with the planned expansion of the Horse Creek Soccer Complex and would be designed to accommodate 40 acre-feet of stormwater combined to serve the needs of the planned expansion. Drainage would continue to flow from west to east across the project following

buildout of the proposed project, and drainage collected on-site from stormwater would be directed to the two proposed detention basins or into the City's existing stormwater collection system along Allison Drive. Additionally, all exposed cut or fill areas would be landscaped or hydroseeded to avoid erosion. As designed, the proposed project would not create substantial erosion or siltation on-site or off-site and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

**No new impact.** The project would introduce new impervious surfaces. However, a majority of the project site would remain pervious following buildout of the park as currently planned. Additionally, as the project is currently an existing park, there is existing storm drainage infrastructure on-site to capture, convey, and manage additional discharge resulting from new impervious surfaces introduced. The proposed project also includes the construction of two detention basins to serve anticipated drainage needs as part of Phase II and the construction of the Horse Creek soccer complex expansion in the northern portion of the project site along the eastern boundary. Therefore, there would be a less than significant impact to the drainage pattern, storm drain system, and runoff as a result of the proposed project, and *no new impact* compared to what was evaluated in the General Plan EIR.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

**No new impact.** As discussed above, two detention basins are proposed as part of the expansion of the Centennial Park project and would be constructed in Phase II in the northern portion of the project site along the eastern boundary of the park. The two detention basins are planned to be developed in conjunction with the planned expansion of the Horse Creek Soccer Complex and would be designed to accommodate 40 acre-feet of stormwater combined to serve the needs of the planned expansion. Therefore, the project would have a less than significant impact and would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. and There would be *no new impact* compared to what was evaluated in the General Plan EIR.

f) Otherwise substantially degrade water quality?

**No new impact.** See response to question a) above. Impacts would be less than significant, and there would *no new impact* compared to what was evaluated in the General Plan EIR.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

**No new impact.** Portions of the EIR Study Area are within the 100-year flood zone, and the General Plan designates these areas for non-residential land uses. The project is the expansion of an existing park, and no housing is existing or proposed to be constructed on-site. Additionally, the proposed project

would comply with policies included in the General Plan, thus there would be no impact, and *no new impact* compared to what was evaluated in the General Plan EIR.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

**No new impact.** The General Plan EIR includes Figure 4.9-1 which shows the FEMA flood zones mapped throughout the City. None of the proposed structures associated with the expansion of Centennial Park would be located within a 100-year flood hazard area. Therefore, the proposed project would have no impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

**No new impact.** The General Plan EIR includes Figure 4.9-4 which shows the dam inundation areas mapped in the vicinity of the City. The only area of the City that would be impacted by the failure of the Monticello Dam would be the area in the northeast corner of the City which is over 2.8 miles northeast of the Centennial Park project site. Therefore, buildout of Centennial Park would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

j) Inundation by seiche, tsunami, or mudflow?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update policies and actions, along with compliance with the CBC, would mitigate the risks associated with seiche, tsunami, and mudflow, and the impact would be less than significant. As described above, the project site is not located near any tidally influenced water bodies nor is it near any large bodies of water that could be affected by a tsunami or seiche. No residences are proposed as part of the proposed project. The proposed project would have no impact on exposing people or structures to inundation by seiche, tsunami, or mudflow, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

# XI. LAND USE AND PLANNING

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) | Conflict with any regional land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ |
| c) | Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

Land Uses and planning are discussed in Chapter 4.10 of the General Plan EIR (City of Vacaville 2013). A large portion of Vacaville is comprised of single-family residential neighborhoods, with a retail corridor along Interstate 80 and a mix of uses in Downtown Vacaville. Vacaville has significant amounts of vacant land as well, most of which is located along Interstate 505 in the northeastern portion of the city. The existing Land Use Element sets forth 25 land use designations. The project property is zoned Parks and Recreation (PR) and Open Space (OS) and is designated for Public Park and Public Open Space in the City of Vacaville General Plan.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

There are no federal regulations pertaining to land use and planning that apply to the proposed project.

#### State Laws, Regulations, and Policies

California State law requires that each city and county adopt a general plan "for the physical development of the city and any land outside its boundaries which bears relation to its planning." Typically, a general plan is designed to address the issues facing the city or county for the next 15-20 years. The general plan expresses the community's development goals and incorporates public policies relative to the distribution of future public and private land uses.

#### Local Laws, Regulations, and Policies

The City’s General Plan contains the following goals and policies related to land use and planning that may be applicable to the project.

**Goal COS-4. Minimize Conflicts Between Agricultural and Urban Uses.**

- Policy COS-4.1: Within the area east of Leisure Town Road, south of the Locke Paddon Community, and north of the railroad tracks, as shown in Figure LU-6 in the Land Use Element, require new development to maintain a 300- to 500-foot wide agricultural buffer along the eastern boundary of all residential development and existing agricultural lands. Require that uses within the agricultural buffer be limited to passive open space uses that are not accessed by a large number of employees or the general public at one time. Permitted uses within the buffer shall be limited as described below:

    - Any portion of the buffer located inside the Urban Growth Boundary, adjacent to the Pacific Gas & Electric Company easement, shall contain substantial landscaping to discourage unlawful access onto the agricultural lands, and to lessen the potential impacts of typical agricultural activities on residential uses. Passive recreational uses such as pedestrian and bicycle trails are permitted.

    - Uses located outside of the Urban Growth Boundary, within the 385-foot wide Pacific Gas & Electric Company easement, shall be limited to public infrastructure improvements necessary or appropriate to serve or protect existing and new permitted uses within the Urban Growth Boundary, including but not limited to, alternative energy facilities, stormwater detention basins, water tanks (reservoirs), and sewer and water lines to accommodate buildout of the Vacaville General Plan.

**Goal LU-1. Preserve, Promote, and Protect the Existing Character and Quality of Life Within Vacaville.**

- Policy LU-P1.5: With the exception of Priority Development Areas, require that infill projects be designed to complement the neighborhood and surrounding zoning with respect to the existing scale and character of surrounding structures, and blend, rather than compete, with the established character of the area.

**Goal LU-2. Carefully Plan for New Development in Undeveloped Portions of Vacaville.**

- Action LU-A2.1: Update the zoning map in the Land Use and Development Code to reflect the General Plan land use designations, and insert a table into the Land Use and Development Code specifying which zoning districts implement each General Plan land use designation.

**Goal LU-8. Coordinate with Surrounding Jurisdictions and Other Local and Regional Agencies that May Affect Vacaville's Future Development Patterns and Character.**

- Policy LU-P8.2: Work with Solano County to ensure that projects developed in the Vacaville Planning Area or Sphere of Influence meet City policies and standards, do not induce further development, and do not unduly burden the City.

- Policy LU-P8.3: Provide written comments to Solano County on all proposed significant development projects in the Planning Area in accordance with the City's land use designations, policies, and standards.

- Policy LU-P8.4: Work with Solano County and the Nut Tree Airport to ensure Vacaville's future development patterns and character do not adversely impact the Nut Tree Airport.

**Goal TR-9. Provide a Balanced, Multimodal Transportation Network That Meets the Needs of All Users, Including Pedestrians, Bicyclists, and Motorists of All Ages and Abilities.**

- Policy TR-P9.2: Require that new and existing on-street bicycle lanes be striped, signed, and maintained to encourage their use.

- 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-P9.6: 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).

- Policy TR-P9.9: When designing new roadway improvement projects, consider the following through an open and inclusive process with community residents:

    - Whether the affected community is an underserved community.

    - What the priority needs of the community are and whether the project would address those needs.

    - Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.

**Goal LU-11. Improve Community Health and Reduce Pollution Exposure and Health Risks Across the City and Reducing Asthma, Especially in Low-Income and Impacted Communities.**

- Policy LU-P11.6: Require potential developers and/or project applicants to provide evidence that the development site is not contaminated or that the formerly contaminated site has been adequately remediated before allowing new development.

- Policy LU-P11.11: Encourage goods and services and recreational facilities and programs to be conveniently located within walking or biking distance from homes.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Land use and planning are discussed in Chapter 4.10 of the General Plan EIR (City of Vacaville 2013). The EIR concluded that implementation of the General Plan Update would not have any significant impacts

on land use or planning, and no mitigation measures were necessary. The General Plan Update did not propose any new major roadways or other physical features through existing neighborhoods that would create new barriers in the EIR Study Area, and land uses in the General Plan Update are largely consistent with existing development patterns.

**Discussion of Impacts**

a) Physically divide an established community?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not result in new development or features that would divide existing residential neighborhoods or communities, and impacts would be less than significant. The project site is an existing park with undeveloped open space. The proposed park improvements would not divide an established community and would not interrupt existing flow or access to adjacent land uses. Additionally, General Plan EIR included the proposed expansion of Centennial Park in its analysis, and the proposed project would have no impact on physically dividing an established community. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Conflict with any regional land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not conflict with any regional land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

*General Plan*

The project site has a current General Plan designation for Public Park with a small portion of the project site along the southeastern boundary designated as Public Open Space. As proposed, the project would expand the existing Centennial Park, remaining consistent with the land use designation as described in the General Plan and City of Vacaville Land Use Map. The proposed project would have no impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

*Zoning*

The project site has a current zoning designation for Parks and Recreation with a small portion of the project site along the southeastern boundary designated as Public Open Space. The Parks and Recreation zoning designation allows for campgrounds and recreational vehicle parks, community assembly, cultural institutions, park and recreation facilities, indoor sports and recreation, outdoor sports and recreation, farmer's markets, and community gardens. Outdoor entertainment and public works utilities are allowed uses but would require approval of a conditional use permit. As proposed, the project would expand the existing Centennial Park, remaining consistent with the zoning designation. The proposed project would have no impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

*Energy Conservation Action Strategy*

The proposed project would comply with the City's Energy Conservation Action Strategy and all application avoidance and minimization measures designed to reduce energy consumption and Greenhouse Gas emissions. The proposed project would have no impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

*Nut Tree Airport Land Use Compatibility Plan*

The project site falls under Compatibility Zones A, C, and E of the Nut Tree ALUCP. According to the Nut Tree ALUCP, Zone A is a High-Risk zone, Zone C is a Moderate Risk zone, and Zone E is a Limited Risk Zone. Zone A prohibits residential uses, and Zones C and E also limit the maximum allowable number of persons per acre in and out of structures. The proposed project site has land use designations of Public Park and Public Open Space, and therefore would not conflict with Zone A, C, or E land use requirements. The proposed project would have no impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would not conflict with any applicable habitat conservation plan or natural community conservation plan as the Solano County HCP is not an adopted conservation plan, and impacts would be less than significant. As of the date of this Initial Study, the Solano County HCP has not yet been adopted. Therefore, the proposed project would not conflict with any applicable housing conservation plan or natural community conservation plan and would have no impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

# XII. NOISE

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No new Impact |
|---|---|---|---|---|
| Would the project result in: | | | | |
| a) Expose persons to or generate noise levels in excess of standards established in the localgeneral plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☒ | ☐ | ☐ |
| b) Expose persons to or generate excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☐ | ☒ |
| c) Substantially, permanently increase ambient noise levels in the project vicinity by more than5 dBA above levels existing without the project? | ☐ | ☐ | ☐ | ☒ |
| d) Substantially, temporarily, or periodically increase ambient noise levels in the project vicinityby more than 5 dBA above levels existing without the project? | ☐ | ☒ | ☐ | ☐ |
| e) Expose people residing or working in the project area to excessive noise levels from aircraftnoise sources? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

**Existing Noise Environment**

Noise sources in the project vicinity are dominated by traffic noise from Interstate 80 approximately 2,600 (0.5 mile) feet to the southeast, Interstate 505 approximately 3,700 feet (0.7 mile) to the east, and from local streets. Additional existing noise sources in the area include aircraft operation from of the Nut Tree Airport approximately 800 feet to the east, truck noise and building heating, ventilation, and air conditioning (HVAC) systems for the industrial uses northeast of the project site, and suburban residential noise (e.g., landscape maintenance equipment, dogs, multi-family-residential parking lots) from the neighborhoods to the west.

**Noise-Sensitive Land Uses**

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, including residences, hospitals, schools, hotels, resorts, libraries, sensitive wildlife habitat, or similar facilities where quiet is an important attribute of the environment. Noise receptors (receivers) are individual locations that may be affected by noise. The closest existing NSLUs to the project site are single-family residences located approximately 30 feet west of the project site. The closest school to the project site is Edwin Markham Elementary School approximately 1,000 feet (0.19 mile) to the southwest.

**Noise Metrics**

All noise-level and sound-level values presented herein are expressed in terms of decibels (dB), with A weighting, abbreviated “dBA,” to approximate the hearing sensitivity of humans. Time averaged noise

levels of one hour are expressed by the symbol "$L_{EQ}$" unless a different time period is specified. Maximum noise levels are expressed by the symbol "$L_{MAX}$." Some of the data also may be presented as octave-band-filtered and/or A-octave band-filtered data, which are a series of sound spectra centered on each stated frequency, with half of the bandwidth above and half of the bandwidth below, the stated frequency. These data are typically used for machinery noise analysis and barrier-effectiveness calculations. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level ($L_{DN}$), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours.

Because decibels are logarithmic units, $S_{PL}$ cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an $S_{PL}$ of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustic laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hertz [Hz]–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

**Vibration Metrics**

Ground-borne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of ground-borne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Peak particle velocity (PPV) is commonly used to quantify vibration amplitude. The PPV, with units of inches per second (in/sec), is defined as the maximum instantaneous positive or negative peak of the vibration wave.

### Regulatory Framework

**City of Vacaville General Plan**

The City's General Plan Noise Element contains the following goals and policies related to noise and vibration that may be applicable to the project.

**Goal LUP-1**: Maintain an acceptable noise environment in all areas of the city.

> **Policy NOI-P1.1**: Require an acoustical analysis for all proposed projects that would locate noise sensitive land uses where the projected ambient noise level is greater than the respective "normally acceptable" noise level as indicated on Table NOI-3 [reproduced in this IS/MND as Table 15, *Exterior*

*Noise Compatibility Standards*], and require mitigation of noise impacts that exceed the land use compatibility standards.

**TABLE 15.**
**EXTERIOR NOISE COMPATIBILITY STANDARDS**

| Land Use Type | Highest Level of Noise Exposure that is Regarded as "Normally Acceptable" (dBA $L_{DN}$ or CNEL ) [1] |
|---|---|
| Residential Low Density Single-Family, Duplex, Mobile Homes | 60 |
| Residential – Multi-Family | 65 |
| Transient Lodging – Motels, Hotels | 65 |
| Schools, Libraries, Churches, Hospitals, NursingHomes | 70 |
| Auditoriums, Concert Halls, Amphitheaters[2] | 70 |
| Sports Arena, Outdoor Spectator Sports[2] | 75 |
| Playgrounds, Neighborhood Parks | 70 |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries | 75 |
| Office Buildings, Business Commercial and Professional | 70 |
| Industrial, Manufacturing, Utilities, Agriculture | 75 |

Source: City of Vacaville General Plan Noise Element Table NOI-3 (2024)
dBA = A-weighted decibels; $L_{DN}$ = Day Night sound level; CNEL = Community Noise Equivalent Level
[1] As defined in the California Office of Planning and Research Guidelines, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.
[2] No normally acceptable level specified for these land uses, maximum conditionally acceptable noise standard shown.

**Policy NOI-P1.2**: Require that noise created by new transportation and non-transportation noise sources be mitigated, to the extent that is technically and economically feasible, to comply with the noise level standards of Table NOI-3 (see Table 15, above).

**Policy NOI-P1.3**: Allow minor exceptions to the noise level design standards in Table NOI-3 (see Table 15, above) in circumstances where mitigation requirements are not technically or economically feasible and not consistent with other City goals, standards, and policies.

**Goal NOI-2**: Protect noise-sensitive uses from excessive noise.

**Policy NOI-P2.1**: Reduce outdoor noise levels in existing residential areas, where economically and aesthetically feasible.

**Policy NOI-P2.5**: Encourage the use of open space, earthen berms, parking, accessory buildings, and landscaping to buffer new and existing development from noise. Use sound walls only when other methods are not practical or when recommended by an acoustical expert as part of a mitigation program.

**Policy NOI-P2.6**: Require that the effects of sound walls on noise levels in surrounding areas be considered and taken into account in the design, location, and construction of sound walls.

**Goal NOI-3**: Minimize noise from mobile sources.

**Policy NOI-P3.1**: Limit truck traffic to designated truck routes.

**Goal NOI-4**: Minimize noise from stationary sources.

**Policy NOI-P4.1**: Preclude the generation of annoying or harmful noise through conditions of approval on stationary noise sources, such as construction and property maintenance activity and mechanical equipment.

**Policy NOI-P4.2**: Require the following construction noise control measures:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Limit hours of operation of outdoor noise sources through conditions of approval

**City of Vacaville Municipal Code**

The VMC contains the following noise regulations which may be applicable to the project:

**Chapter 8: Abatement of Public Nuisance**

**8.10.060 Public nuisance**.

Each of the following acts or conditions is declared to be a public nuisance and may be abated in accordance with this chapter:

N. Commercial activities involving the operation of equipment, including, but not limited to, parking lot cleaning and sweeping machines, leaf blowers, and mowing machines, within 500 feet from any occupied residence between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturday. No such commercial activities shall be allowed on Sundays or holidays. The loading or unloading of commercial vehicles is allowed. This section does not apply to the operation of equipment authorized by the City.

O. Construction, repair work or grading within 500 feet from any occupied residence between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturday. No such construction, repair work or grading activities shall be allowed on Sundays or holidays. These restrictions do not apply to:

1. City projects;

2. An exception granted by the department of public works for emergency work, to offset project delays due to inclement weather, for 24-hour projects, or other similar occurrences; or

3. Interior work, construction, repair work or grading activities that are performed by or under the direction of the homeowner at his or her residence on a Sunday or holiday, provided such work shall only be allowed between the hours of 8:00 a.m. and 7:00 p.m.

**Chapter 9.16: Loudspeakers, Sound Amplifiers and Lighting Equipment**

**9.16.020 Registration – Required**.

It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use, or operate within the city a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures, or transmitting music to any persons or assemblages of person in or upon any street, alley, sidewalk, park, place, or public property without first filing a registration statement and obtaining approval thereof as set forth in this chapter.

**9.16.060 Regulations**.

The commercial and noncommercial use of sound amplifying equipment shall be subject to the following regulations:

A. The only sounds permitted shall be either music or human speech, or both.

B. The operation of sound amplifying equipment shall occur between the hours of nine a.m. and six p.m. each day except Sundays and legal holidays. No operation of sound amplifying equipment for commercial purposes shall be permitted on Sundays or legal holidays. The operation of sound amplifying equipment for noncommercial purposes on Sundays and legal holidays shall only occur between the hours of 10:00 a.m. and 6:00 p.m.

C. Notwithstanding the provisions of subsection B of this section, sound amplifying equipment shall not be operated within two hundred feet of churches, schools, or hospitals.

D. In any event, the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing, or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.

**Chapter 14.09.240 Performance Standards**

**14.09.240.140 Noise**.

These standards implement the Noise Element of the General Plan. Noise, including construction, repair work, and grading, shall be enforced by the provisions of Chapter 8.10 of the VMC, Abatement of Public Nuisance.

C. Project Approval and Operational Standards. These standards apply to all land uses subject to approval through this division, Zoning, and Division 14.11, Subdivisions, and are applicable to both transportation and non-transportation noise sources. Compliance with these standards shall be required in conjunction with all land development and subdivision approvals.

1. Compliance With Noise Standards. Compliance with the noise standards shall be measured on the property line of the affected location of the land use, as determined by the Director of Community Development. For single-family residential uses, the exterior affected location typically is the backyard.

a. For single-unit dwellings, attached, multi-unit dwellings, hospitals and clinics, and residential care facilities, the exterior noise standards shall apply to courtyards, patios, private yard areas, and common activity areas;

b. Lodging uses do not have specific exterior noise standards. However, areas designed for outdoor recreation at transient lodging, motels, or hotels shall be located in such a manner so that noise impacts are practically minimized.

2. Acoustical Study Required. Acoustical studies, prepared in a format consistent with the criteria established in the Noise Element of the General Plan, shall be required and submitted as a part of an application for a development project. The acoustical study shall demonstrate compliance with the noise standards and ensure that sensitive land uses, as receptors of noise, will not be exposed to noise levels in excess of the standards established for both transportation and non-transportation noise sources. The acoustical study shall identify mitigation measures that would result in compliance with such standards.

   a. When a proposed sensitive land use would potentially be exposed to levels of noise which would exceed the standards shown in Tables 14.09.240.C and 14.09.240.D.

   b. When a proposed use would potentially generate levels of noise which would exceed the standards shown in Tables 14.09.240.C [reproduced in this IS/MND as Table 16, *Noise Standard for Transportation Sources*] and 14.09.240.D [reproduced in this IS/MND as Table 17, *Maximum Noise Exposure and Generation Levels for Non-Transportation Sources*].

**TABLE 16.**
**NOISE STANDARD FOR TRANSPORTATION SOURCES**

| Land Use Category | Noise Standard (dBA $L_{DN}$) [1] | |
|---|---|---|
| | Interior | Exterior |
| Residential | 45 | 60 |
| Transient Lodging: Motels, Hotels | 45 | - |
| Hospitals, Nursing Homes | 45 | 60 |
| Other Uses | - | - |

Source: VMC Table 14.09.24.0C
dBA = A-weighted decibels; $L_{DN}$ = Day Night sound level
[1] Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

**TABLE 17.**
**NOISE STANDARD FOR NON-TRANSPORTATION SOURCES**

| Land Use Category | Noise Level Descriptor | Exterior Noise Standard (dBA)[1] | | Interior Noise Standard (dBA)[1] | |
|---|---|---|---|---|---|
| | | Daytime[2] | Nighttime[2] | Daytime[2] | Nighttime[2] |
| Residential | 1-Hour $L_{EQ}$ | 50 | 45 | 45 | 35 |
| Residential | $L_{MAX}$ | 65 | - | - | - |
| Transient Lodging: Motels, Hotels | 1-Hour $L_{EQ}$ | - | - | 45 | 35 |
| Hospitals, Nursing Homes | 1-Hour $L_{EQ}$ | 50 | 45 | 45 | 35 |
| Other Uses | 1-Hour $L_{EQ}$ | - | - | - | - |
| Other Uses | $L_{MAX}$ | - | - | - | - |

Source: City of VMC Table 14.09.24.0D

dBA = A-weighted decibels; $L_{DN}$ = Day Night sound level; $L_{EQ}$ = time-averaged noise level; $L_{MAX}$ = maximum noise level

[1] Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

[2] Daytime standards apply to the hours from 7:00 a.m. to 10:00 p.m.

[3] Nighttime standards apply to the hours from 10:00 p.m. to 7:00 a.m.

3. Transportation Sources. The standard of noise measurement for transportation noise is the $D_NL$. All new uses shall comply with the standards established in Table 14.09.240.C [reproduced in the report as Table 17, above], except that the decision maker may approve an exception to the standards contained in Table 14.09.240.D for unique situations where the requirement of strict compliance with the standard is not practical or feasible. In such situations, the decision maker shall find that the projected noise levels have been mitigated to the maximum extent practical.

4. Non-transportation Sources. Two standards apply to non-transportation noise sources: the hourly $L_{EQ}$ (dBA), and the $L_{MAX}$ (dBA). Table 14.09.240.D [reproduced in the report as Table 17, above] shows the $L_{EQ}$ and the $L_{MAX}$ daytime and nighttime noise standards for non-transportation sources when located near sensitive land uses. All uses shall comply with these standards. The noise standards for non-transportation sources shall not apply in the following situations:

    a. To new uses if the ambient noise levels exceed the hourly $L_{EQ}$ or $L_{MAX}$ of the proposed noise generator, unless the additional noise generated would increase the projected, combined noise levels a minimum of three decibels; or

    b. To public parks or public playgrounds upon a finding by the decision maker that the location of the facilities within the park or playground reasonably limits the noise impacts upon other land uses; or

    c. For nuisance abatement related to residential generated noise sources including, but not limited to, children playing, lawn mowers, barking dogs, and musical equipment; or

    d. To residential caretaker units established in conjunction with nonresidential uses; or

e. To construction activity related to public improvement projects where the Director of Community Development has determined that full compliance with these standards cannot practically be achieved.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Noise impacts are discussed in Chapter 4.11 of the City of Vacaville General Plan EIR. The EIR determined that implementation and construction of the General Plan would result in less than significant impacts regarding exceeding standard in the General Plan or City ordinances, less than significant impacts regarding groundborne vibrations, less than significant impacts regarding temporary increase in ambient noise levels, and less than significant impacts regarding aircraft noise sources. The EIR determined that implementation of the General Plan would result in a potentially significant impact regarding permanent increases in ambient traffic noise. Mitigation Measure NOI-1, requiring resurfacing portions of Vaca Valley Parkway, Leisure Town Road, and Ulatis Drive with a quiet pavement would reduce the impact to a less than significant level.

### Discussion of Impacts

a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

**Less than significant with mitigation incorporated**. The General Plan EIR concluded that adherence to the policies contained in the General Plan would ensure that impacts from the exposure of sensitive receptors to excessive noise levels from stationary noise source, railroad noise source, and traffic noise sources would be less than significant.

<u>On-site Noise Sources</u>

Project on-site noise sources would include noise from proposed recreational activities, the multi-purpose recreation center, and the event pavilion. The following proposed project features would not involve inherently noisy activities and would not result in the generation of noise levels exceeding City standards:

- Phase I Great Meadow Trails and Overlook
- Phase I Disc Golf Course
- Phase II Trails and Pedestrian Access
- Phase III Trails and Pedestrian Access
- Phase IV Skate Park
- Phase V Disc Golf Course
- Picnic and Passive Areas

The following proposed project features could generate moderate noise levels but would not result in the generation of noise levels exceeding City standards because they would be located more than 500 feet from the NSLUs west of the project site:

- Phase I Bike Skills Course
- Phase II Multi-Purpose Recreation Center
- Phase II Tennis Courts

- Phase III Horse Creek Soccer Complex Expansion
- Phase III Renovated Ballfield Complex
- Phase IV Water Play and Central Lawn Area
- Phase IV Basketball Courts
- Phase V Nature Playscape
- Phase V Sand Volleyball Courts

The following project features have the potential to generate noise levels exceeding City standards and would be located within 500 feet of the NSLUs west of the project site:

Phase I Dog Park. The dog park would be located in the western portion of the project site approximately 150 feet from the residences to the west. In its discretion, as lead agency, and per City ordinance 14.09.240.140(4)(b) (see the Regulatory Framework discussion above), the City has determined that the location of the Phase I Dog Park within the project site reasonably limits the noise impacts upon NSLUs west of the project site.

Phase IV RC Car Track. The RC car track would be located in the western portion of the project site approximately 150 feet from the residences to the west. Published verifiable data of RC car noise was not available at the time of this analysis. Electric powered RC cars are not known to be a common source of noise complaints; however, internal combustion engine RC cars are a known source of noise complaints. Unverified data indicated noise levels from internal combustion engine RC could be as loud as 90 dBA at 50 feet. At 150 feet, this would result in approximate noise levels of 80 dBA, exceeding the VMC Section 14.09.240.140 standard of 65 dBA $L_{MAX,}$ 50 dBA $L_{EQ}$ daytime and 45 dBA $L_{EQ}$ nighttime received at residential uses, resulting in a potentially significant impact. Due to the high noise level of internal combustion powered RC cars, sound walls would not be feasible for reducing noise levels to below City standards. Mitigation Measure NOI-1 would require prohibiting the use of internal combustion powered RC cars at the RC car track.

Phase V Event Pavilion. The event pavilion would be located in the western portion of the project site approximately 350 feet from the residences to the west. The event pavilion would include amplified speech and music and accommodate approximately 200 seated inside the pavilion and up to 1,000 people in lawn seating area. Potential noise from amplified speech and music was modeled using the Computer Aided Noise Abatement (CadnaA) model version 2023. Specific details of the pavilion structure and sound system were not available at the time of this analysis. Assuming four speakers mounted on poles at a height of eight feet producing a sound level of 72 dBA $L_{EQ}$ at 50 feet each, noise received at the residences to the west would be approximately 54 dBA $L_{EQ}$, for just the amplified speech/music (not considering crowd noise), exceeding the VMC Section 14.09.240.140 standard of 50 dBA $L_{EQ}$ daytime and 45 dBA $L_{EQ}$ nighttime received at residential uses, resulting in a potentially significant impact. Mitigation Measure NOI-2 would require an acoustical study be completed to ensure that the final design of the event pavilion structure, sound systems, and seating areas do not result in noise exceeding City standards.

**Rail Noise Sources**

The Union Pacic rail line is located approximately 3.5 miles southeast of the project site and would not result in exposure of park users to excessive noise from trains.

**Traffic Noise Sources**

As discussed above, Interstate 80 is located approximately 2,600 (0.5 mile) feet to the southeast, and Interstate 505 is located approximately 3,700 feet (0.7 mile) to the east. Per Figure 4.11-1 from the General Plan EIR, project site is not within the 60 to 65 $L_{DN}$ noise contours for Interstate 80 and Interstate 505. Therefore, park users would not be exposed to excessive noise from traffic.

**Impact Conclusion**

Impacts from traffic noise, railroad noise, and the project's dog park would be less than significant. Impact from on-site noises generated by the RC car track and event pavilion would be potentially significant. Mitigation Measures NOI-1 and NOI-2 would ensure that project on-site noise sources would not exceed City standards measured at residences to the west of the project site. The impact would be *less than significant with mitigation incorporated*.

b) Expose persons to or generate excessive groundborne vibration or groundborne noise levels?

**No new impact.** The General Plan EIR concluded that adherence to the policies contained in the General Plan would ensure that impacts from the exposure of sensitive receptors to vibration, or the generation of vibration would be less than significant.

An on-site source of vibration during project construction would be a vibratory roller (primarily used to achieve soil and pavement compaction), which could be used within approximately 100 feet of the residences to the west. According to Caltrans, a vibratory roller creates a PPV of 0.210 in/sec at 25 feet (Caltrans 2020). At 100 feet, a vibratory roller would create a PPV of 0.046 in/sec.[3] This would not exceed the Caltrans the damage potential criteria of 0.4 inch per second PPV for residential buildings in good repair with gypsum board walls (Caltrans 2020). Once operational, the project would not be a source of ground-borne vibrations. The project would not result in the generation of excessive ground-borne vibration or ground-borne noise levels, and the impact would be less than significant. Therefore, there would be *no new impact*.

c) Substantially, permanently increase ambient noise levels in the project vicinity by more than 5 dBA above levels existing without the project?

**No new impact**. The General Plan EIR concluded, with implementation of the policies contained in the General Plan, the exposure of sensitive receptors to excessive noise levels from construction activities associated with development allowed by the proposed General Plan would be less-than-significant.

Modeling completed for the air quality and GHG emissions impacts (described in Sections 7.III and 7.VIII) concluded that the project would result in 2,759 average daily trips (ADT) on weekdays, 2,977 ADT on Saturdays, and 3,395 ADT on Sundays. Most of the traffic would access the park to use the Multi-Purpose Recreation Center, event pavilion, and other project amenities located on the southern side of the project. Traffic entering the project site from the south would utilize Allison Drive and Browns Valley Parkway, which do not have NSLUs near the roadways between the project and Interstate 80. Traffic entering park from the north would primarily be to use the bike skills course and Great Meadow trails.

[3] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2013b.

Per the air quality Phase I modeling, project trips for the bike skills course, Great Meadow trails, and dog park combined would be 94 ADT weekdays, 236 ADT Saturdays, and 263 ADT Sundays. A doubling of traffic noise (an increase in 3 dBA) requires a doubling of traffic volumes. It is not anticipated that project traffic entering the park from the north on Allison Parkway would double the traffic utilizing the road to access the business and homes along the roadway. Therefore, the project would not result in a substantial permanent increase in ambient noise level in the project vicinity and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Substantially, temporarily, or periodically increase ambient noise levels in the project vicinity by more than 5 dBA above levels existing without the project?

**Less than significant with mitigation incorporated.** The General Plan EIR concluded that adherence to the policies contained in the General Plan would ensure that impacts from the exposure of sensitive receptors to noise from on-site construction noise and off-site construction traffic noise would be less than significant.

Policy NOI-P4.2 from the City General Plan requires the following construction noise control measures be implemented as applicable:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.
- Limit hours of operation of outdoor noise sources through conditions of approval.

The project would require the use of heavy construction equipment throughout most of the 20-year project implementation. In particular, it is anticipated that soil import would occur over an approximately 8.5-year period starting in late 2024. Grading of import soil would require the use of heavy earth moving equipment such as scrapers, graders, and dozers which could be used in conjunction within 50 feet of residences along the western side of the project. Using the U.S. Department of Transportation (USDOT) Roadway Construction Noise Model (RCNM), the combined noise from a scraper, grader, and dozer at 50 would be 84.4 dBA $L_{EQ}$. Per VMC Section 8.10.060, construction of a City project is not subject to the construction hours restriction in the ordinance. Although it is not anticipated that heavy duty construction equipment would be used near any single NSLU for the entire construction duration, due to the length of the construction period, nighttime construction could result substantial sleep disturbance for nearby residents from the use of heavy earth moving equipment.

Importing soil would result in up to 135 one-way truck trips per workday, or up to 17 one-way truck trips per hour. Most of the soil would be imported to the northern portion of the project site which would require haul trucks to access the site on Vaca Valley Parkway and Allison Parkway, potentially passing by residences along the roadway near the intersection of those streets. Nighttime construction could result in substantial sleep disturbance for nearby residents from soil haul trucks. Therefore, project construction noise impacts would be potentially significant. Mitigation Measure NOI-3 would limit

construction activities to the hours between 7:00 a.m. and 7:00 p.m. Monday through Saturday. With implementation of construction control measures in Policy NOI-P4.2 and limiting construction hours per Mitigation Measure NOI-3, the impact would be less than significant.

e) Expose people residing or working in the project area to excessive noise levels from aircraft noise sources?

**No new impact**. The General Plan EIR concluded that adherence to the policies contained in the General Plan would ensure that the exposure of sensitive receptors to excessive noise levels from aircraft noise sources would be a less-than-significant impact. As discussed in Section 7.IX, the project is located within the Nut Tree Airport Land Use Plan area zones C and E and is consistent with the Airport Master Plan zoning designation of Community Facilities & Open Space, as well as the land use designation of public parks/open space. Per Figure 4.11-2 from the General Plan EIR, the project site is not within or touching the 65 CNEL noise Nut Tree Airport noise contour. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from aircraft noise sources. The impact would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

### Mitigation Measures

**NOI-1** **RC Track Noise Control**. The City shall enforce a prohibition of operating internal combustion powered RC cars at the project RC track. The City shall ensure the project plans include signage clearly listing the prohibition of internal combustion powered RC cars use and contact information to register noise complaints with the City.

**NOI-2** **Event Pavilion Acoustical Study**. Before approving final plans for the event pavilion structure, orientation, seating layout, and sound system, the City shall require completion of an acoustical analysis which demonstrates that noise from events at the event pavilion does not exceed City standards measured at the residential properties west of the project.

**NOI-3** **Construction Hours**. The City shall ensure all project construction contractors prohibit project construction activities, including on-site equipment use and off-site soil hauling, from occurring outside the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday, or at any time on Sundays or City recognized holidays. The City shall ensure that all project entrances include a clearly visible sign listing the permissible construction hours and listing contact information for the City and contractor to register noise complaints.

# XIII. POPULATION AND HOUSING

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☐ | ☒ |
| b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The proposed project would expand the existing Centennial Park with the goal to serve the entire City of Vacaville at full buildout. There are no existing residences located on the project site.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

There are no federal regulations pertaining to population or housing that apply to the proposed project.

#### State Laws, Regulations, and Policies

California Government Code Section 65581

California Government Code Section 65581 *et seq.* requires a Housing Element to be included in all city and county General Plans. State Housing Element law mandates that jurisdictions provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community. Compliance with this requirement is measured by the jurisdiction's ability to provide adequate land to accommodate a share of the region's projected housing needs for the applicable planning period. This share is known as the Regional Housing Needs Allocation (RHNA).

#### Local Laws, Regulations, and Policies

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal LU-1. Preserve, Promote, and Protect the Existing Character and Quality of Life Within Vacaville.**

- Policy LU-P1.4: Protect established neighborhoods from incompatible uses.

**Goal LU-3. Coordinate Land Development with the Provision of Services and Infrastructure.**

- Policy LU-P3.2: Manage growth so that the quantity and quality of public services and utilities provided to existing businesses and residents will not drop below required levels of service because of new development, except when required findings related to levels of service are made. While existing development bears some responsibility to fund improvements that will resolve such deficits, ensure that new development also funds its fair share of the costs of maintenance and depreciation of facilities.

- Policy LU-P3.4: Do not approve new development unless there is infrastructure in place or planned to support the growth.

**Goal LU-5. Maintain the City's Urban Growth Boundary.**

- Policy LU-P5.4: Establish and Maintain an Urban Growth Boundary: Establish and maintain an Urban Growth Boundary so that urban development within the City's land use jurisdiction will be focused within the Urban Growth Boundary and the land outside the Urban Growth Boundary within the City's land use jurisdiction will be maintained primarily for agriculture, park, open space, public facility, and utility uses until March 1, 2028, as generally described in Policies LU-P5.1 through LU-P5.3, and as more specifically set forth in Policies LU-P5.5 through LU-P5.7. Until March 1, 2028, Section 2.10 of the Vacaville General Plan Land Use Element may be amended only by the voters of the City or as provided in Policy LU-P5.7. The Urban Growth Boundary is established at the location shown on Figure LU-4 of the General Plan.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Population and housing are discussed in Chapter 4.12 of the City of Vacaville General Plan EIR. The EIR determined that, due to the amount of new development projected in the General Plan Update, implementation of the General Plan would result in significant and unavoidable population growth within the EIR project site.

### Discussion of Impacts

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would induce substantial population growth, and impacts would be significant and unavoidable. However, the proposed project would not induce unplanned population growth directly or indirectly because it does not include construction of new homes, businesses, or roads. The proposed project would accommodate existing recreational needs of the local community and would have a less than significant impact on population growth. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would allow a net increase of housing and would not envision substantial redevelopment projects, and impacts would be less than significant. There are no existing housing units on the project site as the site is currently used as a park and open space. Therefore, the proposed project would have no impact on displacement of housing and would not necessitate the construction of replacement housing. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

**No new impact.** The General Plan EIR concluded that implementation of the City's General Plan Update would not displace substantial numbers of people who either live, work, or do both within Vacaville, and impacts would be less than significant. There are no existing residents on the project site as the site is currently used as a park and open space. Therefore, the proposed project would have no impact on displacement of people and would not necessitate the construction of replacement housing. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

# XIV. PUBLIC SERVICES AND RECREATION

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives? | ☐ | ☐ | ☐ | ☒ |
| b) | Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection services, need for new or physically altered fire protection services, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives? | ☐ | ☐ | ☐ | ☒ |
| c) | Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives? | ☐ | ☐ | ☐ | ☒ |
| d) | Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives? | ☐ | ☐ | ☐ | ☒ |
| e) | Result in substantial adverse impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives? | ☐ | ☒ | ☐ | ☐ |
| f) | Increase the use of existing neighborhood, community, and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| g) | Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☒ | ☐ | ☐ |

## Affected Environment

The proposed project would expand the existing Centennial Park to include the full 276-acre project site located at the corner of Allison Drive and Browns Valley Parkway. The project site is surrounded by existing urban development. The site is bordered by Browns Valley Parkway to the south, the Putah South Canal to the east with Nut Tree Airport beyond, residential developments (single-family residences) to the west, and mixed land uses (institutional, commercial, etc.) to the north. The site is located in the incorporated boundaries of the City of Vacaville; all public services and facilities are available to serve the project site, as noted below.

*Fire, Rescue, and Emergency Medical Services*

The Vacaville Fire Department (VFD) provides fire and emergency medical services to approximately 28 square miles within the City of Vacaville, as well as emergency medical services to approximately 160 square miles of unincorporated county land surrounding the city. VFD responds to calls to services for fires, hazardous materials emergencies, certain technical emergencies, vehicle accidents and extrication incidents, and first responder and transport services. VFD also organizes and conducts a fire prevention and public education program in the City, including business and occupancy inspections.

VFD maintains several facilities and a variety of equipment. In addition to its administrative offices at City Hall, VFD has five existing fire stations that serve the City. Beyond ambulances and basic fire engines, VFD maintains and operates a variety of specialty and support equipment. Funding for VFD comes from the City's General Fund, ambulance transport fees, Special Paramedic tax, Inspections fees, impact fees from new development, and from public safety Community Facilities Districts (CFDs), which have been formed for new development areas to offset the costs of providing public safety services to such areas through the levy of special taxes.

Fire service for the areas surrounding the City limits is provided by fire protection districts, including the Vacaville Fire Protection District, Dixon Fire Protection District, and Suisun Fire Protection District. In addition, VFD is actively involved in formal agreements with the City of Dixon, the City of Fairfield, and the Vacaville Fire Protection District to provide automatic aid responses in designated areas. VFD also participates in a Mutual Aid Plan with other fire departments in Solano County.

*Law Enforcement*

The Vacaville Police Department (VPD) provides law enforcement service to the City of Vacaville. Responsibilities of VPD include a 24/7 communication center, crime suppression and prevention, investigations, traffic patrol, and emergency service. In addition, VPD oversees the Reserve Officer and Cadet Programs and administers specialty units. There is one main VPD police station, which is located at 660 Merchant Street, adjacent to Vacaville City Hall. VPD is currently meeting or exceeding its adopted standards for response times.

Funding for VPD mainly comes from the City's General Fund. A small percentage of other funding comes from grants and development impact fees. In addition, public safety CFDs have been formed for new development areas to offset the costs of providing public safety services to such areas through the levy of special taxes.

VPD participates in a regional Office of Emergency Services mutual aid agreement. By participating in this mutual aid agreement, VPD commits staff and other resources to assist with disasters throughout the State. In return, VPD receives assistance from outside entities should a significant emergency occur in the City. Additionally, the Solano County Sheriff's Office provides law enforcement and emergency response in unincorporated parts of Solano County and provides a small degree of support for City of Vacaville police, assisting the City with police services approximately ten to 15 times per year.

*Schools*

Schools play a central role in the daily life of the City. New families contemplating a home in the City of Vacaville look at the quality of local schools as part of their evaluation of whether to settle in town, and existing residents are actively engaged in schools to help them maintain a high level of achievement. School children require an environment that excites and stimulates learning. The City of Vacaville does not have jurisdiction over local schools. However, schools are an important part of the community, and the General Plan can support the mission of local school districts and the provision of high-quality education for the City of Vacaville's children. The school nearest to the project site is Edwin Markham Elementary School, located 0.22-mile southwest of the project site.

*Parks*

City residents have access to a variety of City-owned and operated parks and recreational facilities. The City owns and operates three categories of parks: neighborhood, community, and regional parks. In addition, the City owns and operates accessible open space, special purpose facilities, and trails. The City has over 2,700 acres of parks and open space, including seven community parks, 25 neighborhood parks, 22 accessible open spaces, and one regional park. The proposed project is an expansion of the existing Centennial Park, which was 35.7 acres in size at the time of the drafting of the General Plan but is currently 53.4 acres. Centennial Park is currently, and would continue to be, a community park; it is outlined in the General Plan as being a notable exception to the maximum 40-acre size standard for community parks in that it is intended to ultimately include all 276 acres of the project site and serve the entire City of Vacaville (City of Vacaville 2013). The City of Vacaville General Plan outlines the service area standards for neighborhood and community parks. The service area is a radius drawn around a neighborhood or community park, rather than as travel time; although significant barriers to transportation, such as freeways and canals, should be taken into consideration. All residential areas of the City should be served by a neighborhood and a community park within the service area standards provided below; although, a community park may serve the residents within 0.5-mile as their neighborhood park.

*Libraries and Other Public Facilities*

The City of Vacaville owns and/or operates numerous public buildings in the city, including City Hall, a public works corporation yard, remote City offices at the corner of Buck Avenue and Eldridge Street, and the Easterly Wastewater Treatment Plant. City Hall is located at 650 Merchant Street. The facility provides for governance and administrative functions, such as the City Council, City Manager, City Attorney, Finance Department, and the City Clerk, and also houses the administrative offices of multiple City departments, including Community Development, Police, Fire, and Public Works. The Public Works corporation yard is located at 1001 Allison Drive, just east of Downtown Vacaville. It provides facilities for municipal building, engineering, maintenance, and public works functions. The remote City offices located at the corner of Buck Avenue and Eldridge Street house the City's Community Services and

Housing Services departments. The Easterly Wastewater Treatment Plant, which is discussed further in the wastewater section of this Element, is located at 6040 Vaca Station Road and treats wastewater collected in the City.

There are two libraries in the City of Vacaville and both are maintained by the Solano County Library System in cooperation with the Vacaville Unified School District Library District. The Town Square branch of the Vacaville Public Library, located at 1 Town Square Place, opened in 2005 and features 25,000 square feet of space. The Cultural Center branch, located at 1020 Ulatis Drive, was remodeled in 2005 and features 24,000 square feet of space. Both libraries feature a meeting room, a study room, and a computer center, as well as additional equipment and technological amenities.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

National Trails System

The National Trails System Act of 1968 authorized The National Trails System (NTS) in order to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The Appalachian and Pacific Crest National Scenic Trails were the first two components, and the System has grown to include 20 national trails.

The National Trails System includes four classes of trails:

a) National Scenic Trails (NST) provide outdoor recreation and the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. The Pacific Coast Trail falls under this category. The Pacific Coast Trail passes through the Desolation Wilderness area along the western plan area boundary.

b) National Historic Trails (NHT) follow travel routes of national historic significance. The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County, the California National Historic Trail, and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express NHT commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.

c) National Recreation Trails (NRT) are in, or reasonably accessible to, urban areas on federal, State, or private lands. In El Dorado County, there are 5 NRTs.

**State Laws, Regulations, and Policies**

California Fire Code

The California Fire Code (Title 24 CCR, Part 9) establishes minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of CCR contains requirements for fire safety during construction and demolition.

California Public Resources Code Division 4: Forests, Forestry and Range and Forage Lands

California PRC Sections 4291 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Requirements regarding hazardous vegetation and fuel management are also contained in Sections 4906 and 4907 of the CFC.

California PRC Section 4290 requires CAL FIRE to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within the SRA and lands within very high FHSZs. Additional regulations regarding defensible space can be found in Title 14, Sections 1270.00 *et seq*. of the California Code of Regulations. The proposed project is not in a CAL FIRE FHSZ and is labeled as being at moderate risk for wildfire exposure according to the General Plan (City of Vacaville 2013.)

The California Parklands Act

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) recognizes the public interest for the state to acquire, develop, and restore areas for recreation and to aid local governments to do the same. The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

The California state legislature approved the California Recreational Trail Act of 1974 (Public Resources Code Section 2070-5077.8) requiring that the Department of Parks and Recreation prepare a comprehensive plan for California trails. The California Recreational Trails Plan is produced for all California agencies and recreation providers that manage trails. The Plan includes information on the benefits of trails, how to acquire funding, effective stewardship, and how to encourage cooperation among different trail users.

The 1975 Quimby Act (California Government Code Section 66477) requires residential subdivision developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. Since the passage of the 1975 Quimby Act, cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements, or pay in-lieu fees. The exactions only apply to the acquisition of new parkland; they do not apply to the physical development of new park facilities or associated operations and maintenance costs.

As of the certification of the City of Vacaville General Plan, the City was considering the implementation

of Quimby Ordinance to better provide dedication of new park lands to serve new residential development. The ordinance itself, however, has not been implemented as of the drafting of this IS/MND.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The 2013 City of Vacaville General Plan Parks and Recreation Element establishes goals and policies that address needs for the provision and maintenance of parks and recreation facilities in the County, with a focus on providing recreational opportunities and facilities on a regional scale, securing adequate funding sources, and increasing tourism and recreation-based businesses. Under the parks standards outlined in the General Plan, the City aims to provide 1.8 acres of neighborhood parkland, 1.7 acres of community parkland, and one acre of regional parkland per 1,000 Vacaville residents, for a total of 4.5 acres of developed parkland per 1,000 Vacaville residents. Currently, the City is deficient in meeting the service standard for neighborhood parks and community parks but does exceed the standard for regional and total parkland categories.

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal PUB-1: Provide Adequate Fire, Rescue, and Emergency Medical Services to Serve Existing and New Development.**

- Policy PUB-P1.1: Prohibit any development that will not, even with identified mitigation measures, maintain standards for fire, rescue, and emergency medical service. All service standards shall be met prior to project occupancy. Allow exceptions to these services standards only when there are overriding findings of special circumstances or economic or social benefits.

- Policy PUB-P1.2: Ensure that new development pays a fair and equitable amount to offset the costs for fire, rescue, and emergency medical response services by collecting impact fees, requiring developers to build new facilities, and requiring the new areas to create or annex into a Community Facilities District.

- Policy PUB-P1.4: Identify and mitigate fire hazards during the project review and approval process.

- Policy PUB-P1.5: Require that new development satisfy fire flow and hydrant requirements and other design requirements as established by the Fire Department.

**Goal PUB-2: Maintain a Safe Environment in Vacaville Through the Enforcement of the Law.**

- Policy PUB-P2.2: Prohibit any development that will not, even with identified mitigation measures, maintain standards for law enforcement service. All service standards shall be met prior to project occupancy. Allow exceptions to these services standards only when there are overriding findings of special circumstances or economic or social benefits.

- Policy PUB-P2.4: Identify and mitigate law enforcement hazards during the project review and approval process by incorporating passive environmental measures such as enhanced lighting and safety in public spaces and adequate property maintenance.

- Policy PUB-2.5: Require physical site planning that prevents crime by locating walkways, open spaces, landscaping, parking lots, parks, play areas, and other public spaces in areas that are visible from buildings and streets.

**Goal PUB-5: Build and Maintain Public Buildings that are a Source of Civic Pride for All Residents**

- Policy PUB-P5.2: Design public buildings and facilities to maintain and improve the beauty of Vacaville.

- Policy PUB-P5.3: Design public buildings to fit into and complement their ultimate surroundings and buffer public buildings from their surroundings to shield unsightly areas from public view.

**Goal SAF-5: Protect Lives and Property from Wildland Fire Hazards.**

- Policy SAF-P5.2: Require that all development in areas of potential wildland fire hazards, including agricultural areas east of Leisure Town Road, include the following:

    - Fire breaks adjoining open space areas.

    - Adequate access to adjoining open space areas.

    - Clearance around structures and energy infrastructure.

    - Fire-resistant groundcover.

    - Fire-resistant roofing materials.

    - Adequate emergency water flow.

    - Adequate road dimensions and signage to support the delivery of firefighting services and evacuation.

- Policy SAF-P5.4: Require that all development adjacent to open agricultural lands or open space comply with state law regarding defensible open space, even if the agricultural lands are designated for future development.

- Policy SAF-P5.5: Incorporate drought-resistant and fire-resistant plants in public works projects in areas subject to wildland fires.

- Policy SAF-P5.7: Require all development applications to be reviewed and approved by the Fire Department prior to project approval.

**Goal PR-1. Develop and Maintain a High-Quality Public Park System That Provides Varied Recreational Opportunities for City Residents, Workers, and Visitors.**

- Policy PR-P1.1: Provide new parks according to the standards established in this Element to ensure adequate distribution, size, and access.

- Policy PR-P1.3: Provide community parks to encompass a range of uses, including active high-investment (e.g. gymnasiums and swimming pools), active low-investment (e.g. playfields and picnic facilities), and passive recreational facilities (e.g. natural areas suitable for quiet reflection). Community parks shall serve large portions of the city by providing facilities suitable for recreational and cultural activities beyond those supplied by neighborhood parks.

- Policy PR-P1.5: Support and encourage the location of special use recreation facilities, such as community gardens, dog parks, and skate parks, on available park or other public lands, where compatible with the existing and planned uses of surrounding properties.

- Policy PR-P1.6: Make provisions for seniors and people with disabilities to freely access and utilize parks and recreational facilities, according to local, State, and federal codes.

- Policy PR-P1.8: Make designated open spaces more accessible to the public with a linked park and trail system that takes advantage of surrounding open space.

- Action PR-A1.2: Provide additional trails and facilities where they are feasible and appropriate. Connect the trails system to the bikeways system wherever feasible and appropriate.

**Goal PR-3. Locate New Parks to Maximize Safety, Site Efficiency, Public Safety, and Convenient Public Access.**

- Policy PR-P3.1: Locate new neighborhood parks adjacent to new elementary schools where possible. Whenever possible, work with the school district to design both the park and school to maximize the benefits for the public.

- Policy PR-P3.2: Prohibit new neighborhood parks adjacent to arterial streets.

- Policy PR-P3.3: Wherever possible, site new parks and recreation facilities to promote pedestrian and bicycle access and prevent the need to cross major roadways.

- Policy PR-P3.4: Locate parks and recreation facilities to take advantage of natural features, adjoining open space, trail access, lands that may be jointly-used for recreation purposes, land use buffers (i.e. areas of open space or low-intensity uses between potentially conflicting land uses), urban separators, and easements.

- Action PR-A3.1: Coordinate with public safety staff in the design of parks and in the development of standards for park design. Incorporate these standards into the Update to the City's Parks & Recreation Master Plan.

**Goal PR-4. Provide and Maintain Parks that Reflect, Preserve, and Respect Vacaville's Natural Setting and the Public's Investment in Each Facility.**

- Policy PR-P4.1: Provide the public with clear signage regarding appropriate usage of parks, open space, trails, and other recreational facilities. Ensure that park regulations and local laws are appropriate and enforceable.

- Policy PR-P4.3: Develop and follow operations policies to prevent the degradation or despoilment of the City's parklands through inappropriate uses.

- Policy PR-P4.4: Preserve and enhance the natural areas and biotic resources within parks, such as riparian corridors, wildlife habitat, and oak woodlands. Integrate these resources into the recreational experience in ways that emphasize their importance and enjoyment to park users, such as providing trails, viewing platforms, and interpretive signage.

**Goal PR-5. Engage in Coordinated and Cooperative Park Planning Efforts.**

- Policy PR-P5.1: Involve interested members of the public, other public agencies, and private organizations in park and recreational facility planning.

**Goal PR-6. Provide Parks and Recreational Programs that Promote and Support Physical Activity and a Healthy Lifestyle in Vacaville.**

- Policy PR-P6.2: Design parks to ensure that Vacaville continues to provide a combination of both active and passive recreational opportunities for all age levels, including walking, jogging, organized team sports, and informal group sports.

- Policy PR-P6.3: Expand opportunities for visual and performing arts as well as programs and events that provide entertainment, such as concerts.

**Goal PR-7: Provide a Parks and Recreation System that is Accessible to Youth, Seniors, and People of All Abilities.**

- Policy PR-P7.1: Expand recreation programs for youth and teens, including sports and fitness, outdoor activity and excursions, and arts education.

- Policy PR-P7.2: Expand opportunities for youth to be involved in planning recreation programs, services, and events for youth.

- Policy PR-P7.3: Identify and remove barriers to accessibility to older parks and recreation facilities.

- Policy PR-P7.4: Prioritize provision and improvements of parks and recreation facilities in low-income areas that lack parks and recreation facilities or have substandard facilities.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Public services and recreation are discussed in Chapter 4.13 of the General Plan EIR (City of Vacaville 2013). The EIR concluded that implementation and construction of the General Plan would not have any significant impacts on public services and no mitigation measures were suggested. The proposed general plan includes policies and actions that aim to provide adequate public services and recreation to serve existing and new development, thus there were no significant impacts or mitigation measures included in the General Plan EIR regarding public services and recreation. No mitigation measures were proposed in the EIR for parks and recreation.

### Discussion of Impacts

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

**No new impact.** The project site would be served by the Vacaville Police Department, which has a police station located at 660 Merchant Street, Vacaville, CA 95688 approximately 1.9 miles southwest of the project site. Considering the project site's proximity to the police department station and currently developed surroundings to the east, north, and west of the site, it is anticipated that existing police services would be adequate, and no new police protection facilities would be necessary. The proposed project would have a less than significant impact on police protection, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

b) Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection services, need for new or physically altered fire protection services, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

**No new impact.** The project site would be served by the Vacaville Fire District and the nearest station is Station 73 located at 650 Eubanks Court, Vacaville, CA 95688 approximately 0.65-mile northeast of the project site. Considering the project site's proximity to a fire station and already developed surroundings to the north, west, and east of the site, the proposed project would not necessitate new fire protection facilities. The proposed project would have a less than significant impact on fire protection, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

**No new impact.** The proposed project is not a residential development that would induce growth and draw new people to the area that would impact local schools. Therefore, the proposed project would have no impact regarding the need for new expanded school facilities, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

**No new impact.** The proposed project is not a residential development that would induce growth or draw new people to the area to a level that would impact local libraries. Therefore, the proposed project would have no impact on library facilities, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

e) Result in substantial adverse impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives?

**Less than significant with mitigation incorporated.** The approximately 276-acre project site features the existing 53.4-acre Centennial Park. As envisioned in the General Plan, the proposed project would expand the existing Centennial Park to develop the approximately 276-acre project site, providing additional recreational and park services to the entire City. The additional amenities to be developed would include a new dog park, bike skills course including a maintenance building and restroom, 18-hole disc golf course, multi-purpose recreation center and outdoor seating area, new tennis courts, soccer complex expansion including a maintenance building, water play area, skate park, RC car track, basketball courts, ballfield maintenance building and restroom, event pavilion, pollinator garden, nature playscape area, sand volleyball courts, trails, group picnic areas, and landscaping. The project would also include the expansion of parking from approximately 380 existing parking spaces to over 1,000 parking spaces and would extend the Allison Parkway access point in the northern portion of the project site.

As outlined in this Initial Study, impacts to biological resources (Section 7.IV), cultural resources (Section 7.V), energy (Section 7.VI), geology, soils, and mineral resources (Section 7.VII), greenhouse gas emissions (Section 7.VIII), hazards and hazardous materials (Section 7.IX), noise (Section 7.XII), traffic and transportation (Section 7.XV), and tribal cultural resources (Section 7.XVI) would be less than significant with mitigation. Therefore, development of the expanded park as proposed would not result in substantial adverse impacts associated with the provision of new or physically altered park facilities, and impacts would be *less than significant with mitigation incorporated*.

f) Increase the use of existing neighborhood, community, and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?

**No new impact.** As noted above under question e), the approximately 276-acre project site features the existing 53.4-acre Centennial Park. As envisioned in the General Plan, the proposed project would expand the existing Centennial Park to develop the approximately 276-acre project site, providing additional recreational and park services to the entire City. The proposed facilities and associated improvements would not accelerate the deterioration of the existing park. The proposed project is intended to accommodate existing demands of the City of Vacaville residents, as envisioned in the General Plan. Therefore, the proposed project would have a less than significant impact on increasing

the use of existing neighborhood and regional parks or other recreational facilities, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

g) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

**Less than significant with mitigation incorporated.** See response to question e) above. Impacts would be *less than significant with mitigation incorporated* from the biological resources (Section 7.IV), cultural resources (Section 7.V), energy (Section 7.VI), geology, soils, and mineral resources (Section 7.VII), greenhouse gas emissions (Section 7.VIII), hazards and hazardous materials (Section 7.IX), noise (Section 7.XII), traffic and transportation (Section 7.XV), and tribal cultural resources (Section 7.XVI) sections of this Initial Study.

# XV. TRAFFIC AND TRANSPORTATION

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which states that, for land use projects "[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact"? | ☐ | ☐ | ☐ | ☒ |
| b) | Construct additional roadway capacity that would lead to induced travel and increased VMT? | ☐ | ☐ | ☐ | ☒ |
| c) | Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities? | ☐ | ☒ | ☐ | ☐ |
| d) | Substantially increase hazards sue to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | ☐ | ☒ | ☐ | ☐ |
| e) | Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

The project is located north of the intersection of Browns Valley Parkway and Allison Drive at 501 Browns Valley Parkway, Vacaville, CA 95688. The following roadways provide primary circulation within the vicinity of the proposed project:

- **Allison Drive** is a major north-south 4-lane arterial roadway that traverses Vacaville between Browns Valley Parkway and Elmira Road.
- **Browns Valley Parkway** is a major north-south arterial that traverses Vacaville from Interstate I-80 north to Cantelow Road. It is currently a 2-lane arterial from Allison Drive to Cantelow Road, and a 4-lane arterial from Interstate I-80 to Allison Drive. According to the City's General Plan, the portion of the road from Allison Drive to Vaca Valley Parkway is planned to be expanded by the City from 2 lanes to a 4-lane arterial by 2035.
- **Vaca Valley Parkway** is a major east-west arterial that traverses Vacaville from west of Wrentham Drive to Interstate I-80. It is a 4-lane arterial from the start of the road to Browns Valley Parkway, a 2-lane arterial from Browns Valley Parkway to Interstate I-505, and a 4-lane arterial that expands to 6 lanes when approaching the Interstate I-80 intersection. The portion of the road from Browns Valley Parkway to Interstate I-505 is planned to be expanded by the City from 2 lanes to a 4-lane arterial by 2035.
- **Allison Parkway** is a minor north-south 2-lane arterial that leads from Vaca Valley Parkway south to the project site.
- **E. Monte Vista Avenue** is a major east-west arterial roadway that traverses Vacaville between Alamo Drive and Vaca Valley Parkway. E. Monte Vista Avenue is two lanes wide east of County Airport Road and four lanes wide west of County Airport Road.

Full buildout of the park would include the expansion of parking from approximately 380 existing parking spaces to over 1,000 parking spaces and the extension of the Allison Parkway access point in the northern portion of the project site to connect to Allison Drive in the south and serve as both a maintenance and public access road.

## Regulatory Framework

### Federal Laws, Regulations, and Policies

#### Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency of the United States Department of Transportation (DOT) responsible for the federally-funded roadway system, including the interstate highway network and portions of the primary State highway network, such as Interstate 80 (I-80). FHWA funding is provided through the Moving Ahead for Progress in the 21st Century (MAP-21). MAP-21 can be used to fund local transportation improvements in Vacaville, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

#### 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 guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. The guidelines apply to all proposed roadways in the project area.

The City's ADA Coordinator works out of the Public Works Department to manage the City's efforts in complying with applicable accessibility regulations. The City formed an ADA Advisory Committee in 2004 to serve as a liaison between residents with disabilities and the City.

### State Laws, Regulations, and Policies

#### California Department of Transportation

The California Department of Transportation (Caltrans) is the primary State agency responsible for transportation issues. One of its duties is the construction and maintenance of the State highway system. Caltrans has established standards for roadway traffic flow and developed procedures to determine if State-controlled facilities require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects. Caltrans facilities within the Vacaville study area include Interstate 80 and Interstate 505, as well as the on- and off-ramps from these State facilities.

**Regional Agencies, Plans, and Policies**

Air Quality Districts

There are two air quality districts that address air pollution in the Vacaville General Plan study area. Since a primary source of air pollution in the Vacaville region is from motor vehicles, the district regulations affect transportation planning in the study area. The YSAQMD, established by a joint powers agreement between Yolo and Solano Counties, is responsible for protecting human health and property from the harmful effects of air pollution throughout the majority of the Vacaville study area. The Bay Area Air Quality Management District (BAAQMD) is a public agency tasked with regulating air pollution in the nine county Bay Area, including the southwest portion of Solano County. BAAQMD's goals include reducing health disparities due to air pollution, achieving and maintaining air quality standards, and implementing exemplary regulatory programs and compliance with federal, State, and regional regulations.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**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-P5.4: 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-P5.8: 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 TR-P5.5.

**Goal TR-6. Require Necessary Transportation Improvements from New Development.**

- Policy TR-P6.4: For locations where the LOS would exceed thresholds described in Policies TR-P5.2 and TR-P5.3 without the addition of traffic from a proposed development, the City may require incremental fair share traffic contributions from the proposed development.

**Goal TR-9. Provide a Balanced, Multimodal Transportation Network that Meets the Needs of All Users.**

- Policy TR-P9.2: Require that new and existing on-street bicycle lanes be striped, signed, and maintained to encourage their use.

- Policy TR-P9.3: Require that new development applications include transit amenities, such as bus stops, bus bays, transit shelters, benches, and on-site dropoff locations, as appropriate, or explain why these features are infeasible or unnecessary.

- 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-P10.1: Construct the comprehensive network of on- and off-roadway bike routes identified in Figure TR-2 to encourage the use of bikes for commute, recreational, and other trips as part of new development and as funding allows in existing developed areas.

- Policy TR-P8.5: Enhance 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-P11.2: Design separated pedestrian paths and trails to be convenient, visible, and safe for all pedestrian transportation needs.

- Policy TR-P11.3: Continue to support programs to improve the mobility of the elderly and disabled, remove existing architectural barriers, and require that new development be accessible to those with physical impairments.

### Impacts and Mitigation Measures from the City of Vacaville General Plan SEIR and ECAS

Traffic and Transportation is discussed in Chapter 3.1 of the City's General Plan Supplemental EIR and updates to the Energy and Conservation Action Strategy (City of Vacaville 2021). The SEIR concluded that Implementation of the City's General Plan would generate average VMT per dwelling unit and per thousand square feet of non-residential space that exceeds the applicable significance threshold, and VMT impacts would be significant and unavoidable even with implementation of mitigation. All other

traffic or transportation impacts would be less than significant or less than significant with mitigation incorporated.

### Discussion of Impacts

a) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

**No new impact.** The General Plan and ECAS Update SEIR concluded that implementation of the City's General Plan would generate average VMT per dwelling unit and per thousand square feet of non-residential space that exceeds the applicable significance threshold, and the impact would be significant and unavoidable.

CEQA Guidelines Section 15064.3(b) indicates that land use projects would have a significant impact if the project resulted in VMT exceeding an applicable threshold of significance. In August 2021, the City's planning commission adopted an amendment to the City's General Plan Transportation Element to implement VMT as the primary metric used to identify potential transportation impacts in CEQA documents. When certifying the Supplemental EIR for the 2021 General Plan Transportation Element and ECAS, the City determined that projects that are consistent with the General Plan will not require further VMT analysis pursuant to CEQA (City of Vacaville 2021). The project property is designated for Public Park and Public Open Space in the City of Vacaville General Plan, and the proposed project includes the expansion of Centennial Park. Therefore, the proposed expansion of Centennial Park is consistent with the land use designation of the project site.

However, the General Plan EIR states that projects that are consistent with the General Plan would be subject to Mitigation Measure TRA-1 of the General Plan EIR unless it can be demonstrated that the project's specific land use type and location is in a "VMT efficient" location. Mitigation Measure TRA-1 from the General Plan is provided below:

> Proposed development projects that could have a potentially significant VMT impact shall consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT decrease. The below list of potential measures is not intended to be exhaustive, and not all measures may be feasible, reasonable, or applicable to all projects. The purpose of this list is to identify options for future development proposals, not to constrain projects to this list, or to require that a project examine or include all measures from this list. Potential measures include:
>
> - improving access to transit;
> - increasing access to common goods and services, such as groceries, schools, and daycare;
> - incorporating affordable housing, including low-income housing, into residential and mixed-use development;
> - **orienting the project toward transit, bicycle and pedestrian facilities;**
> - **improving pedestrian or bicycle networks, or transit service;**
> - implementing traffic calming;
> - **providing bicycle parking;**
> - unbundling parking costs;
> - implement employer parking cash-out programs;
> - implementing a commuter reduction program;

- providing car-sharing, bike sharing, and ride-sharing programs;
- providing transit subsidies or passes;
- providing ride-matching services;
- providing telework options;
- providing incentives or subsidies that increase the use of modes other than single-occupant vehicle;
- providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
- providing employee transportation coordinators at employment sites;
- providing a guaranteed ride home service to users of non-auto modes;
- increasing project density;
- increasing the mix of uses within the project or within the project's surroundings;
- **increasing connectivity and/or intersection density on the project site.**

The proposed project includes design measures that are consistent with measures included in Mitigation Measure TRA-1 above from the General Plan SEIR that are relevant to the expansion of a park (see bold bullets above). Specifically, the proposed project would orient the project toward transit bicycle, and pedestrian facilities, improve pedestrian and bicycle networks, provide bicycle parking, and increase connectivity on the project site by providing a vehicular, pedestrian, and bicycle connection between Allison Drive in the south and Allison Parkway in the north. Therefore, the proposed project incorporates VMT reduction measures into the design, and there would be *no new impact* compared to what was evaluated in the General Plan SEIR.

b) Construct additional roadway capacity that would lead to induced travel and increased VMT?

**No new impact.** The General Plan and ECAS Update SEIR concluded that implementation of the City's General Plan would result in additional roadway capacity that would lead to induced travel and increased VMT, but impacts would be less than significant with mitigation incorporated. The proposed project would extend the existing Allison Parkway in the northern portion of the project site to lead to the proposed parking lot adjacent to the bike skills course. However, it would not provide vehicular access to the southern portion of the project site for the general public and would be used only as access for maintenance and emergency vehicles. Additional roadways and driveways would be constructed in each phase of development to improve the internal road network of Centennial Park. However, the planned roadway improvements would be internal to the project site and would not include expansion of City roadways off-site that would induce travel or increase VMT. Therefore, there would be a less than significant impact, and *no new impact* compared to what was evaluated in the General Plan EIR. No mitigation is necessary.

c) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?

**Less than significant with mitigation incorporated.** The General Plan and ECAS Update SEIR concluded that implementation of the General Plan would not conflict with a program, plan, ordinance or policy addressing transit, bicycle or pedestrian facilities, and impacts would be less than significant. The expansion of Centennial Park includes the construction of pedestrian walking and bicycle trails as components of the proposed project. Full buildout of the park is anticipated to occur over time as

funding becomes available, and all construction and grading activities would be consistent with the VMC and not occur between dusk (0.5-hour after sunset) and dawn (0.5-hour before sunrise).

The General Plan includes goals and policies addressing the level of service (LOS) on Vacaville city streets and how to facilitate the safe and efficient movement of people, goods, and services. The General Plan EIR determined that the three intersections that surround the project site would have the following LOS upon implementation of the 2035 General Plan:

- Browns Valley Road at Allison Drive is a signalized intersection with an LOS projected to be B in the AM and B in the PM following implementation of the 2035 General Plan.

- Browns Valley Road at Brown Street is a signalized intersection with an LOS projected to be B in the AM and B in the PM following implementation of the 2035 General Plan.

- Vaca Valley Parkway at Allison Parkway is a one/two-way stop intersection with an LOS projected to be F in the AM (worst approach), C under AM normal conditions, D in the PM (worst approach), and A under PM normal conditions.

The General Plan EIR determined that implementation of the 2035 General Plan would result in a significant impact to the Vaca Valley Parkway at Allison Parkway intersection by degrading it to LOS F on the worst minor street approach during the AM peak hour and included Mitigation Measure TRAF-29 recommending that the City install stop signs on the eastbound and westbound approaches to provide all-way stop control at the intersection. City implementation of this improvement would provide LOS B with average delays of 11.6 seconds in the AM peak hour and 13.2 seconds in the PM peak hour, reducing potential impacts from implementation of the 2035 General Plan on the Vaca Valley Parkway at Allison Parkway intersection to be less than significant.

Operation of the proposed project could impact the LOS of the Vaca Valley Parkway at Allison Parkway intersection, as future Centennial Park goers could utilize this intersection to access the proposed ingress/egress point in the northern portion of the park. To ensure that the proposed project would not conflict with General Plan LOS goals and policies or substantially degrade the LOS of surrounding intersections, Mitigation Measure TRA-1 would require that an operational Transportation Impact Analysis be prepared to ensure that the LOS for the intersections surrounding the project site do not degrade below level D for the unsignalized two-way intersections and mid-D for signalized and all-way stop intersections.

With implementation of Mitigation Measure TRA-1, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, and impacts would be *less than significant with mitigation incorporated.*

d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

**Less than significant with mitigation incorporated.** The General Plan and ECAS Update SEIR concluded that implementation of the General Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Construction of the proposed project would generate a variety of truck and employee trips on local roadways and major arterials. The use of roadways by heavy construction equipment can increase the risk to drivers, cyclists, and pedestrians in the project area. Construction of the proposed

project could cause a temporary but prolonged impact to transportation and circulation in the project vicinity. For these reasons, traffic impacts during construction are considered potentially significant.

Mitigation Measure TRA-2 requires the project applicant to develop and adhere to a Construction Traffic Management Plan that identifies the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, employee parking, the proposed use of traffic control on public streets, and the proposed closures of public streets for City review and approval prior to the start of construction to ensure that its implementation would minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. Construction activities would generally be anticipated to occur within the project site; however, work may extend onto Allison Parkway and Allison Drive to connect to existing utility lines and other necessary improvements. Construction vehicles would be staged on-site, and staging/construction-vehicle parking on adjacent streets would be prohibited. With implementation of Mitigation Measure TRA-2, potential hazards from construction vehicles and equipment circulation and operations during project construction would be reduced to a less-than-significant level, and impacts would be *less than significant with mitigation incorporated*.

Operation of the proposed project would not result in changes to a roadway that would create road hazards or alter design features developed to mitigate such hazards. Buildout of the park as planned would include expanding the road network within the park site by re-surfacing the existing maintenance road leading from Allison Parkway in the northern portion of the project site to Allison Drive in the southern portion of the project site with roadway grindings and crushed concrete. The maintenance/access road would be raised to improve visibility and allow public vehicular access to the northern and central portions of the project site. The driveway entrances on Browns Valley Parkway in the south and Allison Parkway in the north would be gated and secured outside of park hours. The City would review all site plans to ensure that the proposed project roadways and/or driveways to be constructed in each phase of development would provide clear sight lines, adequate access for emergency vehicles, and pedestrian safety features. Therefore, operation of the proposed project would not substantially increase hazards due to a design feature, and impacts would be less than significant.

e) Result in inadequate emergency access?

**No new impact.** The General Plan and ECAS Update SEIR concluded that implementation of the General Plan would not result in inadequate emergency access. As described, the proposed project would generate traffic during construction through the transport of workers, equipment, and materials to and from the project site. However, construction activities are anticipated to be confined to the project site, and no road closures or detours are anticipated. The proposed project would be designed to incorporate all required VFD and VPD standards to ensure that buildout of the proposed park would not result in inadequate emergency access to and within the project site or areas surrounding the project site. Furthermore, the proposed project would include improving and raising the maintenance/access road leading from Allison Parkway in the northern portion of the project site to Allison Drive which would improve emergency vehicle access through the project site. Therefore, the proposed project would not result in inadequate emergency access and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

### Mitigation Measures

**TRA-1** **Operational Transportation Impact Analysis.** Because soil import for Phase I is anticipated to occur intermittently over 3 to 6 years, the park components to be developed as part of Phase I are not anticipated to be open to the public until 2030 at the earliest. Within 12 months of opening the Phase I project components to the public, a transportation impact analysis (TIA) shall be prepared by a qualified traffic engineer to evaluate the operational traffic impacts from implementation of the park components proposed in Phase I and to ensure the project's compliance with the LOS standards included in Policy 5.2 of the General Plan (at signalized and all-way stop control intersections, endeavor to maintain LOS mid-D or at two-way stop control intersections, attempt to maintain LOS D). The TIA shall include projections for traffic volumes, Level of Service (LOS), peak hour impacts, as well as targeted recommendations specifically for the current, known phase of the project. Transportation-related improvements required by the traffic engineer shall be installed and operational, as recommended, prior to the opening of Phase I.

As funding becomes available for project components proposed in Phases II through V of the Centennial Park Master Plan and before starting each new phase, the TIA prepared for Phase I shall be reviewed and updated for each phase or major project component proposed to be developed by the applicant or City based on the latest traffic data and any changes in local traffic conditions. Recommendations shall be adjusted as needed for upcoming phases as more details about future phases become available, incorporating improvements implemented from previous phases (if any) as well as any new traffic patterns that have emerged. These recommendations shall be implemented as required by the City of Vacaville.

**TRA-2** **Construction Traffic Management Plan.** The project applicant shall develop a Construction Traffic Management Plan to the satisfaction of the City of Vacaville's Public Works Department. The plan shall include items such as the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, and location of employee parking. The City of Vacaville's Public Works Department shall approve the plan prior to the start of project construction.

The overall goal of the Construction Traffic Management Plan would be to minimize traffic impacts to public streets and residential neighborhoods as well as maintain a high level of safety for all roadway users. The Construction Traffic Management Plan shall achieve the following performance standards throughout project construction:

- Construction vehicle traffic shall be managed such that delivery trucks and construction equipment exiting from the southern portion of the project site exit from Allison Drive which is light-controlled.

- Construction vehicle traffic shall be managed such that the available storage in the left-turn pocket on westbound Vaca Valley Parkway is not exceeded.

- Minimize construction vehicle traffic through residential neighborhoods to the extent feasible.

- Prohibit off-site construction and employee vehicle staging or parking.

# XVI. TRIBAL CULTURAL RESOURCES

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | |
| i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or | ☐ | ☒ | ☐ | ☐ |
| ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☒ | ☐ | ☐ |

### Affected Environment

According to Public Resources Code (PRC) Section 21074, a resource is a tribal cultural resource if it is either:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or
    b. Included in a local register of historical resources as defined in PRC Section 5020.1(k).

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying the criteria set forth in PRC Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.

3) A cultural landscape that meets the criteria of PRC Section 21074(a) to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

4) A historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a "non-unique archaeological resource" as defined in PRC Section 21083.2(h), if it conforms with the criteria of PRC Section 21074(a).

In accordance with PRC Section 21084.2, lead agencies are required to consider Tribal Cultural Resources (TCR) including a site feature, place, cultural landscape, sacred place or object, of cultural value to the tribe and is listed on the California Register of Historic Resources (CRHR) or a local register, or the Lead agency, at its discretion, chooses to treat resources as such.

In accordance with PRC Section 21080.3.1(b)(1), to date, the Yocha Dehe Wintun Nation is the only Tribe to request in writing to be informed by the City through formal notification of proposed projects in Vacaville.

*Assembly Bill (AB) 52 Consultations*

The Yocha Dehe Wintun Nation (Tribe) is the only regionally affiliated representatives that have requested formal notification on projects in the City of Vacaville. The City sent an email to the Yocha Dehe Wintun Nation on April 3, 2024 to initiate consultation under AB 52. On April 24, 2024, the Lead Agency and Yocha Dehe Wintun Nation held a virtual consultation meeting. On April 25, 2024, the Tribe sent a letter recommending that cultural monitors be present during all ground disturbance, including backhoe trenching and excavations, as well as Cultural Sensitivity Training. The Tribe also requested to participate in ongoing consultation with the City as the park is developed over time. The Tribe's requests have been included as mitigation measures in this section as well as Section 7.V, Cultural Resources.

### Regulatory Framework

#### Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to Tribal Cultural Resources.

#### State Laws, Regulations, and Policies

Assembly Bill 52

AB 52, which was approved in September 2014 and effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so, requested by the tribe. The bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or

b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

- A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, considering the tribal cultural values and meaning of the resource.

**Local Laws, Regulations, and Policies**

City of Vacaville General Plan

The following policies and/or actions from the City's General Plan are applicable to the proposed Centennial Park Master Plan project:

**Goal COS-6. Protect and Enhance Cultural Resources for their Aesthetic, Scientific, Educational, and Cultural Values.**

- Policy COS-P6.1: Consult with those Native American Tribes with ancestral ties to the Vacaville city limits regarding proposed new development projects and land use policy changes.

- Action COS-A6.1: Consult with Native American Tribes with ancestral ties to Vacaville to discuss tribal cultural resources and to create agreed upon parameters defining what type of projects will be routinely referred to the Tribes (e.g. project types, projects located in specific geographic locations).

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Tribal cultural resources impacts were not discussed in the City of Vacaville General Plan EIR nor the Supplemental EIR.

### Discussion of Impacts

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

**OR**

   ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

**Less than significant with mitigation incorporated.** As noted above, a formal invitation to participate in AB 52 consultation on the proposed project was sent to the Yocha Dehe Wintun Nation by the Lead Agency on April 3, 2024. The City and City's consultant held a virtual meeting with the Tribe on April 24, 2024, regarding the proposed project, and received a follow up letter from the Tribe on April 25, 2024, concluding consultation. In the letter, the Tribe recommended cultural monitoring during ground disturbing activities, cultural sensitivity training for employees, and ongoing consultation with the City as the park gets developed over time. Implementation of Mitigation Measures CUL-1, Worker Awareness Training Program, CUL-2, Accidental Discovery of Cultural Resources, CUL-3, Paleontological Resources, and CUL-4, Accidental Discovery of Human Remains, and (all detailed in Section 7.V, Cultural Resources) would reduce potential impacts to less than significant.

Additionally, the Tribe would be notified prior to excavation activities associated with buildout of the Centennial Park Master Plan project, including the prior to the excavation of the proposed detention basins to be constructed in Phase II, and implementation of Mitigation Measure TCR-1 would reduce potential impacts to less than significant. Therefore, the impact would be *less than significant with mitigation incorporated.*

### Mitigation Measures

**TCR-1** **Tribal Notification and Cultural Construction Monitoring.** The City will notify the Yocha Dehe Wintun Nation prior to ground disturbing activities requiring backhoe trenching or excavation, and a cultural resources monitor shall be present during ground disturbing activities requiring backhoe trenching or excavation within previously undisturbed native soil. After the initial ground disturbance phase of grading, the City may reduce or curtail cultural resources monitoring activities subject to approval by the Yocha Dehe Wintun Nation. In the event that tribal cultural resources are encountered during project grading or construction, all work within 100 feet of the find shall be halted until the find is evaluated for its significance by a qualified Yocha Dehe Wintun Nation tribal representative and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is identified and implemented. In the event that unearthed prehistoric or

archaeological cultural resources or human remains are encountered during project construction, Mitigation Measure CUL-2 or Mitigation Measure CUL-4 shall take effect.

# XVII. UTILITIES AND SERVICE SYSTEMS

| | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| b) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☐ | ☒ |
| c) Exceed wastewater requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | ☒ |
| d) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | ☒ |
| f) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☐ | ☒ |
| h) Comply with federal, State, and local statutes and regulations related to solid waste and recycling? | ☐ | ☐ | ☐ | ☒ |
| i) Result in the wasteful, inefficient, and unnecessary consumption of energy during construction or operation? | ☐ | ☐ | ☐ | ☒ |

### Affected Environment

#### Water

Existing water infrastructure within the Centennial Park site includes a 12-inch public potable water main leading into the project site from the intersection of Allison Drive and Browns Valley Parkway and another 12-inch public potable water main that runs along Allison Parkway in the northern portion of the project site before heading west to connect to the 8-inch public potable water system serving the single-family residences to the west of the project site.

City policy encourages the use of raw water for landscape irrigation, and raw water may be sourced from the SID which currently provides water to the Nut Tree airport complex east of the project site. However, Centennial Park is currently outside of SID's service boundary and would need to be annexed into their service area, and upon annexation into the SID's service boundary, the proposed project could tie into an existing 36-inch SID water line that runs along the park's Browns Valley Parkway frontage.

**Sewer**

A VCP sewer line runs south along Allison Parkway and leads to Allison Drive in the southern portion of the project site. A portion of this pipe segment consists of 15-inch diameter VCP, while approximately 1,200 LF of the segment consists of 12-inch diameter VCP. According to the City's General Plan, the Browns Valley Parkway trunk sewer line has been realigned to follow Browns Valley Parkway and Allison Drive to the connection point on the Nut Tree Airport Trunk Sewer as shown on Figure 4.15-4 in the City's General Plan. Additionally, the Allison Parkway Lift Station has been recently replaced to increase capacity.

**Stormwater**

Public stormwater mains run south from the Browns Valley Parkway and Allison Drive intersection, as well as along Allison Parkway in the northern portion of the project site. The City also has two areas of the park that currently function as detention basins (South Horse Basin #1 and South Horse Basin #2) and serve the project site and adjacent areas.

**Other Services**

Security lighting would be present on the project site and would be shielded, downfacing, and dimmable in accordance with the VMC. PG&E currently provides electrical services to Centennial Park and has an easement located in the project site. Service is provided through both underground and aboveground transmission lines. AT&T, US Sprint, MCI, and Pacific Bell all provide telecommunications services to Vacaville. These services are also provided via underground and aboveground transmission lines. The project site will continue to be served by these existing services and providers.

### Regulatory Framework

**Federal Laws, Regulations, and Policies**

Energy Policy Act of 2005

The Energy Policy Act of 2005, intended to reduce reliance on fossil fuels, provides loan guarantees or tax credits for entities that develop or use fuel-efficient and/or energy efficient technologies (USEPA 2014). The act also increases the amount of biofuel that must be mixed with gasoline sold in the United States (USEPA 2014).

**State Laws, Regulations, and Policies**

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at

least 50 percent by 2000 (Public Resources Code Section 41780). The state, acting through the California Integrated Waste Management Board (CIWMB), determines compliance with this mandate. Per-capita disposal rates are used to determine whether a jurisdiction's efforts are meeting the intent of the act.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) requires that all development projects applying for building permits include adequate, accessible areas for collecting and loading recyclable materials.

California Integrated Energy Policy

Senate Bill 1389, passed in 2002, requires the CEC to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years, and to provide an update in the year between reports. The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research. The 2019 Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Title 24–Building Energy Efficiency Standards

The CALGreen (CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (CBSC 2019). The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

Urban Water Management Planning Act

California Water Code Sections 10610 *et seq.* requires that all public water systems providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY), prepare an urban water management plan (UWMP).

**Local Laws, Regulations, and Policies**

**Goal LU-9. Ensure Convenient Access to Healthy Foods for all Residents**

- Policy LU-P9.6 Encourage all new public facilities, private schools, parks and recreational facilities, and commercial, office, and medical buildings to provide drinking fountains and water filling stations.

### Impacts and Mitigation Measures from the City of Vacaville General Plan EIR

Utilities and service systems are discussed in Chapter 4.15 of the General Plan EIR (City of Vacaville 2013). The EIR concluded that, due to the proposed policies, actions, measures, and compliance with state and federal regulations, implementation of the General Plan would have a less than significant impact on utilities and service systems. No mitigation measures were proposed in Chapter 4.15.

### Discussion of Impacts

a) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

**No new impact.** The General Plan EIR disclosed that new transmission and distribution system water mains (pipelines) are anticipated to be installed in various locations by 2035 to ensure water is conveyed throughout the City to meet projected level of service requirements. Figure 4.15-2 of the City's General Plan shows a planned 18-inch water pipeline to be installed by the City that transects the southern half of the Centennial Park project site. The 18-inch water pipeline would run from Cessna Drive located northeast of the project site, transect the southern half of the Centennial Park site, and connect to Browns Valley Parkway southwest of the project site. There are also approximately 22 fire hydrants existing on the project site, and no new fire hydrants are proposed as part of the project.

The proposed project would tie into existing 8- and 12-inch diameter water mains located in the southern portion of the project site, the existing 12-inch diameter water main in the northern portion of the project site along Allison Parkway, and the City-planned 18-inch diameter water main proposed from Cessna Drive to Browns Valley Parkway. Water infrastructure would be required for a majority of the proposed project components, as would irrigation for proposed landscaping. Any new tie-ins connecting to existing or City-planned water infrastructure are anticipated to be constructed either beneath existing roadways internal to the project site or in previously disturbed areas and would comply with all applicable General Plan goals and policies, thus minimizing potential environmental effects. Therefore, the project would have a less than significant impact related to the expansion of existing facilities and *no new impact* compared to what was evaluated in the General Plan EIR.

b) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

**No new impact.** The General Plan EIR concluded that the City has sufficient water supply entitlements to meet the average daily potable water demand without requiring additional water supply entitlements to meet Year 2035 water demands, and the impact would be less than significant. The City's 2020 UWMP calculated the past, current, and projected water use and water supply through 2045. The 2020 UWMP calculated the projected water supply available in 2045 to be 30.8 mgd. The City's future water demand (20.9 mgd) would be below the City's future (30.8 mgd) water supply allocations. Therefore, the 2020

UWMP determined the City's water supply would be adequate to offset future water demands projected for buildout of the General Plan, including projected full buildout of the 276-acre Centennial Park (City of Vacaville 2023). Therefore, the proposed project would not require new or expanded water entitlements, and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

c) Exceed wastewater requirements of the applicable Regional Water Quality Control Board?

**No new impact.** The General Plan EIR concluded that implementation of the General Plan Update would have a less-than-significant impact on the ability of the Easterly Waste Water Treatment Plant (WWTP) to meet wastewater treatment requirements. The proposed project is served by the Easterly WWTP. The proposed project would be constructed and would operate in accordance with the policies included in the City of Vacaville General Plan, including Policy PUB-P13.4 which directs the City to plan, construct, and maintain wastewater treatment facilities to provide a level of wastewater treatment that meets State discharge requirements and to plan for expanding wastewater treatment capacity, consistent with anticipated needs. Therefore, the project would have a less than significant impact, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

d) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

**No new impact.** The General Plan EIR concluded that because additional project-specific environmental analysis for the Easterly WWTP expansion and new or expanded wastewater collection facilities would be completed pursuant to CEQA, and because the proposed General Plan includes policies to minimize environmental impacts of such projects, the impact would be less than significant.

The project site is currently served by the Easterly WWTP. There is an existing 12- and 15-inch sewer main running from Allison Parkway in the northern portion of the project site to the intersection of Allison Drive and Browns Valley Parkway in the south. The City of Vacaville would upsize the 12-inch diameter VCP (approximately 1,200 LF) portion of the sewer main to 15-inch diameter VCP to accommodate flow capacity required by full buildout of the proposed project. The proposed project would include construction of sewer tie-ins along the proposed Allison Parkway extension in the northern section of the project site to accommodate the restroom facilities for the bike skills course. The proposed project would not construct or require the expansion of wastewater treatment facilities. The proposed expansion of existing facilities and construction of tie-ins as determined necessary at each phase of development are anticipated to occur within existing on-site roadways or in previously disturbed areas on the project site. Therefore, the proposed project would have a less than significant impact, and there would be *no new impact* compared to what was already evaluated in the General Plan.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

**No new impact.** The General Plan EIR concluded that adherence to the General Plan Update policies, goals, and actions would reduce potential impacts to wastewater treatment to a less-than-significant level. The City of Vacaville has plans to upsize approximately 1,200 LF of an existing sewer main on-site running from north to south from 12-inch diameter VCP to 15-inch diameter VCP to accommodate buildout flow capacity. Additionally, since adoption of the General Plan, the City of Vacaville has

replaced the Allison Parkway Lift Station (Lift Station 10) with a new lift station as it was operating at near capacity. Therefore, with the City's planned upsizing of the existing sewer line on-site, the proposed project would have a less than significant impact to the wastewater treatment provider, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

f) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

**No new impact.** The General Plan EIR concluded that because additional project-specific environmental analysis for any new or expanded stormwater facilities would be completed pursuant to CEQA, and because the proposed General Plan includes policies to minimize environmental impacts of such projects, the impact would be less than significant.

Two detention basins are part of the proposed project and would be constructed in Phase II in the northern portion of the project site along the eastern boundary of the park. The two detention basins are planned to be developed in conjunction with the planned expansion of the Horse Creek Soccer Complex and would be designed to accommodate 40 acre-feet of stormwater combined to serve the needs of the planned expansion. The detention basins would be constructed in accordance with Section 14.26.030.020 of the VMC, which require implementation and maintenance of post-construction BMPs to control the volume, rate, and potential pollutant load of stormwater runoff.

The City also has two areas of the park that currently function as detention basins (South Horse Basin #1 and South Horse Basin #2) and serve the project site and adjacent areas. South Horse Basin #1 is depicted in Figure 3, Master Plan, as Existing Wetlands, and is located in the southern portion of the project site along the eastern side of the existing Allison Drive ingress point. The project would construct a walking trail surrounding South Horse Basin #1 but would not expand the existing detention basin area. South Horse Basin #2 is located in the northern portion of the project site, southeast of the proposed bike skills course, and would not be impacted by construction or operation of the project. The location of the existing City detention basins are shown in Figure 4.9-2, Existing Drainage Facilities, of the General Plan EIR. Storm drains would be constructed in previously disturbed areas to serve the proposed project components as the site continues to be built out.

While the proposed project would include construction of two stormwater detention basins as part of Phase II, as well as construction of storm drains as the site continues to be built out, the basins and drains would be constructed in accordance with City standards as well as the goals and policies included in the General Plan EIR. Impacts related to the construction of the on-site stormwater facilities would be less than significant, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

**No new impact.** The General Plan EIR concluded that the total solid waste generated from new development allowed by the implementation of the General Plan would increase Vacaville's annual solid waste by approximately 0.03 percent of the permitted daily capacity of the Recology Hay Road facility, and the Recology Hay Road facility has sufficient capacity to accommodate the solid waste disposal needs of new development under the General Plan. New dumpster enclosures would be constructed and located adjacent to the parking lots or maintenance roads for ease of collection. Additional trash cans would be placed at picnic areas, within the dog park, and as needed for maintenance of the park.

Solid waste generated from the park would include refuse from park users, and anticipated volumes of solid waste are not anticipated to result in an excess of capacity of infrastructures. There would be a less than significant impact on solid waste, and *no new impact* would occur compared to what was evaluated in the General Plan EIR.

h) Comply with federal, State, and local statutes and regulations related to solid waste?

**No new impact.** The General Plan EIR concluded that the General Plan Update complies with federal, State, and local statutes and regulations related to solid waste, and impacts would be less than significant. The VMC implements the requirements of AB 939, and the California Solid Waste Reuse and Recycling Access Act of 1991 has enabled the City to meet or exceed the State-mandated waste diversion goals every year for the past decade. In addition, the General Plan includes policies and actions under Goal PUB-9 to reduce per capita solid waste and increase recycling, and the proposed ECAS includes measures that would similarly divert waste and reduce per capita solid waste, ensuring that the City can continue to meet State waste diversion requirements.

Any solid waste generated from the proposed project would comply with all applicable statutes and regulations, including Chapter 8.08 of the VMC which implements the approved Source Reduction and Recycling Element required by AB 939, and regulates the collection and disposal of solid waste, yard waste, and household hazardous materials. Further, the project would comply with goals and policies included in the General Plan that ensure compliance with federal and state regulations. Therefore, the proposed project would not conflict with federal, state, or local statutes or regulations related to solid waste and would have a less than significant impact. There would be *no new impact* compared to what was evaluated in the General Plan EIR.

i) Result in the wasteful, inefficient, and unnecessary consumption of energy during construction or operation?

**No new impact.** The General Plan EIR concluded that proposed policies, actions, and measures in the General Plan and ECAS Update, along with Title 24 requirements, would prevent the wasteful, inefficient, and unnecessary consumption of energy, resulting in a less-than-significant impact. Security lighting would be present on the project site and would be shielded, downfacing, and dimmable in accordance with city policy.

PG&E currently provides electrical services to the project site, and has an easement located in the project site. Construction of the proposed project would not occur within this easement, and any future amenities would be connected to existing PG&E infrastructure on-site. Additionally, the proposed project would not connect to existing natural gas lines or telecommunication systems, which would expand capacity. The proposed project would comply with the State Building Standard Code, Title 24 to prevent the wasteful, inefficient, and unnecessary consumption of energy during the construction and operation of new residential and non-residential buildings and would also comply with all applicable policies included in the City of Vacaville General Plan EIR and ECAS.

Therefore, the project would have a less than significant impact on energy consumption during construction or operation, and there would be *no new impact* compared to what was evaluated in the General Plan EIR.

## XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

| | | New Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No New Impact |
|---|---|---|---|---|---|
| a) | Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☒ | ☐ | ☐ |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)? | ☐ | ☒ | ☐ | ☐ |
| c) | Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☒ | ☐ | ☐ |

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

**Less than significant with mitigation incorporated.** With implementation of project-specific mitigation measures discussed in previous sections of this IS/MND, the proposed project would not adversely impact sensitive natural communities or special-status animals. However, a small potential exists for previously undiscovered tribal cultural resources and/or human remains to be unearthed during demolition and site grading activities.

With implementation of the mitigation measures required by this IS/MND in Sections 7.IV, Biological Resources, 7.V, Cultural Resources, 7.VI, Energy, 7.VII, Geology, Soils, and Mineral Resources, 7.VIII, Greenhouse Gas Emissions, 7.IX, Hazards and Hazardous Materials, 7.XII, Noise, 7.XV, Traffic and Transportation, and 7.XVI, Tribal Cultural Resources, compliance with General Plan policies, and application of standard BMPs during construction, development of the proposed project would not result in any of the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or, 6) eliminate important examples of the major

periods of California history or prehistory. Therefore, the proposed project's impact would be *less than significant with mitigation incorporated*.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

**Less than significant with mitigation incorporated.** The proposed project, in conjunction with other approved or pending projects within the City of Vacaville, could contribute to cumulative impacts. However, with implementation of mitigation measures proposed in Sections 7.I through 7.XVII of this IS/MND, the project's contribution to potentially significant impacts would be reduced to a level that is considered less than cumulatively considerable. Additionally, the full expansion of the Centennial Park project was envisioned in the General Plan, and the park would serve the entire City. Impacts would be *less than significant with mitigation incorporated.*

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

**Less than significant with mitigation incorporated.** As described in this Initial Study, implementation of the proposed project could result in impacts to biological resources, cultural resources, energy, geology, soils, and mineral resources, greenhouse gas emissions, hazards and hazardous materials, noise, traffic and transportation, and tribal cultural resources prior to the implementation of mitigation measures. In addition to the project-specific mitigation measures within this Initial Study, the proposed project would be required to implement all applicable policies of the General Plan. Implementation of all such mitigation measures and policies would reduce any potential direct or indirect impacts that could occur to human beings, and all impacts would be reduced to less than significant levels. Therefore, the proposed project's impact would be *less than significant with mitigation incorporated.*

# 8.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2023. Available at: https://www.airquality.org/ClimateChange/Documents/Handbook%20Public%20Draft_2021-Aug.pdf.

California Air Resources Board (CARB). 2023a. Overview: Diesel Exhaust and Health. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

2023b. Clean Car Standards – Pavley, Assembly Bill 1493. Accessed December. Available at: http://www.arb.ca.gov/cc/ccms/ccms.htm.

2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available at: https://www.arb.ca.gov/ch/handbook.pdf.

California Department of Conservation (CDC). 2024a. California Important Farmland Finder Interactive Map. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/.

2024b. Federal Mapping and Monitoring Program. Available at: https://www.conservation.ca.gov/dlrp/fmmp.

2024c. Williamson Act Program Overview. Available at: https://www.conservation.ca.gov/dlrp/wa/Pages/wa_overview.aspx.

California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB); For: *Dixon, Winters, Merritt, Monticello Dam, Dozier, Mt. Vaca, Fairfield North, Elmira,* and *Allendale* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed May 31, 2024.California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf.

California Energy Commission (CEC). 2021a. California Electricity Sources. Available from: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation.

2021b. Supply and Demand of Natural Gas in California. Available from: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california.

2021c. California Gasoline Data, Facts, and Statistics. Available from: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics#:~:text=In%202022%2C%2013.6%20billion%20gallons,Board)%20and%2010%20percent%20ethanol.

2021d. Diesel Fuel Data, Facts, and Statistics. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics.

City of Vacaville. 2013. General Plan Environmental Impact Report. Accessed on March 1, 2024. Available from: https://www.cityofvacaville.gov/government/community-development/general-plan/general-plan-other/general-plan-and-ecas-eir-documents.

2015. General Plan Conservation and Open Space Element. Accessed April 29, 2024 at: https://www.cityofvacaville.gov/home/showpublisheddocument/14102/637045896849400000

2021. Supplemental Environmental Impact Report. Accessed on March 1, 2024 at: https://www.cityofvacaville.gov/government/community-development/general-plan/general-plan-other/general-plan-and-ecas-eir-documents/.

El Dorado County Air Quality Management District (EDCAQMD) et al. 2018. Wildfire Mitigation Plan for the Sacramento Federal Nonattainment Area for $PM_{2.5}$. Accessed April 29, 2024 at: https://www.ysaqmd.org/wp-content/uploads/Planning/SFNA-Exceptional-Events-Mitigation-Plan_Submittal-to-AA_08022018.pdf

HELIX Environmental Planning, Inc. (HELIX). 2024a. Biological Resources Assessment. Available as Appendix D.

2024b. Cultural Resources Assessment. Available as Appendix E.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. February. Available at: https://www.ipcc.ch/report/ar4/wg1/.

Kleinfelder, Inc. (Kleinfelder). 2024. Phase I Environmental Site Assessment. Available as Appendix F.

National Park Service. 1997. How to Apply the National Register Criteria for Evaluation. Available at: https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

Natural Resources Conservation Service. 2023. Web Soil Survey. Available at: https://websoilsurvey.nrcs.usda.gov/app/.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manualpreparation-health-risk-0.

Sacramento County Air Quality Management District (SCAQMD) et al. 2023. Sacramento Regional 2015 NAAQS 8-Hour Ozone Attainment & Reasonable Further Progress Plan. Accessed April 29, 2024 at: https://www.ysaqmd.org/wp-content/uploads/2023/08/Sac-Regional-2015-NAAQS-8-hr-O3-Attainment-and-RFP-with-Appendices.pdf.

Sacramento Water Resources Control Board (SWRCB). 2019. Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. Available at:

https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/1toxicity_provisions_final_101918.pdf.

Santa Clara, County of. 2018. Initial Study South County Animal Services Center County of Santa Clara Appendix A Environmental Noise Assessment. Available at: https://files.santaclaracounty.gov/migrated/Initial%20Study%20Animal%20Services%20Center.pdf.

U.S. Fish and Wildlife Service (USFWS). 2024a. Information for Planning and Consultation (IPaC) Trust Resource Report: Centennial Park Master Plan Project. Accessed May 31, 2024.

2017. Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. v + 69pp.

Yolo-Solano Air Quality Management District (YSAQMD). 2022a. Attainment Status. Accessed April 29, 2024 at: https://www.ysaqmd.org/wp-content/uploads/Graphics/Attainment_Status.png.

2022b. CEQA and Land Use. Accessed April 30, 2024 at: https://www.ysaqmd.org/plans-data/ceqa/.

2019. Triennial Assessment and Plan Update. Accessed April 29, 2024 at: https://www.ysaqmd.org/wp-content/uploads/2024/03/2019-Triennial-Plan.pdf.

2007. Handbook for Assessing and Mitigating Air Quality Impacts. Accessed April 29, 2024 at: https://www.ysaqmd.org/wp-content/uploads/Planning/CEQAHandbook2007.pdf.

# 9.0 PREPARERS

### City of Vacaville

- Albert Enault, Senior Planner
- Hew Hesterman, Park Planner

### HELIX Environmental Planning, Inc.

- Lesley Owning, Principal Planner
- Anviti Singh, Environmental Planner
- Julia Pano, Environmental Planner
- Martin Rolph, Air Quality/Noise Specialist
- Patrick Martin, Biologist
- Ben Siegel, RPA, Senior Archaeologist
- Jentin Joe, Staff Archaeologist
- Scott Redding, Landscape Group Manager
- Jose Andrade, Landscape Designer