General Plan Update

Draft Environmental Impact Report

January 2024

Carnegie
STATE VEHICULAR RECREATION AREA

Prepared for:

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Acronyms and Abbreviations

4WD	Four-Wheel Drive
AAQA	Ambient Air Quality Analysis
AB	Assembly Bill
ADA	Americans with Disabilities Act
AG	Agriculture
ANSI	American National Standards Institute
ANSI S1.4	American National Standards Institute Class 1 sound level meters
ARB	California Air Resources Board
ASC	Anthropological Studies Center
ATVs	All-Terrain Vehicle
BAAQMD	Bay Area Air Quality Management District
BAS	best available science
BMPs	best management practices
CAA	federal Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	Energy Conservation Standards
CALGreen Code	California Green Building Standards Code
CalOSHA	California Occupational Safety and Health Administration
CALVENO	California Vehicle Noise
CARE	Community Air Risk Evaluation
CASSP	California Archaeological Site Stewardship Program
CBSC	California Building Standards Code
cc	cubic centimetres
CCAA	California CAA
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
CHS	Campground Host Sites
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COCs	contaminants of concern
CR	Cultural Resource Management
CRHR	California Register of Historical Resources
CWA	Clean Water Act

dB	Decibels
dBA	A-weighted decibels
Department	Department of Parks and Recreation
DNL	Day-Night Average Sound Level
DOE	U.S. Department of Energy
DOM	Department Operations Manual
DPM	diesel particulate matter
DPR	California Department of Pesticide Regulation
DTSC	California Department of Toxic Substances Control
ECAP	East County Plan Area
ECC	Emergency Command Center
EIR	environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
FEIR	final EIR
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FHWA-RD-77-108	Federal Highway Administration Highway Traffic Noise Prediction Model
FMMP	Farmland Mapping and Monitoring Program
FRAP	Fire and Resource Assessment Program
FY	fiscal year
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
General Plan	Carnegie State Vehicular Recreation Area General Plan
GHG	greenhouse gas
GIS	geographic information system
GPS	global positioning system
GWP	global warming potential
HMA	Hot mixed asphalt
HMS	Habitat Monitoring System
HMTA	Hazardous Materials Transportation Act
I-580	Interstate 580
ICS	Incident Command System
IE	Interpretation and Education
IEP	Interpretive and Educational Program
LAMPs	Local Agency Management Programs
lb/day	pounds per day
LDL	Larson-Davis Laboratories
L_{dn}	Day-Night Average Sound Level
LED	light emitting diode
L_{eq}	Equivalent Sound Level
LID	Low Impact Development
LLNL	Lawrence Livermore National Laboratory
L_{max}	Maximum Sound Level
LOS	level of service
LRAs	local responsibility areas
MEI	Maximally Exposed Individual

mgd	millions of gallons per day
MLD	most likely descendant
mph	miles per hour
MPOs	Metropolitan Planning Organizations
MWh	megawatt hours
MX	motocross
MY	model year
NAAQS	national ambient air quality standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOP	notice of preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRM	Natural Resource Management
O&M	operations and maintenance
OHMVR	Off-Highway Motor Vehicle Recreation
OHV	off-highway vehicle
OHV BMP Manual	Off-Highway Best Management Practices Manual for Erosion and Sediment Control
OM	Operations and Maintenance
OPR	Governor's Office of Planning and Research
OS/RC	Open Space–Resource Conservation
OSHA	California Occupational Safety and Health Administration
OWTS	Onsite Wastewater Treatment Systems
OWTS Policy	Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems
P/F	Public
PCAPCD	Placer County Air Pollution Control District
perc	percolation
PG&E	Pacific Gas & Electric Company
Phase II Small MS4 General Permit	Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems
PM	particulate patter
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$	particulate matter equal to or less than 2.5 micrometers in diameter
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act of 1976
ROD	record of decision
ROG	reactive organic gases
ROVs	recreational off-highway vehicles
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RV	recreational vehicle
RV2013	Recreation Vehicle 2013

RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCS	Sustainable Communities Strategy
SFBAAB	San Francisco Bay Area Air Basin
SHPO	State Historic Preservation Officer
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
Soil Standard	Soil Conservation Standard and Guidelines
SO_X	oxides of sulfur
SPLs	sound pressure levels
SPPOs	State Parks peace officers
sq. ft.	square feet
SRAs	state responsibility areas
SVP	Society of Vertebrate Paleontology
SVRA	State Vehicular Recreation Area
SVRA	Carnegie State Vehicular Recreation Area
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	Tribal Cultural Resources
TMDL	total maximum daily loads
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USTs	underground storage tanks
VEO	Visitor Experience and Opportunities
VM	Visitor Management
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VTA	Volunteer Training Area
Water	Water Quality
WDRs	Waste Discharge Requirements
WET	California Waste Extraction Tests
WHPP	Wildlife Habitat Protection Plan
WQA	Water Quality Assessment
ZEV	zero emission vehicles

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Executive Summary

This summary of the environmental impact report (EIR) for the Carnegie State Vehicular Recreation Area (SVRA) General Plan (General Plan) is provided in accordance with Section 15123 of the California Environmental Quality Act (CEQA) Guidelines, which specifies that an EIR is to contain a brief summary of the proposed action and its consequences, presented in clear and simple language. The summary identifies each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; areas of controversy known to the lead agency, including issues raised by agencies and the public; and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. Accordingly, this summary includes a brief description of the project (Carnegie SVRA General Plan), environmental impacts and mitigation, areas of known controversy, and alternatives to the project.

Project Overview

Carnegie SVRA is mainly a destination for intermediate and advanced off-highway motorcycles from multiple age groups. Known for steep hillsides and challenging terrain, the SVRA attracts families and single riders who want to ride for a few hours, ride and camp for several days, or compete in or watch hillclimbs or other special events. Various facilities that support recreation opportunities are located within the approximately 1,533 acre SVRA. Existing visitor facilities include multiple restrooms, day-use sites for picnicking and staging, and recreational facilities that include off-highway vehicle (OHV) trails, a motocross track, all-terrain vehicle (ATV)/motocross track, 70 cubic centimetres (cc) children's track, 110cc beginner track, 4x4 challenge area, hillclimb special-event area, campsites, and park concessions. SVRA operations facilities include the ranger station and entrance kiosk, SVRA maintenance area, SVRA headquarters area, water treatment facility, emergency helicopter pad, volunteer training area, and water tower.

All units operated by the California Department of Parks and Recreation (State Parks) must prepare a general plan before developing new facilities that may result in the permanent commitment of resources. General plans are broad-based policy documents that establish long-range visions and goals and provide direction on future types of improvements, services, and programs. The Carnegie SVRA General Plan outlined in this EIR is this unit's second general plan.

The project considered in this EIR is the implementation of the Carnegie SVRA General Plan. The General Plan is a guidance document intended for use over many years, and it outlines goals and guidelines that apply to the entire Carnegie SVRA. The goals and guidelines address existing issues and provide ongoing management guidance that can be implemented to achieve the SVRA's long-term vision, which is to provide an effectively managed and convenient place for friends, families, and groups to enjoy the outdoor recreational setting through OHV activity and other compatible recreational uses.

In addition to the long-range planning provided through the General Plan, the project includes multiple improvements to park facilities related to recreation opportunities, operations, and interpretation and education. Some of the new and improved facilities to improve operations and the visitor experience include a new group campsite, campfire center, recreational vehicle dump station, motorbike trail, kid's minibike track, and pedestrian trails; additional visitor recreation area; an expanded ranger station; SVRA maintenance area and headquarters area improvements; new greenhouse; and a water treatment facility upgrade (see Chapter 2, "Project Description," of this EIR for detailed information about the proposed facility projects).

The Carnegie SVRA General Plan provides much of the regulatory setting description and the project description used for the CEQA analysis in this EIR. Chapter 2, "Existing Conditions," in the General Plan describes the geographical, physical, and management setting, including resource conditions and planning influences. General Plan Chapter 4, "The Plan," identifies proposed use areas, facility projects,

interpretation and education programs, and operations and management goals and guidelines, which combine to serve as the project description used for this CEQA analysis.

Potential Areas of Concern and Issues to be Resolved

State Parks is the CEQA lead agency for this project. The lead agency must consider community needs and desires, long-term planning, and the Off-Highway Motor Vehicle Recreation (OHMVR) Division's mission when determining the appropriate level of intensity of OHV use at Carnegie SVRA. It will be important for the OHMVR Division's decision makers to resolve the need for balance between open and developed OHV use areas throughout the SVRA, on the one hand, and restrictions in some areas to protect on-site natural and cultural resources and provide for public safety and compatibility with surrounding land uses, on the other.

The following areas of known controversy were identified for the Carnegie SVRA General Plan and were taken into consideration during the development of the General Plan goals and guidelines:

- Relationship with neighbors
- Limited visitor facilities
- Effect of OHV use on the views from Tesla Road/Corral Hollow Road and on aerial imagery
- Noise levels from existing and potential OHV use
- On-site erosion and sedimentation
- Fire safety during dry California summers
- Cultural resources, including historic-era and prehistoric sites
- Protection and preservation of sensitive biological resources in portions of Carnegie SVRA, including aquatic resources from recreational use

Summary of Impacts and Mitigation Measures

This EIR provides a detailed analysis of the potentially significant environmental impacts resulting from implementation of the Carnegie SVRA General Plan. The environmental analysis found that, with incorporation of project design features, implementation of goals and guidelines as directed by the General Plan, and adherence to regulatory requirements (e.g., State Parks and the OHMVR Division requirements and guidelines, and requirements from regulatory agencies and state and federal regulations), implementation of the General Plan would result in less-than-significant environmental impacts in the following issue areas:

- Aesthetics
- Agriculture and Forestry
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Minerals
- Noise
- Population and Housing
- Public services and Utilities

- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

No mitigation measures are required for the impacts identified for these resource areas because the impacts were found to be less than significant or have no impact. However, as identified in Section 3.3, "Air Quality," of this EIR, the following impacts would be significant and unavoidable during General Plan operations only, because no feasible mitigation measures currently exist to reduce these impacts to a less-than-significant level (the corresponding construction-related impacts would be less than significant with implementation of General Plan goals and guidelines that include avoidance and minimization measures that would reduce impacts during project construction):

- Impact 3.3-1, "Conflict with or obstruct implementation of the applicable air quality plan."
- Impact 3.2-2, "Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is Nonattainment Under an Applicable Federal or State Ambient Air Quality Standard."

Summary of Alternatives Considered

CEQA requires an analysis of a range of potential alternatives to the proposed project (General Plan) that would reduce any significant impacts. However, implementation of the proposed project would cause no significant impacts, with the exception of air quality impacts related to operations, which are significant and unavoidable. Therefore, no alternatives exist that could reduce or eliminate significant environmental impacts. However, alternatives were identified that have the potential to minimize operational air quality impacts. In addition, several alternatives were considered during the planning process, including an Air Quality Alternative, the provisions of which were ultimately incorporated into the General Plan (OM Goal 7 and OM Guidelines 7.1)

The alternatives analysis evaluates each issue area compared with the proposed project. The following three project alternatives are considered in the alternatives analysis.

No Project Alternative

Under the No Project Alternative would keep the previous 1982 General Plan in place with all of its goals and policies and the additional acreages as it relates to State Park use. It is assumed that the existing patterns of operation and management would continue, and recreational and operational facilities could be implemented as described with the 1982 General Plan. Visitation and Park use would be expected to increase as the statewide and regional populations grow. Many of the management actions that would protect, preserve, and restore natural, cultural, and other sensitive resources that have been identified for the General Plan would not be in place to guide the stewardship of the Park's resources.

The No Project Alternative, which would continue to follow the management goals and guidelines within the original General Plan approved in 1982, would be difficult to implement due to the extensive policies that California State Parks has enacted since its approval. These policies provide a multitude of measures to protect resources within the Park and all other parks managed by State Parks. Based on the policies that exist now, many of the recreational and operational facilities upgrades or constructions proposed in the General Plan would be difficult to implement. The main reason that a revision to the previous General Plan was determined to be necessary, was because it was outdated, not compatible with current policies, and does not adequately address current resource issues.

Managing the Park under the existing 1982 General Plan would result in potentially significant impacts to sensitive resources. Therefore, compared to the General Plan, the No Project Alternative would result in **more extensive impacts** than the General Plan.

Alternative 1: Reduced Emissions Alternative

Alternative 1 would aim to further reduce operational emissions by implementing additional air quality management measures (OM Guideline 7.2 through 7.4). Because Alternative 1 focuses on air quality, impacts on all other resource topics other than air quality are expected to remain the same as with implementation of the General Plan as currently proposed.

Implementing the additional operational measures related to air quality would potentially help to further reduce the operational impacts of the SVRA on air quality, specifically during times when air quality in the region is most impaired. However, regional air quality is driven by the cumulative conditions in the region, rather than by use in the SVRA alone. Further, in the summer when air quality conditions are typically worst, use of the SVRA is generally low because of the extreme temperatures in the region. Furthermore, it is unlikely that implementation of the additional measures would be sufficient to bring air quality in the region to below the thresholds that would bring the region into non-attainment. Thus, while the additional measures may help to reduce pollutants, the impact is expected to remain significant and unavoidable even with implementation of these measures and compared to the General Plan, Alternative 1 would result in **similar** impacts on regional air quality.

Alternative 2: SVRA Shutdown and Park Closure

Alternative 2 would aim to further reduce operational emissions by shutting down the SVRA. This would mean that Carnegie SVRA would close and no OHV use or other Park activities would occur. Alternative 2 focuses on improving air quality; however, impacts to other resource topics besides air quality would result. For example, if the SVRA shut down, biological resources, including conservation and restoration efforts, would no longer be managed and the wildlife habitat protection plan would not be implemented. Similarly, cultural resources would no longer be managed or protected. Additionally, geology and soils and hydrology and water quality could be negatively impacted due to lack of implementing the soils management plan or the stormwater management plan.

As discussed above for Alternative 1, regional air quality is driven by the cumulative conditions in the region, rather than by use in the SVRA alone. It is unlikely that shutting down the SVRA would be sufficient to bring air quality in the region to below the thresholds that would bring the region into non-attainment. Thus, while shutting down the SVRA may help to reduce pollutants, the impact is expected to remain significant and unavoidable even with implementation of these measures.

Furthermore, Alternative 2 would not meet the duties and responsibilities of State Parks OHMVR as required by California Code, Public Resources Code (PRC) § 5090.32, which includes but is not limited to: (a) Planning, acquisition, development, conservation, and restoration of lands in the state vehicular recreation areas. (b) Direct management, maintenance, administration, and operation of lands in the state vehicular recreation areas. Alternative 2 also does not meet the Declaration of Purpose required by California PRC Section 5002.2(b), or the SVRA Vision.

Additionally, Carnegie SVRA was purchased by State Parks using OHV Trust Funds. Legislative action (California PRC, Section 5006.48) authorized State Parks to plan, acquire, and develop the site for OHV use. If the SVRA were to shut down, Parks would have to pay back those funds to the OHV Trust.

Alternative 2 would be a significant and unavoidable impact to recreation as it would be a complete loss of a SVRA. Thus, compared to the General Plan, the SVRA Shutdown and Park Closure Alternative would result in **similar impacts** on regional air quality and would create a **significant unavoidable impact** on recreation.

Environmentally Superior Alternative

The General Plan, as presented in ***Chapter 4 – The Plan***, is the environmentally superior alternative because it balances protection of resources while allowing for high-quality recreation and focuses OHV use to areas that are not environmentally sensitive.

1. Introduction

This environmental impact report (EIR) evaluates the environmental effects of implementing the Carnegie State Vehicular Recreation Area (SVRA) General Plan (General Plan). The EIR includes a description of the General Plan preferred concept and the changes (e.g., facility projects, operations) proposed in the General Plan and is intended to inform decision makers and the public about environmental consequences of implementing the General Plan.

The EIR was prepared in accordance with the California Environmental Quality Act of 1970 (CEQA) (California Public Resources Code [PRC] Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The California Department of Parks and Recreation (State Parks), Off-Highway Motor Vehicle Recreation (OHMVR) Division, is the CEQA lead agency for this project.

This introductory chapter provides an overview of the environmental review process required by CEQA. The chapter also describes the background of the proposed project (the Carnegie SVRA General Plan), agency roles and responsibilities, and the contents and organization of this EIR.

1.1 Project Overview

General plans are broad-based policy documents that establish long-range management visions, goals, and guidelines and provide direction for future types of improvements, services, and programs. Developing general plans allows agencies to assess resource stewardship, facility development and management, and education and interpretive programs for the public. A general plan provides guidelines for managing and designating future land uses, which includes developing the facilities required to accommodate recreational trends, expected visitation, and administrative needs.

The Carnegie SVRA General Plan provides a comprehensive framework to guide long-term development, ongoing management, and public use at Carnegie SVRA. The General Plan must support the State Parks mission and its OHMVR Division mission, be consistent in its vision for the SVRA's future, and remain general in scope and flexible to accommodate changing conditions and enable State Parks to solve future management problems.

1.2 Comments Received on the Scope of the EIR

As required by Section 15082 of the CEQA Guidelines, the OHMVR Division issued a notice of preparation (NOP) of an EIR on March 30, 2022 (State Clearinghouse Number 2022030810). On that same day, State Parks sent an email to approximately 1,900 e-mail addresses on the project contact and subscriber list. This email blast announced the public comment period for the NOP of the Carnegie SVRA General Plan Update and EIR. The NOP's purpose was to identify agency and public concerns about potential impacts of the Carnegie SVRA General Plan and to solicit comments on the scope of the EIR.

The NOP and written and verbal comments received during the 30-day public review period for the NOP are included in Appendix A of this EIR. In total, 11 comment letters were received in response to the NOP during the public comment period: one from the California Fish and Wildlife Service, two from regional and local agencies, three from organizations, and five from individuals. Comments received focused on the concern about potential resource damage from OHV recreation, and many of the desired uses at the SVRA. These issues are addressed in detail in the various resource sections of the EIR.

1.3 Type, Purpose, and Intended Uses of this Environmental Impact Report

CEQA states that the purpose of an EIR is “to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided” (PRC Section 21002.1[a]). CEQA requires state and local governmental agencies to consider the environmental impacts of projects over which they have discretionary authority and to balance a proposed project’s benefits against its unavoidable environmental consequences. If the agency identifies environmental impacts as significant and unavoidable, it may still approve the proposed project if the agency believes that social, economic, or other benefits would outweigh the unavoidable impacts.

This EIR was prepared by to assess the potential environmental impacts of approving and implementing the Carnegie SVRA General Plan. The EIR addresses the project’s potentially significant adverse effects on the physical environment, to the extent that such effects are reasonably foreseeable. The Carnegie SVRA General Plan is a planning document that provides a preferred concept for site use, including visitor experience areas and facility projects, and both a broad set of goals and guidelines for future management and operations and some specific goals and guidelines related to facility and interpretation and educational program development, some currently in the design phase but most currently conceptual (see Chapter 2, “Project Description” in this EIR). A program EIR was determined to be the appropriate CEQA document.

This EIR evaluates the goals, guidelines, proposed use areas, uses, and facilities described in the Carnegie SVRA General Plan for their potential effects on the environment. In compliance with Section 15063 of the CEQA Guidelines, the scope of the analysis in this EIR was informed by the results of comments received during the NOP comment period. Chapter 3, “Environmental Analysis,” of this EIR addresses environmental issues known to relate to the site and issues identified as being of community concern, as expressed during project scoping. Those issues are as follows:

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

The EIR analyzed potential impacts of actions that may be taken should the General Plan be adopted. The environmental analysis has been conducted concurrently with General Plan development. Impact minimization measures have been incorporated into the General Plan wherever possible to help ensure that planned actions, including those to be implemented in the future, would not result in significant environmental impacts. Therefore, the CEQA analysis detailed in this General Plan EIR, which accompanies the Carnegie SVRA General Plan, is intended to be adequate for future projects that would

be implemented in a manner consistent with the General Plan's goals and guidelines herein and require no further mitigation. Some actions described in the General Plan may require additional CEQA analysis documentation after project details are known. According to Section 15168 of the CEQA Guidelines, all future projects that may be implemented if the Carnegie SVRA General Plan is adopted must undergo CEQA review, in light of the information in the General Plan EIR, to determine whether additional CEQA documentation is necessary. The type of additional documentation completed would be determined based on the provisions contained in CEQA Guidelines Sections 15162-15164. When planning to implement future projects that require additional environmental review, State Parks may refer to this General Plan EIR as a starting point for a "tiered CEQA analysis," in accordance with Sections 15152 and 15168 of the CEQA Guidelines.

1.4 Environmental Review Process

As described in Section 1.2, State Parks issued an NOP informing agencies and the public that this EIR would be prepared and soliciting input on the scope of issues to be addressed. The comments received were considered while this EIR was prepared.

State Parks has filed a notice of completion with the State Clearinghouse, part of the Governor's Office of Planning and Research, indicating that this EIR is complete and available for review. In addition, a notice of availability of this EIR has been filed with the State Clearinghouse; circulated to persons, organizations, and agencies on the project mailing list; and posted in local newspapers. The notice of availability describes the project and project location, identifies significant environmental impacts, specifies the review period, and identifies where this EIR and accompanying General Plan are available for review.

Agencies and individuals are invited to comment on the information presented in this EIR. Comments should address the EIR's accuracy and completeness on environmental issues. Where possible, respondents should endeavor to provide information they feel is lacking, or should indicate where the information may be found.

After a 45-day public comment period, State Parks will review and consider all comments received on the project's environmental impacts. If necessary, this EIR analysis will be revised or expanded to address comments received during the public comment period. The revised EIR and all responses to comments will be incorporated into a final EIR (FEIR).

State Parks will then consider certifying the FEIR. FEIR certification is not project approval or adoption, but a lead agency action finding that the environmental analysis is adequate and that CEQA obligations have been fulfilled. The OHMVR Commission holds authority to approve all OHMVR Division general plans and EIRs. This commission will determine whether to accept the certified EIR as FEIR under CEQA Guidelines Sections 15166 and 15168 and adopt the Carnegie SVRA General Plan as a general plan under PRC Section 5002.2.

1.5 Environmental Impact Report Contents and Organization

This EIR is organized into the following chapters:

- **Executive Summary**: A summary is included at the beginning of this document to explain the conclusions of the EIR's analyses. Also addressed in the summary are issues of known controversy, environmental issues to be resolved, and alternatives considered.
- **Chapter 1, "Introduction,"** provides an overview of the EIR's purpose and the CEQA process, summarizes comments received on the scope of this EIR, and describes subsequent environmental review that may be required in the future.
- **Chapter 2, "Project Description,"** discusses the environmental setting, past and current uses of Carnegie SVRA, project objectives, General Plan components included for analysis in this EIR, the regional planning context, and intended uses of this EIR.

- **Chapter 3, "Environmental Analysis,"** evaluates the potential environmental impacts of the Carnegie SVRA General Plan. Chapter 3 also presents the General Plan goals and guidelines that would reduce those potential impacts.
- **Chapter 4, "Cumulative Analysis,"** analyzes environmental effects eliminated from future analysis, unavoidable significant environmental effects, significant irreversible environmental changes, and growth-inducing impacts.
- **Chapter 5, "Other CEQA-Required Analysis,"** analyzes environmental effects eliminated from future analysis, unavoidable significant environmental effects, significant irreversible environmental changes, and growth-inducing impacts.
- **Chapter 6, "Alternatives to the Proposed Project,"** considers a reasonable range of potentially feasible alternatives to the Carnegie SVRA General Plan that could avoid or substantially lessen any of the significant effects of the project identified in Chapter 3. Chapter 6 also analyzes the No-Project Alternative and identifies the environmentally superior alternative, as required by CEQA.
- **Chapter 7, "References,"** lists all references used during the preparation of this EIR, as well as citations for personal communications.
- **Chapter 8, "Report Contributors,"** lists all EIR preparers and contributors.

2. Project Description

This chapter provides a description of the Carnegie State Vehicular Recreation Area (SVRA) General Plan including the proposed projects for the purpose of supporting the California Environmental Quality Act (CEQA) analysis in this Environmental Impact Report (EIR). As described in Section 15124 of the CEQA Guidelines, a complete project description must contain:

- the location and boundaries of the proposed project;
- a statement of objectives sought by the proposed project;
- a general description of the project's technical, economic, and environmental characteristics; and
- a statement briefly describing the intended uses of the environmental impact report (EIR).

By legal mandate (California Public Resources Code [PRC] Section 5002.2), all units operated by State Parks must have a general plan prepared before developing new facilities that may permanently commit a resource to a particular use. General plans are broad-based policy documents that establish a long-range vision, proposed concept, and detailed goals and guidelines that provide direction on future types of improvements, services, and programs that will be implemented over the lifetime of the general plan. General plans are intended to be used for many years. Therefore, a general plan establishes a decision-making framework consistent with the established vision, but it also is flexible enough to allow for changing conditions over time.

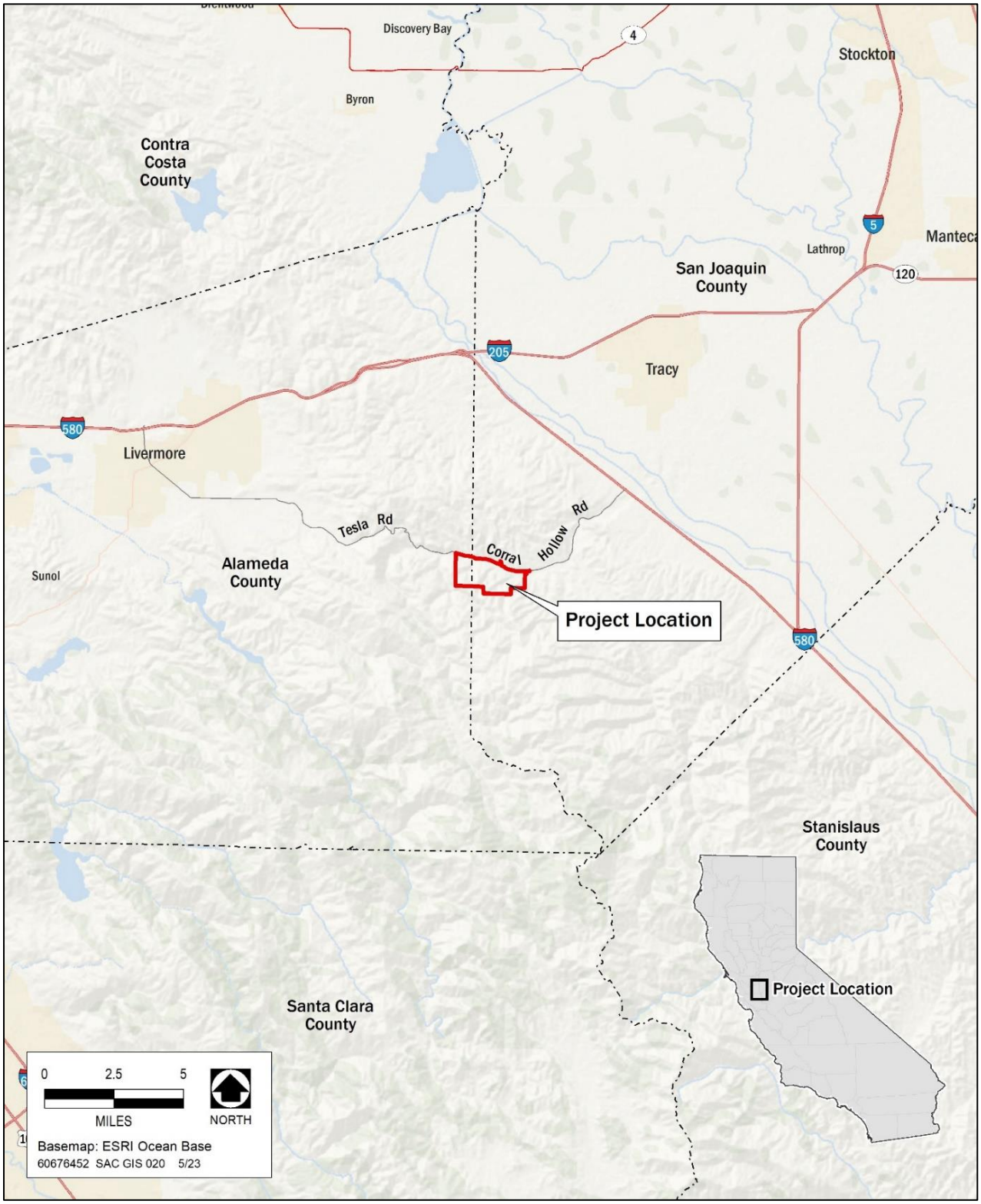
Chapter 2 "Existing Conditions" of the Carnegie SVRA General Plan (General Plan) provides a description of much of the physical setting in the SVRA including existing facilities and ongoing operations. Chapter 4 "The Plan" of the General Plan identifies proposed visitor experience areas, facilities, and programs; operations facilities and programs; and SVRA management goals and guidelines. These elements combine to serve as the project description used for this CEQA analysis. The General Plan is incorporated by reference herein, consistent with Section 15150 of the CEQA Guidelines. A summary of the project description is provided below.

In addition to Chapter 4, this project description includes detailed information about the proposed projects that will likely be constructed during implementation of the General Plan. The information for each reasonably foreseeable project is described below at the level of detail known at the time of General Plan preparation. For some project (such as the ranger station improvements) this information includes design drawings, while other projects remain at the conceptual level. A map showing the location and extent of each of these projects is also included. Some of these projects will likely require additional CEQA analysis as design progresses. Additional projects may come online over the lifetime of the General Plan and would require CEQA analysis independent of this EIR. All projects listed below under 2.4.4, "Proposed Land Use and Facilities," are specifically included in this General Plan and are analyzed in this EIR at the level possible, given the current state of project design.

2.1 Environmental Setting and Carnegie SVRA Use Characteristics

This section provides an overview of the general character of Carnegie SVRA and the immediate vicinity. This description includes the SVRA's location, on-site activities, environmental resources, and onsite and surrounding development. Please see Chapter 2 "Existing Conditions" of the General Plan for additional details regarding current conditions and uses at Carnegie SVRA.

Figure 2-1 shows the regional location of Carnegie SVRA. The SVRA is in unincorporated Alameda and San Joaquin counties, approximately 12 miles east of Livermore and 12 miles southwest of Tracy. To the north is the Lawrence Livermore National Laboratory Experimental Test Site (Site 300) property. The Alameda Tesla Property, owned by State Parks, is located to the west. This property is not currently open to the public and is not part of this General Plan. A separate planning process for this property is currently



Source: Data adapted by AECOM in 2023

Figure 2-1. Regional Location Map of the Carnegie SVRA

underway. Additional State Parks owned land is to the north of Tesla Road. Open space and rural residential areas (ranchland) are also located to the east, west, and south. Carnegie SVRA is made up of northeast-trending ridges with steep canyons and the Corral Hollow Creek floodplain. Corral Hollow Creek flows from west to east through the SVRA into the San Joaquin Valley. The hills rise abruptly from the floodplain with very steep slopes. A narrow, flat floodplain corridor characterized by riparian habitat parallels Corral Hollow Creek to the south side of Corral Hollow Road/Tesla Road and the surrounding hills support grasslands, scrub, and oak woodlands.

The SVRA's entrance is off Corral Hollow Road. The Carnegie SVRA planning area includes approximately 1,529-acres south of Corral Hollow Road and another approximately 4 acres north of Corral Hollow Road for a combined 1,533 acres. The area north of Corral Hollow Road contains SVRA staff offices and residences, and the SVRA water treatment plant. Figure 2-2 illustrates the planning area.

Existing recreational uses at the SVRA include off-highway vehicle (OHV) trails, tracks, hillclimbs, challenge areas, and camping. Day-use areas and a concession store (MotoMart) are available. Some areas are currently closed to use, including the Waterfall Canyon area and portions of the floodplain of Corral Hollow Creek.

Available Carnegie SVRA attendance data (people entering the SVRA) for fiscal year (FY) 2009–2010 to FY 2018–2019 show 157,943 visitors (day use and camping) in FY 2014–2015, the year with highest attendance. The year with the lowest attendance in this time frame was FY 2018–2019, which had a total of 54,249 visitors.

For the analysis in this EIR, it is assumed that attendance at Carnegie SVRA would likely rise slightly with population growth and general economic conditions in the surrounding region. Generally, OHV parks are most commonly attended by users most proximate to the park, such as regional residents. In particular, Carnegie SVRA attracts more local users versus those travelling from further distances throughout the State or elsewhere. Based on the California Department of Finance's demographic projections 2020 through 2060, San Joaquin County is expected to experience an average annual growth rate of 0.71 percent. Alameda County is expected to experience a smaller average annual growth rate of 0.43 percent.

Although the Carnegie SVRA General Plan would provide additional OHV and non-OHV recreation opportunities at the SVRA and attendance would likely grow naturally, there would likely not be a "bump" in attendance solely because of the new opportunities within the SVRA's footprint proposed in the General Plan. Therefore, it is estimated that general economic conditions in the region have a larger effect on short-term attendance than new facility offerings. Furthermore, the expanded opportunities would be brought online over time, according to available funding.

2.2 Project Background

SVRAs are OHV parks that are operated by the Off-Highway Motor Vehicle Recreation (OHMVR) Division of State Parks. OHVs are land vehicles that are used mostly for recreation purposes, such as all-terrain vehicles (ATVs), off-highway motorcycles, and 4-wheel-drive (4WD) trucks. The OHMVR Division is mandated to ensure that SVRAs are managed for long-term environmental sustainability and to comply with applicable environmental laws, guidelines, and regulations.

The OHMVR Division is required to manage SVRAs in accordance with management standards established for the OHMVR Program (PRC Sections 5090.2, 5090.35, and 5090.53). These management standards include soil conservation and resource management protocols.

The Carnegie SVRA planning team considered several factors when it initially created a range of visitor and operational uses for the General Plan concept described in the Chapter 4 of the General Plan. These considerations provided guidelines for the concept. The planning team's assumptions are listed below.

1. *Property ownership:* The property is owned by State Parks and operated by the OHMVR Division. Planning efforts associated with the property must be consistent with the OHMVR Division's mission statement.

2. *State Parks land classification:* The planning area is classified as SVRA lands by State Parks. Planning efforts must be consistent with statutory guidance for SVRA lands.
3. *OHMVR Division Strategic Plan:* The general plan for the SVRA must be consistent with the goals, principles, and themes described in the strategic plan.
4. *California Public Resources Code:* Laws that include the Off-Highway Motor Vehicle Act of 2003 (PRC Section 5090.01 et seq.) direct how State Parks and SVRAs must be managed and what uses are allowable.
5. *State and federal laws regarding resource protection:* The general plan must avoid or minimize harm to protected plants and animals and effectively manage cultural resources in accordance with applicable regulations.
6. *Air quality plans/districts:* Two different air districts govern the SVRA. The general plan needs to consider how the SVRA will comply with each air district's rules.
7. *Municipal Separate Storm Sewer System Permit and Storm Water Management Plan:* The general plan must remain in compliance with the requirements listed in these documents.

State Parks previously prepared a Carnegie SVRA General Plan Revision and associated EIR for the existing Carnegie SVRA and the adjacent Alameda Tesla property expansion area owned by State Parks. While the General Plan Revision was approved and the EIR was certified by the OHMVR Commission in 2016, the Commission rescinded these decisions in 2021 due to several lawsuits. The lawsuits, along with the subsequent legislation requiring that the Alameda Tesla expansion area not be designated as a SVRA, resulted in State Parks and the OHMVR Division electing to prepare a stand-alone General Plan Update and EIR for the existing Carnegie SVRA. The General Plan and EIR include a series of proposed projects as listed below in Section 2.4.4.

State Parks is currently conducting a separate planning effort for the Alameda Tesla property to determine a suitable classification and future use of the property. While the outreach conducted prior to the approval of the General Plan Revision and EIR in 2016 includes information gathered for both the existing SVRA and Alameda Tesla property, all information gathered was considered, as applicable and feasible, by the planning team during development of the current Carnegie SVRA General Plan. Additional input received during scoping and focused outreach was also considered.

The General Plan concept described in Chapter 4 of the General Plan and summarized below includes elements that address the concerns raised in comments and the feedback provided by the public, agencies, and many stakeholder groups. The planning team attempted to accommodate as many ideas as possible for Carnegie SVRA while staying consistent with the OHMVR Act and the OHMVR Division mission, draft vision, and statement of purpose presented in Section 2.3, "Project Objectives."

The General Plan concept avoids sensitive resources by taking into consideration cultural resources and biological resources, and slopes and soils constraints.

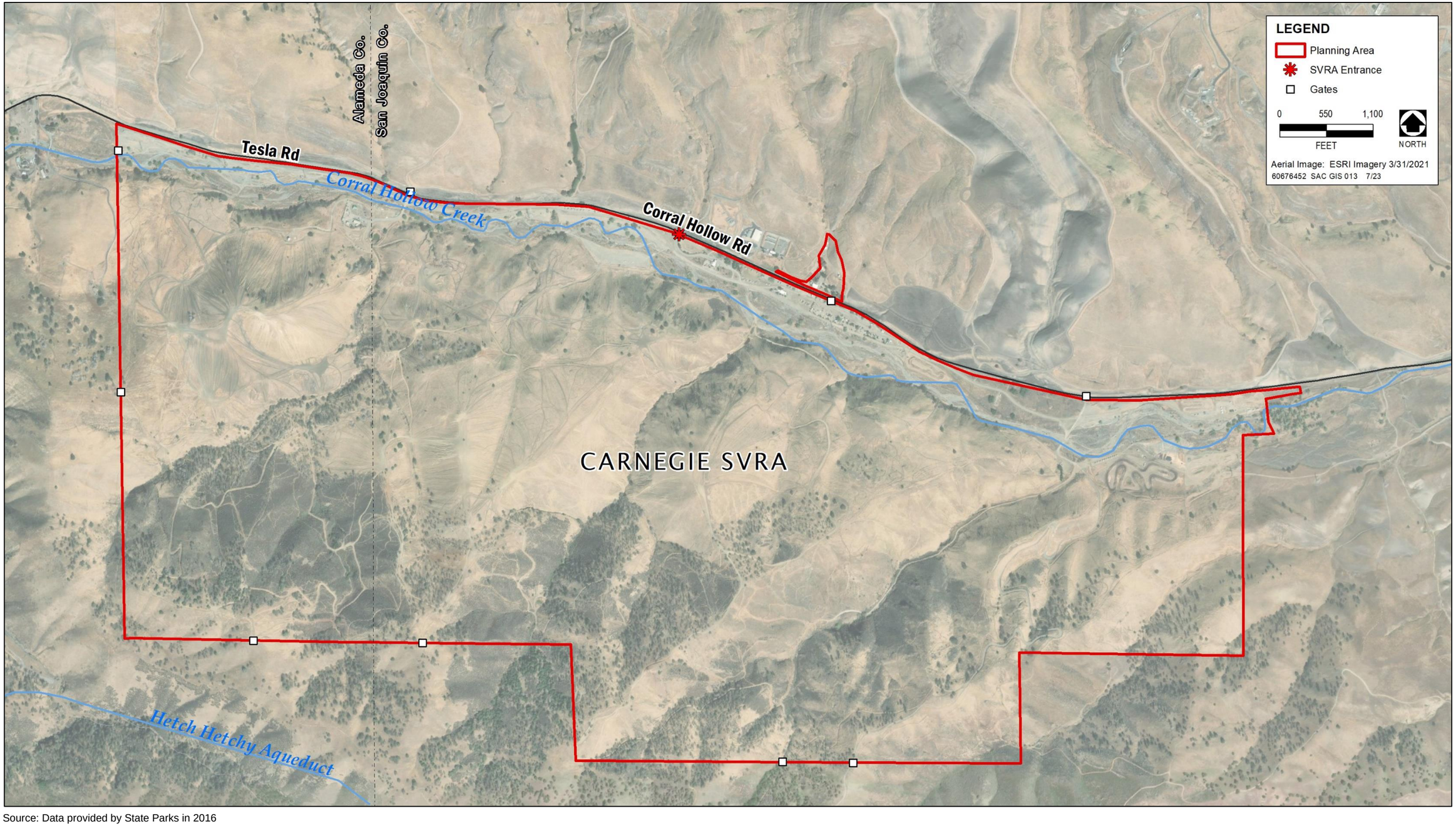
2.3 Project Objectives

Project objectives are used to develop and evaluate a range of alternatives to the proposed project. Section 15124 of the CEQA Guidelines requires a description of project objectives. In addition to project objectives, the missions of State Parks and the OHMVR Division guide management of any SVRA.

2.3.1 Mission Statements

2.3.1.1 California State Park Mission Statement

The mission of State Parks is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.



Source: Data provided by State Parks in 2016

Figure 2-2. Planning Area Map

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2.3.1.2 Off-Highway Motor Vehicle Recreation Division Mission Statement

The mission of the OHMVR Division is to provide leadership statewide in OHV recreation; to acquire, develop, and operate state-owned vehicular recreation areas; and to otherwise provide for a statewide system of managed OHV recreational opportunities through providing funding to other public agencies. The OHMVR Division also aims to ensure that quality recreational opportunities remain available for future generations by providing for education, conservation, and enforcement efforts that balance OHV recreation impacts with programs that conserve and protect cultural and natural resources.

2.3.2 General Plan Objectives

The objectives of the Carnegie SVRA General Plan are as follows:

- Manage Carnegie SVRA for the protection of sensitive natural and cultural resources while providing high-quality OHV recreational experiences.
- Manage the SVRA in accordance with the purpose of acquisition and classification.
- Promote public health and safety at Carnegie SVRA.
- Anticipate future demand for OHV recreation opportunities and identify strategies to accommodate them at Carnegie SVRA.
- Provide management options for operating all portions of Carnegie SVRA in keeping with California's OHMVR Act of 2003, as amended.
- Increase the diversity of OHV opportunities at Carnegie SVRA.
- Provide interpretive opportunities for biological and cultural resources.
- Provide for adaptive management of park operations and resources.
- Plan orderly implementation of long-term capital improvements at Carnegie SVRA.
- Guide the enhancement of recreation opportunities that support family and community-oriented use.
- Provide a framework for the provision of adequate facilities for Carnegie SVRA management operations.
- Comply with resource protection requirements, including air quality plans, stormwater management plans, and regulations protecting biological and cultural resources.

2.4 General Plan Components

2.4.1 Unit Classification

Carnegie SVRA was added to the California State Park System as a SVRA in July 1980. The site, which had been used by OHVs since the 1940s, was operated as a private motorcycle park from 1970 to 1979 before being purchased by State Parks using OHV funds. Legislative action (PRC Section 5006.48) authorized State Parks to plan, acquire, and develop the site for OHV use.

2.4.2 Declaration of Purpose

The purpose of Carnegie SVRA is to provide effectively managed, responsible OHV and related recreational opportunities while protecting and interpreting the SVRA's valued cultural and natural resources.

2.4.3 SVRA Vision

Carnegie SVRA will be a regional destination where children and adults of all skill levels can ride, play, and learn in an outdoor recreational setting. Carnegie SVRA will continue to be an affordable location where visitors can enjoy a wide variety of OHV recreation. Carnegie SVRA will be a model of exciting and well-managed OHV recreation as well as excellent environmental stewardship. Visitors will be able to

learn about and contribute to the long-term sustainability of diverse cultural and natural resources present within the SVRA.

2.4.4 Proposed Land Use and Facilities

For the purposes of the environmental analysis in this EIR, the term “facilities” is used to refer to anything that is part of the built environment. This term includes all facilities envisioned in the General Plan, such as trails and OHV practice riding areas, campground, campfire center, educational and interpretive amenities, picnic and gathering areas, ranger station, SVRA staff office space and housing, maintenance yard facilities, concessions, staging and parking areas, restrooms, water treatment and drainage systems, recreational vehicle (RV) dump station, signage, fencing, solar or other renewable-energy facilities, and access roads.

Uses would be developed consistent with the visitor experience areas described below in Section 2.4.5 and would compose a small portion of the planning area based on consideration of cultural resources, biological resources, and slope and soil constraints, which were assessed during development of the General Plan (described in Section 2.2).

2.4.4.1 Circulation and Access

Figure 2-2 shows the location of the SVRA’s existing public entrance and gates. The main park road runs parallel to and south of Corral Hollow/Tesla Road and north of Corral Hollow Creek.

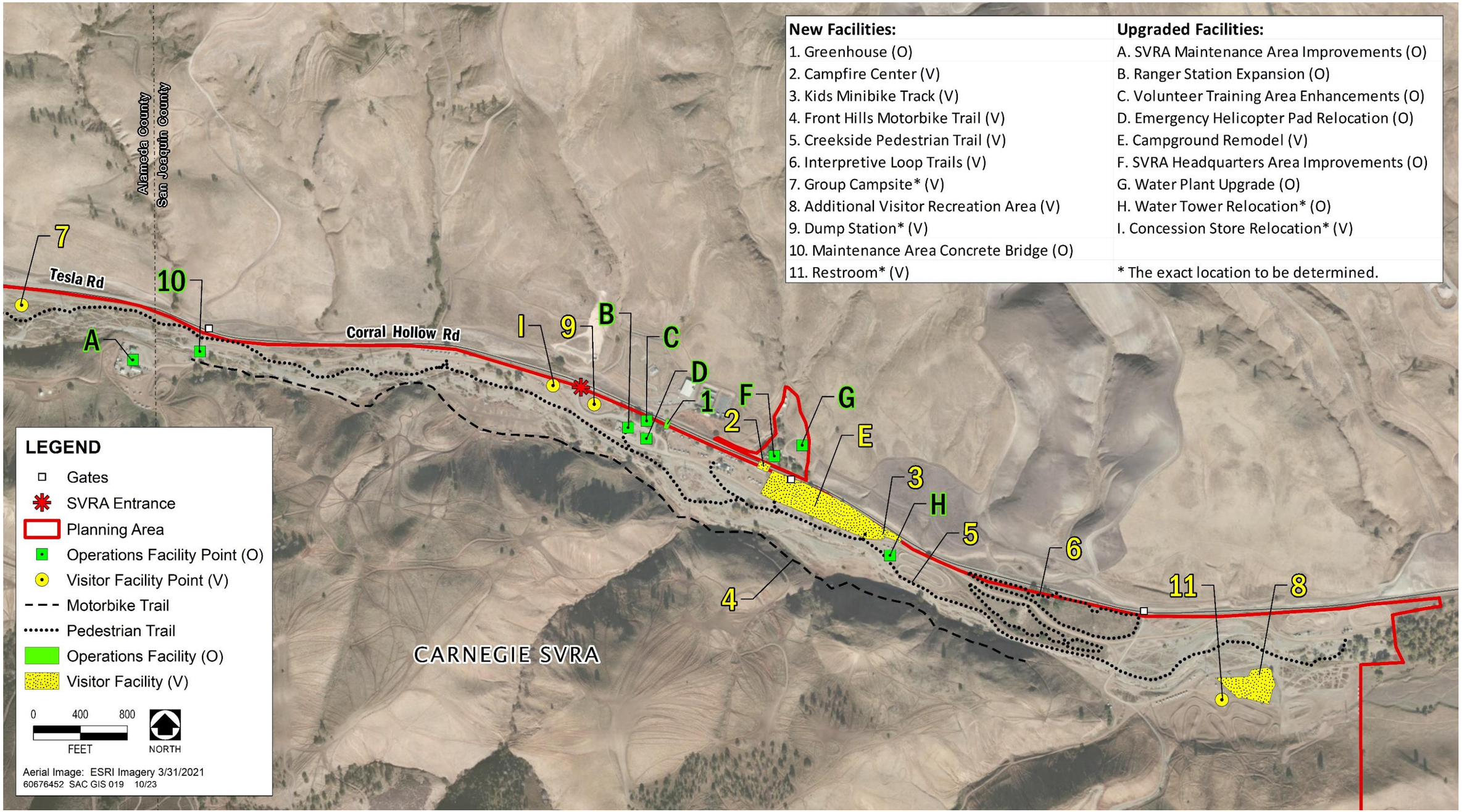
2.4.4.2 Recreational Uses

Carnegie is classified as a State Vehicular Recreation Area. Current recreational activities that are allowed under the SVRA classification will continue, including OHV recreation and camping. The following are recreational goals for the SVRA, as defined through the planning process:

- Improve and/or expand visitor recreational experience areas and amenities.
- Provide more OHV recreational opportunities for children, OHV practice areas, and non-motorized visitor amenities (e.g., hiking or potentially mountain biking trails, remote-control car track), and maintain intermediate and advanced OHV opportunities already provided.
- Perpetuate and enhance OHV riding opportunities for ATVs, recreational OHVs (ROVs), 4WD vehicles, and off-highway motorcycles, and expand OHV recreation areas, as feasible.
- Provide trails and practice areas for skills development and technical riding. Adaptively modify these trails over time to improve and provide new visitor experiences, consistent with resource management goals and guidelines in the General Plan.
- Accommodate educational and interpretive opportunities, such as interpretive pedestrian trails, additional interpretive infrastructure, picnic and gathering areas, and visitor educational programs.

2.4.4.3 Proposed Projects

Proposed projects include new and improved visitor and operations facilities that would be constructed under the General Plan (see Figure 2-3). A description of each proposed project is provided below.



New Facilities:	Upgraded Facilities:
1. Greenhouse (O)	A. SVRA Maintenance Area Improvements (O)
2. Campfire Center (V)	B. Ranger Station Expansion (O)
3. Kids Minibike Track (V)	C. Volunteer Training Area Enhancements (O)
4. Front Hills Motorbike Trail (V)	D. Emergency Helicopter Pad Relocation (O)
5. Creekside Pedestrian Trail (V)	E. Campground Remodel (V)
6. Interpretive Loop Trails (V)	F. SVRA Headquarters Area Improvements (O)
7. Group Campsite* (V)	G. Water Plant Upgrade (O)
8. Additional Visitor Recreation Area (V)	H. Water Tower Relocation* (O)
9. Dump Station* (V)	I. Concession Store Relocation* (V)
10. Maintenance Area Concrete Bridge (O)	
11. Restroom* (V)	* The exact location to be determined.

Source: Data from Great Outdoors compiled by AECOM in 2014

Figure 2-3. Proposed Projects

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2.4.4.4 Visitor Facilities

Campground Remodel: The existing campground includes 26 individual campsites. Campsites are family style, originally designed for single family households and include a ramada, concrete table, and fire ring. The campground is surrounded by peeler core fencing. Over the years, the lack of campsite delineation has resulted in some visitors choosing to group camp with extended family and friends. Overcrowded campsites and noise during quiet hours are frequently associated with large groups in a campground. Additionally, while many visitors still choose to camp "tent and truck style," there are no designated areas to place a tent in the campground. "Camping" also includes motorhomes and toy-hauler trailers that are 40 feet or more. The campground remodel will include peeler core fencing to delineate and separate each campsite. Each campsite will be numbered and may include paved parking. Parking spurs will be approximately 45 feet long and 30 feet wide and at a 40-degree angle to allow easier backing in for larger RVs. Campsite delineation will also allow for an increased number of campsites. A "camping area" behind the parking spur will have a table, shade ramada, fire ring, and a space for visitor tent(s). Electricity hookups will be installed on the east side of the parking spur for each campsite.

State Parks may remove existing campsites 1 through 9 along Corral Hollow Road, which has a speed limit of 55 miles per hour (MPH), and turn this area into a buffer between the road and the campground. In addition to the SVRA main entrance, the campground has an entrance on its northern boundary, which connects directly to Corral Hollow Road. State Parks will install a gate at the northern entrance that will close after SVRA hours and may have lighting that illuminates "exit only" signs and "tire busters" to prevent unauthorized entry into the campground while still allowing vehicles to exit. Safety zones will also be created at entrances to reduce the potential for collisions when vehicles are entering and exiting the campground. Non-native trees that obscure viewing of oncoming traffic on Corral Hollow Road will be removed. Buffer and safety zones will be planted with native plants and trees and will provide drainage area for rainfall and dust control during the summer.

New Group Campsite. State Parks will consider several locations on previously disturbed land within the SVRA's gathering and services visitor experience area to develop a group campsite. One location currently under consideration is at the SVRA's northwest corner. Although the exact details of the potential site and capacity have not been determined, the campsite will likely hold up to approximately 30 people and may include parking spurs and spaces, electricity hookups, potable water, picnic tables, shade ramadas, a fire ring, space for visitor's tents, and restrooms.

New RV Dump Station. The SVRA currently does not have a RV dump station for campers. State Parks will construct a dump station on previously disturbed land (e.g., near the campground or SVRA exit as shown in Figure 2-3). There is already a vault septic tank installed next to the current "oversized vehicle" exit at the entrance kiosk. The dump station will be accessible by the general public for a fee.

New Campfire Center. State Parks will design and construct a campfire center on previously disturbed land on the west end of the existing campground (will require relocating the water tower to another previously disturbed area, such as the area west of the existing ATV track). The campfire center, with seating for 50 to 75 people, will have a small and partially covered stage, lockable/removeable audio and visual equipment and screen, lighting, electrical outlets, firepit, and other associated infrastructure. The campfire center would be used for campfire and interpretive programs, entertainment events, and group gatherings. The seating would be in an amphitheater configuration facing the stage.

Concession Store Upgrade and Relocation. The existing leased concession store, MotoMart, is located next to the SVRA day use and campground area. The store may be replaced and potentially relocated to the west side of the SVRA entrance. The new modular concession building will be Americans with Disabilities Act (ADA) compliant, and utilities would be brought up to current codes. Upgraded utility connections for the new building would include electrical, water, and sewer. The concessionaire will develop their own tenant improvements and the building will still be used for food sales, retail, parks general store, equipment rental and sales, and minor motorcycle repair services. The store will include outdoor adjacent spaces to accommodate seating for food service users, shade structures and landscaping, indoor/outdoor interpretive areas, and restrooms (See Appendix B – Concession Store

Conceptual Floor Plan Design). If the existing concession store is relocated, State Parks will consider using the vacated site to develop another visitor amenity, such as new visitor's center.

New Kid's Minibike Track. A kid's minibike riding area with a simple flat oval dirt track will be installed on a small portion of the camping area at the east end of the campground and west of the existing peeler core fence and the loading/parking area to the east of the peeler core fence and north of the SVRA's main road. This area is currently used as an informal camp space with a concrete table and campfire ring. The new riding area next to the campground will provide a safe riding zone. Children will be redirected to this area from riding their minibikes in the campground where vehicles and trailers moving around present a safety hazard.

New Pedestrian Interpretive Loop Trails. State Parks will construct two new interpretive loop trails east of the campground and existing ATV track. The loop trails would be on the north and south sides of the main SVRA road. The trails will be above ground boardwalks. No-climb fencing would be installed in some areas to avoid impacts to cultural resources. The exact alignment of the trails will be determined by park staff and resource managers. The southern trail will have interpretive signage describing the historic town of Carnegie and the Carnegie Brick and Pottery factory previously present in this area. The trails will be developed according to State Parks guidelines and ADA compliant to the extent feasible (as much as the topography will allow). The trails will include turnouts with benches and potentially picnic tables.

New Creekside Pedestrian Trail. This new native surface/dirt trail will run along the north side of Corral Hollow Creek, which is located south of the main SVRA road, and could help increase safety by reducing the number of pedestrians walking on the road. The trail may have interpretive signage and some focused fencing to keep people on the trail to avoid impacts to sensitive resources.

New Front Hills Single Motorbike Trail. This new two-way native surface/dirt trail will run along the hillside to the south of and parallel to Corral Hollow Creek and the SVRA's main road, with turnouts for motorbikes. The trail could help reduce or calm traffic on the main SVRA road, which sometimes gets congested. The alignment of the trail will take into consideration the terrain and sensitive resources.

Additional Visitor Recreation Area. The special event/day use area north of the existing Motocross (MX) track is currently underutilized. State Parks will consider redeveloping the area into one or more new visitor facilities, such as a remote-control car track area with small features to mimic the natural environment with hills, bridges, and obstacles; a trials motorbike area; and an additional ATV track.

Reopening the Waterfall Canyon area to Non-Motorized Trail Use. State Parks is considering the rehabilitation of existing trails in in the southeast corner of the SVRA for non-motorized pedestrian use. Details about the trails and their allowed recreational uses will be provided in a Carnegie SVRA Roads and Trails Management Plan. The alignment of trails will take into consideration potential viewpoints, areas for picnic tables, benches, and interpretive signage, terrain and drainages, and sensitive resources.

Franciscan Riding Area. State Parks will finish rehabilitating the area (the area south of the Franciscan loop trail that was damaged in the 2015 Tesla fire) into a sustainable trail network for advanced riders.

Miscellaneous. Another restroom also may be added near the existing MX track and would be designed like the existing restroom in that area. Additionally, potential additions to the existing 4x4 riding area include driving obstacles, such as a teeter totter or pyramid, as feasible.

2.4.4.5 Operations Facilities

The following operations facilities and programs are envisioned in the General Plan:

SVRA Maintenance Area Improvements. The SVRA maintenance area is located at the county line near the SVRA's western boundary and is accessible from Corral Hollow Road. Maintenance area improvements may include expansion of the existing footprint to install two new prefabricated buildings (ranger office and sector building), auto shop remodeling/addition, fuel system upgrade (2,000 gallons for unleaded gas and 1,000 gallons for diesel), carport roof and siding repair/reconstruction, solar PV installation on carport, power maintenance shop upgrade, new fencing, paving/concrete surfacing for parking, and shade structures. The auto shop garage/warehouse layout may be redesigned and improved

to include the shop space, office space, and a break room (See Appendix B - Auto Shop Conceptual Floor Plan Design). State Parks may also replace the maintenance area bridge.

Ranger Station Expansion: The SVRA entrance and ranger station are located near the center of the SVRA's northern boundary and accessible from Corral Hollow Road. SVRA staffing and equipment has outgrown the current space and there is no dedicated space for ranger trainings and staff meetings, and the yard is currently underutilized. State Parks will expand and redesign the layout of the existing ranger station building and yard. The station and yard face the entrance road to the north. The building will include features such as new staff work areas/stations and offices, a breakout room, meeting/tactical training room, storage rooms, a break room, a locker room with shower, and redesigned medical facility. The operations yard west of the station building would be expanded further west and redesigned to include an approximately 50-foot x 70-foot shop building, vehicle and trailer parking areas, monitoring well, drainage basin, fencing, and security gate. The visitor parking area at the back of the building would include rock cobble lined drainage parking islands, an ADA accessible (van) parking space, and dumpster enclosure. Hot mixed asphalt (HMA) paving will be added on the east side of the station building to connect the entrance road to the visitor parking area located at the back (south) of the station building. The project will require demolition of the back half of the existing ranger station (including the current shade structure), approximately 900 square feet (sq. ft.) and the addition of approximately 4,300 sq. ft. to the entire ranger station building and yard area (see Appendix B - Ranger Station Conceptual Floor Plan Design and Site Plan).

Emergency Helicopter Pad Relocation: Currently, the emergency helicopter pad is near the SVRA maintenance area. The pad will be relocated to an area just east of the existing ranger station to better support and improve emergency medical response. The pad will be a hardscaped surface.

Volunteer Training Area Enhancements: A small area east of the ranger station and north of the main SVRA road, which includes a small storage shed and picnic tables, is used for training SVRA volunteers. The area will be expanded further east (potentially up to the location of the proposed greenhouse) to include facilities and features such as a classroom for safety trainings/meetings (no larger than 30-foot by 30-foot) and additional picnic tables.

Campground Host Sites. State Parks will develop up to four campground host sites potentially near the volunteer training area. These sites will provide features such as parking spur, electricity hook-up, water, picnic table, shade ramada, and fire ring.

New Greenhouse: A greenhouse will be constructed just west of the existing visitor day-use area. State Parks will also install picnic tables for plant cuttings and educational programs. The greenhouse will likely be a cold frame structure and approximately 20 feet by 84 feet with a minimum 6-foot arch on the center arch and 5-foot side walls and poly on roof, sides and ends.

SVRA Headquarters Area Improvements. This area is located north of the campground and Corral Hollow Road and east of California Fire Station 21 and includes a portable building with SVRA staff offices and meeting space, storage sheds, a SVRA staff residence, three SVRA staff trailer pads, the SVRA water plant, and a large, drained man-made stock pond. The portable office building is at maximum capacity. Project area improvements may include filling the drained pond for additional developable space, upgrading or expanding the existing office space and other operations facilities and staff housing, such as a new wood shop, a new resource work/storage building, additional storage sheds/space, a new double-wide modular home for SVRA staff, additional staff trailer pads, and/or expanding the parking area.

Water Treatment Facility Upgrade: The existing SVRA water treatment facility is too small, over 50 years old, and frequently breaks down. The system has become expensive to keep in good repair. Furthermore, the system does not have a generated backup system for power failures to produce water during power outages. Due to the SVRA's remote location, location fires and power failures occur often, and it is critical to have a backup system that can support both the SVRA needs and the fire department during a natural disaster. The system will be upgraded to increase water treatment capacity and provide a backup system to generate power to produce water during outages. The project will replace the old

system with a modern, pressurized system. The project will also include a new water treatment facility building, new water monitoring equipment with a chlorine injection system, and other modern efficiency and safety features.

Miscellaneous. Other potential operations facility projects may include new or improved low-water creek crossing(s), maintenance of creek crossings, SVRA staff and public electric vehicle charging infrastructure, and an ATV and/or MX track sprinkler system. Additionally, facilities for communication or technology support could be in any of the SVRA use areas, except for limited recreation areas. Maintenance and resource management activities also include activities such as shade ramada replacement, as needed, and tree planting.

With the full buildout of anticipated improvements, State Parks anticipates needing up to an additional seven full-time employees and seven to eight seasonal employees.

2.4.5 Visitor Experience Areas

The General Plan proposes eight different visitor experience areas in the SVRA, each with different characteristics, activity or allowable uses, and area-specific resource management prescriptions or considerations (see Figure 2-4 and Table 2-1). State Parks will manage natural and cultural resources in the visitor experience areas to protect their integrity and to comply with relevant state and federal laws and regulations regarding their management and protection. The resource management goals and guidelines described in Section 4.4.6, “Parkwide Goals and Guidelines,” in Chapter 4 of the General Plan apply to all visitor experience areas. Resource management considerations are included only when there is an action or requirement for a specific visitor experience area beyond the general resource management goals and guidelines.

2.4.6 Goals and Guidelines

Goals and guidelines were developed and are described in Chapter 4 of the General Plan to address existing issues and to provide ongoing guidance for management of Carnegie SVRA. The goals establish the purpose and desired future conditions of the SVRA, and the guidelines provide the direction that State Parks will consider to achieve these goals.

The Park-wide goals and guidelines apply to all Carnegie SVRA visitor experience areas. Where specific resource management is warranted for a particular visitor experience area, the applicable management strategies are outlined in Table 4-1 of the General Plan.

Management of the SVRA is undertaken in compliance with all applicable statutory and regulatory requirements, including the following:

- Section 404 of the federal Clean Water Act (CWA)
- Section 401 of the CWA
- Section 402 of the CWA
- Porter-Cologne Water Quality Control Act of 1969
- Title 24 of the California Building Standards Code
- Alquist-Priolo Earthquake Fault Zoning Act
- Federal Endangered Species Act
- California Endangered Species Act
- California Fish and Game Code
- California Public Resources Code
- California Vehicle Code

Detailed descriptions of these laws and regulations and their applicable sections are included in Section 2.7.3, “Regulatory Influences,” of the General Plan.

This text below summarizes the goals proposed in the Carnegie SVRA General Plan. Section 4.4, “Goals and Guidelines,” in Chapter 4 of the General Plan provides the complete text of proposed goals and guidelines.

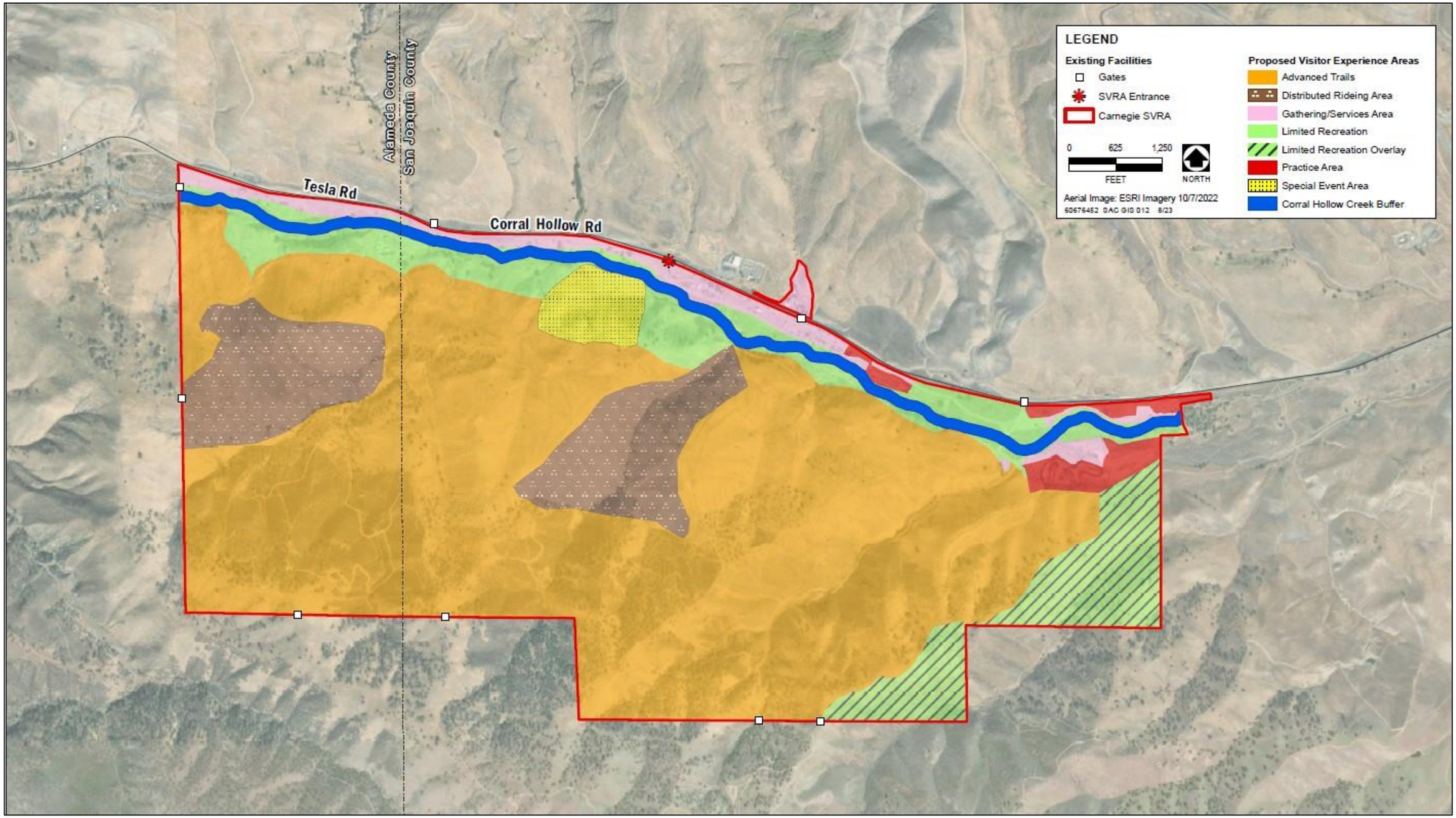

Figure 2-4. General Plan Land Use Concept Map and Visitor Experience Areas

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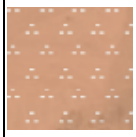
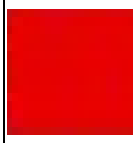
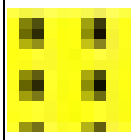
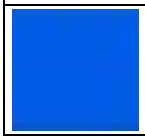
Table 2-1. Visitor Experience Areas

Color on Maps	Title	Description
	Limited Recreation Area	**Definition:** An area with a higher-than-average concentration of sensitive natural and/or cultural resources. **Allowable Uses:** Roads or trails may cross these areas to facilitate public egress/ingress and connectivity between other visitor experience areas; however, their footprint should be limited to the minimum necessary to serve their intended purpose, and they should be designed and managed to avoid or minimize impacts on the surrounding resources. No other facilities will be allowed. These areas could be available for nonmotorized recreational opportunities. **Resource Management:** These areas were chosen based on the presence of sensitive resources.
	Limited Recreation Overlay 1—Waterfall Canyon	**Definition:** An area that, because of water quality management restrictions, needs to be managed like a limited recreation area. **Allowable Uses:** Hiking and mountain biking may be allowed on trails. This area could accommodate OHV facilities if certain guidelines are met. For instance, this area could be changed to an intermediate or advanced trail area in the future if there is an additional acquisition that would allow State Parks to provide adequate water quality management measures for the watershed consistent with the *Corral Hollow Watershed Assessment* and the *Storm Water Management Plan for Carnegie SVRA*. **Resource Management**: This area is currently excluded from OHV recreation for water quality management purposes and will be managed according to the *Storm Water Management Plan for Carnegie SVRA* or the most current water quality management prescriptions.
	Advanced Trails Area	**Definition:** An area that provides more challenging OHV trails. **Allowable Uses:** This area will allow OHV trails and challenge areas. Trails for skills development and technical riding will be allowed. These trails could be adaptively modified over time to improve the visitor experience and provide new experiences. Examples of trails and experiences that could be found in these areas include minor hillclimbs/descents; rocky trail sections; tight turns; roll and flow; and skills practice trails for off-highway motorcycles and ATVs. Trails should be designed and constructed to be narrow and to limit soil erosion in more advanced trail areas and to be wider with gradual turns and moderate trail slopes in moderate trail areas. **Resource Management:** Challenge areas would be allowed where most appropriate using site-specific studies and would be closed and rotated as needed to restore soil and/or vegetation.
	Gathering and Service Areas	**Definition:** An area that provides places for visitors to gather and access services. **Allowable Uses:** Campgrounds, restrooms, picnic areas, parking areas, concessions, ranger station, entrance kiosk, staging, etc. **Resource Management:** Facilities and associated landscaping should be designed to assure safety and to provide an attractive natural setting, while limiting maintenance requirements. Impacts to resources will be considered prior to development.

Color on Maps	Title	Description
	Distributed Recreation Area	**Definition:** An area in which OHV recreation is not limited to specific trails. **Allowable Uses:** Trails and experiences that could be found in these areas include hillclimbs/descents; tight turns, roll and flow; and skills practice trails for off-highway motorcycles and ATVs. There may be small, concentrated riding areas within distributed riding areas to provide opportunities such as hillclimbing or high banking. **Resource Management:** Distributed recreation areas will be clearly delineated and posted to limit visitors from riding off trail in adjacent areas not designated for distributed riding. Soil and vegetation restoration may be needed to limit soil erosion and to conserve the area's natural character. Trails and concentrated riding areas within distributed riding areas may be changed over time to create new experiences and to restore vegetation and/or soils. Areas within the distributed recreation area may be closed to OHV use to conserve specific resources, to provide gathering areas for visitors, or to allow for management of a particular resource. A vegetative buffer will be maintained along corridors with properly sited and armored approaches and crossings to prevent erosion and protect water quality.
	Practice Area	**Definition:** An area that provides specialized opportunities for visitors of different age groups and experience levels to develop riding/driving skills. **Allowable Uses:** Uses in these areas may include tracks, trails, challenge courses, technical challenge areas, or other facilities for all types of OHV vehicles that allow riders and drivers to practice and/or challenge themselves. Facilities need to be carefully designed, constructed, and managed to create safe and enjoyable experiences.
	Special Event Area	**Definition:** An area that provides a space for competitive hillclimbing events. **Allowable Uses:** Hillclimbs, space for spectators, vendors, staging, and other related activities. The area needs to be secured during hillclimb events for the safety of competitors and other visitors. **Resource Management:** The special-event area will be opened and closed on a rotating basis for vegetation and/or soil restoration purposes. The area will be clearly delineated and posted to limit visitors from riding off trail in adjacent areas.
	Corral Hollow Creek Buffer	An area restricted to only limited pedestrian activities and designated low-water crossings of motorized vehicles to preserve the water quality of the seasonal creek.

Notes: 4WD = four-wheel-drive; ATV = all-terrain vehicle; OHV = off-highway vehicle; ROV = recreational off-highway vehicle; SVRA = State Vehicular Recreation Area

Source: Data provided by State Parks and compiled by AECOM in 2023

2.4.6.1 Visitor Experience and Opportunities (VEO)

Primary visitor experience and opportunities goals include providing a broad range of OHV recreation experiences and opportunities for visitors to enjoy and appreciate (VEO Goal 1), providing state-of-the-art visitor-serving facilities to enhance the visitor experience (VEO Goal 2), and enhancing individual-, family-, and community-centered recreational opportunities (VEO Goal 3).

2.4.6.2 Visitor Facilities

The General Plan includes visitor facilities goals and guidelines for OHV use, camping, hiking, interpretation and education, and other visitor facilities. The primary goal for OHV use includes maintaining, improving, or expanding visitor area connectivity, practice areas, and riding opportunities for all OHV recreationalists (OHV Use Goal 1). The primary goal for camping includes remodeling and upgrading the existing SVRA campground to improve the visitor experience and safely, provide a designated group campsite, and implement a reservation system (Camping Goal 1). The primary goal for hiking includes developing a range of hiking and walking trails for different visitor interests and abilities within the SVRA that are consistent with protecting sensitive resources (Hiking Goal 1). The primary goal for interpretation and education is to provide facilities that support the interpretive mission of Carnegie SVRA, such as a campfire center (Interpretation and Education [IE] Goal 1). The primary goal for other visitor facilities includes improving, expanding, or adding complementary recreational use amenities to enhance the visitor experience (OVF Goal 1).

2.4.6.3 Operations Facilities

The General Plan includes operations facilities goals and guidelines for the maintenance yard, ranger station, volunteer training area, SVRA headquarters, campground host sites, greenhouse, and other operations support facilities. The primary goal for the maintenance yard includes expanding, improving, and upgrading the SVRA maintenance yard facilities to accommodate park maintenance staff needs and improve operation efficiencies (model year [MY] Goal 1). The primary goal for the ranger station includes expanding and remodeling the existing ranger station and associated yard to accommodate park staff work/office space, equipment, staff training, and other facility and SVRA operation needs (RS Goal 1). The primary goal of the volunteer training area includes considering expanding and enhancing the volunteer training area to include additional training facilities (Volunteer Training Area [VTA] Goal 1). The primary goal for the SVRA headquarters includes expanding and improving headquarters facilities, including staff offices, housing, storage areas, and parking, and upgrading the SVRA water treatment system (Headquarters Goal 1). The primary goal of the campground host sites includes developing sites for campground hosts who can provide services to visitors camping at the SVRA and enhance the visitor experience (Campground Host Sites [CHS] Goal 1). The primary goal of the greenhouse includes constructing a greenhouse with features such as picnic tables for plant cuttings to support the Corral Hollow Creek riparian restoration efforts and educational programs (Greenhouse Goal 1). The primary goal for other operations facilities is to relocate and/or update SVRA operations, as well as visitor, support facilities to improve efficiencies.

2.4.6.4 Physical Resource Management

The General Plan includes physical resource management goals and guidelines for water quality, soils, and geology and paleontological resources. Primary physical resource management goals and guidelines include managing the SVRA to protect jurisdictional waters of the United States, including wetlands, and waters of the state (Water Quality [Water] Goal 1); protect water quality (Water Goal 2); conserve water resources (Water Goal 3); anticipate issues related to flood control when planning projects (Water Goal 4); protect and conserve soil (Soils Goal 1); minimize geologic hazards (Geo Goal 1); promote staff education and visitor awareness of geological and paleontological resources (Geo Goal 2), all while maintaining a quality OHV recreational experience.

2.4.6.5 Natural Resources Management (NRM)

The General Plan includes natural resources goals and guidelines for natural resources management. Primary natural resources management goals and guidelines include managing Carnegie SVRA for a balance of uses that allow protection and stewardship of natural resources (NRM Goal 1); restoration or enhancement of natural habitats (NRM Goal 2); protection of special-status and rare plants and sensitive natural communities (Plant Goal 1); and protection of native wildlife species, including special-status wildlife species and their designated habitats (Wildlife Goal 1), all while maintaining a quality OHV recreational experience.

2.4.6.6 Cultural Resource Management (CR)

The General Plan includes cultural resource goals and guidelines for cultural resource management. Primary cultural resource management goals and guidelines include identifying, documenting, and evaluating cultural resources within Carnegie SVRA (CR Goal 1); protecting, stabilizing, and preserving cultural resources (CR Goal 2); and ensuring that cultural material and object collections at Carnegie SVRA have a specific connection to the SVRA's cultural history or provide support for interpretive themes and programs (CR Goal 3).

2.4.6.7 Tribal Cultural Resources (TCR)

The General Plan includes tribal cultural resources goals and guidelines for tribal cultural resources management. The primary tribal cultural resources goal includes identifying and interpreting the tribal cultural resources, traditional cultural places, and past and present cultural uses in the Park and protecting these culturally significant places (TCR Goal 1).

2.4.6.8 Interpretation and Education Programs (IEP)

The General Plan includes goals and guidelines for interpretation and education at Carnegie SVRA. Primary interpretive and educational goals and guidelines include providing relevant and thematic interpretive materials that address the SVRA's sense of place and history and meet the needs and interests of the visitors (IEP Goal 1); increasing visitors' knowledge of and appreciation for recreational opportunities at the SVRA and in the region (IEP Goal 2); expanding the understanding of ecological relationships and heightening awareness of and sensitivity to human impacts (IEP Goal 3); and promoting safe and responsible OHV recreation (IEP(Goal 4).

2.4.6.9 Park Operations and Maintenance (OM)

The General Plan includes goals and guidelines for park operations and maintenance. Primary goals and guidelines include providing visitor services and infrastructure that encourage responsible visitor use of Carnegie SVRA and meet visitor needs (OM Goal 1); maintaining and enhancing the quality of OHV recreational opportunities (OM Goal 2); providing facilities and services that contribute to the safety and convenience of visitors and staff (OM Goal 3); coordinating with special-event sponsors to ensure that special events are well managed and that appropriate visitor services are available (OM Goal 4); developing and maintaining SVRA facilities and monitoring OHV activities to ensure compatibility with surrounding land uses (OM Goal 5); limiting potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities (OM Goal 6); managing the SVRA to reduce regional air quality impacts from OHV recreation and related activities (OM Goal 7); maintaining current aesthetic qualities and reducing visual impacts on surrounding areas that could result from construction, maintenance, and OHV recreation activities (OM Goal 8); and designing facilities to maximize energy efficiency, energy conservation, and resource conservation efforts (OM Goal 9).

2.4.6.10 Climate Change

The general plan includes goals and guidelines to address the impacts of climate change, including understanding the climate impacts felt to date and predicting impacts based on the best available information (Climate Goal 1) and developing a strategy to address and adapt to potential climate impacts (e.g., wildfire, flooding), and sustain SVRA goals through management actions and other activities (Climate Goal 2)

2.4.6.11 Visitor Management (VM)

The General Plan includes goals and guidelines for visitor management. Primary goals and guidelines related to visitor management include establishing and implementing an adaptive management process for managing visitor capacity at Carnegie SVRA in support of the SVRA's purpose and vision (VM Goal 1).

3. Environmental Analysis

This chapter provides a programmatic analysis of the potential environmental impacts of implementing the proposed Carnegie State Vehicular Recreation Area (SVRA) General Plan. As described in Chapter 1, “Introduction,” of this draft environmental impact report (DEIR), the approach to analyzing the General Plan’s environmental impacts is programmatic because the General Plan presents a framework for future management and park development.

The programmatic analysis of General Plan impacts addresses potential impacts related to all aspects of the General Plan. General Plan Chapter 4, “The Plan,” serves as the project description for this EIR as described in EIR Chapter 2. Much of the project description is presented at a programmatic level of detail, meaning that the project description lacks the detail (little to no specifications or designs) that will be available when specific projects are proposed. Thus, to conduct this California Environmental Quality Act (CEQA) analysis, assumptions were made about the results of implementing many of the proposed facility projects. These assumptions are discussed in this chapter.

Similarly, General Plan Chapter 2, “Existing Conditions,” provides much of the physical and regulatory setting information used for this EIR’s environmental analyses. That chapter is hereby incorporated by reference, consistent with CEQA Guidelines Section 15150. Chapter 2 of the General Plan describes the geographical, physical, and management setting, including resource conditions and planning influences. This information is referenced at the beginning of each resource section in this EIR. Generally, the General Plan itself presents the setting information relevant to the General Plan, and this EIR provides supplemental setting information relevant to the environmental analysis. The structure of the analysis is similar for each environmental issue. The analysis starts with a discussion of the existing environmental setting and is followed by a programmatic discussion of potentially significant adverse effects resulting from implementation of the Carnegie SVRA General Plan.

Each issue analysis includes the following sections:

- **Existing Conditions**: This section describes the existing conditions of the environmental issue being analyzed.
- **Regulatory Setting**: This section describes the applicable federal, state, regional, and local regulations related to the environmental issue being analyzed.
- **Impact Analysis and Mitigation Measures:** This section includes the Thresholds of Significance for analysis independently determined by considering the regional context and the setting. This section presents the guidelines used to identify how an impact is to be judged for each issue area in this EIR specific to Carnegie SVRA. This section includes the environmental impact analysis, which presents the evaluation methodology and the analysis of each specific environmental issue area. It then identifies any potentially significant environmental impacts and identifies mitigation measures that must be implemented to mitigate each impact found to be significant or explains why an impact would not occur.

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3.1 Aesthetics

This section describes aesthetic resource conditions in the planning area and analyzes the potential impacts of implementing the Carnegie SVRA General Plan on viewsheds in the planning area.

3.1.1 Existing Conditions

Descriptions of existing aesthetic resources and photographs of typical views in the planning area and site-specific project sites are provided in Section 2.3.4, “Aesthetic Resources,” in Chapter 2 of the General Plan.

3.1.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, and laws are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Scenic Highway Program

Caltrans manages the California Scenic Highway Program. The purpose of this program is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. Caltrans manages the State Scenic Highway Program, provides guidance, and assists local government agencies, community organizations, and citizens with the process to officially designate scenic highways.

Regional and Local Plans, Policies, Regulations, and Ordinances

Section 2.7, “Planning Influences,” in Chapter 2 of the General Plan summarizes the regional plans, policies, regulations, and laws related to aesthetic resources at Carnegie SVRA. In particular, Section 2.7.2, “Regional Planning,” describes the Scenic Route Element and *East County Area Plan* in the *Alameda County General Plan*, and scenic routes in San Joaquin County.

Section 2.7.3, “Regulatory Influences,” of the General Plan describes the visual goal for sensitive viewsheds in the *East County Area Plan* of the *Alameda County General Plan*, which is to preserve unique visual resources and protect sensitive viewsheds with policies that include guidelines in respect to ridgelines, community separators (open space), trees, other landscaping, grading, and utilities in areas that are near the cities of Pleasanton, Dublin, and Livermore (Alameda County 2002).

Furthermore, Section 2.7.3 of the General Plan describes the Scenic Resources section in the Natural and Cultural Resources section of the *San Joaquin County General Plan* (San Joaquin County 2016), which contains goals and policies that address scenic resources in the county, including enhancement of scenic routes. Corral Hollow Road is identified as a scenic route, and San Joaquin County supports litter removal, provision of parking at desirable viewpoints, landscaping plans for development, and the use of design guidelines. The intent of the county’s scenic designation is that development proposals should not detract from the visual and recreational experience along these routes. The general plan also calls for views of waterways, hilltops, and oak groves from public lands and roadways to be protected.

Carnegie SVRA is owned and operated by the state of California; therefore, no regional or local plans, policies, regulations, or ordinances related to aesthetic resources are applicable to the planning area.

3.1.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on aesthetic resources is based on review of representative photographs provided in Section 2.3.4 “Aesthetic Resources” in Chapter 2 of the General Plan, maps, and aerial photography. Potential changes to existing aesthetic resources that would result from implementation of the Carnegie SVRA General Plan were evaluated. When the extent and implications of the visual changes were determined, consideration was given to:

- specific changes in the visual composition, character, and valued qualities of the affected environment;
- the visual context of the affected environment;
- the extent to which the affected environment contains places or features that have been designated in plans and policies for protection or special consideration; and
- the number of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the project-related changes.

Created using geographic information system (i.e., GIS) applications, Figure 3.1-1 illustrates the results of a viewshed analysis that determined the visibility of the planning area from surrounding areas at an elevation of 6 feet. The purpose of the viewshed analysis was to quantify views of the planning area and offer a visual analysis to aid in the evaluation of potential impacts.

A 3-mile radius around the planning area is shown in Figure 3.1-1 for scale. Locations of higher visibility as depicted in the figure have views across the entire planning area, whereas locations of moderate visibility have only partial views, and locations of lower visibility have very limited views of the planning area. Figure 3.1-1 provides a general analysis of potential views, and does not factor in trees, buildings, other structures, or atmospheric conditions (e.g., haze) that may affect visibility.[1] Generally, irrespective of visual obstructions such as buildings or hillsides, a person can see out to a distance of approximately 2.7 miles at mean sea level and approximately 26.46 miles at an elevation of 500 feet (Research Maniacs 2014).

In addition, the duration of views of the planning area from Corral Valley Road is considered in this analysis. The views of the planning area are variable and largely dependent on vehicle speed traveled. The higher vehicle speeds allowed on Corral Valley Road reduces the opportunity for prolonged views of the planning area.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact on aesthetic resources if it would:

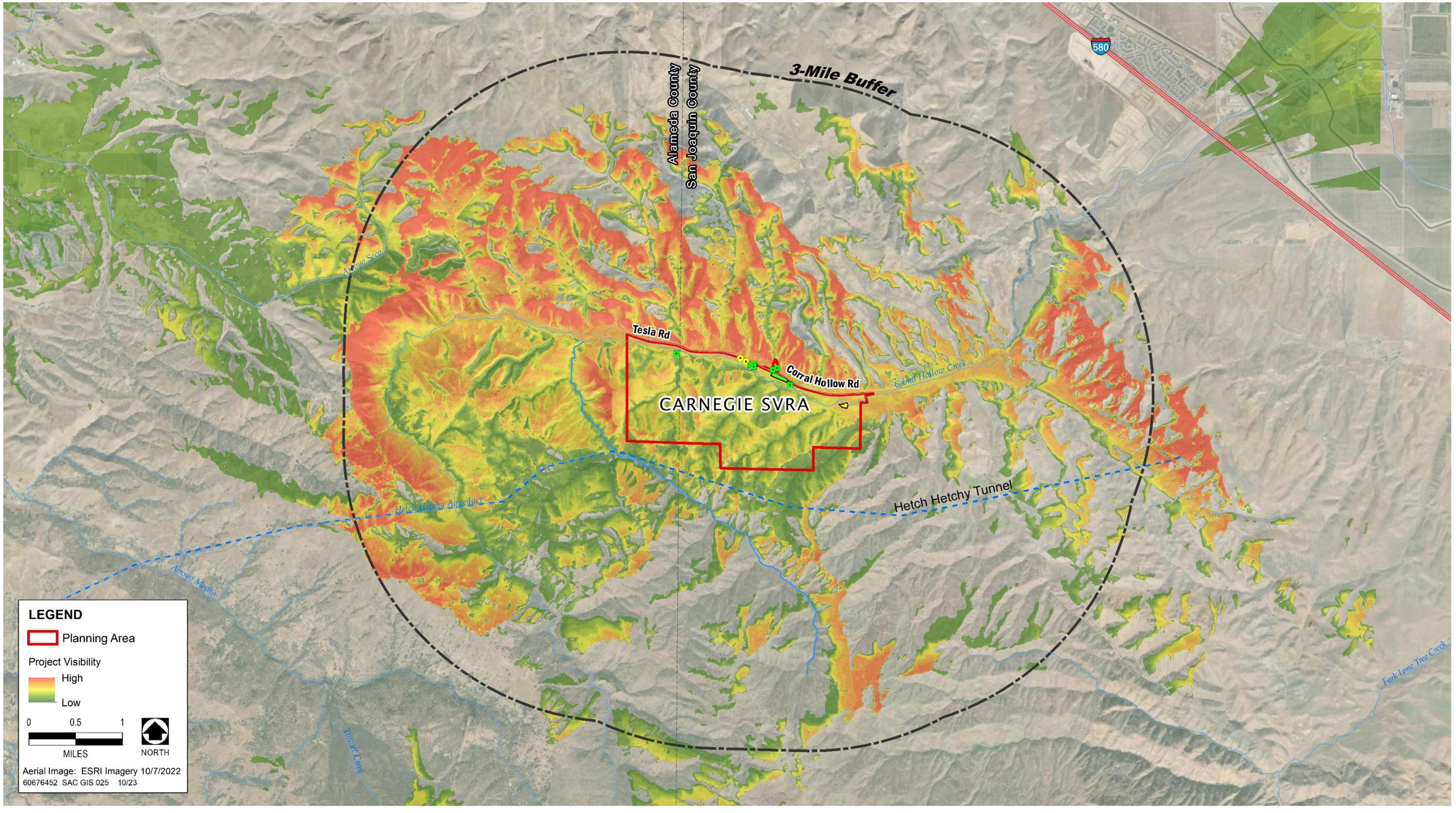
a) have a substantial adverse effect on a scenic vista;

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

c) in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or

d) create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

[1] For the viewshed map (Figure 3.1-1), the color gradient is based on the number of points visible in the planning area. This viewshed is based on a 200-foot grid of points overlaid onto the planning area boundary, resulting in approximately 5,000 viewpoints. The viewshed calculated values ranging from 0 to 5,000, based on the number of points visible. The colors shown are as follows: 0 = blank (not visible); 1 = green; 2 = green-yellow; 3 = yellow; 4 = yellow-orange; 5 = orange; 6 = orange-red; and 7+ = red. If one-fifth or more of the planning area is visible from a location, it is shown as red (high visibility).



Source: AECOM 2016

Figure 3.1-1. Carnegie SVRA Planning Area Viewshed

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Environmental Impacts

Issues Not Discussed Further in this DEIR

Substantially Damage Scenic Resources within a State Scenic Highway – The nearest State Scenic Highway to the SVRA is State Route 580, approximately 5.5 miles north-northwest of the planning area (Caltrans 2023). Because of the viewing distance and intervening topography, the planning area is not visible from State Route 580. Therefore, no impact from damage to scenic resources within a State Scenic Highway would occur, and this issue is not discussed further in this DEIR.

Substantial Adverse Effect on a Scenic Vista – Scenic vistas are typically categorized as either panoramic views (visual access to a large geographic area) or focal views (visual access to a particular object, scene, setting, or feature of interest). There are no designated scenic vistas, overlooks, or viewpoints in or near the planning area. Therefore, implementation of the Carnegie SVRA General Plan would have no impact on a scenic vista, and this issue is not discussed further in this DEIR.

Impact 3.1-1. Substantially Degradation of Existing Visual Character or Quality of Public Views in a Nonurbanized Area?

General Plan Implementation

The Carnegie SVRA General Plan is a broad-based policy document that establishes a long-range vision to direct future management, development, services, and programs for the SVRA. This vision would be obtained through the implementation of a set of long- and short-term goals and specific guidelines associated with each goal. Aesthetic resources goals and guidelines that will result in impact avoidance of aesthetic resources within the SVRA are described in detail in section 4.4. “Goals and Guidelines” of the General Plan. This framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals. Therefore, with implementation of these goals and guidelines, General Plan implementation would not cause any adverse effects on aesthetic resources; there would be **no significant impact** related to aesthetic resources.

New and Improved Facilities

Corral Hollow Road/Tesla Road runs approximately 7.5 miles along the northern boundary of the planning area. Views of the planning area from this primary public road consist of developed areas of Carnegie SVRA such as the entrance station, campground, and main park road; motorcycle tracks in areas where off-highway vehicle (OHV) recreation is not confined to specific trails; and hillsides covered with grassland, scattered oak trees, and chaparral. Corral Hollow Creek flows alongside Corral Hollow Road/Tesla Road for much of its route, and rocky and steep creek banks and vegetation are visible from the roadway (see Figure 2-18 in Section 2.3.4, “Aesthetics,” of the General Plan). The color and texture of the vegetation varies by season. In summer months, or times of little rainfall, the landscape is generally tan or light brown and dry in appearance (see Figure 2-18 in Section 2.3.4 of the General Plan). In winter, or during months of higher rainfall, the landscape turns predominantly green because of the vegetation in the area (see Figure 2-19 in Section 2.3.4 of the General Plan).

Prominent built features along the roadway include fences; overhead power lines; grading and roadway features; residences; parking, camping, and event areas in the SVRA; an industrial facility (LLNL Site 300); and areas showing evidence of previous grading or excavation associated with historical mining and landfill activities. As shown in Figures 2-18 and 2-19 in Section 2.3.4 of the General Plan, these human-built elements tend to dominate the viewshed and are inconsistent with the surrounding open space and create a lack of visual coherence and compositional harmony.

The Carnegie SVRA includes developed areas along the creek, with large, open areas used for parking, camping, and special events. From hillsides and hilltops in the planning area, longer views extend up and down the canyon and into the Central Valley. The Sierra Nevada is visible from higher elevations on clear days (see Figure 2-19 and 2-20 in Section 2.3.4 of the General Plan).

Human-built elements in the planning area include many of the developed camping, parking, and staging areas along Corral Hollow Creek. These areas are characterized by large expanses of gravel with few trees and little vegetation. Figure 2-18 in Section 2.3.4 of the General Plan illustrates graveled event areas in the Carnegie SVRA in the middle ground. Hillsides in the Carnegie SVRA have visible motorcycle tracks in areas where OHV recreation is not confined to specific trails (see Figure 2-20 in Section 2.3.4 of the General Plan).

New and improved visitor facilities called for in the proposed General Plan consist of the campground remodel, new group campsite, new dump station, new campfire center, concessions store upgrade, new kid's minibike track, new interpretive loop trails, new creekside pedestrian trail, new front hills single motorcycle trail, reopening the Waterfall Canyon area to non-motorized trail use, rehabilitation of the Franciscan riding area, additional recreation area, additional restrooms, and additions or improvements to the existing 4x4 riding area. New operational facilities include SVRA maintenance area improvements, ranger station expansion, emergency helicopter pad relocation, volunteer training area enhancements, campground host sites, new greenhouse, SVRA headquarters area improvements, water plant upgrade, and other miscellaneous projects as described in Chapter 2 of this EIR. New facilities would be designed as recommended in OM Guideline 8.1 (shown at the end of this impact discussion). New structures would be designed to be similar in height to existing structures and would be constructed in a style similar to the existing structures at the SVRA. If necessary, California native tree species would be planted to screen the new facilities from views and nonobtrusive colors would be used so the facilities would blend in with the environment.

Individual tree removal has the potential to adversely affect the aesthetics of the planning area, depending on where the tree is located; however, the General Plan's overall management direction, as supported by NRM Guideline 1.1, NRM Guideline 1.5, and Plant Guideline 1.6 of the General Plan (shown at the end of this impact discussion), call for the placement of visitor-serving facilities in prior disturbed areas or in areas of relatively low resource value and replacement of any trees removed and the preservation, enhancement, and restoration of native woodland. In addition, the area that would be converted to land cover other than the natural vegetative cover is very limited and land cover makes up a very small fraction of the overall acreage of the SVRA.

Corral Hollow Road in the vicinity of the planning area is a San Joaquin County–designated scenic route. In addition, Tesla Road in the planning area is designated as a scenic rural recreation route in Alameda County. Implementing new and improved visitor facilities would not change the overall aesthetic character along these routes. Areas with trails, new campfire center, new recreation area, new kid's minibike track, new Front Hills single motorcycle track would be located primarily away from Corral Hollow Road/Tesla Road (Figure 3.1-1). Views from the roadway would be of areas designated for limited recreation, as well, some of which are currently visible from the road. As stated previously, visible areas of the SVRA from the roadway are characterized by large expanses of gravel with few trees and little vegetation. Because only the higher peak areas are visible from areas outside of the local viewshed of the planning area (Figure 3.1-1), OHV activities would not be visually apparent from the surrounding viewshed, thus keeping existing scenic views largely unobstructed.

Natural Resource Management (NRM) Goal 1: Manage Carnegie SVRA for a balance of uses that allow protection and stewardship of natural resources while maintaining a quality OHV recreational experience.

- **NRM Guideline 1.1:** Locate visitor-serving facilities in prior disturbed areas or areas of relatively low resource value to minimize disturbance to higher-value habitat areas.
- **NRM Guideline 1.5:** Focus new trail development in areas of relatively low habitat value. Route new trails around the edges of high-quality habitat and include buffers to avoid habitat fragmentation. Maintain strict enforcement of riding destination requirements throughout the SVRA, according to the allowable uses in the respective visitor experience areas and monitor for compliance. If noncompliance is documented, enact adaptive management techniques such as temporary closures or other measures proven effective at the SVRA.

Operations and Maintenance (OM) Goal 8: Manage the SVRA to maintain current aesthetic qualities and reduce visual impacts on surrounding areas that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 8.1:** Design any new structures such that they are similar in height and scale to existing structures at the SVRA and have an architectural style similar to the existing structures. Locate facilities with minimal impact on the viewshed. Utilize California native plant and tree species as necessary to screen new facilities from views.

Plant Goal 1: Manage the SVRA for a balance of uses that allow protection of special-status plants and sensitive natural communities while maintaining a quality OHV recreational experience.

- **Plant Guideline 1.6:** Limit removal of native trees. Any trees removed as a result of facilities construction shall be replaced, with the specific number of trees to be replaced determined during project-level planning. At both new and existing facilities, prohibit adverse indirect effects on native trees from root compaction and physical damage. Preserve or enhance the extent of native woodlands at the SVRA and look for opportunities for enhancement and restoration.

In addition, all State Parks facilities would be designed in accordance with California State Parks Guiding Principles for Aesthetic Design: 'Design of park facilities should embody the same vigor and spirit that the Department applies to its Mission, while evoking forward-thinking design theories, producing meaningful places and spaces, worthy of preservation by future generations' (California State Parks 2020). The Guiding Principles for Aesthetic Design also include the following (California State Parks 2020):

- design of facilities by a design professional;
- design decisions that are sensitive to the context of the site including the cultural and physical environment.
- design and maintenance of meaningful places and spaces; and
- the use of sustainable design, universal accessibility, and new technology and materials.

Overall, new and improved facilities envisioned in the General Plan are designed to be consistent with the existing character of Carnegie SVRA and the surrounding area. New structures would not substantially obstruct scenic views, and the character of these facilities would be consistent with the existing character of the planning area and vicinity. Many of the new and improved operational facilities, such as the SVRA maintenance area improvements, ranger station expansion, and emergency helicopter pad relocation, would be located in previously disturbed areas. Further, no permanent OHV facilities would be constructed in higher elevation areas visible from Corral Hollow Road/Tesla Road. In addition, implementing General Plan goals and guidelines and California State Parks Guiding Principles for Aesthetic Design would ensure new and improved visitor and operational facilities would not substantially degrade the existing visual character or quality of public views of the sites or their surroundings, and this impact would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.1-2. Create a New Source of Substantial Light or Glare?

General Plan Implementation

On-going park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, associated with the implementation of the Carnegie SVRA General Plan would not involve substantial alterations to or changes in the existing facilities. Minor building alterations or landscape changes could occur, as necessary, but these minor changes necessary for the upkeep of facilities and landscaping would not require new lighting. New construction includes facilities that are consistent with existing facilities and do

not expand the existing footprint above 10 percent. Therefore, General Plan implementation would not create a new source of substantial light or glare in the planning area, and there would be **no impact**.

New and Improved Facilities

Carnegie SVRA typically operates during the daylight hours, from 8 a.m. to 6 p.m. New facilities would not require the substantial use of artificial light and reflective surfaces, such as windows or tin roofs. Implementation of General Plan OM Guideline 8.2 (presented below) would ensure that nighttime security lighting at the facilities would be designed to avoid light pollution. Specifically, lighting would be angled downward to provide targeted illumination and prevent light spillover into adjacent areas as discussed in OM Guideline 8.2 below.

- **OM Guideline 8.2:** Implement the following actions to minimize potential light pollution or glare that could result from lighting for nighttime activities and security:
  - Include shielding on any new light fixtures.
  - Angle any new light fixtures downward to provide light spillover into adjacent areas.
  - Avoid the use of reflective surfaces, such as tin roofs or reflective glass that could produce glare, on any new structures.

Therefore, new and improved facilities would not create a new source of substantial light or glare in the planning area, and this impact would be **less than significant**.

Mitigation Measures

With implementation of goals and guideline, no mitigation is required.

3.2 Agriculture and Forestry Resources

3.2.1 Existing Conditions

Agricultural Resources

The California Department of Conservation's Important Farmland classifications—Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance—recognize the land's suitability for agricultural production by considering the physical and chemical characteristics of the soil, such as soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth. The classifications also consider location, growing season, and moisture available to sustain high-yield crops. Together, Important Farmland and Grazing Land are defined by the California Department of Conservation as "Agricultural Land" (California Public Resources Code, Sections 21060.1 and 21095).

According to the Alameda County Important Farmland map, published by the California Department of Conservation's Division of Land Resource Protection, the planning area in Alameda County is designated as Grazing Land (California Department of Conservation 2018a). The San Joaquin County Important Farmland map, published by the California Department of Conservation's Division of Land Resource Protection, designates the planning area around Corral Hollow Road as Other Land and the remainder of the planning area as Grazing Land (California Department of Conservation 2018b).

Williamson Act

Under the California Land Conservation Act of 1965, also known as the Williamson Act, local governments can enter into contracts with private property owners to protect land (within agricultural preserves) for agricultural and open space purposes. No lands are under Williamson Act contract on the planning area.

Agricultural Zoning

The planning area in Alameda County is zoned by the County as Agriculture (AG) (Alameda County 2022a). As described in Section 17.06 of the Alameda County Zoning Code, this district promotes implementation of general plan land use proposals for agricultural and other nonurban uses, to conserve and protect existing agricultural uses, and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare. Permitted land uses include single-family dwelling units; agricultural land uses, including crop, vine or tree farm, truck garden, plant nursery, greenhouse, apiary, aviary, and horticulture; wineries, microbreweries, or olive oil mills; grazing and breeding of horses and cattle; fish hatcheries and rearing ponds; private and public hiking and riding trails; and boarding stables (Alameda County 2022b).

The planning area in San Joaquin County is designated by the County as AG-160 (General Agriculture, 160-acre minimum parcel size) (San Joaquin County 2017). The AG zone is established to preserve agricultural lands for the continuation of commercial agricultural enterprises. Permitted land uses include single-family dwelling units, general animal raising, family food production, crop production, and minor utility services (San Joaquin County 2022). Parks, nature preserves, and campgrounds are permitted uses with issuance of a use permit (San Joaquin County 2022).

Forestry Resources

Appendix G of the CEQA Guidelines defines "forestland" as land that can support 10 percent native tree cover and woodland vegetation of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources—timber, aesthetics, fish and wildlife, biodiversity, water quality, or recreation—and other public benefits (California Public Resources Code Section 12220[g]). The following are the approximate acreages and locations of forestland in the planning area (see Table 2-8 in Chapter 2, "Existing Conditions," of the General Plan).

In total, approximately 17 percent of the planning area is mapped as forestland, and thus satisfies the requirements of PRC Section 12220(g). Blue oak woodland accounts for approximately 13.6 percent of the planning area and the largest percentage of forestland in the planning area. Fremont cottonwood forest, California juniper, and buckeye account for 2.3 percent, 0.9 percent, and 0.2 percent, respectively, of the total forestland in the planning area.

3.2.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

There are no federal plans, policies, regulations, and laws applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Important Farmland Inventory System and Farmland Mitigation and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established by the State of California in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the U.S. Soil Conservation Service (now called the Natural Resources Conservation Service, under the U.S. Department of Agriculture). The intent was to produce agricultural resource maps, based on soil quality and land use across the nation. The Department of Conservation sponsors the FMMP and also is responsible for establishing agricultural easements, in accordance with California Public Resources Code Sections 10250–10255.

The Department of Conservation FMMP maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance. The following list provides a comprehensive description of all the categories mapped by the California Department of Conservation (DOC 2023):

- **Prime Farmland**—Land that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields.
- **Farmland of Statewide Importance**—Land similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.
- **Unique Farmland**—Land of lesser quality soils used for the production of the state's leading agricultural cash crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California.
- **Farmland of Local Importance**—Land that is of importance to the local agricultural economy, as defined by each county's local advisory committee and adopted by its board of supervisors.
- **Grazing Land**—Land with existing vegetation that is suitable for grazing.
- **Urban and Built-Up Lands**—Land that is used for residential, industrial, commercial, institutional, and public utility structures and for other developed purposes.
- **Other Lands**—Land that does not meet the criteria of any of the previously described categories and generally includes low-density rural developments, vegetative and riparian areas not suitable for livestock grazing, confined-animal agriculture facilities, strip mines, borrow pits, and vacant and non-agricultural land surrounded on all sides by urban development. In Alameda and San Joaquin counties, Other Land is further divided into five subcategories: Rural Residential Land, Semi-Agricultural and Rural Commercial, Vacant and Disturbed Land, Defined Animal Agriculture, Non-agricultural and Natural Vegetation.

Important Farmland is classified by the Department of Conservation as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Under CEQA, the designations for Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as "agricultural land" or "farmland" (Public Resources Code Sections 21060.1 and 21095, and CEQA Guidelines Appendix G).

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulations, and laws applicable to the planning area.

3.2.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on agricultural resources was based on a review of the Department of Conservation Important Farmland maps and Williamson Act Contract maps for Alameda County and San Joaquin County (Department of Conservation 2018a, 2018b). Appendix G of the CEQA Guidelines focuses the analysis on conversion of agricultural land on Prime Farmland, Farmland of Statewide Importance, or Unique Farmland; therefore, any conversion of these lands would be considered a significant impact under CEQA.

The evaluation of potential impacts on forestry resources was based on the potential for implementing the General Plan to remove forestry resources as defined PRC Section 12220(g).

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the General Plan would have a potentially significant impact related to agriculture and forestry resources if it would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use;

b) Conflict with existing zoning for agricultural use or a Williamson Act contract;

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

d) Result in the loss of forestland or conversion of forestland to nonforest use; or

e) Involve other changes in the existing environment that, because of their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to nonforest use.

Issues Not Discussed Further

Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use— The planning area is designated by the Alameda County and San Joaquin County Important Farmland maps as Grazing Land and Other Land (California Department of Conservation 2018a, 2018b). Grazing Land and Other Land is not considered Important Farmland under CEQA (Public Resources Code Sections 21060.1 and 21095 and CEQA Guidelines Appendix G). Therefore, implementing the General Plan, new and improved visitor facilities, and new and improved operational facilities would not convert Important Farmland to non-agricultural uses. Thus, **no impact** would occur, and this issue is not addressed further in this EIR.

Conflict with Existing Williamson Act Contract— No lands are under Williamson Act contract on the planning area. Therefore, implementing the General Plan, new and improved visitor facilities, and new and improved operational facilities would not conflict with an existing Williamson Act contract. Therefore, **no impact** would occur, and this issue is not addressed further in this EIR.

Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production— The planning area is not zoned as forestland, timberland, or a Timberland Production Zone. Thus, implementing the General Plan, new and improved visitor facilities, and new and improved operational facilities would not conflict with existing zoning for, or cause rezoning of, forestry resources. Therefore, **no impact** would occur, and this issue is not addressed further in this EIR.

Result in the Loss or Conversion of Forest Land to Non-Forest Use - Approximately 17 percent of the planning area is mapped as forestland, and thus satisfies the requirements of PRC Section 12220(g). Minimal non-native tree removal and/or hazardous tree removal could occur during trails and road maintenance. Therefore, implementing the General Plan, new and improved visitor facilities, and new and improved operational facilities would not convert forestland to non-forest uses. Thus, **no impact** would occur, and this issue is not addressed further in this EIR.

Environmental Impacts

Impact 3.2-1. Conflict with Existing Zoning for Agricultural Use?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, are consistent with the Carnegie SVRA General Plan and would continue to be consistent with the agricultural zoning of the planning area, and there would be **no impact**.

New and Improved Facilities

Lands in the westernmost portion of the planning area in Alameda County are zoned by the County AG District, and permitted used in the AG district include private and public hiking and riding trails (Alameda County 2022a, Alameda County 2022b). The portion of the pedestrian loop trail within Alameda County would be consistent with this land use designation and zoning. The park maintenance area and facility improvements would occur within the boundaries of the existing maintenance area and developed areas of the park; therefore, no conflict with the AG zoning would occur.

The remainder of the planning area is in San Joaquin County and zoned by the County as AG-160 (General Agriculture, 160-acre minimum parcel size) (San Joaquin County 2017). Parks, nature preserves, and campgrounds are permitted uses with issuance of a use permit under the AG-160 zoning (San Joaquin County 2022). New and improved facilities would be internal to the SVRA, and because Carnegie SVRA is owned and operated by the state, no use permit would be required. Therefore, the new and improved visitor facilities would not conflict with zoning for agricultural use, and this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.3 Air Quality

This section provides an analysis of the potential air quality impacts related to implementation of the proposed Carnegie State Vehicular Recreation Area (SVRA) General Plan. The analysis presented in this section is based on proposed General Plan policies and implementation measures and an assessment of anticipated development under the proposed General Plan. Information to inform the environmental and regulatory setting relevant to the impacts analyzed in this section are provided in Chapter 2 of the proposed General Plan and are incorporated by reference herein.

3.3.1 Existing Conditions

The planning area is located on the border of Alameda and San Joaquin Counties. These counties are part of the San Francisco Bay Area Air Basin (SFBAAB) and San Joaquin Valley Air Basin (SJVAB), respectively. Existing conditions are discussed in the “Air Quality” discussion in Section 2.3.1, “Physical Resources,” of the General Plan and below.

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); lead; and particulate patter (PM), which is subdivided into two classes based on particle size – PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$).

Health-based air quality standards have been established for these pollutants by EPA at the national level and by ARB at the state level. These standards are referred to as the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS), respectively. The NAAQS and CAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. Both EPA and ARB designate areas of California as “attainment,” “nonattainment,” “maintenance,” or “unclassified” for the various pollutant standards according to the federal Clean Air Act (CAA) and the California CAA (CCAA), respectively. Because the air quality standards for these air pollutants are regulated using human and environment health-based criteria, they are commonly referred to as “criteria air pollutants.”

The SFBAAB is currently designated by the State of California as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. Based on national standards, the SFBAAB is designated as a marginal nonattainment area for ozone, nonattainment for 24-hour $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. The SJVAB is currently designated by the State of California as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ and as an attainment or unclassified area for all other pollutants. Based on national standards, the SJVAB is designated as an extreme nonattainment area for ozone and nonattainment for $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. A summary of the attainment status classifications for the SFBAAB and SJVAB are provided in Table 3.3-1 and Table 3.3-2, respectively.

Table 3.3-1. California and National Attainment Statuses for the San Francisco Bay Area Air Basin

Pollutant	California Classification	National Classification
Ozone (1-hour)	Nonattainment	–
Ozone (8-hour)	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide (NO_2)	Attainment/Unclassified	Attainment/Unclassified
Sulfur dioxide (SO_2)	Attainment/Unclassified	Attainment/Unclassified
Respirable particulate matter (PM_{10})	Nonattainment	Attainment
Fine particulate matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Lead	Attainment/Unclassified	Attainment/Unclassified
Sulfates	Attainment/Unclassified	No national standards
Hydrogen sulfide	Attainment/Unclassified	No national standards
Vinyl chloride	Attainment/Unclassified	No national standards
Visibility-reducing particles	Attainment/Unclassified	No national standards

Source: ARB 2020

Table 3.3-2. California and National Attainment Statuses for the San Joaquin Valley Air Basin

Pollutant	California Classification	National Classification
Ozone (1-hour)	Nonattainment/Severe	–
Ozone (8-hour)	Nonattainment	Nonattainment/Extreme
Carbon monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide (NO_2)	Attainment	Attainment/Unclassified
Sulfur dioxide (SO_2)	Attainment	Attainment/Unclassified
Respirable particulate matter (PM_{10})	Nonattainment	Attainment
Fine particulate matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Lead	Attainment	Unclassified
Sulfates	Attainment	No national standards
Hydrogen sulfide	Unclassified	No national standards
Vinyl chloride	Attainment	No national standards
Visibility-reducing particles	Unclassified	No national standards

Source: SJVAPCD 2023

Table 3.3-3. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[1]	NAAQS[2,3]	
			Primary	Secondary
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	NA
CO	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	NA
NO_2	1 hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	NA
NO_2	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
Ozone	1 hour	0.09 ppm (180 µg/m^3)	NA[5]	NA
Ozone	8 hour	0.070 ppm (137 µg/m^3)[8]	0.070 ppm (137 µg/m^3)[4]	Same as Primary
PM_{10}	24 hour	50 µg/m^3	150 µg/m^3	Same as Primary
PM_{10}	Annual Arithmetic Mean	20 µg/m^3 [6]	NA	NA
$PM_{2.5}$	24 hour	NA	35 µg/m^3	Same as Primary
$PM_{2.5}$	Annual Arithmetic Mean	12 µg/m^3 [6]	12 µg/m^3 [10]	15.0 µg/m^3
SO_2	1 hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	NA
SO_2	24 hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	NA
SO_2	Annual Arithmetic Mean	NA	0.030 ppm (80 µg/m^3)	NA
Sulfates	24 hour	25 µg/m^3	NA	NA
H_2S	1 hour	0.03 ppm (42 µg/m^3)	NA	NA
Lead	30-day Average	1.5 µg/m^3	NA	NA
Lead	Calendar quarter	NA	1.5 µg/m^3	Same as Primary
Lead	Rolling 3-month Average	NA	0.15 µg/m^3 [9]	
Vinyl Chloride	24 hour	0.01 ppm (26 µg/m^3)	NA	NA
Visibility-Reducing Particles	8 hour	See Note 7	NA	NA

Source: ARB 2016

Key: µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; CO = carbon monoxide; EPA = U.S. Environmental Protection Agency; NO^2 = nitrogen dioxide; O^3 = ozone; PM_{10} = particulate matter 10 microns in diameter or less; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; ppm = parts per million; ppb = parts per billion; SO^2 = sulfur dioxide; H_2S = hydrogen sulfide

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter – PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM^{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

3 National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

5 The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.

6 In June 2002, ARB established new annual standards for $PM_{2.5}$ and PM_{10}.

7 Statewide Visibility Reducing Particles (VRP) Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

8 The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.

9 National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

10 In December 2012, EPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m^3). In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Ozone

Ozone is the most common component of smog and is toxic and colorless with a pungent odor. In high concentrations, ozone and other photochemical oxidants are directly detrimental to humans by causing respiratory irritation and possible alterations in the functioning of the lungs. Ozone and other oxidants can also enter the leaves of plants and reduce photosynthesis, which is the process that plants use to convert sunlight to energy to live and grow.

Ozone is not emitted directly into the air but is formed through a series of reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X) in the presence of sunlight. These chemicals are considered to be precursors of ozone, as their reaction leads to its formation. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X includes various combinations of nitrogen and oxygen, including nitric oxide, NO_2, and others, typically resulting from the combustion of fuels.

Emissions of both ROG and NO_X are considered critical to ozone formation; therefore, either ROG or NO_X can limit the rate of ozone production. When the production rate of NO_X is lower, indicating that NO_X is scarce, the rate of ozone production is NO_X-limited. Under these circumstances, ozone levels could be most effectively reduced by lowering current and future NO_X emissions (from fuel combustion), rather than by lowering ROG emissions. Rural areas tend to be NO_X-limited, while areas with dense urban populations tend to be ROG-limited.

Ozone concentrations reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air, coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas.

Individuals exercising outdoors, children, and people with lung disease, such as asthma and chronic pulmonary lung disease, are the most susceptible subgroups for ozone effects. Short-term ozone exposure (lasting for a few hours) can result in changes in breathing patterns, reductions in breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. A correlation has also been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality (EPA 2022a). An increased risk of asthma has been found in children who participate in multiple sports and live within communities with high ozone levels.

Emissions of the ozone precursors ROG and NO_X have decreased in the past several years. According to the most recently published edition of ARB *California Almanac of Emissions and Air Quality*, NO_X, and ROG emissions levels in the Sacramento metropolitan area are projected to continue to decrease through 2035, largely because of more stringent motor vehicle standards and cleaner burning fuels, as well as rules for controlling ROG emissions from industrial coating and solvent operations (ARB 2013a).

Carbon Monoxide

CO is a colorless and odorless gas that is primarily produced by the incomplete burning of carbon in fuels such as natural gas, gasoline, and wood, and is emitted by a wide variety of combustion sources, including on-road and non-road mobile sources, wood-burning stoves, incinerators, industrial sources, and wildfires. On-road and non-road mobile sources account for approximately 53 percent and 29 percent, respectively, of all anthropogenic CO emissions nationwide (EPA 2022b). Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Vehicle traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called “hot spots,” which can be hazardous to human receptors adjacent to the intersections.

Adverse health effects associated with exposure to high CO concentrations, typically only attainable indoors or within similarly enclosed spaces, include dizziness, headaches, and fatigue. CO exposure is especially harmful to people with anemia or with a history of heart disease (EPA 2022b).

Nitrogen Dioxide

NO_2 is one of a group of highly reactive gases known as oxides of nitrogen, or NO_X. NO_2 is formed when ozone reacts with nitric oxide (i.e., NO) in the atmosphere and is listed as a criteria pollutant because NO_2 is more toxic than nitric oxide. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The combined emissions of nitric oxide and NO_2 are referred to as NO_X and reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a geographical area may not be representative of local NO_X emission sources. NO_X also reacts with water, oxygen, and other chemicals to form nitric acids, contributing to the formation of acid rain.

Inhalation is the most common route of exposure to NO_2. Breathing air with a high concentration of NO_2 can lead to respiratory illness. Short-term exposure can aggravate respiratory diseases, particularly asthma, resulting in respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these subgroups (EPA 2022c).

Sulfur Dioxide

SO_2 is one component of the larger group of gaseous oxides of sulfur (SO_X). SO_2 is used as the indicator for the larger group of SO_X, as it is the component of greatest concern and found in the atmosphere at much higher concentrations than other gaseous SO_X. SO_2 is typically produced by such stationary sources as coal and oil combustion facilities, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, a direct irritant. Concentration rather than duration of exposure is an important determinant of respiratory effects. Children and those who suffer from asthma are particularly sensitive to effects of SO_2 (EPA 2023).

SO_2 also reacts with water, oxygen, and other chemicals to form sulfuric acids, contributing to the formation of acid rain. SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other SO_X, which can react with other compounds in the atmosphere to form small particles, contributing to particulate matter pollution, which can have health effects of its own.

Particulate Matter

PM refers to a complex mixture of small solid matter and fine droplets (aerosols) made up of several components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The major area-wide sources of $PM_{2.5}$ and PM_{10} are fugitive dust, especially from roadways, agricultural operations, and construction and demolition. Other sources of PM_{10} include crushing or grinding operations. PM sources also include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. Exhaust emissions from mobile sources contribute only a very small portion of directly emitted $PM_{2.5}$ and PM_{10} emissions. However, they are a major source of ROG and NO_X, which undergo reactions in the atmosphere to form PM, known as secondary particles. These secondary particles make up the majority of PM pollution.

The size of PM is directly linked to its potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller, because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects, even death. The adverse health effects of PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals,

polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine PM (referred to as the "piggybacking effect"), or with fine dust particles of silica or asbestos. Effects from short- and long-term exposure to elevated concentrations of PM_{10} include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (World Health Organization 2021).

$PM_{2.5}$ poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health. Direct emissions of $PM_{2.5}$ in the Sacramento metropolitan area decreased between 2000 and 2010 but are projected to increase very slightly between 2010 and 2035. Emissions of diesel particulate matter (DPM) decreased from 2000 through 2010 because of reduced exhaust emissions from diesel mobile sources and are anticipated to continue to decline through 2035 (ARB 2013a).

Lead

Lead is a highly toxic metal that may cause a range of human health effects. Lead is found naturally in the environment and is used in manufactured products. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. Soon after its inception, EPA began working to reduce lead emissions, issuing the first reduction standards in 1973. Lead emissions decreased substantially after the near elimination of leaded gasoline use. Metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB has identified lead as a toxic air contaminant (TAC).

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to even low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, hearing problems, and lower intelligence quotients. In adults, increased lead levels are associated with increased reproductive problems, decreased kidney function and cardiovascular issues (EPA 2022d). Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears that lead does not directly affect the respiratory system.

Toxic Air Contaminants

TACs are a set of airborne pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. HAPs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators. On-road motor vehicles and off-road sources, such as construction equipment and trains, are also common sources of TACs. According to the California Almanac of Emissions and Air Quality (ARB 2013a), most of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being diesel particulate matter (DPM). Other TACs for which data are available that currently pose the greatest ambient risk in California are benzene, formaldehyde, hexavalent chromium, 1,3-butadiene and acetaldehyde.

DPM differs from other TACs because it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, type of lubricating oil, and presence or absence of an emission control system. Unlike the other TACs, no ambient monitoring data are available for DPM because no routine measurement method currently exists. However, emissions of DPM are forecasted to decline; it is estimated that emissions of DPM in 2035 will

be less than half those in 2010, further reducing state-wide cancer risk and non-cancer health effects (ARB 2013a).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, because of the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to the pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as the majority of the workers tend to stay indoors most of the time.

The planning area is located in a rural area of both Alameda and San Joaquin Counties and is generally surrounded by undeveloped land. The nearest sensitive receptors are residences located at the northwestern boundary of the planning area along Corral Hollow Road. There are also some current and planned residences typically occupied by Carnegie SVRA staff (and family) located within the planning area. Campsites are also located in designated areas of the SVRA; however, these receptors would only be located temporarily within the planning area for a limited amount of time.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population. In addition, people may have different reactions to the same odor – an odor that is offensive to one person may be perfectly acceptable to another. An unfamiliar odor is more easily detected and is more likely to result in complaints than a familiar one.[1]

Quality and intensity are two properties present in any odor.[2] Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult.[3]

Examples of common land use types that generate substantial odors include wastewater treatment plants, landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. In addition, agricultural activities in the area can cause odors, such as dairy operations; horse, cattle, or sheep (livestock) grazing; fertilizer use; and aerial crop spraying.

[1] This is due to a phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

[2] The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as "flowery" or "sweet," then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor.

[3] At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

3.3.2 Regulatory Setting

Air quality in the SFBAAB and SJVAB is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work both jointly and individually to improve air quality through legislation, regulations, planning, policy making, education, and a variety of programs. Regulatory requirements applicable to emission sources in the SFBAAB and SJVAB are detailed in the "Air Quality Regulations" discussion in Section 2.7.3, "Regulatory Influences," of the General Plan. Note that although State Parks is not generally subject to regional or local land use plans and regulations, it is subject to plans and regulations implementing delegated federal authority, and these local air district policies and regulations have been used to develop the impact analyses for this resource.

3.3.3 Impact Analysis and Mitigation Measures

Thresholds of Significance

The Planning Area is located on the border of two counties where two different air districts manage air quality. Therefore, the air quality within the Planning Area is managed by both the Bay Area Air Quality Management District (BAAQMD) and San Joaquin Valley Air Pollution Control District (SJVAPCD). As stated in Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make determinations of significance with regard to air quality impacts. Thus, in addition to evaluating air quality impacts against the CEQA Guidelines, this analysis evaluates the air quality impacts of the Carnegie SVRA General Plan pursuant to both the BAAQMD- and SJVAPCD-recommended guidance and thresholds of significance. Note that this analysis conservatively assesses the impact of the full proposed General Plan against both the BAAQMD and SJVAPCD thresholds of significance and does not apportion out and assess activities by location within each air district.

California Environmental Quality Act Guidelines Thresholds

Based on Appendix G of the CEQA Guidelines, implementation of the proposed Carnegie SVRA General Plan would result in a significant air quality impact if it would:

a) conflict with or obstruct implementation of the applicable air quality plan;

b) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard;

c) expose sensitive receptors to substantial pollutant concentrations; or

d) result in other emissions (such as those leading to odors) adversely affecting a substantial number or people.

Bay Area Air Quality Management District Project-Level Thresholds

BAAQMD's 2022 CEQA guidelines (BAAQMD 2023) provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements; and include recommended thresholds of significance, mitigation measures, and background air quality information. The recommended assessment methodologies address criteria air pollutants, air toxics, odors, and GHG emissions (assessed separately in Section 3.8 of this EIR). The following describe the BAAQMD-recommended thresholds of significance to analyze impacts with respect to air quality per the BAAQMD 2022 CEQA guidelines.

Criteria Air Pollutants: The BAAQMD has adopted the following mass emissions-based thresholds of significance for construction and operational emissions:

- Average daily construction emissions of ROG, NO_X, or (exhaust) $PM_{2.5}$ of 54 pounds per day (lb/day), or average daily construction emissions of PM_{10} exhaust emissions of 82 lb/day; and
- Construction activities for the General Plan would implement all of BAAQMD's best management practices for fugitive dust control; and

- Average daily operational emissions of ROG, NO_X, or (exhaust) $PM_{2.5}$ of 54 lb/day, or average daily operational emissions of PM_{10} exhaust of 82 lb/day; and
- Annual operational emissions of ROG, NO_X, or (exhaust) $PM_{2.5}$ associated of 10 tons per year (tpy) or annual operational PM_{10} exhaust emissions of 15 tpy.

Local CO Hotspots: Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the CAAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). BAAQMD has developed the following criteria for screening for the potential to create CO hotspots:

- Consistency with an applicable congestion management program established by the county congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans; and
- Traffic volumes at affected intersections of less than 44,000 vehicles per hour; and
- Traffic volumes at affected intersections less than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Odors. The BAAQMD acknowledges in its CEQA Guidelines that determining the significance of emissions that lead to odors is subjective and influenced by many variables. As such, the BAAQMD recommends that project-related odor impacts consider all available pertinent information to qualitatively determine the significance of odor impacts, including the proximity of sensitive receptors and odor sources, relevant meteorological conditions, and then nature of the odor sources, as well as consideration of data regarding similar facilities in similar settings. With regard to proximity of odor sources to sensitive receptors, the BAAQMD has identified common facility types that have been known to generate other emissions that lead to odors and provides these as “Odor Screening Distances” in Table 5-4 of the CEQA Guidelines (BAAQMD 2023); these screening distances are provided here in Table 3.3-4; projects proposed under the General Plan does not include any operational activities identified in the screening list.

Table 3.3-4. BAAQMD Odor Screening Distances

Type of Facility	Screening Level Distance
Wastewater Treatment Facility	2 Miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 Miles
Transfer Station	1 Mile
Composting Facility	1 Mile
Petroleum Refinery	2 Miles
Asphalt Batch Plant	2 Miles
Chemical Manufacturing	2 Miles
Fiberglass Manufacturing	1 Mile
Painting/Coating Operations	1 Mile
Rendering Plant	2 Miles
Coffee Roaster	1 mile
Food Processing Facility	1 Mile
Confined Animal Facility/Feed Lot/Dairy	1 Mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Source: BAAQMD 2023

The BAAQMD also suggests thresholds related to the frequency of odor complaint occurrences when evaluating potential impacts of a project locating receptors near an existing source of odors. The planning area would be potentially generating emissions leading to odors and/or locating new receptors. Because the planning area includes existing operations similar in nature to the proposed operational emissions sources under the General Plan, these thresholds regarding odor complaint frequency can similarly inform if the proposed operational sources associated with the projects would be potentially significant. According to the BAAQMD guidance, significant odor problems are defined as:

- five unconfirmed complaints per year averaged over a three-year period.

Community Risk and Hazards: BAAQMD has developed the following health risk and hazard thresholds of significance for projects:

- Construction and/or operational emissions resulting in an excess cancer risk levels of more than 10 in 1 million, non-cancer hazard index greater than 1 and/or an annual average increase in $PM_{2.5}$ greater than 0.3 micrograms per cubic meter; or
- Compliance with a qualified community risk reduction plan.

BAAQMD recommends a tiered approach where the project's impacts, and the combined cumulative impacts from surrounding sources and the project, are compared to the appropriate thresholds of significance.

San Joaquin Valley Air Pollution Control District Project-Level Thresholds

The SJVAPCD prepared the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI; SJVAPCD 2015) to assist in the evaluation of air quality impacts of projects and plans proposed in the SJVAB. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements; and include recommended thresholds of significance, mitigation measures, and background air quality information. The recommended assessment methodologies address criteria air pollutants, air toxics, odors, and GHG emissions (assessed separately in Section 3.8 of this EIR). The following describe the SJVAPCD-recommended thresholds of significance to analyze impacts with respect to air quality per the SJVAPCD GAMAQI and most up-to-date SJVAPCD-recommended thresholds of significance.

Criteria Air Pollutant Emissions and Precursors.

The SJVAPCD has adopted mass emissions-based thresholds of significance for construction and operational permitted and non-permitted equipment and activities. Table 3.3-5 presents the SJVAPCD-recommended thresholds of significance for emissions of criteria air pollutant and precursor generated by construction-related sources, permitted operational sources, and non-permitted operational sources. As explained in the SJVAPCD GAMAQI, these thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SJVAB's existing air quality conditions. If annual emissions of criteria air pollutants or precursors would exceed any applicable threshold, the project could conflict with or obstruct implementation of the applicable air quality plan and would result in a cumulatively considerable net increase in emissions for the respective criteria air pollutant; this would be considered a significant impact.

Table 3.3-5. Criteria Air Pollutant Thresholds of Significance for SJVAPCD

Pollutant	Construction Emissions (tpy)	Operational Emissions (tpy) - Permitted Equipment/Activities	Operational Emissions (tpy) – Non-permitted Equipment/Activities
CO	100	100	100
NO_X	10	10	10
ROG	10	10	10
SO_X	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Notes: SJVAPCD = San Joaquin Valley Air Pollution Control District; tpy = tons per year; CO = carbon monoxide; NO_X = oxides of nitrogen; ROG = reactive organic gases; SO_X = oxides of sulfur; PM_{10} = respirable particulate matter of diameter 10 micrograms or greater; $PM_{2.5}$ = fine particulate matter

An important distinction is made between the proposed nonpermitted and permitted operational equipment and activities. As shown in Table 3.3-5, SJVAPCD has established independent thresholds for nonpermitted and permitted operational equipment and activities. The SJVAPCD GAMAQI (*section 8.3.1 through 8.3.3*) provides the basis for the established SJVAPCD thresholds of significance. The SJVAPCD considered several options for quantitative thresholds against which to evaluate the significance of operational emission impacts from permitted and nonpermitted equipment and activities including (1) whether to evaluate the emissions sources in combination against the tons per year thresholds for criteria air pollutants; (2) whether a combined threshold doubling the individual tons per year for each criteria air pollutant would be appropriate when considering both permitted and nonpermitted equipment and activities; (3) whether to evaluate permitted and nonpermitted emissions sources independently against the tons per year emissions thresholds; or (4) whether some other tons per year thresholds lower than the individual thresholds for permitted and nonpermitted emissions sources would be appropriate. The SJVAPCD GAMAQI explains that the basis of thresholds determined that the option 3 maintains consistency with the basis of the SJVAPCD's individual tons per year thresholds for permitted sources and is consistent with the SJVAPCD attainment plans. In accordance with the SJVAPCD GAMAQI, the proposed nonpermitted and permitted operational equipment and activities for projected proposed under the General Plan could be compared separately to the SJVAPCD thresholds of significance. However, for simplicity, this analysis conservatively does not distinguish between emissions associated with operational activities of permitted and nonpermitted sources.

The SJVAPCD GAMAQI also describes the mass emissions screening threshold for determining whether an Ambient Air Quality Analysis (AAQA) is warranted to evaluate a project's impacts on localized ambient air quality as a result of a project's potential to cause or contribute to any violation of a CAAQS or NAAQS under CEQA. Guidance for the ambient air quality thresholds of significance provided by SJVAPCD in Section 8.4.3 of the GAMAQI detail that the SJVAPCD recommends that an AAQA be performed when the increase in on-site emissions from either construction activities, on-site operational emissions from permitted equipment and activities, or on-site operational emissions from nonpermitted equipment and activities exceed 100 pounds per day for an criteria pollutant, after implementation of all enforceable mitigation measures. Pursuant to the SJVAPCD Application Review Policy 2030, *Project Ambient Air Quality Analysis Applicability Determination under CEQA*, an AAQA shall be performed when on-site emissions of any criteria pollutant[4] would equal or exceed 100 pounds per day as a result of construction, permitted source activities, or nonpermitted source activities (SJVAPCD 2018).

In accordance with the SJVAPCD impact criteria detailed above, a project would be considered to have a significant impact if its emissions would cause or contribute to a violation of an ambient air quality standard by exceeding any CAAQS or NAAQS. The analysis considered the fact that even when independent projects are each individually below the maximum annual criteria pollutant significance

[4] If ammonia or ROG emissions are greater than 100 pounds per day, then these pollutants are not required to be evaluated under an AAQA since no CAAQS or NAAQS exists for these pollutants.

threshold, the impact of multiple simultaneous projects located within the same area could cause or worsen an exceedance of the CAAQS or NAAQS. The SJVAPCD states that "determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project's property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation." The SJVAPCD AAQA screening level recommendations are based specifically on on-site emissions from construction and operational activities and are intended to identify the level beyond which a more detailed dispersion modeling analysis would be needed to evaluate if emission increases from a project will cause or contribute to a violation of the ambient air quality standards.

CO Hotspots. Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the CAAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SJVAPCD is in attainment of the California and national AAQS, and CO concentrations in the SJVAPCD have steadily declined. There have been no exceedances of the California and national CO AAQS since 1991 (SJVAPCD 2015). Because CO concentrations have improved, the SJVAPCD has the following screening criteria to provide lead agencies and project applicants with a conservative indication of whether the implementation of the proposed project would result in CO emissions that exceed the significance criteria for CO hotspots (9.0 ppm [8-hour average] and 20.0 ppm [1-hour average]). The first-tier states that a proposed project's CO impact would be less than significant if the following criteria are met:

- Traffic generated by a proposed project would not result in deterioration of level of service (LOS) on one or more streets or at one or more intersections to LOS E or F; and
- A project would not worsen a street or an intersection that already operates at LOS of F.

If the first tier of screening criteria is not met, the air district provides a second-tier analysis step. Under this step, the project's CO impacts would be less than significant if an analysis is run using the Transportation Project-Level Carbon Monoxide Protocol (University of California, Davis) and results demonstrate that the project would not potentially have a significant effect on any intersection.

Community Risk and Hazards. The SJVAPCD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level.

The SJVAPCD's GAMAQI includes the following recommendations for evaluation of acute/chronic exposure to TACs:

- The significance threshold for cancer risk is based on a limit of 20 in one million for the Maximally Exposed Individual (MEI); the significance threshold for chronic and acute non-cancer risk is based on a hazard index of 1 for the MEI.

The SJVAPCD APR-1906 Framework for Performing Health Risk Assessments provides a tiered approach for conducting health risk assessments.

Odors. The SJVAPCD acknowledges in its GAMAQI that determining the significance of emissions that lead to odors is subjective and influenced by many variables. As such, the SJVAPCD recommends that project-related odor impacts consider all available pertinent information to qualitatively determine the significance of odor impacts, including the proximity of sensitive receptors and odor sources, relevant meteorological conditions, and then nature of the odor sources, as well as consideration of data regarding similar facilities in similar settings. With regard to proximity of odor sources to sensitive receptors, the SJVAPCD has identified common facility types that have been known to generate other emissions that lead to odors within the SJVAB, and provides these as "Screening Levels for Potential Odor Sources" in Table 3.3-6 of the GAMAQI (SJVAPCD 2015); these screening distances are provided here in Table 3.3-6;

projects proposed under the General Plan does not include any operational activities identified in the screening list.

Table 3.3-6. SJVAPCD Screening Levels for Potential Odor Sources

Type of Facility	Screening Level Distance
Wastewater Treatment Facility	2 Miles
Sanitary Landfill	1 Mile
Transfer Station	1 Mile
Composting Facility	1 Mile
Petroleum Refinery	2 Miles
Asphalt Batch Plant	1 Mile
Chemical Manufacturing	1 Mile
Fiberglass Manufacturing	1 Mile
Painting/Coating Operations	1 Mile
Food Processing Facility	1 Mile
Feed Lot/Dairy	1 Mile
Rendering Plan	1 Mile

Source: SJVAPCD 2015

The SJVAPCD also suggests thresholds related to the frequency of odor complaint occurrences when evaluating potential impacts of a project locating receptors near an existing source of odors. The planning area would be potentially generating emissions leading to odors and locating new receptors. Because the planning area includes existing operations similar in nature to the proposed operational emissions sources under the General Plan, these thresholds regarding odor complaint frequency can similarly inform if the proposed operational sources associated with the projects would be potentially significant. According to the SJVAPCD guidance, significant odor problems are defined as:

- more than one confirmed complaint per year averaged over a three-year period; or
- three unconfirmed complaints per year averaged over a three-year period.

Methodology

The discussion below presents the methods used for the air quality analysis and how the significance of the proposed General Plan's air quality impacts was determined. The evaluation of the impacts of implementation of the proposed General Plan to air quality was based on existing activities within Carnegie SVRA and the changes that could result from development and use of the approximate 1,575-acre planning area with implementation of the proposed General Plan. Proposed projects under the General Plan include new and improved visitor and operational facilities that would be constructed within the planning area and are detailed in the Project Description in Chapter 2 of this EIR. This analysis evaluates the net change in operational emissions associated with implementation of the General Plan in addition to the emissions associated with construction of new and improved facilities. Potential air quality impacts associated with short-term construction and long-term operations were evaluated in accordance with BAAQMD- and SJVAPCD-recommended and ARB-approved methodologies.

Construction and operational emissions of criteria air pollutants were compared with the applicable thresholds of significance (described above) to determine potential impacts. BAAQMD and SJVAPCD's significance thresholds serve as a proxy for determining whether the proposed General Plan could violate air quality standards, cause a substantial contribution to an existing or projected air quality violation, and/or conflict with any applicable air quality plan. Please see Appendix B of the EIR for model details, assumptions, inputs, and outputs.

New and Improved Facilities

Construction- and operational-related emissions from new and improved facilities were modeled using the California Emissions Estimator Model (CalEEMod) Version 2022.1, which is the most current version of the BAAQMD- and SJVAPCD-recommended model for estimating construction and operational emissions from land use development projects.

Information on project components, earliest possible year of construction, and construction durations were provided by State Parks, along with information such as developed area sizes, building square footages, and quantities of material infill to be brought onsite. Where plan-specific information was not available or was not known at the time of the analysis, CalEEMod default parameters were used. In some instances, specific construction equipment was anticipated for projects; therefore, this equipment was added to the CalEEMod default equipment list. For projects where construction activities were anticipated to be completed solely by Park staff, no additional worker vehicle trips were estimated as it is expected that staff would be onsite already and not because of the project's construction. As discussed in Section 3.19 of this EIR, "Utilities and Service Systems", potable and nonpotable water for uses within the Carnegie SVRA would continue to be supplied by onsite wells and with the onsite water treatment facility, therefore operational activities which would use water were assumed to not use any additional electricity to supply, treat or distribute water beyond what is being accounted for directly with onsite electricity usage and onsite water treatment facility emissions.

In addition to the construction and operation of the new and improved facilities, emissions associated with an increase in visitor attendance was estimated. As discussed in the Project Description, although the Carnegie SVRA General Plan would provide additional off highway vehicle (OHV) and non-OHV recreation opportunities at the SVRA and attendance would likely grow naturally, there would likely not be an increase in attendance solely because of the new opportunities within the SVRA's footprint. However, for the purposes of this analysis, it was assumed that attendance at Carnegie SVRA would rise consistent with projected growth within the region. Conservatively, the maximum projected annual growth rate between San Joaquin County and Alameda County, 0.71 percent, was used. A baseline year of 2022 was selected to be consistent with the year when the notice of preparation for this EIR was filed. Future projections were made for 2054 as the horizon year of the General Plan using average historical attendance at Carnegie SVRA and compounded growth over time using the 0.71 percent annual growth rate. Air quality emissions were determined using the net change between the activity levels at the horizon year with General Plan implementation and the baseline activity levels. The analysis years and associated OHV activity levels are shown in further detail in Appendix B.

Historical SVRA attendance records and transportation data collected in an online survey as part of this EIR were used to estimate counts of on-road vehicles, on-road vehicle trip lengths, and OHVs from attendance records. In addition, site-specific visitor and activity data were collected by Carnegie SVRA staff members between October 4 and October 20, 2014, to assist in the development of emission estimates. A log sheet was prepared and visitors were polled for the following information as they entered and/or left the park: OHV type, engine type (i.e., two-stroke or four-stroke for motorcycles and all-terrain vehicles [ATVs]), duration of visit, and OHV activity miles traveled during the visit (see Appendix B for additional details).

To compute emissions estimates, the activity data were combined with emission factors obtained from ARB's Recreation Vehicle 2013 (RV2013) model (ARB 2013b) for motorcycles and ATVs, and EMFAC2021 for the on-highway light trucks, which are used to transport motorcycles and ATVs or are driven on-site as OHV 4x4 trucks. Emission factors from Chapter 13.2.2, "Unpaved Roads," of EPA's AP-42, Compilation of Air Pollutant Emission Factors, were used along with on-site OHV activity data and manufacturer vehicle weights to estimate off-road emissions of fugitive dust from activities within Carnegie SVRA. Similarly, EMFAC2021 was used to estimate emission factors for on-road vehicle travel to and from Carnegie SVRA, and emission factors from Chapter 13.2.1, "Paved Roads," of EPA's AP-42 were used to estimate emissions of fugitive dust associated with those on-road vehicle trips.

As detailed in the Project Description, it is anticipated that Parks personnel for the Carnegie SVRA under buildout of the proposed General Plan would increase by seven full-time staff and seven to eight seasonal

employees. Although seasonal employees would only be onsite for part of the year, and a portion of the seasonal or full-time staff may stay onsite during employment, it was conservatively assumed that 15 additional employees would travel to and from the Carnegie SVRA daily, all year long. CalEEMod default parameters for trip lengths and vehicle fleet mixes were used to estimate emissions associate with these employee vehicle trips.

For the purposes of estimating a maximum daily construction scenario, construction activities associated with different projects that may be happening concurrently at different locations within the General Plan area are assumed to overlap. Due to constraints on State Parks resources and to help minimize disturbance on visitors' use of the Carnegie SVRA, it was assumed that up to six individual construction projects undergoing construction in a given year could overlap at any given time. For conservatism for both the daily and annual emission estimates, the earliest possible construction year was modeled for each project, as any construction in future years would more realistically result in fewer emissions for the same level of activity due to fleet turnover over time, in which older equipment and vehicles are replaced by those with new engines meeting more recent and more stringent emission standards.

TAC emissions associated with construction and operation of the new and improved facilities in the proposed General Plan that could affect surrounding areas are evaluated qualitatively. The potential for the development of the General Plan to result in other emissions, such as those leading to odors, is also evaluated qualitatively.

Impacts Analysis from General Plan Implementation

As discussed in Section 2.7.3, "Regulatory Influences," of the General Plan, the BAAQMD Board of Directors has adopted the 2017 Clean Air Plan which describes a comprehensive control strategy that the Air District will implement to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases to protect public health and the climate. Similarly, SJVAPCD has adopted several plans for attainment of air quality standards. To address ozone nonattainment, SJVAPCD has adopted the *2007 Ozone Plan for 1997 8-hour Ozone Standard,* the *2016 Plan for the 2008 8-Hour Ozone Standard,* and most recently the *2022 Plan for the 2015 8-Hour Ozone Standard,* which establishes the District's plans to expeditiously attain the 70 parts per billion 8-hour ozone standard. The 2022 plan contains an exhaustive list of regulatory and incentive-based measures to reduce emissions of ozone precursors in the region. SJVAPCD adopted its *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$* Standards, which addresses the EPA federal 1997 annual $PM_{2.5}$ standard of 15 micrograms per cubic meter and 24-hour $PM_{2.5}$ standard of 65 micrograms per cubic meter; the 2006 24-hour $PM_{2.5}$ standard of 35 micrograms per cubic meter; and the 2012 annual $PM_{2.5}$ standard of 12 micrograms per cubic meter. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable through enforcement of existing regulatory measures for stationary sources and strategies to address mobile source and residential wood combustion emissions. SJVAPCD is in the process of developing an updated Plan for the federal 2012 $PM_{2.5}$ standard to address the reclassification of the District to Serious nonattainment.

Implementation of the proposed General Plan would not conflict with or obstruct implementation of the BAAQMD 2017 Clean Air Plan, nor the SJVAPCD attainment plans for ozone and $PM_{2.5}$. As outlined in greater detail in the General Plan, Chapter 4, "The Plan," the proposed General Plan is intended to provide effectively managed, responsible OHV and related recreational opportunities through new and improved visitor and operational facilities; however, as discussed in Section 2.1 of this EIR, the General Plan does not propose to increase park attendance or related vehicle use levels beyond what is expected through overall growth within the region; the General Plan is therefore consistent with the emission-generating characteristics and assumptions used by the BAAQMD and SJVAPCD to forecast emissions their respective air quality plans, as well as the measures and strategies identified to reduce emissions. In addition, the proposed General Plan includes Operations and Maintenance (OM) Goal 7, which is designed to reduce regional air quality impacts from activities within the planning area.

Implementation of the park management goals and guidelines under the proposed General Plan will not generate a net increase of criteria air pollutants above existing conditions. Any increase in construction-related and operational criteria pollutant emissions that would result from new and improved facilities

projects are individually addressed below. Existing Park operations, including visitor use, visitor services, park operations and maintenance activities, as well as the goals and guidelines, are part of the environmental setting. This EIR does not analyze the specific impact of ongoing Park management. Where applicable, State Parks has completed CEQA compliance for ongoing operations, resource management activities, and for existing development within the Park. Implementation of the proposed General Plan goals and guidelines would not result in an increase in emissions nor conflict with or obstruct implementation of the BAAQMD nor SJVAPCD air quality plans and 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 or expose sensitive receptors to substantial pollutant concentrations; therefore, there would be no impact.

Implementation of the goals and guidelines under the proposed General Plan does not include any activities that would create objectionable odors. Any vehicle and equipment use is part of ongoing activities and considered part of the baseline conditions of the planning area. In addition, these emissions sources, while they may result in odors associated with fuel combustion, are not typically considered substantial odor sources and would be temporary and short in duration. Implementation of the proposed General Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people; there is no impact.

Impacts Analysis from New and Improved Facilities Projects

Impact 3.3-1. Conflict with or obstruct implementation of the applicable air quality plan?

Emissions associated with construction or operations of the proposed General Plan new and improved facilities could conflict with or obstruct implementation of the applicable air quality plan. Therefore, this impact is ***significant****.*

Air quality plans describe air pollution control strategies to be implemented to reduce criteria air pollutant emissions for which the region is designated as nonattainment in order to achieve NAAQS and CAAQS by the earliest practicable date, or to maintain existing compliance with those standards, pursuant to the requirements of the CAA and CCAA. As discussed in Section 2.7.3, “Regulatory Influences,” of the General Plan and discussed above, BAAQMD has adopted the 2017 Clean Air Plan that the Air District will implement to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases to protect public health and the climate. Similarly, SJVAPCD has adopted several plans for attainment of ozone and $PM_{2.5}$ air quality standards. Both the SFBAAB and the SJVAB are in attainment for CO, SO_2, and other pollutants, so there are no air quality plans for those pollutants. BAAQMD and SJVAPCD have included in their respective air quality plans comprehensive control strategies which combine regulatory and incentive-based measures to reduce emissions within the region.

As documented in the SJVAPCD GAMAQI, the SJVAPCD recommended thresholds of significance have been based off district new source review offset requirements, which are a major component of the district’s air quality plans to achieve attainment. Thus, the SJVAPCD has determined that projects whose emissions would be less than the recommended thresholds of significance for criteria air pollutants would not conflict with or obstruct implementation of applicable air quality plans. Similarly, the BAAQMD CEQA Guidelines have developed the thresholds of significance to ensure that no individual project has the potential to create a significance adverse impact, with a focus on criteria air pollutants for which the SFBAAB is designated as nonattainment. Therefore, the thresholds of significance can be used to inform whether a project would conflict with or obstruct the attainment goals of the applicable air quality plans. The following provides analysis of consistency with the applicable air quality plans.

Construction

Construction activities associated with the proposed General Plan’s new and improved facilities would result in emissions of criteria air pollutants and ozone precursors, including ROG, NO_X, PM_{10}, and $PM_{2.5}$, the pollutants for which the SFBAAB and SJVAB are designated as nonattainment under either the NAAQS or CAAQS. These activities would include site preparation (e.g., clearing, excavation, cut and fill activities and grading); exhaust emissions from use of off- road equipment, material delivery, and

construction worker commutes; asphalt paving; and application of architectural coatings. Ozone precursor emissions of ROG and NO_X are associated primarily with construction equipment exhaust and the application of architectural coatings. Dust (particulate matter) generation is dependent on soil type and soil moisture, as well as the amount of total acreage of clearing, grubbing and grading activities. Clearing and earthmoving activities comprise the major source of construction dust generation, but re-entrained road dust from traffic and general disturbance of the soil also contribute to the problem. Sand, lime, or other fine particulate materials may be used during construction and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. PM emissions are also generated by equipment exhaust. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates.

The proposed General Plan includes OM Goal 6 and OM Guidelines 6.1 through 6.5, listed below, to reduce potential construction-related emissions.

OM Goal 6: Limit potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 6.1:** Implement current Bay Area Air Quality Management District (BAAQMD) Table 5-2 Basic Best Management Practices for Construction-Related Fugitive Dust Emissions for all projects as feasible and applicable, which may include the following measures:
  - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
  - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
  - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
  - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
  - All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
  - All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
  - Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
  - Publicly visible signs shall be posted at the soil transfer site within BAAQMD, with the telephone number and person to contact at Alameda County regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number also shall be visible, to ensure compliance with applicable regulations.
- **OM Guideline 6.2:** Implement current Bay Area Air Quality Management District (BAAQMD) Table 6-1 Best Management Practices for Construction-Related GHG Emissions for all projects as feasible and applicable, which may include the following measures:
  - Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation (CARE) area or Assembly Bill 617 community.
  - Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
  - Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.

  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
  - Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
  - Use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on- road trucks.
  - Use U.S. Environmental Protection Agency SmartWay certified trucks for deliveries and equipment transport.
  - Require all construction equipment is maintained and properly tuned in accordance with manufacturer’s specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
  - Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
  - Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
  - Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
  - Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
  - Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15% more by weight than the diversion requirement in Title 24.
  - Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.
  - Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
  - Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
  - Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

- **OM Guideline 6.3:** Implement current BAAQMD Table 5-3 Enhanced Best Management Practices for Construction-Related Fugitive Dust Emissions as necessary and as feasible for projects with construction emissions above the BAAQMD thresholds of significance, which may include the following measures:
  - Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.

  - Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
  - Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
  - Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
  - Minimize the amount of excavated material or waste materials stored at the site.
  - Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

- **OM Guideline 6.4:** Implement San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII control measures for construction emissions of respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), which includes the following requirements:
  - All disturbed areas, including storage piles, that are not being actively utilized for construction purposes shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, and covered with a tarp or other suitable cover or vegetative ground cover.
  - All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
  - All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions through application of water or presoaking.
  - With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
  - When materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
  - All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
  - Following the addition of materials to or the removal of materials from the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
  - Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
  - An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles, shall implement measures to prevent carryout and trackout.

- **OM Guideline 6.5:** Implement current SJVAPCD Emission Reduction Clean Air Measures as necessary for projects with construction emissions above the SJVAPCD thresholds of significance, which may include the following measures (note that this is not an exhaustive list):
  - Utilize the cleanest available off-road construction equipment, including the latest Tier diesel or electric equipment (e.g. scrapers, graders, trenchers, tractors, loaders, backhoes, etc.).
  - Utilize electric on-road vehicles and off-road vehicles and equipment to the extent feasible.

- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- Additional control measures (for projects that are large in area or located near sensitive receptors, or that for any other reason warrant additional emissions reductions):
- Construct and maintain wind barriers sufficient to limit visible dust to 20% opacity on the construction site.
- Utilize On-site water sprays or other dust suppression materials.
- Suspend excavation and grading activity when winds exceed 20 mph.[5]
- Minimize idling time (e.g., 5-minute maximum).
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Curtail construction during periods of high ambient concentrations of pollutants; this may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to reduce short-term impacts).

Per OM Guideline 6.1, implementing BAAQMD's basic construction mitigation measures would be mandatory for all construction activities performed in the Alameda County portion of the planning area. OM Guideline 6.2, detailing BAAQMD's best management practices for GHG emissions from construction activities, will be implemented as feasible and would be expected to reduce criteria pollutant emissions collaterally to the reduction in GHG emissions. For projects in Alameda County with construction emissions above the BAAQMD thresholds of significance, OM Guideline 6.3 would require implementation of enhanced best management practices to further reduce fugitive dust emissions from construction activities. In addition, construction-related activities for buildout in the Alameda County portion of the General Plan area would comply with BAAQMD rules and regulations established, in part, to ensure implementation of and consistency with strategies and actions of the applicable air quality plans, including but not limited to Regulation 6 Rule 1 (Particulate Matter), Regulation 6 Rule 6 (Trackout), and Regulation 11 Rule 2 (Asbestos, Demolition, Renovation and Manufacturing), as discussed in Section 2.7.3, "Regulatory Influences," of the General Plan.

Similarly, as detailed in OM Guideline 6.4, implementing SJVAPCD Regulation VIII for control of particulate matter emissions would be mandatory for all construction activities performed in the San Joaquin County portion of the planning area. For projects in San Joaquin County with construction emissions above the SJVAPCD thresholds of significance, OM Guideline 6.5 would require implementation of SJVAPCD Emission Reduction Clean Air Measures as necessary and feasible to further reduce criteria air pollutant emissions from construction activities. In addition, construction-related activities in the San Joaquin County portion of the General Plan area would be required to comply with SJVAPCD rules and regulations established, in part, to ensure implementation of and consistency with strategies and actions of the applicable air quality plans, including but not limited to Regulation III Rule 3135 (Dust Control Plan), Regulation IV Rule 4101 (Visible Emissions), Regulation IV Rule 4601 (Architectural Coatings) and Regulation VIII Rules 8011–8081 (Fugitive Dust). Construction and operational activities in the San Joaquin County portion of the General Plan area would also comply with Regulation IV Rule 9510 (Indirect Source Review), which requires applicants subject to the rule (based on project land development size) to provide information that enables SJVAPCD to quantify construction-related and operational NO_X and PM_{10} exhaust emissions and helps fulfil SJVAPCD's emission reduction commitments in the air quality attainment plans.

As detailed below in Impact 3.3-2 and shown in Table 3.3-7, emissions generated during construction would not exceed the BAAQMD nor the SJVAPCD thresholds of significance. Projects within the planning area would be required to adhere to OM Goal 6 and OM Guidelines 6.1 through 6.5 in addition to the applicable BAAQMD or SJVAPCD rules and regulations listed above which are established, in part, to

[5] Regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation.

ensure consistency with the air quality attainment plans. Therefore, construction activities related to buildout of the General Plan would not conflict with or obstruct of implementation of the applicable air quality plans and would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Operations

Activities at Carnegie SVRA would generate emissions of criteria pollutants from mobile sources related to OHV recreation as described and envisioned in the General Plan. Mobile sources of criteria pollutants would include trips to and from Carnegie SVRA by SVRA staff members and visitors, and the existing and increased use of OHVs. Recreational activities at Carnegie SVRA have historically included hillclimbing and trail riding by off-highway motorcycles and ATVs and limited off-road course driving by four-wheel-drive or 4x4 trucks. These vehicles all produce exhaust emissions as they burn gasoline and fugitive dust as their tires entrain dirt into the air. OHV emissions vary widely based on vehicle type, engine type, activity, speed, and soil moisture content and composition in the SVRA OHV recreation areas. In addition to OHV recreational use, there would be criteria pollutant emissions generated from operational activities of the new and improved visitor and operational facilities described in the Project Description which include, but are not limited to, additional visitor restrooms, additional or revamped campsites, a relocated and improved concession stand, additional staff housing, new and expanded staff meeting, storage and maintenance facilities, and upgrades to the existing water plant. Emissions would be generated through increased electricity and heating/cooling for these facilities, architectural coatings, and the use of a diesel-powered emergency generator for the water plant and a diesel water pump for OHV track sprinklers.

State Parks would implement OM Guideline 4.3 in addition to OM Goal 7 and OM Guideline 7.1 from the General Plan (shown below) to reduce emissions of criteria pollutants from Carnegie SVRA operational activities and from mobile sources associated with OHV recreation with the park.

OM Goal 4: Coordinate with special-event sponsors to ensure that special events are well managed and that appropriate visitor services are available.

- **OM Guideline 4.3:** During special events, implement traffic dust control measures in dirt parking areas and parking measures, such as clearly defined staging and unloading areas for OHVs, designated parking areas for large vehicles and trailers, defined parking lots for regular-sized vehicles, designated emergency vehicle parking and access routes, and barricades to direct vehicles and pedestrians. Provide travel and parking information in special-event publications.

OM Goal 7: Manage the SVRA to reduce to reduce regional air quality impacts from OHV recreation and related activities.

- **OM Guideline 7.1:** Implement the following operational emission reduction measures to help reduce regional air quality emissions:
  - Prohibit campfires on all summer and winter Spare the Air days identified by either BAAQMD or SJVAPCD. In addition, campfires throughout the park from November 1 to the end of February should be limited to SJVAPCD's "Check Before You Burn" program where campfires are restricted on days designated as "no burning for all" or "no burning unless registered."
  - Replace diesel-fueled maintenance equipment with alternative-fuel equipment (e.g., propane, electricity) when feasible.
  - Install and utilize electric vehicle (EV) charger(s) to promote the use of low or zero-emission vehicles.
  - Inform and suggest to all park visitors to limit the use of diesel generators for reactional vehicle cooling or heating during winter and summer Spare the Air days identified by either BAAQMD or SJVAPCD.

– Limit maintenance equipment engine idling to 2 minutes.

Operational activities within the Alameda County portion of the General Plan area would be subject to BAAQMD rules and regulations including, but not limited to, Regulation 2 Rule 1 (Permits) and Regulation 6 Rule 1 (Particulate Matter). As discussed above, construction and operational activities in the San Joaquin County portion of the General Plan area would be required to comply with Regulation IV Rule 9510 (Indirect Source Review), which helps fulfil SJVAPCD's emission reduction commitments in the air quality attainment plans.

As detailed below in Impact 3.3-2 and shown in Table 3.3-7, emissions generated during operational and recreational activities would be below the BAAQMD and SJVAPCD thresholds of significance, except for emissions of total PM_{10} which would slightly exceed the SJVAPCD threshold of significance of 15 tons per year (tpy). Fugitive dust is the largest source of operational PM_{10} emissions from buildout of the Carnegie SVRA General Plan, encompassing 99 percent of the total PM_{10} emissions for operational activities. It is generated by vehicles at the entrance and in the parking, camping, and staging areas of the park, and by OHV tires spinning and lifting soil into the air in the riding areas. The soil's silt and moisture content, vehicle weight and speed, and weather conditions affect the quantity of PM_{10} generated. To control some of these factors and limit the creation of fugitive dust, Carnegie SVRA limits vehicle speeds in the unpaved, non-OHV-riding areas (parking, camping, and staging areas) and applies dust suppressants annually and water as needed in these areas.

Regional air quality plans use land use designations and projected growth to estimate air quality emissions for the region. Thus, the regional air quality plans for the SFBAAB and SJVAB both account for OHV recreation areas and the types and volume of activities at Carnegie SVRA. Therefore, increased attendance to the Carnegie SVRA would be consistent with activities expected at this type of facility and with regional population growth assumed in the air quality plans. Implementation of OM Guideline 4.3, OM Goal 7 and OM Guideline 7.1 in addition to the applicable SJVAPCD and BAAQMD rules and regulations would help ensure consistency with the respective air district air quality plans. However, operational emissions would still exceed SJVAPCD's threshold of significance, which were established by SJVAPCD to reflect a major component of the district's air quality plans. As a result, operational activities associated with the Carnegie SVRA General Plan may conflict with implementation of regional air quality plans and would be **significant**.

Mitigation Measures

No feasible mitigation measures currently exist for directly treating emissions from OHV recreation, given the predominantly undeveloped, hilly area of the planning area where water sources are limited and water and dust-suppressant application trucks would produce significant additional emissions of exhaust and fugitive PM dust. Without any feasible mitigation measures to minimize the potentially significant operational impact, the impact would be **significant and unavoidable**.

Impact 3.3-2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? *Emissions of criteria air pollutants and ozone precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. Therefore, this impact is* ***significant.***

As detailed in Section 3.3.3, "Existing Conditions" above, both the SFBAAB and SJVAB are currently nonattainment for both the NAAQS and CAAQS for ozone and $PM_{2.5}$, and nonattainment for the CAAQS for PM_{10}. As discussed in the SJVAPCD GAMAQI, if project emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase. Similarly, the BAAQMD CEQA Guidelines have developed the thresholds of significance to ensure that no individual project has the potential to create a significance adverse impact, with a focus on criteria air pollutants for which the SFBAAB is designated as nonattainment. Therefore, the thresholds of significance can be used to inform whether a project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. As discussed above,

construction and operational emissions were estimated using CalEEMod. The SJVAPCD ambient air quality analysis (AAQA) thresholds are based on the maximum daily emissions that can occur as a result of the project. As there can be differences in the emissions between winter and summer, the maximum level of emissions for pounds per day between the two seasons was taken. The BAAQMD thresholds of significance are based on average daily emissions. For construction, this was determined by taking the total emissions in each year and dividing by the minimum number of days of construction that could occur within that year, conservatively assuming maximum overlap of individual facility projects construction activities. For operations, it was assumed that the annual emissions would occur over 365 days in any given year. Table 3.3-7 for construction and Table 3.3-8 for operations show the overall maximum daily emissions in addition to the average daily and total annual emissions for each year of construction and for full buildout operations.

Construction

As shown in Table 3.3-7, the average daily, maximum daily and annual emissions generated by construction-related activities would be below the respective BAAQMD and SJVAPCD-recommended threshold of significance for all pollutants. In addition, as discussed in Impact 3.3.1, all construction activities performed in the Alameda County portion of the planning area would be required to implement BAAQMD's basic construction mitigation measures and to follow applicable BAAQMD rules and regulations for particulate matter and other criteria pollutants generated by construction activities. Similarly, all construction activities performed in the San Joaquin County portion of the planning area would be required to implement SJVAPCD Regulation VIII for control of particulate matter emissions and comply with SJVAPCD rules and regulations regulating construction-related emissions. These measures serve to reduce the amount of criteria pollutant emissions that would be generated during construction. Therefore, construction activities would not be expected to contribute to an existing or projected air quality violation or result in a cumulatively considerable net increase and this impact would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Operations

As shown in Table 3.3-8, total operational emissions would slightly exceed the SJVAPCD thresholds for PM_{10}. 99 percent of the PM_{10} emissions generated from operational activities are fugitive dust emissions from OHV recreational usage. Implementation of OM Guideline 4.3, OM Goal 7 and OM Guideline 7.1 in addition to the applicable SJVAPCD and BAAQMD rules and regulations would help reduce the potential for the General Plan's operational activities to contribute to an existing or projected air quality violation or result in a cumulatively considerable net increase. However, the comparison to the BAAQMD and SJVAPCD thresholds shows that operations could still potentially contribute to an existing or projected air quality violation and potentially conflict with efforts to reach attainment of any air quality standards. Therefore, impacts to air quality from long-term operations of the General Plan would be **significant**.

Mitigation Measures

As discussed in Impact 3.3.-1, no feasible mitigation measures currently exist for directly treating fugitive dust emissions from OHV recreation, given the predominantly undeveloped, mountainous area of the planning area where water sources are limited and water and dust-suppressant application trucks would produce significant additional emissions of exhaust and fugitive PM dust. Without any feasible mitigation measures to minimize the potentially significant operational impact, the impact would be **significant and unavoidable**.

Health Effects of Criteria Air Pollutants

Criteria air pollutants can have human health effects at various concentrations, dependent upon the duration of exposure and type of pollutant. CAAQS and NAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. Similarly, air

districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. With respect to regional air quality, As detailed in Section 3.3.1, “Existing Conditions”, both the SFBAAB and SJVAB are currently designated as nonattainment for the NAAQS for ozone and $PM_{2.5}$, and nonattainment for the CAAQS for ozone, PM_{10} and $PM_{2.5}$. As noted above, projects that emit criteria air pollutants that exceed either the BAAQMD or the SJVAPCD thresholds of significance are considered to be “cumulatively considerable” and may contribute to the regional cumulative degradation of air quality that could result in impacts to human health.

Health effects associated with ozone include respiratory symptoms, worsening of lung disease, and damage to lung tissue. ROG and NO_X are precursors to ozone, for which the SFBAAB and SJVAB are designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of ROG and NO_X to regional ambient ozone concentrations is the result of complex photochemistry. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project’s emissions of ozone precursors is speculative. Health effects associated with short- and long-term exposure to elevated concentrations of PM_{10} include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (WHO 2021). $PM_{2.5}$ poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health.

The proposed General Plan would primarily generate criteria air pollutant emissions during the construction phase, and the primary pollutants of concern would be ozone precursors (ROG and NO_X) and PM. Adverse health effects induced by regional criteria pollutant emissions generated by the proposed General Plan (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_X) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project or plan area.

As shown in Table 3.3-4 and Table 3.3-6, all emissions associated with implementation of the General Plan would be below the BAAQMD- and SJVAPCD-recommended thresholds of significance with the exception of operational PM_{10} emissions respective to the SJVAPCD thresholds of significance. PM_{10} emissions would be approximately 1.06 times the threshold, just barely exceeding it. As discussed above, the nature of criteria pollutants is such that the emissions from an individual project or plan area cannot be directly identified as responsible for health impacts within any specific geographic location. As a result, attributing health risks at any specific geographic location to a single proposed project is not feasible, and this information and consideration is presented for informational purposes only.

Impact 3.3-3. Expose sensitive receptors to substantial pollutant concentrations? *Local mobile-source emissions of CO would not be expected to substantially contribute to emissions concentrations that would exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm. Construction and operation of facilities within the General Plan area would also not increase the potential for exposure of sensitive land uses to substantial concentrations of TACs, this impact would be* ***less than significant.***

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Table 3.3-7. Total Construction Criteria Air Pollutant Emissions Under the Carnegie SVRA General Plan

Category	Project	Construction Start Year	Construction Duration	ROG Max lb/day	ROG tpy	NO_X Max lb/day	NO_X tpy	PM_{10} (Exhaust) Max lb/day	PM_{10} (Exhaust) tpy	PM_{10} (total) Max lb/day	PM_{10} (total) tpy	$PM_{2.5}$ (Exhaust) Max lb/day	$PM_{2.5}$ (Exhaust) tpy	$PM_{2.5}$ (total) Max lb/day	$PM_{2.5}$ (total) tpy	CO Max lb/day	CO tpy	SO_2 Max lb/day	SO_2 tpy
Visitor Facilities	Campground Remodel	2026	3 months	4.16	0.08	35.37	0.57	1.44	0.02	9.49	0.10	1.33	0.02	5.36	0.06	36.09	0.69	0.08	0.00
Visitor Facilities	New Group Camping - Campsites for up to 30 people.	2023	1 month	2.33	0.02	19.88	0.14	0.85	0.01	3.11	0.01	0.78	0.01	1.83	0.01	18.49	0.15	0.04	0.00
Visitor Facilities	New Group Camping - New Restrooms	2023	3 months	3.24	0.06	20.47	0.42	0.88	0.02	3.10	0.02	0.81	0.02	1.85	0.02	19.57	0.44	0.06	0.00
Visitor Facilities	New Dump Station	2025	1 month	1.57	0.01	12.84	0.08	0.56	0.00	2.72	0.01	0.52	0.00	1.54	0.00	13.42	0.11	0.03	0.00
Visitor Facilities	New Campfire Center - Amphitheater	2024	3 months	1.26	0.02	11.68	0.19	0.54	0.01	2.70	0.01	0.50	0.01	1.52	0.01	11.39	0.23	0.02	0.00
Visitor Facilities	New Campfire Center - Relocating Water Tower	2023	1 week	1.78	0.00	16.18	0.03	0.73	0.00	2.80	0.00	0.67	0.00	1.67	0.00	14.64	0.03	0.03	0.00
Visitor Facilities	New Kid's Minibike Track	2024	1 month	2.11	0.02	17.62	0.15	0.76	0.01	6.07	0.02	0.70	0.01	3.27	0.01	16.75	0.15	0.04	0.00
Visitor Facilities	New Interpretive Loop Trails	2025	2 weeks	0.07	0.00	0.87	0.00	0.03	0.00	2.60	0.01	0.02	0.00	1.34	0.01	1.61	0.01	0.00	0.00
Visitor Facilities	New Front Hills/ Riparian Pedestrian Trail	2026	1 month	0.73	0.01	5.63	0.04	0.46	0.00	3.04	0.03	0.43	0.00	1.74	0.02	2.50	0.02	0.00	0.00
Visitor Facilities	New Front Hills Motorcycle Trail	2025	6 weeks	0.06	0.00	0.86	0.01	0.03	0.00	2.58	0.04	0.02	0.00	1.34	0.02	1.51	0.02	0.00	0.00
Visitor Facilities	New Visitor Recreation Area	2026	6 weeks	1.05	0.01	9.21	0.09	0.42	0.00	2.55	0.01	0.39	0.00	1.40	0.01	9.98	0.11	0.02	0.00
Visitor Facilities	Reopening the Waterfall Canyon Areas	2025	1 month	0.06	0.00	0.86	0.01	0.03	0.00	2.58	0.03	0.02	0.00	1.34	0.01	1.51	0.02	0.00	0.00
Visitor Facilities	Reopening the Franciscan Riding Ares	2025	1 month	0.06	0.00	0.86	0.01	0.03	0.00	2.58	0.03	0.02	0.00	1.34	0.01	1.51	0.02	0.00	0.00
Visitor Facilities	Other Visitor Facilities - New Restroom	2026	3 months	2.81	0.05	15.42	0.36	0.63	0.01	2.85	0.02	0.58	0.01	1.62	0.02	17.52	0.45	0.04	0.00
Visitor Facilities	4x4 Practice Area Improvements	2024	1 month	0.07	0.00	0.93	0.01	0.03	0.00	2.59	0.03	0.03	0.00	1.34	0.02	1.52	0.02	0.00	0.00
Visitor Facilities	Concession Stand Relocation	2024	12 months	2.22	0.09	11.42	0.71	0.53	0.03	2.67	0.04	0.49	0.03	1.51	0.03	11.06	0.89	0.02	0.00
Operations Facilities	SVRA Maintenance Area Improvements	2024	12 months	3.95	0.10	11.42	0.72	0.53	0.03	2.67	0.04	0.49	0.03	1.51	0.03	11.06	0.91	0.02	0.00
Operations Facilities	Ranger Station Office and Yard Expansion - Ranger Station	2027	12 months	1.93	0.07	8.72	0.58	0.39	0.02	2.53	0.03	0.36	0.02	1.38	0.02	9.83	0.86	0.02	0.00
Operations Facilities	Ranger Station Office and Yard Expansion - Operations Yard	2025	3 months	9.22	0.03	10.10	0.16	0.46	0.01	2.60	0.01	0.43	0.01	1.44	0.01	10.36	0.22	0.02	0.00
Operations Facilities	Emergency Helicopter Pad Relocation	2024	1 week	2.87	0.00	25.25	0.03	1.06	0.00	3.91	0.00	0.98	0.00	2.15	0.00	24.95	0.03	0.06	0.00
Operations Facilities	Volunteer Training Area Enhancements	2024	3 months	1.53	0.02	11.42	0.18	0.53	0.01	2.67	0.01	0.49	0.01	1.51	0.01	11.06	0.22	0.02	0.00
Operations Facilities	Campground Host Sites	2023	1 month	2.32	0.02	19.59	0.14	0.85	0.01	3.05	0.01	0.78	0.01	1.81	0.01	18.42	0.15	0.04	0.00
Operations Facilities	New Greenhouse	2023	4 weeks	1.28	0.00	12.59	0.04	0.60	0.00	2.67	0.00	0.55	0.00	1.55	0.00	11.37	0.04	0.02	0.00
Operations Facilities	Park Headquarters Area Improvements	2025	4 months	7.91	0.06	14.10	0.37	0.64	0.01	3.49	0.02	0.59	0.01	1.95	0.01	14.93	0.42	0.02	0.00
Operations Facilities	Park Headquarters Area Improvements - Modular and Trailer Homes for SVRA Staff	2026	2 months	28.60	0.04	9.21	0.10	0.42	0.00	2.55	0.01	0.39	0.00	1.40	0.00	9.98	0.14	0.02	0.00
Operations Facilities	Water Plant Upgrade	2024	6 weeks	1.22	0.01	11.42	0.09	0.53	0.00	2.67	0.01	0.49	0.00	1.51	0.00	11.06	0.11	0.02	0.00
Operations Facilities	Other Operations Facility Projects - New Maintenance Area/Shop Concrete Bridge	2026	3 months	1.05	0.02	9.22	0.12	0.42	0.01	2.56	0.02	0.39	0.00	1.40	0.01	9.98	0.15	0.02	0.00
Operations Facilities	Other Operations Facility Projects - New/Revamped Low Water Creek Crossings	2026	6 months	1.05	0.04	9.21	0.35	0.42	0.02	2.55	0.06	0.39	0.01	1.40	0.03	9.98	0.45	0.02	0.00
Operations Facilities	Other Operations Facility Projects - Staff and Public EV Charging Stations	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Operations Facilities	Other Operations Facility Projects - ATV/MX Track Sprinkler System	2024	3 weeks	1.19	0.01	11.39	0.05	0.53	0.00	2.61	0.01	0.49	0.00	1.49	0.00	10.72	0.05	0.02	0.00

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Category	Project	Construction Start Year	Construction Duration	ROG Max lb/day	ROG tpy	NO_X Max lb/day	NO_X tpy	PM_{10} (Exhaust) Max lb/day	PM_{10} (Exhaust) tpy	PM_{10} (total) Max lb/day	PM_{10} (total) tpy	$PM_{2.5}$ (Exhaust) Max lb/day	$PM_{2.5}$ (Exhaust) tpy	$PM_{2.5}$ (total) Max lb/day	$PM_{2.5}$ (total) tpy	CO Max lb/day	CO tpy	SO_2 Max lb/day	SO_2 tpy
Operations Facilities	Other Operations Facility Projects - Facilities for Communication or Technology Support	2024	2 months	4.28	0.02	11.50	0.12	0.53	0.01	2.68	0.01	0.49	0.01	1.51	0.01	11.09	0.15	0.02	0.00
Operations Facilities	Additional Employment/Operations	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Maximum Daily Emissions (lb/day)[1]	38.74	--	88.88	--	3.97	--	23.04	--	3.65	--	12.93	--	93.52	--	0.19	--
			2023 Total Emissions (tpy)	--	0.10	--	0.78	--	0.03	--	0.06	--	0.03	--	0.04	--	0.81	--	0.00
			2023 Average Daily (lb/day)[2]	3.17	--	24.37	--	1.02	--	1.75	--	0.94	--	1.24	--	25.21	--	0.06	--
			2024 Total Emissions (tpy)	--	0.28	--	2.24	--	0.10	--	0.18	--	0.09	--	0.13	--	2.75	--	0.00
			2024 Average Daily (lb/day)[2]	2.15	--	17.22	--	0.77	--	1.41	--	0.71	--	0.99	--	21.13	--	0.04	--
			2025 Total Emissions (tpy)	--	0.10	--	0.65	--	0.03	--	0.14	--	0.02	--	0.08	--	0.81	--	0.00
			2025 Average Daily (lb/day)[2]	2.25	--	15.22	--	0.59	--	3.33	--	0.54	--	1.93	--	18.75	--	0.04	--
			2026 Total Emissions (tpy)	--	0.24	--	1.63	--	0.07	--	0.25	--	0.06	--	0.14	--	2.02	--	0.00
			2026 Average Daily (lb/day)[2]	3.76	--	25.28	--	1.05	--	3.81	--	0.97	--	2.23	--	31.32	--	0.06	--
			2027 Total Emissions (tpy)	--	0.07	--	0.58	--	0.02	--	0.03	--	0.02	--	0.02	--	0.86	--	0.00
			2027 Average Daily (lb/day)[2]	0.55	--	4.43	--	0.16	--	0.23	--	0.15	--	0.17	--	6.65	--	0.01	--
			SJVAPCD AAQA Threshold (Maximum lb/day)	**100**	**--**	**100**	**--**	**--**	**--**	**100**	**--**	**--**	**--**	**100**	**--**	**100**	**--**	**100**	**--**
			Threshold Exceeded (in any year)?	**N**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**N**	**--**	**N**	**--**
			BAAQMD Significance Threshold (Average lb/day)	**54**	**--**	**54**	**--**	**82**	**--**	**--**	**--**	**54**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
			Threshold Exceeded (in any year)?	**N**	**--**	**N**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
			SJVAPCD Significance Threshold (tpy)	**--**	**10**	**--**	**10**	**--**	**--**	**--**	**15**	**--**	**--**	**--**	**15**	**--**	**100**	**--**	**27**
			Threshold Exceeded (in any year)?	**--**	**N**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**N**	**--**	**N**

1. Determined by summing maximum lb/day from each project within same year and determining the year with the highest maximum lb/day. Assumed only up to six projects can occur simultaneously.

2. Determined by taking tpy, converting to lb/year, and dividing by number of construction days in year.

Notes:

AAQA = Ambient Air Quality Analysis; BAAQMD = Bay Area Air Quality Management District; CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; ROG = reactive organic gases; SJVAPCD = San Joaquin Valley Air Pollution Control District; SO_2 = sulfur dioxide; tpy = tons per year.

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Table 3.3-8. Total Operational Criteria Air Pollutant Emissions Under the Carnegie SVRA General Plan

Category	Component	ROG Max lb/day	ROG tpy	NO_X Max lb/day	NO_X tpy	PM_{10} (Exhaust) Max lb/day	PM_{10} (Exhaust) tpy	PM_{10} (total) Max lb/day	PM_{10} (total) tpy	$PM_{2.5}$ (Exhaust) Max lb/day	$PM_{2.5}$ (Exhaust) tpy	$PM_{2.5}$ (total) Max lb/day	$PM_{2.5}$ (total) tpy	CO Max lb/day	CO tpy	SO_2 Max lb/day	SO_2 tpy
Visitor Facilities	Campground Remodel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Visitor Facilities	New Group Camping - Campsites for up to 30 people.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Visitor Facilities	New Group Camping - New Restrooms	0.06	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00
Visitor Facilities	New Dump Station	0.12	0.02	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00
Visitor Facilities	New Campfire Center - Amphitheater	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Visitor Facilities	Other Visitor Facilities - New Restroom	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Visitor Facilities	Concession Stand Relocation	0.17	0.03	0.14	0.03	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.35	0.04	0.00	0.00
Visitor Facilities	Visitor Vehicle/OHV Trips	4.66	0.85	0.72	0.13	0.16	0.03	85.99	15.69	0.09	0.02	8.51	1.55	28.68	5.23	0.00	0.00
Operations Facilities	SVRA Maintenance Area Improvements	0.22	0.04	0.11	0.02	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.09	0.02	0.00	0.00
Operations Facilities	Ranger Station Office and Yard Expansion - Ranger Station	0.13	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.02	0.00	0.00
Operations Facilities	Ranger Station Office and Yard Expansion - Operations Yard	0.08	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Operations Facilities	Volunteer Training Area Enhancements	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Operations Facilities	Campground Host Sites	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operations Facilities	Park Headquarters Area Improvements	0.08	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.01	0.00	0.00
Operations Facilities	Park Headquarters Area Improvements - Modular and Trailer Homes for SVRA Staff	0.42	0.05	0.11	0.01	0.23	0.01	0.23	0.01	0.22	0.01	0.22	0.01	2.01	0.10	0.01	0.00
Operations Facilities	Water Plant Upgrade	0.08	0.01	0.32	0.02	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.24	0.01	0.00	0.00
Operations Facilities	Other Operations Facility Projects - ATV/MX Track Sprinkler System	0.94	0.17	4.91	0.90	0.55	0.10	0.55	0.10	0.55	0.10	0.55	0.10	4.55	0.83	0.00	0.00
Operations Facilities	Other Operations Facility Projects - Facilities for Communication or Technology Support	0.04	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Operations Facilities	Additional Employment/Operations	0.15	0.026	0.22	0.04	0.00	0.00	0.33	0.06	0.00	0.00	0.09	0.02	1.78	0.27	0.00	0.00
	Maximum Daily Emissions (lb/day)[1]	7.23	--	6.73	--	1.00	--	87.17	--	0.93	--	9.44	--	38.23	--	0.02	--
	Total Annual Emissions	--	1.27	--	1.17	--	0.15	--	15.87	--	0.14	--	1.69	--	6.57	--	0.00
	Average Daily (lb/day)[2]	6.97	--	6.42	--	0.81	--	86.97	--	0.74	--	9.24	--	36.03	--	0.01	--
	SJVAPCD AAQA Threshold (Max lb/day)	**100**	**--**	**100**	**--**	**--**	**--**	**100**	**--**	**--**	**--**	**100**	**--**	**100**	**--**	**100**	**--**
	Threshold Exceeded?	**N**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**--**	**--**	**N**	**--**	**N**	**--**	**N**	**--**
	BAAQMD Significance Threshold (Average lb/day and tpy)	**54**	**10**	**54**	**10**	**82**	**15**	**--**	**--**	**54**	**10**	**--**	**--**	**--**	**--**	**--**	**--**
	Threshold Exceeded?	**N**	**N**	**N**	**N**	**N**	**N**	**--**	**--**	**N**	**N**	**--**	**--**	**--**	**--**	**--**	**--**
	SJVAPCD Significance Threshold (tpy)	**--**	**10**	**--**	**10**	**--**	**--**	**--**	**15**	**--**	**--**	**--**	**15**	**--**	**100**	**--**	**27**
	Threshold Exceeded?	**--**	**N**	**--**	**N**	**--**	**--**	**--**	**Y**	**--**	**--**	**--**	**N**	**--**	**N**	**--**	**N**

1. Determined by summing maximum lb/day from each project.

2. Determined by taking tpy, converting to lb/year, and dividing by number of operation days in year (365).

Notes:

AAQA = Ambient Air Quality Analysis; BAAQMD = Bay Area Air Quality Management District; CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; ROG = reactive organic gases; SJVAPCD = San Joaquin Valley Air Pollution Control District; SO_2 = sulfur dioxide; tpy = tons per year.

General Plan components without any expected operational emissions are not included within this table.

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Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as the majority of the workers tend to stay indoors most of the time. Sensitive receptors within the planning area are residences in the form of staff housing within the General Plan area north of Corral Hollow Road and temporary park visitors within the recreational areas in the Carnegie SVRA. Sensitive receptors surrounding the planning area include offsite single family residences near the northwestern boundary of the General Plan area along Corral Hollow Road.

The exposure of sensitive receptors (e.g., existing off-site residents) to TAC emissions from short-term (construction) and long-term operational (mobile, stationary, and other) sources is discussed separately below.

Construction Emissions and Exposure to TACs at Surrounding Land Uses

Construction of the new and improved facilities would generate diesel PM (DPM) emissions from the use of off-road diesel-powered equipment required for site grading and excavation, paving, and other construction activities. During some equipment-intensive phases, such as grading, construction-related emissions would be higher than other less equipment-intensive phases, such as building construction or architectural coatings. These activities may expose nearby receptors to TACs, including surrounding residents in adjacent areas; the nearest offsite residence is located approximately 300 feet to the west of the General Plan area. For this analysis, DPM is assumed to be equivalent to exhaust-generated $PM_{2.5}$, presented in Table 3.3-7.

Health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. Even in intensive phases of construction, there would not be substantial pollutant concentrations, with the potential exception of the immediate vicinity of the construction site. Concentrations of mobile-source DPM emissions are typically reduced by approximately 60 percent at a distance of around 300 feet (100 meters) (Zhu and Hinds, et. al. 2002). The majority of construction activities would take place throughout the approximately 1,575-acre General Plan area, not along the General Plan area boundaries that are closest to off-site sensitive receptors. However, since the exact amount, type, and phasing of any development that could occur in the future in the General Plan area is unknown, and since any future construction phases are also unknown, it is not possible to know whether there could be exposure to substantial pollutant concentrations during construction.

The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent to which a person is exposed to the substance. As described above, exhaust $PM_{2.5}$ emissions during construction would be a maximum of 3.65 lb/day (Table 3.3-7). The maximum daily emissions are conservative estimates which assume a high-intensity level of development within a single year, and maximum overlap of construction phases. The risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs (OEHHA 2015). The total construction period is projected to take place over a period of less than 5 years, beginning as early as 2023 and occurring through 2027. As a result, the exposure of sensitive receptors to construction emissions would be intermittent and temporary in nature. Even during this period of time, construction activities would vary in activity and equipment intensity, and would take place throughout the 1,575-acre General Plan area. If the duration of construction activities near a sensitive receptor was for the entirety of the 5 years, which is not anticipated, then the exposure would be 15 percent of the total exposure period used for typical health risk calculations (i.e., 30 years). It is important to note that emissions from construction equipment would be reduced over the approximately 5-year period of development of the General Plan area. As construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease.

State Parks would implement OM Goal 6 and OM Guidelines 6.6 through 6.7 from the General Plan (shown below) to help reduce the potential exposure to substantial TAC emissions from Carnegie SVRA construction and operational activities.

OM Goal 6: Limit potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 6.6:** Maintain a buffer of at least 250 feet around any residential properties within the planning area during and after implementation of the General Plan.
- **OM Guideline 6.7:** Conduct an environmental analysis for all construction projects located within 1,000 feet of any residents (on-site or off-site) to assess potential air quality health impacts of construction-related emissions on the existing residence(s). If any significant impacts (e.g., health risk thresholds) are determined pursuant to the applicable air district thresholds of significance (i.e., BAAQMD or SJVAPCD), the applicant and contractor shall implement all necessary measures to minimize emissions.

Construction activities associated with development in the General Plan area would have intermittent and temporary construction emissions, and it is possible that construction projects would occur in areas adjacent to sensitive receptors. It is possible that multiple elements of construction within the proposed General Plan area and possible off-site improvements could be proposed to occur simultaneously in areas near existing or future planned sensitive receptors. However, as discussed above concentrations of DPM are most concentrated within 300 feet of the source and drop off substantially at greater distances. OM Guideline 6.6 in the proposed General Plan would maintain a buffer of 250 feet or greater around any residential properties. In addition, with implementation of OM Guideline 6.7, any proposed construction activities within 1,000 feet of on- or offsite residents would be required to assess the potential air quality impacts compared to the applicable BAAQMD or SJVAPCD thresholds of significance and implement measures to reduce air quality impacts as necessary. Therefore, the possibility that construction activities could occur within a distance and for a duration that would generate substantial TAC exposure to sensitive receptors would be minimized, and this impact is considered **less than significant**.

Land Use Compatibility and Exposure to TACs from Nearby Land Uses

The land uses proposed within the General Plan area include recreational and operational facilities to support usage of the Carnegie SVRA. None of the land uses within the General Plan area are typically considered substantial sources of TACs; however, they are associated with an increase of visitor trips to and from the Carnegie SVRA and OHV usage within the park. Land uses would also include stationary sources of TACs, such as diesel-fueled back-up generators. These types of stationary sources, in addition to any other stationary sources (including industrial land uses) that may emit TACs would be subject to either SJVAPCD or BAAQMD Rules and Regulations if these sources were located within the San Joaquin County or Alameda County portion of the General Plan area, respectively. Land uses that are more likely to generate substantial TAC emissions include industrial land uses that involve stationary sources, manufacturing processes, and large-scale commercial, warehousing, logistics, or other uses that could potentially attract heavy truck traffic.

ARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides guidance concerning land use compatibility with regard to sources of TAC emissions (ARB 2005). The handbook offers recommendations for siting sensitive receptors near uses associated with TACs (e.g., freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, industrial facilities). While the handbook is advisory and not regulatory, it offers the following recommendations that are potentially pertinent to the proposed General Plan:

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads carrying 100,000 vehicles per day, or rural roads carrying 50,000 vehicles per day.
- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.

- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
- Avoid siting new sensitive land uses within 300 feet of a large gasoline station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gasoline dispensing facilities.
- Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation using perchloroethylene. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult the local air district. Do not site new sensitive land uses in the same building with dry-cleaning operations that use perchloroethylene.

The land development within the General Plan area would include sensitive land uses in the form of new staff housing in addition to short term, temporary recreational usage within the park. This development would be located more than 4 miles from the nearest freeway (i.e., Highway 580), which far exceeds the 500-foot buffer recommended by ARB. In addition, as the Carnegie SVRA is largely surrounded by undeveloped land, the sensitive land uses within the General Plan area would not be located within 1,000 feet of a major service or maintenance rail yard, 300 feet of a large gasoline station, 50 feet of a typical gasoline dispensing facility, or 500 feet of any dry-cleaning operation using perchloroethylene. Therefore, the General Plan would be consistent with all of the ARB recommendations listed above to avoid and minimize impacts from TACs from off-site sources.

However, future development within the General Plan area would include stationary sources of TACs, such as a 36-horsepower diesel-fueled backup generator and a 23.9 horsepower diesel-fueled water pump. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to applicable district rules and regulations.

Under BAAQMD Rule 2-1 (Permits—General Requirements), Rule 2-2 (New Source Review), and Rule 2-5 (New Source Review of Toxic Air Contaminants), all sources that have the potential to emit TACs must obtain permits from BAAQMD. BAAQMD analyzes sources that require a permit (e.g., by performing health risk assessments) based on their potential to emit TACs. If BAAQMD determines that project-related emissions would exceed its threshold of significance for TACs, the source must implement the best available control technology for TACs (T-BACT) to reduce emissions. If a source cannot reduce the risk below the threshold of significance even after implementing T-BACT, BAAQMD will deny the permit.

Like BAAQMD's permitting process, SJVAPCD's air quality permitting process under SJVAPCD Regulation IV, Rule 4002 (National Emissions Standards for Hazardous Air Pollutants) and Regulation VII (Toxic Air Pollutants) requires all sources that have the potential to emit TACs to obtain permits. Sources that require a permit are analyzed by SJVAPCD (e.g., by performing health risk assessments) based on their potential to emit toxics. As with BAAQMD, if a source cannot reduce the risk below the threshold of significance, even after T-BACT has been implemented, SJVAPCD will deny the permit.

Because the proposed General Plan would be consistent with ARB's Handbook for siting sensitive land uses from identified sources of TAC emissions, impacts from TACs from off-site sources would be minimized. In addition, stationary sources of TACs within the General Plan area would be small in size and subject to applicable district rules and regulations to further reduce emissions and ensure that they do not cause health risks above applicable thresholds. Therefore, long-term operational activities would not expose sensitive receptors to substantial TAC concentrations and this impact is considered **less than significant**.

Carbon Monoxide Hotspots

A mobile-source pollutant of localized concern is CO. Continuous engine exhaust may elevate localized CO concentrations, or "hot spots." Land use development projects do not typically have the potential to result in localized concentrations of criteria air pollutants that expose sensitive receptors to substantial pollutant concentrations, in part, because the predominant source of these pollutants is typically in the form of mobile-source exhaust from vehicle trips that occur throughout a network of roads and are not concentrated in a single location.

Emissions and ambient concentrations of CO have decreased substantially throughout California in the past three decades. The national statewide CO standard is attained statewide in California, and an exceedance of NAAQS or CAAQS in the region was last recorded in 1993. This is primarily attributable to requirements for cleaner vehicle emissions. CO hot spots are typically observed at heavily congested roadway intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. Construction sites are less likely to result in localized CO hot spots due to the nature of construction activities, which normally utilize diesel-powered equipment for intermittent or short durations. While ambient CO concentrations in the region have not exceeded NAAQS or CAAQS in many years, localized CO concentrations could still occur, particularly at intersections of high-volume roadways.

BAAQMD has developed the following criteria for screening for the potential to create CO hotspots:

- Consistency with an applicable congestion management program established by the county congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans; and
- Traffic volumes at affected intersections of less than 44,000 vehicles per hour; and
- Traffic volumes at affected intersections less than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Similarly, SJVAPCD has the following screening criteria which states that a proposed project's CO impact would be less than significant if the following criteria are met:

- Traffic generated by a proposed project would not result in deterioration of level of service (LOS) on one or more streets or at one or more intersections to LOS E or F; and
- A project would not worsen a street or an intersection that already operates at LOS of F.

The proposed General Plan would not result in prolonged idling throughout the day, nor contribute substantially to regionally high-volume, congested roadways. In addition, the surrounding intersections and OHV recreational trails within the Carnegie SVRA at which on-road and offroad vehicle trips may increase are generally not locations of typically limited vertical and/or horizontal of ambient air (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadways), and therefore would not likely be subject to elevated concentrations of CO. The increase in visitor vehicle trips based on regional growth rates would be an estimated 9,442 additional on-road vehicles to and from the park and an additional 14,163 OHVs within the park, annually. This translates to an average increase of 26 on-road vehicles and 39 OHVs per day. Due to the low level of new trips that would be generated by increased visitors associated with buildout of the General Plan relative to the overall SFBAAB and SJVAB regions, improved vehicle emissions standards for CO, and lack of conditions that would limit dispersion of CO emissions from vehicle exhaust, the proposed General Plan would not violate air quality standards for CO nor have the potential to result in CO hotspots. Therefore, this impact is **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.3-4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines and emissions associated with asphalt paving and the application of architectural coatings may be considered offensive to some individuals. The nearest residence approximately 300 feet from the western border of the General Plan area west may be exposed to odors from diesel exhaust associated with grading and asphalt paving activities depending on the wind direction, however taking into consideration the fact that odors would be temporary and disperse rapidly with distance from the source,

construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Furthermore, projects within the General Plan area would be required to comply with BAAQMD's Regulation 7 (Odorous Substances) or SJVAPCD's Rule 4102 (Nuisance), which place general limitations on odorous substances and nuisances to limit the generation of odors within the SFBAAB and SJVAB, respectively. These regulations would ensure that odors generated by short-term construction would not affect a substantial number of people. Therefore, this impact would be **less than significant**.

Operations

Continuation of park management, operations, and visitor use would not create new sources of odors, and implementation of the General Plan would result in minimal additional facilities. Recreational land uses are not typically considered to be sources of objectionable odors. Operationally, industries and/or facilities that are widely considered major sources of odors include wastewater treatment and pumping facilities, chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shops), composting facilities, food processing facilities, confined animal facilities, asphalt batch plants, rendering plants, metal smelting plants, and coffee roasters. This list is meant not to be entirely inclusive, but to act as general guidance. In the context of land use planning, one of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, or a "buffer zone." BAAQMD and SJVAPCD have both published recommended odor screening distances tables, which are provided in Section 3.3.3, "Impact Analysis and Mitigation Measures" in Table 3.3-4 and Table 3.3-6, respectively.

Future development of the General Plan area would include land use types to support recreational use of the Carnegie SVRA and operations of the park, and do not include land uses in the list of known odor-generating sources in either BAAQMD or SJVAPCD's recommended buffer distances tables. Surrounding land uses are largely undeveloped other than a few single-family homes, which do not have the potential to generate odors that are detectable on and in the vicinity of the General Plan area. In addition, BAAQMD's Regulation 7 (Odorous Substances) and SJVAPCD's Rule 4102 (Nuisance) place general limitations on odorous substances and nuisances to limit the generation of odors, and both districts provide an on-line complaint website and phone number if any resident experiences odor concerns. Any potentially odors would be generally confined to the immediate vicinity of the source; by the time such emissions reach any sensitive receptor, of which the only near receptors are on-site staff housing and park visitors, they would be diluted to well below any level that would adversely affect a substantial number of people. Therefore, this impact would be **less than significant.**

Mitigation Measures

No mitigation is required.

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3.4 Biological Resources

This section describes biological resource conditions in the planning area and analyzes the potential impacts of implementing the Carnegie SVRA General Plan on biological resources.

3.4.1 Existing Conditions

Section 2.3.2 “Biotic Resources,” in Chapter 2, “Existing Conditions,” of the General Plan provides a detailed description of the landcover and vegetation types that occur in the planning area and detailed information on the status of common and special-status plants and wildlife species and which occur in the Carnegie SVRA and vicinity.

3.4.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Section 2.7.3.1, “Natural Resources Regulations,” in Chapter 2 of the General Plan provides a discussion of federal plans, policies, regulations, and laws applicable to the biological resources in the planning area.

State Plans, Policies, Regulations, and Laws

Section 2.7.3.1 in Chapter 2 of the General Plan provides a discussion of state plans, policies, regulations, and laws applicable to the biological resources in the planning area.

Regional and Local Plans, Policies, Regulations, and Ordinances

Carnegie SVRA is owned and operated by the state of California; therefore, no regional or local plans, policies, regulations, or ordinances related to biological resources are applicable to the planning area.

3.4.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on biological resources from implementation of the General Plan and the proposed projects is based on current land use, existing conditions, and on changes that could occur at the SVRA from implementation of the General Plan including the new and improved facility projects. Impacts may occur as a result of removal of vegetation, expansion of existing or construction of new facilities, or as a result of changed use patterns.

Thresholds of Significance

Based on Appendix G of CEQA Guidelines, implementation of the General Plan would result in a potentially significant impact related to biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

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 local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

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.

Environmental Impacts

Impact 3.4-1. Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive, or Special Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

General Plan Implementation

The Carnegie SVRA General Plan is a broad-based policy document that establishes a long-range vision to direct future management, development, services, and programs for the SVRA. This vision would be obtained through the implementation of a set of long- and short-term goals and specific guidelines associated with each goal. Natural resources goals and guidelines that will result in impact avoidance of natural resources within the SVRA are described in detail in Section 4.4.1.3 “Natural Resources” in Chapter 4 of the General Plan. This framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals. Therefore, with implementation of these goals and guidelines, General Plan implementation would not cause any direct or indirect adverse effect on special-status species and their habitats; there would be **no significant impact** related to special-status species and their habitat.

New and Improved Facilities

Most of the proposed new and improved visitor an operations facilities described in Chapter 2 of this EIR are located in areas of the SVRA that have previously been disturbed or developed. Construction of these projects would not require substantial removal of native habitat or vegetation cover types that support special-status species. These facilities are generally in areas that already experience a high amount of visitor use and use patterns are not expected to change substantially from those currently present with the exception of the Waterfall Canyon area, which is not currently open to the public but would experience non-motorized use as a result of General Plan implementation.

Nonetheless, adverse effects on special-status species and their habitat could occur through direct or indirect impacts during the construction of the new facilities, the improvements on existing facilities, or as a result of subsequent operations and management of these facilities and increased visitor use. Direct impacts could occur through habitat removal, trampling, or off-road vehicle use in unauthorized areas. Indirect impacts could occur through alterations to the landscape that may result in modified habitats and the introduction of light, noise, or trash into areas not previously affected in this way. To address these potential direct and indirect impacts, all new and improved facilities will be planned, designed, constructed, operated, and maintained consistent with the below General Plan goals and guidelines.

Natural Resource Management (NRM) Goal 1: Manage Carnegie SVRA for a balance of uses that allow protection and stewardship of natural resources while maintaining a quality OHV recreational experience.

- **NRM Guideline 1.1:** Locate visitor-serving facilities in prior disturbed areas or in areas of relatively low resource value to minimize disturbance to higher-value habitat areas.
- **NRM Guideline 1.2:** Before planning new visitor-serving or operations facilities, or expanding existing ones, conduct site-specific surveys/mapping of sensitive biological resources (e.g., special-status species and sensitive habitats, migratory corridors, nesting sites, and colony locations) and take the location and extent of these resources into consideration during the planning and design process. Avoid affecting sensitive biological resources during planning, design, and construction. Utilize fencing and other methods to exclude public access in environmentally sensitive areas, as

necessary. Conduct worker environmental awareness training for construction personnel before construction.

- **NRM Guideline 1.3:** In the event that disturbing a sensitive biological resource is unavoidable, minimize the disturbance to the minimum area necessary to achieve the project purpose, and identify and implement measures to offset those impacts in coordination with a qualified biologist and the appropriate resource agencies, depending on the listing or protection status of the resource. Coordination with the agencies may include acquisition of any required environmental permits, take authorizations, management plans, or other documents as required by the respective agencies.
- **NRM Guideline 1.4:** Continue to implement the OHMVR Division's Habitat Monitoring System (HMS) until the Wildlife Habitat Protection Plan (WHPP) for the Carnegie SVRA is finalized.

  The HMS and the WHPP are tools used to aid in the implementation of park-specific monitoring and adaptive management, with a focus on trends in percent habitat cover, focal species distribution and abundances, and comparisons between riding and nonriding areas. The HMS data is used to accumulate, standardize, and analyze records of plants, animals, and habitats in the planning area and guide adaptive management. The HMS is consistent with State Parks' resource management directives, and with the specific biological provisions that outline management programs for working with natural processes of vegetation succession, controlling the spread of noxious and invasive weeds, and protecting natural wildlife habitat.

  The WHPP is an improved framework which emphasizes a broad range of scientifically accepted techniques and measures that are appropriate for the unique habitats found within each SVRA. This monitoring system provides information on protocols for baseline studies, focused studies, monitoring, and surveys, and is used by SVRA resource managers to aid in the development of park-specific monitoring plans and techniques.

  The goals of the WHPP are to monitor and manage wildlife and plant populations and restore habitats where necessary to sustain a viable species composition within each SVRA. The plans enable adaptive management, allowing management practices and strategies to change, or "adapt," as warranted by new monitoring information. Environmental scientists for each SVRA conduct and oversee the monitoring based on the WHPP and other monitoring protocols. Biological resource assessments conducted at Carnegie SVRA have been compiled according to the guidelines set forth by this system.
- **NRM Guideline 1.5:** Focus new trail development in areas of relatively low habitat value. Route new trails around the edges of high-quality habitat and include buffers to avoid habitat fragmentation. Maintain strict enforcement of riding destination requirements throughout the SVRA, according to the allowable uses in the respective visitor experience areas and monitor for compliance. If noncompliance is documented, enact adaptive management techniques such as temporary closures or other measures proven effective at the SVRA.

NRM Goal 2: Encourage a balance of uses that allow for the restoration or enhancement of natural habitats while maintaining a quality OHV recreational experience.

- **NRM Guideline 2.1:** Implement an adaptive management plan for biological resources that combines the results of monitoring implemented through the HMS or WHPP (NRM Guideline 1.4) and monitoring for soil conservation (Soils Guideline 1.2). Identify and establish adaptive management opportunity zones in areas of high-quality natural habitat and sensitive habitat, or where populations of special-status wildlife and plants occur or could occur (e.g., elderberry shrubs, California tiger salamander breeding ponds). Implement management actions to protect these zones from activities that could disturb sensitive resources or to enhance/restore them as part of the adaptive management process.
- **NRM Guideline 2.2:** Implement adaptive management, including temporary or rotating closures, invasive species management, and habitat enhancement, to allow natural regenerative processes to occur; enact these measures proactively. Use signage to inform visitors of areas that contain

sensitive biological resources or are closed. Use interpretive materials to inform visitors of habitat enhancement and restoration activities to promote environmental stewardship.

- **NRM Guideline 2.3:** Manage SVRA landscapes to preserve natural vegetation and to enhance native California plant communities and associated habitat functions and values. Management strategies include habitat restoration and enhancement; invasive species management; focused propagation of desired species; fencing or other barriers to protect sensitive habitats such as riparian areas, to maximize natural recruitment of riparian species; controlled burns; managed grazing; or other management techniques proven beneficial to the maintenance of healthy natural ecosystems.
- **NRM Guideline 2.4:** Apply state-of-the-art science and ecological knowledge to the management of natural communities and associated habitat functions at the SVRA. Management strategies shall take current science and results from ongoing management and research into consideration. Work with the academic community to continue to allow research at the SVRA and apply knowledge gained through on-site and off-site research to site-specific resource management. OHMVR Division environmental scientists shall conduct research and coordinate studies with research at other SVRAs, as appropriate.

Plant Goal 1: Manage the SVRA for a balance of uses that allow protection of special-status plants and sensitive natural communities while maintaining a quality OHV recreational experience.

- **Plant Guideline 1.1:** Conduct protocol-level surveys for special-status plants and sensitive natural communities on the sites of proposed facilities during the planning and design process. Conduct the surveys during the blooming season for all potentially occurring special-status plant species according to the most current methodology recommended by CDFW and USFWS, depending on the listing status of the species. The surveys shall be conducted by a qualified botanist familiar with the flora of Alameda and San Joaquin Counties. Document the survey results in a written report submitted to the OHMVR Division. Map the location and extent of all occurrences of special-status plant species encountered during the surveys and maintain the data in the SVRA's Geographic Information System database. If construction of facilities is delayed, repeat special-status plant surveys every 5 years to ensure that data are current and account for long-term and seasonal variation.
- **Plant Guideline 1.2:** Prohibit impacts on existing occurrences of special-status plants during project implementation.
- **Plant Guideline 1.3:** Avoid siting facilities within 100 feet of known special-status plant occurrences to avoid indirect impacts. If these buffers cannot be maintained, use design features to protect the occurrences from indirect impacts.
- **Plant Guideline 1.4:** Use drought-tolerant plants, and whenever feasible, use plants native to the site for landscaping. Select plants that require little or no irrigation. If irrigation is required for plant establishment, use temporary irrigation methods that allow a gradual tapering off of watering over a 3- to 5-year period. Regulate water pressure at a level that applies sufficient water without causing erosion, damage to plants, or runoff.
- **Plant Guideline 1.5:** Monitor for existing and/or incipient populations of invasive weeds annually. If new invasive weeds are documented, implement actions to prevent their establishment and spread before they become established or occupy large portions of the SVRA. Maintain weed management practices for the SVRA consistent with OHMVR Division policies or other applicable guidance and based on best available science.

  Plant Guideline 1.6: Limit removal of native trees. Any trees removed as a result of facilities construction shall be replaced, with the specific number of trees to be replaced determined during project-level planning. At both new and existing facilities, prohibit adverse indirect effects on native trees from root compaction and physical damage. Preserve or enhance the extent of native woodlands at the SVRA and look for opportunities for enhancement and restoration.

Wildlife Goal 1: Manage the SVRA to maintain a quality OHV recreational experience while protecting native wildlife species, including special-status wildlife species and their designated habitats.

- **Wildlife Guideline 1.1:** Conduct annual (or more frequent) monitoring as part of the HMS or WHPP, to look for signs of active use by burrowing owls and for active kit fox dens in the planning area. If signs of burrowing owl use or active dens are detected during monitoring, consider active management strategies to encourage and preserve use of the site by the species. Such strategies include placing new facilities away from any active burrowing owl; appropriate buffers shall be sized depending on the use of the burrow (nesting or wintering) and the disturbance impact, as described in *Staff Report on Burrowing Owl Mitigation* (DFG 2012) or subsequent version and/or consultation with CDFW. If active dens were found, strategies that include not siting facilities within 500 feet of active dens would be initiated based on CDFW guidelines (DFG 2012). CDFW would be contacted regarding appropriate setbacks for a natal/pupping den if found, both occupied and unoccupied.
- **Wildlife Guideline 1.2:** Avoid siting new facilities within 150 feet of pools currently known or later identified to support California red-legged frog, California tiger salamander, western pond turtle, or western spadefoot.
- **Wildlife Guideline 1.3:** Avoid siting facilities within 100 feet of elderberry shrub locations, for complete avoidance. If work or placement of facilities closer to existing shrubs is required, implement appropriate measures, developed in consultation with USFWS, to avoid or compensate for direct and indirect impacts on valley elderberry longhorn beetle.
- **Wildlife Guideline 1.4:** Avoid siting facilities within 150 feet of preferred Alameda whipsnake habitat, particularly scrub vegetation types. If placement of facilities within or adjacent to Alameda whipsnake habitat cannot be avoided, implement appropriate measures to avoid or compensate for direct and indirect impacts on Alameda whipsnake resulting from project-specific activities. Implement protection measures agreed upon during consultation with USFWS. Encourage further research into the presence of Alameda whipsnake at the site, to ensure that management is based on the best available knowledge of the species and its requirements.
- **Wildlife Guideline 1.5:** During placement of new facilities, avoid known breeding locations of all special-status avian species known to occur in the planning area.
- **Wildlife Guideline 1.6:** If construction activities are planned during the breeding season of common and special-status birds, conduct a preconstruction survey of the construction zone and establish an appropriate buffer (as determined by a qualified biologist) within 2 weeks of construction onset. If breeding birds are documented, establish appropriate buffer zones around the occupied nests to protect the birds until the young have fledged.
- **Wildlife Guideline 1.7:** If construction activities are planned within suitable upland habitat for special-status herpetofauna (California red-legged frog, California tiger salamander, western pond turtle, or western spadefoot) and within the known maximum upland dispersal distance of those species from known breeding habitat, develop and implement appropriate measures to avoid or compensate for potential direct and indirect impacts of project-specific activities on special-status herpetofauna in upland habitats. Before the start of construction, implement any protection or mitigation measures agreed upon during consultation with the wildlife agencies.
- **Wildlife Guideline 1.8:** Perform a preconstruction survey for potential bat roosting habitat (large trees with cavities, rock outcrops, caves, mines) in proposed construction areas and a 100-foot buffer around the construction area (Western Bat Working Group 2007). Implement avoidance and minimization measures determined appropriate by a qualified biologist based on guidance from the wildlife agencies and the best available science before conducting any activity within 100 feet of known bat roost locations. Avoidance and minimization measures may include establishment of roost avoidance buffers, seasonal activity restrictions, or monitoring of roost locations.
- **Wildlife Guideline 1.9:** Perform preconstruction surveys for active burrowing owl burrows for proposed construction that would occur within suitable burrowing owl habitat or within 50 feet of suitable burrowing owl habitat. Conduct preconstruction surveys according to current CDFW guidelines as described in their *Staff Report on Burrowing Owl Mitigation* (DFG 2012) or subsequent version. Because burrowing owls can be present throughout the year, this guideline would be implemented in suitable burrowing owl habitat regardless of the time period for initiation of

construction. If active burrowing owl burrows are found, CDFW would be consulted regarding appropriate avoidance and minimization measures, including no disturbance buffers, to be implemented during construction and any additional mitigation measures agreed upon during consultation with CDFW.

- **Wildlife Guideline 1.10:** During placement of new facilities, avoid interference of movement through known migratory wildlife corridors in the planning area.

These goals and guidelines were developed to protect special-status species and their habitat in the SVRA and to avoid and minimize impacts on special-status species through programmatic solutions of strategic site selection, habitat preservation, agency consultation, restoration of habitats, ongoing surveys, and annual monitoring and adaptive management plans using the best available science (BAS). As a result, the new and improved facilities would not cause substantial direct or indirect adverse effect on special-status species and their habitats; there would be **a less than significant impact** on special-status species and their habitats.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.4-2. Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

General Plan Implementation

As previously discussed, the Carnegie SVRA General Plan would result in a policy document that establishes a long-range vision for the SVRA to direct future restoration, developments, services, and programs. Natural resources goals and guidelines that will result in impact avoidance of natural resources within the SVRA are described in detail in Section 4.4.6.1 “Physical Resource Management,” and 4.4.6.2 “Natural Resources” in Chapter 4 of the General Plan. As previously discussed, this framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals. Therefore, with implementation of these goals and guidelines, General Plan implementation would not cause any direct or indirect adverse effect on direct or indirect adverse effect on riparian habitat or other sensitive natural communities; there would be **a less than significant impact** related to riparian habitat or other sensitive natural communities.

New and Improved Facilities

Adverse effects through direct or indirect impacts on riparian habitat or other sensitive natural communities could result during the construction of the new facilities, the improvements on existing facilities, or as a result of subsequent operations and management of these facilities and increased visitor use. Direct impacts could occur if the new facilities impede the natural flow in the watershed, through habitat modification, vegetation removal, or bank stability interference. Indirect impacts could occur through alterations to the landscape that may result in modified or fragmented habitats, the introduction of non-native plant species, and light, noise, or trash into areas not previously affected in this way. To address these potential direct and indirect impacts, all new and improved facilities will be planned, designed, constructed, and maintained consistent with the General Plan goals and guidelines under NRM Goal 1, NRM Goal 2, and Plant Goal 1 described above under Impact 3.4-1, as well as the below goals and guidelines.

Water Goal 1: Manage the SVRA for the protection of jurisdictional waters of the United States, including wetlands and waters of the state, while maintaining a quality OHV recreational experience.

- **Water Guideline 1.1:** Avoid locating facilities in areas delineated as jurisdictional waters of the United States, including wetlands; areas that qualify as waters of the state under the Porter-Cologne Water Quality Control Act of 1969, and areas subject to California Department of Fish and Wildlife

(CDFW) regulation under California Fish and Game Code Section 1602. Where avoidance is not feasible, such as for trail crossings, design facilities to minimize impacts.

- **Water Guideline 1.2:** Work to attain no net loss of wetlands functions and values at the SVRA. If impacts on jurisdictional features cannot be fully avoided:
  - Determine the acreage of direct impacts (i.e., fill of wetlands) and indirect impacts (i.e., alterations to wetland hydrology) that would result from project implementation, and obtain necessary permits.
  - Provide compensatory mitigation such that the functions and values of all affected wetlands and other waters of the United States, waters of the state, and stream and riparian habitats protected under the California Fish and Game Code are replaced, restored, or enhanced on a "no net loss" basis. Restore, enhance, and/or replace wetland, water, and riparian habitat acreage at a location and by methods agreeable to the U.S. Army Corps of Engineers (USACE), the Central Valley and San Francisco Bay Regional Water Quality Control Boards (RWQCBs), CDFW, and/or the U.S. Fish and Wildlife Service (USFWS) as appropriate and depending on agency jurisdiction.

Water Goal 2: Manage the SVRA for the protection of water quality while maintaining a quality OHV recreational experience.

- **Water Guideline 2.1:** Avoid siting facilities in and immediately adjacent to riparian or stream corridors or within waters of the United States or the state, including seeps, ponds, or drainages. Stream corridors shall be managed with vegetated buffers and crossings shall be properly sited for circulation and designed to minimize erosion and other water quality impacts. Design measures include but are not limited to:
  - armoring approaches,
  - providing sediment traps or filter areas,
  - hardening the crossing surface,
  - protecting the streambanks from vehicle backwash and overflow during flooding, and
  - modifying super elevation (direction of tilt) such that roads and trails drain away from stream corridors.

  Culverts or bridge crossings shall be considered in highly erosive areas.

- **Water Guideline 2.2:** Implement best management practices (BMPs) in operating the SVRA, consistent with the *Storm Water Management Plan for Carnegie SVRA* (SWMP) or applicable subsequent document. Monitor water quality regularly and implement adaptive management practices as warranted. Adaptive management practices used may include permanent or seasonal area closures, facility redesign, and hillside restoration.

The goals and guidelines will avoid and minimize all impacts on riparian habitat or other sensitive natural communities through programmatic solutions of site selection, aquatic resource protection, agency consultation, and compensatory mitigation. As a result, the new and improved facilities would not cause any direct or indirect adverse effect to riparian habitat or other sensitive natural communities; there would be **a less than significant impact** on riparian habitat or other sensitive natural communities.

Mitigation Measures

With the implementation of the goals and guideline, no mitigation is required.

Impact 3.4-3. Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption, or Other Means?

General Plan Implementation

As previously discussed, the Carnegie SVRA General Plan is a policy document that establishes a long-range vision for the SVRA to direct future restoration, developments, services, and programs. No net loss of wetland functions or values as well as steps for impact avoidance of state or federally protected wetlands within the SVRA is described in detail in Section 4.4.6.1 in Chapter 4 of the General Plan. This framework would guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals. Therefore, with implementation of these goals and guidelines, General Plan implementation would not cause any direct or indirect adverse effect on state or federally protected wetlands; there would be **a less than significant impact** related to state or federally protected wetlands.

New and Improved Visitor and Operations Facilities

Adverse effects through direct or indirect impacts on state or federally protected wetlands could occur during the construction of the new facilities, improvements on existing facilities, or as a result of subsequent operations and management of these facilities and increased visitor use. Direct impacts could occur if the new facilities impede the natural flow in the watershed or at water crossings, if fill or contaminants enter the waters and wetlands during construction, or from physical damage to the wetlands themselves. Indirect impacts could occur through alterations to the landscape that may result in modified wetland habitats, increased erosion or sediment deposition, or an increase in visitor traffic through the wetland areas. To address these potential direct and indirect impacts, all new and improved facilities will be planned, designed, constructed and maintained consistent with General Plan Water Goal 1 and Water Goal 2 and the associated guidelines described above under impact 3.4-2.

The goals and guidelines will avoid and minimize all impacts on state or federally protected wetlands through programmatic solutions of site selection, aquatic resource protection, agency consultation, and compensatory mitigation. As a result, the new and improved visitor facilities would not cause any substantial direct or indirect adverse effect on state or federally protected wetlands; there would be **a less than significant impact** on state or federally protected wetlands.

Mitigation Measures

No mitigation is required.

Impact 3.4-4. Interfere Substantially with the Movement of Any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites?

General Plan Implementation

As previously discussed, the Carnegie SVRA General Plan would result in a policy document that establishes a long-range vision for the SVRA to direct future restoration, developments, services, and programs. These policies are described in detail in Section 4.4.6.1 in Chapter 4 of the General Plan. This framework would guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals. Therefore, with implementation of these goals and guidelines, would not cause any direct or indirect adverse effects to the movement of native resident or migratory fish, wildlife species, established native resident or migratory wildlife corridors, or the use of native wildlife nursery sites; there would be **no significant impact** on these biological resources.

New and Improved Visitor and Operation Facilities

Adverse effects through direct or indirect impacts on wildlife habitat, habitat connectivity, or the use of nursery sites could result during the construction of the new facilities, the improvements on existing facilities, or as a result of later operations and management of these facilities and increased visitor use. Direct impacts could occur if the new facilities impede the natural flow in the watershed or at water crossings, are established in wildlife nursery areas or in areas which could fragment wildlife corridors, through habitat modification, or from off-road vehicle use in unauthorized areas. Indirect impacts could occur through alterations to the landscape that may result in modified habitats, increased visitor traffic, and the introduction of light, noise, or trash into areas not previously affected in this way. To address these potential direct and indirect impacts, all new and improved facilities will be planned, designed, constructed and maintained consistent with General Plan goals NRM Goal 1, NRM Goal 2, Plant Goal 1, Wildlife Goal 1, Water Goal 1, and Water Goal 2 and the associated guidelines described above under Impacts 3.4-1 and 3.4-2.

The goals and guidelines will mitigate all impacts on movement of fish or wildlife species, on migratory wildlife corridors, and native wildlife nursery sites through programmatic solutions of site selection, aquatic resource protection, agency consultation, ongoing surveys, annual monitoring, compensatory mitigation, and adaptive management plans using the best available science (BAS). As a result, the new and improved visitor facilities would not cause any direct or indirect adverse effect on movement of fish or wildlife species, on migratory wildlife corridors, and native wildlife nursery sites; there would be **a less than significant impact** on these biological resources.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.4-5. Conflict with any Local Policies or Ordinances Protecting Biological Resources, such as a Tree Preservation Policy or Ordinance?

General Plan Implementation/New and Improved Facilities

Carnegie SVRA is owned by the State of California. State lands are not subject to local policies or ordinances protecting biological resources. There would be **no impact**.

Mitigation Measures

No mitigation is required.

Impact 3.4-6. Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan?

General Plan Implementation/New and Improved Facilities

Carnegie SVRA is not subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved applicable plan. There would be **no impact**.

Mitigation Measures

No mitigation is required.

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3.5 Cultural Resources

This section describes cultural resources in the planning area. It also discusses the federal, state, and local regulatory framework and analyses the potential impacts of implementing the Carnegie State Vehicular Recreation Area (SVRA) General Plan on cultural resources.

3.5.1 Existing Conditions

Section 2.3.3, “Cultural Resources,” in Chapter 2 of the General Plan describes the setting information for the planning area related to pre-contact land use patterns, ethnography, and the historic era. An extensive study conducted by the Anthropological Studies Center (ASC) at Sonoma State University (ASC 2010) indicated that the planning area contains a rich pre-contact associated with the Northern Valley Yokuts and Ohlone Native American populations, and a rich and varied historic land use history dating from 1846 to present-day ranching.

3.5.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Federal regulations may be required for Federal permits or funding, or other programs or actions that include Federal involvement. Summaries of some of the Federal regulations that could be applicable to specific actions that involved federal agencies at the SVRA are presented below.

National Historic Preservation Act, Section 106

The purpose of the National Historic Preservation Act (NHPA) (Title 16, Section 470 et seq. of the U.S. Code) is to protect sites, buildings, structures and objects significant in American architecture, history, archaeology, and culture. Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties. Section 106 applies to actions initiated, licensed or permitted by the federal government which have the potential to affect properties listed or eligible for listing on the National Register of Historic Places. Under Section 106, the responsible Federal agency must:

- Identify “historic properties” (cultural resources) which may be affected by project;
- Determine the effects of the project on the subject properties;
- Consult with appropriate state and local officials, Native American tribes, and members of the public regarding potential effects on cultural resources and consider their views and concerns when making project decisions.

Pursuant to Section 106, the importance of the cultural resource and the severity of the impact are both evaluated in terms of significance. Mitigation is required for actions that result in significant impacts to significant resources.

National Register of Historic Places

The National Register of Historic Places (NRHP) was developed pursuant to Title 36 Code of Federal Regulations (CFR) Section 60 to identify the nation’s cultural resources and indicate which properties should be considered for protection. The criteria used to evaluate properties for nomination to the NRHP are as follows:

- Districts, sites, buildings, structures, or objects that possess integrity of location, design, setting, materials, workmanship, feeling and association; and
- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or

- That embody 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
- That have yielded, or may be likely to yield, information important in prehistory or history.

In California, applications for properties to be nominated to the National Register are submitted to the State Office of Historic Preservation for initial consideration; if deemed suitable, the State Historic Preservation Officer (SHPO) is responsible for formally submitting the nomination. While listing on the National Register does not automatically ensure protection of the resource, it establishes additional levels of review and consideration before approval of potentially harmful actions.

State Plans, Policies, Regulations, and Laws

California Code of Regulations Section 15064.5
Determining the Significance of Impacts to Archaeological and Historical Resources.

A historical resource is one that is listed in or determined to be eligible for listing in the California Register of Historical Resources; a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (meets the criteria for listing on the California Register of Historical Resources).

These criteria include:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

To determine whether a project will affect a significant cultural resource, an State Parks project manager prepares a project evaluation form and submits it to State Park archaeologists for review. State Parks archaeologists consult the most recent cultural resource geodatabase and cultural resource inventory prepared for the subject SVRA, and then prepare a Section 5024 report if a cultural resource has been recorded in the project area. The cultural resource is evaluated for significance according to NRHP/California Register of Historical Resources (CRHR) criteria. The Section 5024 report assesses potential impacts on the resource and describes mitigation measures. If the archaeologists determine that a project will have an adverse impact on significant cultural resources, project managers direct staff members to redesign the project, to avoid those impacts.

Public Resources Code Section 5021
The State Parks Department shall consider all recommendations for registration made by the commission, and shall register, as state historical landmarks, those buildings, structures, sites, or places which the department deems to be important historical resources and shall register, as points of historical interest, those buildings, structures, sites, or places which the department deems to be historical resources of sufficient historical interest to qualify for the placement of signs pursuant to Section 5022.5. The commission shall maintain a register which shall identify by number and description such historical landmarks and points of historical interest. The department may publish results of office and field archaeological investigation annually and shall issue additional publications, such as detailed site reports and area resource reports, as necessary, to inform the public and educational institutions.

Public Resources Code Section 5024.1
Established the California Register of Historical Resources and defined the criteria for listing on the Register, including California properties formally determined eligible for or listed in the National Register of Historic Places, State Historical Landmark No. 770 and all consecutively numbered state historical

landmarks following No. 770, and Points of historical interest which have been reviewed by the office and recommended for listing in the California Register.

In addition, Public Resources Code (PRC) Section 5024 requires state agencies to make a good-faith effort to protect and preserve all state-owned historical resources under their jurisdiction. Each state agency must submit to the SHPO an inventory of all state-owned historical resources exceeding 50 years of age that are under its jurisdiction. PRC Section 5024.5 gives SHPO the authority to review all efforts made by state agencies, to protect and preserve those resources from development and maintenance projects. SHPO has instituted a memorandum of understanding with State Parks to complete Section 5024 reviews of all projects that could adversely affect significant historical resources. State Parks archaeologists prepare a report of Section 5024 reviews for the SHPO annually.

After completing a cultural resources inventory, archaeologists from the ASC evaluated the significance of the resources. A cultural resource is considered significant if it meets all of the following criteria:

- it meets one of the criteria lists for significance with regard to either the CRHR or the NRHP,
- it is at least 50 years old, and
- it retains its integrity.

Completing the Section 5024 review process ensures that State Park projects follow the required standards for management and protection of cultural resources. Those guidelines are the Secretary of the Interior's Standards for the Treatment of Historic Properties. The following basic concepts underlie all treatments:

- Keep good documentation because it is essential to good management.
- Repair and retain historic fabric instead of replacing it.
- Replace with only "like-kind" materials, styles, finishes, colors, and craftsmanship.
- Avoid the false historicity that is created by using features that are undocumented or period styles that never were there.
- Make treatments reversible whenever possible.
- Protect archaeological resources.

To determine whether a project will affect a significant cultural resource, a State Parks project manager prepares a project evaluation form and submits it to OHMVR Division archaeologists for review. State Park archaeologists consult the most recent cultural resource geodatabase and cultural resource inventory prepared for the subject SVRA, and then prepare a Section 5024 report if a cultural resource has been recorded in the project area. The cultural resource is evaluated for significance according to NRHP/CRHR criteria. The Section 5024 report assesses potential impacts on the resource and describes mitigation measures. If the archaeologists determine that a project will have an adverse impact on significant cultural resources, project managers direct staff members to redesign the project, to avoid those impacts.

Public Resources Code Section 5097

PRC Section 5097 addresses archaeological resources. Archaeological resources that are not "historical resources" may be "unique archaeological resources" as defined in PRC Section 21083.2, which also generally provides that "non-unique archaeological resources" do not receive any protection under CEQA. PRC Section 21083.2(g) defines a "unique archaeological resource" as an archaeological artifact, object, or site that does not merely add to the current body of knowledge but has a high probability of meeting any of the criteria identified there. If an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource are not considered to be a significant impact.

PRC Section 5097.5 states that unauthorized removal or destruction of archaeological or paleontological resources on sites located on public lands is a misdemeanor. In this case, "public lands" means lands

owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation or its agent.

PRC Sections 5097.9 through 5097.991 (California Native American Historic Resource Protection Act) establish the Native American Heritage Commission (NAHC) and its responsibilities with respect to Native American resources and require that state and local agencies cooperate with the NAHC in carrying out those duties. The NAHC identifies and catalogs places that are of special religious or social significance to Native Americans and known graves and cemeteries of Native Americans on private lands. It also performs other duties to preserve and maintain the accessibility of sacred sites and burials and properly dispose of Native American human remains and burial items. If human remains of Native American origin are discovered, the NAHC is responsible for identifying the person(s) it believes to be the most likely descendant (MLD) of the deceased Native American.

PRC Section 5097.98 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for such actions.

Public Resources Code, Section 21080.3.1
Consultation with Native Americans is conducted for any project that would result in the undertaking of a negative declaration, mitigated negative declaration, or environmental impact report.

Public Resources Code, Section 21083.2
The lead agency shall determine if a project will have significant effect on Archaeological Resources. If the project is determined to have a significant effect on unique archaeological resources, an Environmental Impact Report is needed to address the significant effect to the resources.

Public Resources Code, Section 21084.1
A project that may cause substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.

Public Resources Code, Section 21084.3
Public agencies shall, when feasible, avoid damaging effects to any Tribal Cultural Resources.

Government Code
Confidentiality of archaeological resource records and Native American consultation information. Government Code §6254 (r) states that records of Native American graves, cemeteries, sacred places, places, features, objects in the possession of a state agency are not required to be disclosed. Government Code §6254.10 states that archaeological site information and information from Native American consultation maintained by Department of Parks and Recreation is not required to be disclosed.

Health and Safety Code

Activities in the planning area are subject to several sections of the California Health and Safety Code pertaining to the discovery and treatment of human remains.

- Health and Safety Code Sections 8010–8011

Sections 8010–8011 of the Health and Safety Code establish a state repatriation policy and facilitate implementation of the federal Native American Graves Protection and Repatriation Act. The policy requires that all Native American physical remains and cultural items be treated with dignity and respect, and encourages voluntary disclosure and return of such remains and cultural items by publicly funded agencies and museums in California. The policy provides for mechanisms to aid Native American tribes, including non-federally recognized tribes, in filing repatriation claims and obtaining responses to those claims.

Executive Order W-26-92
All state agencies shall recognize and, to the extent prudent and feasible within existing budget and personnel resources, preserve and maintain the significant heritage resources of the State. Each state agency is directed to administer the cultural and historic properties under its control in a spirit of stewardship and trusteeship for future generations; to initiate measures necessary to direct its policies, plans, and programs in such a way that state-owned sites, structures, and objects of historical,

architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and to ensure that the protection of significant heritage resources are given full consideration in all of its land use and capital outlay decisions.

Executive Order B-10-11
Every state agency and department shall encourage communication and consultation with Native American Tribes.

California State Parks Department Operations Manual and Resource Management Policies and Directives

The Department Operations Manual (DOM) is the guiding policy manual for California State Parks. Included within the DOM is a volume of resource management policies and directives. These policies and directives provide guidance toward the preservation of natural and cultural resources and on the uses that may impact those resources, as well as to amplify the legal codes contained in the Public Resources Code, the California Code of Regulations, and the California State Park and Recreation Commission's Statement of Policy and Rules of Order.

The Resource Management Directives include policies on archaeological, historical, and cultural resource preservation, protection, consultation, research, and professional procedures and practices.

State Parks Cultural Resource Review and Related Procedures (Departmental Notice 2004-02)

The Department's procedures for protecting historical resources in conformance with PRC sections 5024 and 5024.5 and Executive Order W-26-92.

State Parks Confidential Cultural Resource Data Governance (Departmental Notice 2021-09)
Established protocol to manage confidential cultural resources information that is critical for effective environmental compliance, risk management, and stewardship for California State Parks. Access to, and use of, the information is constrained by governance to restrict access, define allowable uses, and defend against misuse or inadvertent disclosure.

Regional and Local Plans, Policies, Regulations and Ordinances

No regional or local plans, policies, regulations, or ordinances related to cultural resources are applicable to the planning area.

3.5.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on cultural resources in the planning area from General Plan implementation, including the construction of the proposed new and improved facility projects described in Chapter 2, "Project Description," of this EIR, is based on the existing information provided in *A Cultural Resources Study of Portions of the Carnegie State Vehicular Recreation Area Alameda and San Joaquin Counties, California* (ASC 2010). As a result of the previous inventory and recordation, 25 cultural resources were identified within the boundary of the planning area. Of these resources, one reflects prehistoric land use and 24 are the results of historic-era themes relating to transportation, pottery and brick works, and mining activities. State Parks determined the larger Tesla Mining and Industry Historic District is eligible for listing in the NRHP at the state level under Criteria A, B, C, and D, with a period of significance between 1855 and 1911. In a letter dated December 7, 2012, the California Office of Historic Preservation (OHP 2012) concurred with State Parks' determinations and its proposed list of contributors and noncontributors to the significance of the Tesla Mining and Industry Historic District. There are 14 contributing resources (historical resources) in the Carnegie SVRA planning area that are contributors to the historic district.

The remains of the Carnegie Brick and Pottery Works (CA-SJO-311H) are within the planning area and are listed as California Historical Landmark (CHL) No. 740.

A prehistoric site identified in the planning area appears to be individually eligible for the NRHP under Criterion D.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact on cultural resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines;

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines; or

c) Disturb any human remains, including those interred outside of formal cemeteries.

Section 15064.5 of the CEQA Guidelines defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

As cited in Section 15064.5, the lead agency shall consider a resource to be “historically significant” if the resource meets the CRHR criteria for eligibility or is listed in a local historic register or deemed significant in a historical resource survey. A significant historical resource is one that meets one or more of the following CRHR criteria:

a) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

b) is associated with the lives of persons important in our past;

c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d) has yielded, or may be likely to yield, information important in prehistory or history.

Environmental Impacts

Impact 3.5-1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Previous cultural resource inventories have identified historical resources in the Carnegie SVRA planning area including 14 contributors to the Tesla Mining and Industry Historic District. Within the planning area are also built environment resources that are of historic age and used as secondary supporting facilities for park operations such as staff residences, garages/carports, and water utility infrastructure; however, these park-supporting historic-age resources have not yet been evaluated for historical significance. These resources have the potential to be affected through the implementation of the general plan, new and improved visitor facilities, and new and improved operational facilities.

The presence of known cultural resources in the planning area was carefully considered during development of the General Plan. The planning team used a cultural resources overlay map while developing the visitor experience areas and evaluating project sites and took the presence of sensitive resources into consideration when determining uses for each area.

Chapter 4, “The Plan,” of the General Plan contains a detailed set of goals and guidelines aimed at protecting cultural resources present in the planning area so that the OHMVR Division will meet its mandate to protect cultural resources consistent with state law. Adherence to CR Goals 1 and 2 and associated guidelines (see below) would avoid significant adverse impacts on historical resources from future development and improvements at Carnegie SVRA. In particular, these measures stipulate that complete cultural resource studies/inventories would be conducted at each location proposed for ground disturbance or development, and all known resources would be protected, stabilized, and/or preserved in place. Park undertakings would avoid or minimize significant impacts on known cultural resources.

Cultural Resource Management (CR) Goal 1: Identify, document, and evaluate cultural resources within Carnegie SVRA.

- **CR Guideline 1.1**: To augment the cultural resource study/inventory of Carnegie SVRA completed for this General Plan, Carnegie SVRA will follow standard operating procedures and directives for cultural resources management practices and incorporate the latest professional practices to develop an ongoing program to maintain and update the existing cultural resource inventory; site recordation and evaluations; global positioning system (GPS) recordation; historical, archaeological, and ethnographic research; and preparation of new and updated site records and survey reports for built environment, historic-era and precontact archaeological cultural resources within Carnegie SVRA. Submit all new and updated site records to the California Historical Resources Information System (CHRIS) to ensure this information is available for future studies.
- **CR Guideline 1.2***:* Work with historical data and descendants to identify and nominate those historic-era archaeological resources that may be eligible for inclusion in the NRHP and CRHR as individual sites, districts, or cultural landscape resources. Identify and locate descendants of families who lived or worked within the Park during the historical era. Include homesteaders, miners, construction and railroad workers, recreationalists, State Parks staff, etc. For those with memories of the Park, conduct oral history interviews and request access to photos or other documents that the individual or family may have of the time in the Park. The information gained from these interviews, photos, and documents will complement and expand upon existing historical data on early land use. It could help in locating, identifying, and evaluating historic archaeological sites.
- **CR Guideline 1.3:** Promote cooperative research ventures with local educational institutions and other governmental agencies to complement site documentation, evaluation, and analysis needs and encourage site protection and preservation.

CR Goal 2: Protect, stabilize, and preserve cultural resources.

- **CR Guideline 2.1:** Incorporate all known cultural resources either listed or eligible for listing in the NRHP, the CRHR, or as a California Historical Landmark (CHL), into an ongoing archaeological condition monitoring/assessment program that examines and documents the effects of visitor use and natural erosion. Examinations shall be conducted by a qualified state archaeologist and shall document current site conditions using Archaeological Site Condition Assessment Records, photographs, and GPS equipment. Mitigation measures shall be developed where considerable damage to sites is identified. Such mitigation measures can include site-specific closures, revegetation, sign placement, fencing, site burial, education, and other applicable methods.
- **CR Guideline 2.2:** Protect, stabilize, and preserve in place all known cultural resources either listed or eligible for listing in the NRHP, CRHR, or as a CHL, and that are considered important because of their or potential archaeology values, in accordance with PRC Sections 5024 and 5024.5 and Governor's Executive Order B-10-11 ("Native American Consultation Policy").
- **CR Guideline 2.3:** Develop and incorporate cultural resource management and protection measures, including procedures for site damage assessment, in wildfire plans and additional natural disaster plans and procedures. Identify the cultural resources most vulnerable to impacts because of natural disaster, especially those either listed or determined eligible for listing in the NRHP or the CRHR, for implementation of such protection measures.
- **CR Guideline 2.4**: Design all SVRA undertakings, including routine maintenance and new facility development, to avoid or minimize significant impacts on all known cultural resources either listed or eligible for listing in the NRHP, CRHR, or as a CHL, and all tribal cultural resources identified by local tribes and individuals as sacred or culturally significant. Knowledge of the location of these sites was taken into consideration when selecting the preferred concept and shall be taken into consideration during future site specific planning in all visitor experience areas.
- **CR Guideline 2.5**: Provide annual cultural resource training to park staff members. Ensure that SVRA field staff, such as maintenance and trails team members, understand the procedures for what to do if cultural resources, and most importantly human remains, are inadvertently discovered during a project or a park visitor. Involve local California Native American guest speakers as participants in

annual cultural resource training to share and teach park staff members about today's local Native American population, their heritage, and the important role of cultural resource management in protecting their heritage. Inform SPPOs about the location of known cultural resources most susceptible to looting, vandalism, or damage by park visitors so that they can monitor site conditions and watch for site impacts and vandalism. Ensure that SPPOs have the latest information on current cultural resource laws.

- **CR Guideline 2.6:** Maintain the existing California Archaeological Site Stewardship Program (CASSP), which includes ongoing site monitoring of known cultural resources conducted by trained volunteers. Provide annual CASSP training workshops that continue to educate CASSP volunteers in the basic fundamentals of archaeological methods to expand their archaeological monitoring skill sets. Involve the local California Native American tribes and individuals in CASSP and/or participation in the annual training opportunities so that they can be involved in monitoring and learning about their heritage sites.
- **CR Guideline 2.7:** Prohibit permanent modifications that would result in the destruction of cultural resources that the State Historic Preservation Officer has determined ineligible for listing in the NRHP, CRHR, or that are considered important because of their interpretive or potential archaeological values. Minimal facilities or non-permanent activities could be allowed on or near these sites.
- **CR Guideline 2.8:** If cultural resources are inadvertently discovered during construction activities, cease construction activities within and in the vicinity of the find and consult a State Parks archaeologist or other qualified cultural resource professional to determine the potential NRHP/CRHR eligibility/ significance of the find. If the find is recommended to be significant, develop and implement mitigation measures in consultation with the qualified state archaeologist or cultural resource professional consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Mitigation measures could include, but would not necessarily be restricted to, redesign to avoid the resource, archival research, additional in-field documentation, interpretive signage, capping of the site, or data recovery through excavation. If data recovery is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the significant resource, should be prepared and adopted before any excavation. If the discovery is determined not to be eligible for listing in the NRHP or CRHR, then no further investigations or mitigation of adverse effects is necessary.
- **CR Guideline 2.9**: Maintain appropriate confidentiality of all cultural resource descriptions, locations, and results of Native American consultation in conformance with Government Code Section 6254.10. This applies to archaeological site information maintained by State Parks, the State Historical Resources Commission, and/or the State Lands Commission.
- **CR Guideline 2.10**: In the event that human remains are discovered during project activities, temporarily halt all work at the discovery location and areas within 100 feet adjacent to the find. Leave any human remains and associated artifacts and features in place; avoid cleaning, photographing, or analyzing human remains or associated artifacts and features, and avoid removing them from the site. The State Parks employee or construction contractor must immediately contact the State Park District Superintendent to inform him/her of the find. The State Parks District Superintendent (or designee) will notify the county coroner, in accordance with Section 7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) will be notified within 24 hours of the discovery if the coroner determines that the remains are Native American. In compliance with PRC Section 5097.98, the NAHC will immediately notify those person(s) believed to be the most likely descendant (MLD) of the deceased Native American. The MLD will complete his/her inspection and make recommendations for treating or disposing the human remains or associated grave goods. If a Native American monitor is at the park at the time of the discovery, and that person has been designated the MLD by the NAHC, the monitor, as a representative of the MLD, may make a recommendation of the appropriate disposition. Work will not resume in the area of the find until proper disposition is complete (PRC Section 5097.98).
- **CR Guideline 2.11**: Identify all the stakeholders and provide opportunities for their input through a semi-annual meeting designed to enhance all the recreational opportunities within the SVRA. Cultural

resources management efforts are most successful when a local community is interested in preserving their values. Developing cultural resources management policies and strategic actions with partners and stakeholders demonstrates the intrinsic value of historical resources. Proactive management and diverse interpretation will help turn increased awareness into more enthusiastic partnerships.

CR Goal 3: Ensure that cultural material and object collections at Carnegie SVRA have a specific connection to the SVRA's cultural history or provide support for interpretive themes and programs. Archaeological and historical objects such as furnishings, equipment, or personal items associated with the SVRA are all potential collection items.

- **CR Guideline 3.1:** After completion of the General Plan, develop a Scope of Collections Statement that describes the existing collections, their history, and uses, as well as development and management goals for these and future collections.
- **CR Guideline 3.2:** Update the Scope of Collections Statement periodically to provide clear guidelines on which objects to seek, acquire, decline, or de-access.
- **CR Guideline 3.3:** Acquire, collect, and when necessary, preserve the archaeological and historical, materials, objects, and specimens that support interpretive themes and programs relevant to the SVRA's precontact, ethnography, and history, in accordance with the guidelines established in the Scope of Collections Statement.
- **CR Guideline 3.4:** Preserve archaeological and historical materials found within the SVRA. Curate these collections at State Parks' California Statewide Museum Collections Center, or at a district curatorial facility/location if appropriate space is not available at the SVRA.
- **CR Guideline 3.5**: Establish safe and secure spaces for curation and display of the SVRA's collections. Follow the policies and procedures for management of collections as outlined in Chapter 2000, "Museum Collections Management," of State Parks' Department Operations Manual.
- **CR Guideline 3.6:** Consider transfer to a more suitable park unit or to the Statewide Museum Collections Center, or possible deaccession of previously acquired collection items that do not meet these guidelines or the Scope of Collections Statement guidelines.

As discussed above, cultural resource studies/inventories of Carnegie SVRA have been conducted and used in the development of the General Plan, and an ongoing program has been implemented to maintain and update the existing cultural resource inventory, recordation, studies, and evaluations for the SVRA. State Parks will continue to provide qualified historical resource specialists to document and evaluate any potentially eligible historical resources as required for compliance with CEQA and PRC 5024 and mandates for historical resource compliance with CEQA and PRC 5024.5 for any potential adverse effects occur to historical resources, and to consider, or to adopt prudent and feasible alternatives to eliminate or mitigate adverse effects on historical resources as specified in Section 5024.5(b).

With adherence to the above General Plan goals and guidelines, the impact on historical resources would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.5-2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Previous cultural resource inventories and Native American consultation have resulted in the documentation of a broad array of prehistoric and historic-era archaeological resources in the planning area that form a complex cultural landscape. The resources consist of one (1) prehistoric occupation site with human remains, and 24 historic-era sites of which 18 are within the Tesla Mining and Industry Historic District. Although 10 resources have been determined to not be contributing elements to the historic district, all 25 resources have the potential to be affected or otherwise degraded through natural processes such as erosion, recreational activities, and development of facilities and infrastructure.

Chapter 4, “The Plan,” of the General Plan contains a detailed set of goals and guidelines aimed at protecting cultural resources present in the planning area so that the OHMVR Division will meet its mandate to protect cultural resources consistent with state law. Adherence to **CR Goals 1 and 2 and associated guidelines** (see above) would avoid significant adverse impacts on cultural resources from future development and improvements at Carnegie SVRA. In particular, these measures stipulate that complete cultural resource studies/inventories would be conducted at each location proposed for ground disturbance or development, and all known resources would be protected, stabilized, and/or preserved in place. Park undertakings would avoid or minimize significant impacts on all known cultural resources.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.5-3. Disturb any human remains, including those interred outside of dedicated cemeteries?

Because Native American human remains have been identified at one location in the Carnegie SVRA, the potential exists for additional remains to be discovered, either in the vicinity of this location or in other previously undisturbed contexts.

Cultural Resource Management (CR) Goal 2 and CR Guideline 2.11 (shown below) in Chapter 4 of the General Plan would address potential impacts from unanticipated discovery of human remains during General Plan implementation.

As described above, **CR Guideline 2.10** provides that, in the event that human remains are discovered during project activities, all work at the discovery location and areas adjacent to the find would be halted temporarily. Any human remains and associated artifacts and features would be left in place. No human remains or associated artifacts and features would be cleaned, photographed, analyzed, or removed from the site. The State Park employee or construction contractor would immediately contact the State Park District Superintendent, to inform him/her of the find. The State Park District Superintendent (or designee) would notify the County Coroner, in accordance with Section 7050.5 of the California Health and Safety Code, and if the coroner determined that the remains were Native American, the NAHC would be notified within 24 hours of the discovery. In compliance with PRC Section 5097.98, the NAHC immediately would notify those person(s) believed to be the MLD of the deceased Native American. The MLD would complete his/her inspection and would make recommendations for treating or disposing the human remains and associated grave goods (PRC Section 5097.98). If a Native American monitor was at Carnegie SVRA at the time of the discovery, and that person has been designated as the MLD by the NAHC, the monitor would make the recommendation of the appropriate disposition. Adherence to the guidelines in the General Plan for the treatment of human remains and associated grave goods would avoid any adverse effects on human remains. Therefore, the impact would be **less than significant.**

Mitigation Measures

With implementation of the goal and guideline, no mitigation is required.

3.6 Energy

This Energy section provides environmental setting information regarding regional energy resources and energy use trends; a summary of the relevant federal, state, and local laws, regulations, and policies along with related details of the proposed Carnegie State Vehicular Recreation Area (SVRA) General Plan; and impact analysis that includes an evaluation of the primary energy resource needs associated with implementation of the General Plan and considers the benefit of existing regulations and proposed actions of the General Plan that require energy-efficient construction and operation. The discussion of electrical and natural gas infrastructure is provided in Section 3.19, “Utilities and Service Systems.”

3.6.1 Existing Conditions

The planning area is located on the border of Alameda and San Joaquin Counties. These counties are under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively. Existing conditions are discussed below.

The transportation sector (predominantly from vehicles) is by far the largest consumer of energy, accounting for 47 percent of end-use energy consumption in California (U.S. Energy Information Administration 2022). There is a direct link between the vehicle miles traveled (VMT) and energy use, as well as related greenhouse gas (GHG) emissions. In addition to mobile sources in the transportation sector, energy is consumed from residential and commercial/industrial building usage. Energy in consumed in the planning area by the built environment primarily in the form of electricity and natural gas, and by transportation uses primarily in the form of gasoline and diesel fuel.

Electrical and Natural Gas Service and Resources

Within the Planning Area, electrical and natural gas services are provided by Pacific Gas & Electric Company (PG&E). In 2021, PG&E provided 78,587,869 megawatt hours (MWh) of electricity to its customers (CEC 2023a). Electricity is generated from a variety of sources, including hydropower, natural-gas-fired generators, renewable resources eligible under the state’s Renewable Portfolio Standards (RPS) program (e.g., solar, wind, geothermal, hydroelectric, and bioenergy), and purchases from other energy suppliers. PG&E’s electricity base mix as of 2021 was provided by 48 percent qualified renewable energy sources and 91 percent by GHG-free sources (PG&E 2022). In addition, the proportion of PG&E-delivered electricity for all customers generated from eligible renewable energy sources is anticipated to increase to 100 percent by 2040. The general electrical power mix for PG&E as of 2021 is presented in Table 3.6-1 below.

Natural gas service is provided to Alameda and San Joaquin County and the surrounding areas of northern and central California by PG&E through portions of PG&E’s approximately 43,000 miles of natural gas distribution pipelines[1]. Natural gas consumption within the PG&E service area was approximately 4,493 million therms in 2021 (CEC 2023b), approximately 12.5 percent (563 million therms) of which was provided to users in Alameda and San Joaquin Counties (CEC 2023c).

Energy Use for Transportation

As discussed above, transportation is the largest energy consuming sector in California, accounting for approximately 47 percent of all energy use in the state (U.S. Energy Information Administration 2022). More motor vehicles are registered in California than in any other state, and commute times in California are among the longest in the country. Since transportation accounts for more energy consumption than other end-use sectors, the fuel use and travel demand due to the buildout of the General Plan are important for consideration in an assessment of energy efficiency.

[1] https://www.pge.com/en_US/about-pge/company-information/profile/profile.page

Table 3.6-1. PG&E Electrical Power General Mix, 2021

Energy Source	Percentage (%)
Eligible Renewable, Total	47.7
Biomass and Biowaste	*4.2*
Geothermal	*5.2*
Eligible Hydroelectric	*1.8*
Solar	*25.7*
Wind	*10.9*
Coal	0.0
Large Hydroelectric	4.8
Natural Gas	8.9
Nuclear	39.3
Other	0.0
Unspecified Power	0.0
Total	100.0

Notes:
[1] As defined in Senate Bill 1078, and Senate Bill 1038, which modified the definition of "in-state renewable electricity generation technology," an eligible renewable resource includes geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass and biogas, selected municipal solid waste facilities, photovoltaic, solar thermal, and wind facilities, ocean thermal, tidal current, and wave energy generation technologies.
[2] "Unspecified Power" sources refer to electricity that has been purchased through open market transactions and is not traceable to a specific generation source.
Source: PG&E 2022

Transportation fuel has, and will continue to diversify in California and elsewhere. While historically gasoline and diesel fuel accounted for nearly all demand, there are now numerous options, including ethanol, natural gas, electricity, and hydrogen. Currently, despite advancements in alternative fuels and clean vehicle technologies, gasoline and diesel remain the primary fuels used for transportation in California, and California remains the second highest consumer of motor gasoline in the country (U.S. Energy Information Administration 2022).

3.6.2 Regulatory Setting

Information to inform the regulatory setting applicable to the potential impacts analyzed in this section are detailed in the "Greenhouse Gas Emissions and Energy Regulations" discussion in Section 2.7.3, "Regulatory Influences," of the General Plan. Note that although State Parks is not generally subject to regional or local land use plans and regulations, it is subject to plans and regulations implementing delegated federal authority, and these local air district policies and regulations have been used to develop the impact analyses for this resource. While many federal, State, regional, and local energy-related plans, policies, and regulations do not directly apply to the implementation of the proposed General Plan, an overview of the regulatory setting applicable to energy usage is helpful for understanding the overall context for energy conservation and efficiency actions locally and regionally. Many of the statewide and regional policies and plans developed to reduce GHG emissions, such as the California Air Resources Board (ARB) 2022 Scoping Plan, also target reductions in energy usage through reduced VMT and increased energy efficiency.

There are also several energy sector regulations established to reduce GHG emissions in California. Established in 2002, California's RPS requires electricity providers to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. The RPS requires

retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030 with interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045. In addition, new buildings constructed in California must comply with the standards contained in California Code of Regulations (CCR) Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards (CALGreen), which are designed to increase energy efficiency and conservation.

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP).

SJVAPCD regulates local air quality and air pollutant emissions sources in the San Joaquin Valley Air Basin (SJVAB), including those in San Joaquin County. SJVAPCD has an adopted Climate Change Action Plan (CCAP), directing the District to develop guidance to assess and reduce the impact of project-level GHG emissions, many strategies of which result in increased energy efficiency and reduced energy consumption. The SJVAPCD CCAP and guidance to implement the plan as it relates to the proposed General Plan is discussed further in Section 3.6, Greenhouse Gas Emissions.

On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan which describes a comprehensive control strategy that the Air District will implement to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases within the San Francisco Bay Area Air Basin (SFBAAB). Consistent with the GHG reduction targets adopted by the state of California, the Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

The Alameda County Board of Supervisors approved a climate action plan in February 2014 which establishes a strategy to enable the County to reduce its community-wide emissions by more than 15% by the year 2020. However, the draft *Alameda County (Unincorporated Areas) Community Climate Action Plan* does not address off highway vehicles (OHVs).

3.6.3 Impact Analysis and Mitigation Measures

Methodology

Energy impacts were analyzed by estimating energy consumption associated with construction and operation of the General Plan land uses, related vehicle miles travelled for on-road vehicle trips and OHV usage within the Carnegie SVRA, and supporting infrastructure. Energy demand was calculated using the California Emissions Estimator Model (CalEEMod), as well as relevant plans and policies pertaining to energy efficiency and conservation. For the purposes of fuel consumption associated with construction vehicles and equipment, as well as OHV operational vehicle activity within the planning area, GHG emissions estimates were converted to an estimated fuel consumption using US Energy Information Administration's GHG equivalency factors for diesel and gasoline fuel (U.S. Energy Information Administration 2022). There are also operational on-road vehicle trips associated with an increase in visitor attendance to the Carnegie SVRA as well as vehicle trips from additional staff anticipated under the buildout of the proposed General Plan. Energy usage was estimated from those trips using EMFAC2021 statewide emissions inventory information to relate the VMT to consumption of energy. Calculation methodology is further detailed in Sections 3.3 and 3.8, Air Quality and Greenhouse Gas Emissions, respectively and provided in Appendix C of this Draft EIR.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed General Plan would have significant energy impacts if it would:

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

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

Appendix F of the CEQA Guidelines provides guidance on determining whether a project would result in wasteful, inefficient, or unnecessary consumption of energy resources. As stated in Appendix F, the goal of conserving energy implies the wise and efficient use of energy, and the means of achieving this goal includes the following.

- Decreasing overall per-capita energy consumption.
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil.
- Increasing reliance on renewable energy sources.

Environmental Impacts of General Plan Implementation

Implementation of the park management goals and guidelines under the proposed General Plan would not result in a net increase in energy demand or any conflict with a plan for renewable energy or energy efficiency. Park facilities and grounds maintenance activities have been occurring and presently occur in the planning area, and therefore, are considered part of the baseline conditions for this analysis. Any increase in construction-related and operational energy usage that would result from new and improved facilities projects are individually addressed below. Implementation of the General Plan goals and guidelines would not change or result in new land use or new buildings for human habitation, nor any net increase in park user or staff vehicle activity or use of off-road maintenance equipment, and therefore no net increase in fuel demand for transportation purposes. Accordingly, the proposed General Plan would not use energy in a wasteful, inefficient, or unnecessary way, nor would it conflict with or obstruct implementation of a state or local plan adopted for the purposes of increasing energy efficiency and renewable energy; there is **no impact** on energy resources from implementation of the General Plan.

Environmental Impacts of New and Improved Facilities

Impact 3.6-1. Consumption of energy?

Implementation of the proposed General Plan would result in energy consumption for the duration of construction in the form of electricity, natural gas, and fossil fuels (e.g., gasoline, diesel fuel). Buildout of the General Plan new and improved facilities would also require energy for operations. The General Plan would not reduce per-capita energy consumption or generate substantial renewable energy that would reduce reliance on fossil fuels, but would not result in wasteful, inefficient, or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

Construction-Related Energy Consumption

Implementation of the General Plan's proposed new and improved visitor and operational facilities would increase the consumption of energy for the duration of construction in the form of electricity, natural gas, and fossil fuels (*e.g.,* gasoline, diesel fuel). The primary energy demands during construction would be associated with construction equipment and vehicle fueling. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site.

presents the total fuel consumption anticipated for the proposed construction activities. Over the anticipated 5-year construction period, the buildout of the General Plan would require a total of approximately 132,777 gallons of diesel and 4,390 gallons of gasoline. The General Plan could also involve the use of on-site electric-powered equipment, the use of which would supplant the need for gasoline and diesel fuel.

Table 3.6-2. Modeled Construction Fuel Consumption

Category	Project	GHG Emissions (MT CO_2/Year) [a]	Gallons Gasoline	Gallons Diesel
Visitor Facilities	Campground Remodel	158	776	14,934
Visitor Facilities	New Group Camping - Campsites for up to 30 people.	38	219	3,545
Visitor Facilities	New Group Camping - New Restrooms	116	35	11,384
Visitor Facilities	New Dump Station	25	40	2,442
Visitor Facilities	New Campfire Center - Amphitheater	39	9	3,791
Visitor Facilities	New Campfire Center - Relocating Water Tower	6	0	626
Visitor Facilities	New Kid's Minibike Track	40	0	3,909
Visitor Facilities	New Interpretive Loop Trails	1	12	109
Visitor Facilities	New Front Hills/ Riparian Pedestrian Trail	3	26	240
Visitor Facilities	New Front Hills Motorcycle Trail	3	0	338
Visitor Facilities	New Visitor Recreation Area	18	202	1,598
Visitor Facilities	Reopening the Waterfall Canyon Areas	2	0	240
Visitor Facilities	Reopening the Franciscan Riding Ares	2	0	240
Visitor Facilities	Other Visitor Facilities - New Restroom	119	106	11,595
Visitor Facilities	4x4 Practice Area Improvements	3	0	280
Visitor Facilities	Concession Stand Relocation	151	377	14,573
Operations Facilities	SVRA Maintenance Area Improvements	156	587	14,861
Operations Facilities	Ranger Station Office and Yard Expansion - Ranger Station	147	341	14,179
Operations Facilities	Ranger Station Office and Yard Expansion - Operations Yard	36	80	3,505
Operations Facilities	Emergency Helicopter Pad Relocation	7	38	642
Operations Facilities	Volunteer Training Area Enhancements	38	42	3,655
Operations Facilities	Campground Host Sites	38	219	3,574
Operations Facilities	New Greenhouse	5	0	487
Operations Facilities	Park Headquarters Area Improvements	68	64	6,639
Operations Facilities	Park Headquarters Area Improvements - Modular and Trailer Homes for SVRA Staff	25	97	2,370
Operations Facilities	Water Plant Upgrade	18	19	1,730
Operations Facilities	Other Operations Facility Projects - New Maintenance Area/Shop Concrete Bridge	23	253	2,033
Operations Facilities	Other Operations Facility Projects - New/Revamped Low Water Creek Crossings	68	810	6,026
Operations Facilities	Other Operations Facility Projects - ATV/MX Track Sprinkler System	7	0	712
Operations Facilities	Other Operations Facility Projects - Facilities for Communication or Technology Support	26	37	2,521
All Phases	**All Sources**	**Total Gallons**	**4,390**	**132,777**

Notes:
ATV/MX = all-terrain vehicle/motocross; CO_2 = carbon dioxide; MT = metric tons; SVRA = State Vehicular Recreation Area
[a] Modeled by AECOM in 2023

State Parks would implement OM Guideline 6.2 from the General Plan (shown below) to reduce GHG emissions from construction related to buildout of the General Plan, which would also serve to reduce overall energy consumption from construction activities within the planning area.

OM Goal 6: Limit potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 6.2:** Implement current Bay Area Air Quality Management District (BAAQMD) Table 6-1 Best Management Practices for Construction-Related GHG Emissions for all projects as feasible and applicable, which may include the following measures:
  - Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation (CARE) area or Assembly Bill 617 community.
  - Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
  - Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.
  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
  - Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
  - Use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on-road trucks.
  - Use U.S. Environmental Protection Agency SmartWay certified trucks for deliveries and equipment transport.
  - Require all construction equipment is maintained and properly tuned in accordance with manufacturer’s specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
  - Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
  - Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
  - Reduce electricity use in the construction office by using light emitting diode (LED) bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
  - Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
  - Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15% more by weight than the diversion requirement in Title 24.

- Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.
- Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
- Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

Construction activities within the General Plan area would be temporary in nature and would be conducted in accordance with all applicable laws and regulations, including applicable federal, state, and local laws that are intended to promote efficient utilization of resources and minimize environmental impacts. Construction equipment used for buildout of the General Plan would comply with ARB regulations regarding the use of on- and off-road equipment during construction. The General Plan does not include unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites. Material resulting from demolition and site preparation would be reused to the extent feasible, in accordance with CALGreen standards for the diversion of non-hazardous waste, and on-site idling of heavy-duty equipment would be limited to no more than 5 minutes, in accordance with California Code of Regulations Title 13, Sections 2485 and 2449. In addition, OM Guideline 6.2 would serve to further reduce energy consumption through implementation of feasible and applicable BAAQMD GHG best management practices. Therefore, construction activities associated with the General Plan would not result in inefficient, wasteful, or unnecessary use of fuel or other energy sources and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant.**

Operational Energy Consumption

Energy use associated with operations under full buildout of the General Plan would include electricity and natural gas use associated with the proposed land uses, and fuel for vehicle travel. The proposed buildings would be constructed to meet all applicable energy efficiency standards at the time of construction and would be required to comply with the current energy performance standards found Title 24 of the California Code of Regulations, including the Green Building Code (Part 11 of Title 24) Building Energy Efficiency Standards. Electrical and natural gas demands from the proposed land uses, as well as diesel demand from stationary sources anticipated under buildout of the General Plan, were modeled using CalEEMod and are presented in Table 3.6-3. Building operational energy demands from implementation of the General Plan would be approximately 698,451 kilowatt-hours per year for electricity and 1,757,391 thousand British thermal units of natural gas, based on default energy consumption rates developed for CalEEMod. It should be noted that these estimates do not account for increased energy efficiency that is likely over time due to improvements in building design and technology, as well as regulatory requirements of the California Building Standards Code. Diesel demands were estimated based on the size of the units, anticipated maximum annual operating hours, and CalEEMod default load factors. Stationary source operational energy demands from implementation of the General Plan would be approximately 115,929 thousand British thermal units of diesel.

Table 3.6-3. General Plan Land Use Operational Electricity and Natural Gas Demand

Category	Project	Electrical (kWh/year)	Natural Gas (kBtu/year)	Diesel (kBtu/year)
Visitor Facilities	Campground Remodel	0	0	0
Visitor Facilities	New Group Camping - Campsites for up to 30 people.	0	0	0
Visitor Facilities	New Group Camping - New Restrooms	41,859	57,738	0
Visitor Facilities	New Dump Station	54,026	216,829	0
Visitor Facilities	New Campfire Center - Amphitheater	0	0	0
Visitor Facilities	Other Visitor Facilities - New Restroom	36,459	50,290	00
Visitor Facilities	Concession Stand Relocation	163,147	513,289	0
Visitor Facilities	Visitor Vehicle/OHV Trips	0	0	0
Operations Facilities	SVRA Maintenance Area Improvements	99,168	398,003	0
Operations Facilities	Ranger Station Office and Yard Expansion - Ranger Station	89,996	124,137	0
Operations Facilities	Ranger Station Office and Yard Expansion - Operations Yard	73,253	101,042	0
Operations Facilities	Volunteer Training Area Enhancements	18,836	25,982	0
Operations Facilities	Campground Host Sites	0	0	0
Operations Facilities	Park Headquarters Area Improvements	48,137	66,399	0
Operations Facilities	Park Headquarters Area Improvements - Modular and Trailer Homes for SVRA Staff	47,890	100,618	0
Operations Facilities	Water Plant Upgrade	7,231	29,021	1,960
Operations Facilities	Other Operations Facility Projects - ATV/MX Track Sprinkler System	0	0	113,970
Operations Facilities	Other Operations Facility Projects - Facilities for Communication or Technology Support	18,449	74,045	0
Operations Facilities	Additional Employment/Operations	0	0	0
	Total General Plan	**698,451**	**1,757,391**	**115,929**

Source: Modeled by AECOM in 2023

Notes:

ATV/MX = all-terrain vehicle/motocross; kBtu = thousand British thermal units; kWh = kilowatt-hours; OHV = off-road vehicle; SVRA = State Vehicular Recreation Area

Transportation-related energy consumption would be in the form of both fuel (e.g., diesel and gasoline) and electricity for electric and hybrid vehicles. Buildout of the General Plan itself would not directly relate to an increase in visitor trips or recreational usage within the Carnegie SVRA. However, for purposes of this analysis, it was anticipated that daily trips for visitors and OHV usage within the planning area would increase according to regional growth rates. In addition, daily trips were estimated for the anticipated increase in Park staff to support buildout of the General Plan. Transportation fuel consumption associated with on-road operational trips were estimated based on the VMT estimates detailed in Section 3.3 of this EIR, Air Quality, and the use of the EMFAC2021 vehicle fuel and electricity consumption data. As discussed in the Methodology section above, OHV operational vehicle gasoline usage within the planning area was estimated from the GHG emissions converted to an estimated fuel consumption using US Energy Information Administration's GHG equivalency factors for diesel and gasoline fuel (U.S. Energy Information Administration 2022).

Table 3.6-4 shows the estimated diesel, gasoline and electricity fuel consumption during full buildout of the General Plan operations, which is anticipated to begin in 2054.

Table 3.6-4. General Plan Operational Transportation-related Energy Consumption

Fuel Source	Energy Consumption	Energy Consumption Unit of Measurement
Diesel Fuel	79	Gallons per year
Gasoline	23,183	Gallons per year
Electricity	30,592	KWh per year

Notes: KWh = kilowatt per hour

Sources: EMFAC2021 (v1.0.2) web database; U.S. Energy Information Administration 2022

Modeled by AECOM in 2023

State Parks would implement OM Guidelines 1.2, 1.3, and 7.4 from the General Plan (shown below) to reduce emissions from Carnegie SVRA operational activities and from mobile sources associated with OHV recreation with the park, which would also serve to reduce overall energy consumption from recreational usage and maintenance operations within the planning area.

OM Goal 1: Provide visitor services and infrastructure that encourage responsible visitor use of Carnegie SVRA and meet visitor needs.

- **OM Guideline 1.2:** Investigate and implement the use of solar and other innovative and renewable technologies to provide electricity at the SVRA.
- **OM Guideline 1.3:** Promote opportunities to incorporate sustainability into SVRA development, operations, and maintenance. Sustainability initiatives could include supporting and encouraging the use of electric vehicles, promoting energy efficiency, using reclaimed water, and applying energy efficiency and green building standards to new construction and other initiatives that may be developed in the future.

OM Goal 7: Manage the SVRA to reduce regional air quality impacts from OHV recreation and related activities.

- **OM Guideline 7.4:** Implement the following operational emission reduction measures to help reduce regional emissions:
  - Prohibit campfires on all summer and winter Spare the Air days identified by either BAAQMD or SJVAPCD. In addition, campfires throughout the park from November 1 to the end of February should be limited to SJVAPCD's "Check Before You Burn" program where campfires are restricted on days designated as "no burning for all" or "no burning unless registered."
  - Replace diesel-fueled maintenance equipment with alternative-fuel equipment (e.g., propane, electricity) when feasible.
  - Install and utilize electric vehicle (EV) charger(s) to promote the use of low or zero-emission vehicles.
  - Inform and suggest to all park visitors to limit the use of diesel generators for reactional vehicle cooling or heating during winter and summer Spare the Air days identified by either BAAQMD or SJVAPCD.
  - Limit maintenance equipment engine idling to 2 minutes.

Stationary sources in the form of diesel engines to support operations would be minimal, and diesel engine usage would be limited to strictly necessary operation which would ensure that these activities would not result in wasteful, inefficient, or unnecessary consumption of energy resources. As discussed in Section 3.6.2, "Regulatory Setting," State plans adopted for the purpose of promoting energy efficiency include the California RPS, the California Energy Efficiency Standards, and the CALGreen Code. The

design and construction of new and retrofit buildings would be required to comply with the California Code of Regulations. The California Energy Code and CALGreen are expected to become increasingly more stringent over time to further the State's renewable energy and GHG reduction goals. Replacement of existing infrastructure would also result in new facilities built to current standards, which are more energy efficient than older facilities that were built to prior, less stringent, standards. Furthermore, the default assumptions used by CalEEMod for the purposes of emissions modeling and estimating energy demands are based on more typical commercial buildings, which would typically generate much greater energy demand in the form of building heating and cooling, electricity to power office equipment, and water demand, than the outdoor recreation focused buildings and facilities that are proposed as part of the buildout of the General Plan. Implementation of the proposed General Plan would not result in wasteful, inefficient or unnecessary consumption of energy resources, nor would it conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, this impact would be **less than significant**.

Energy efficiency is a possible indicator of environmental impacts. The actual adverse physical environmental effects associated with energy use and the efficiency of energy use are detailed throughout this EIR in the environmental topic–specific sections. For example, the use of energy can lead to air pollutant and GHG emissions, the impacts of which are addressed in Sections 3.3 and 3.8, respectively, of this EIR. There is no physical environmental effect associated with energy use that is not addressed in the environmental topic–specific sections of this EIR.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

3.7 Geology and Soils/Paleontological Resources

This section analyzes the potential impacts of implementing the Carnegie SVRA General Plan on geology, soils, and paleontological resources.

3.7.1 Existing Conditions

Section 2.3.1, “Physical Resources,” in Chapter 2, “Existing Conditions,” of the General Plan includes a discussion of the existing setting for geology, soils, and paleontological resources.

3.7.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Section 2.7.3.3, “Geology, Soils, Minerals, and Paleontological Resources Regulations,” in Chapter 2 of the General Plan includes a discussion of federal plans, policies, regulations, and laws applicable to geology and soils in the planning area.

There are no federal plans, policies, regulations, and laws applicable to paleontological resources in the planning area.

State Plans, Policies, Regulations, and Laws

Section 2.7.3.3 in Chapter 2 of the General Plan includes a discussion of State plans, policies, regulations, and laws applicable to geology, soils, and paleontological resources in the planning area, with the exception of onsite wastewater treatment systems discussed below.

Onsite Wastewater Treatment Systems

Due to statewide public concerns about Onsite Wastewater Treatment Systems (OWTS), in 2000 Governor Gray Davis codified California Water Code Section 13290 et. seq., a modified form of Assembly Bill 885. These Water Code sections directed the State Water Resources Control Board (SWRCB) to adopt standards or regulations for OWTS by January 1, 2004. In 2005, the SWRCB released draft standards, but opposition from the regulated community prevented their adoption. Environmental activist groups sued the SWRCB for failure to act. Therefore, on June 19, 2012 State Board adopted Resolution No. 2012-0032, the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy).

The goal of the statewide OWTS Policy is to correct and prevent system failures due to poor siting and design, and excessive OWTS densities. The OWTS Policy recognizes that local agencies, typically county health departments, have greatest regulatory expertise; therefore they remain as leads. However, local agencies historically focused on public health. The OWTS Policy adds focus on water quality protection with a risk-based approach for new, replacement, and failing OWTS. The SWRCB has delegated most oversight and implementation authority related to OWTS to the nine Regional Water Quality Control Boards (RWQCB).

Regional and Local Plans, Policies, Regulations, and Ordinances

Section 2.7.3.3 in Chapter 2 of the General Plan includes a discussion of other regional and local plans, policies, regulations, and laws applicable to geology, soils, and paleontological resources in the planning area, with the exception of OWTS discussed below.

Onsite Wastewater Treatment Systems

In the Planning Area, the Central Valley RWQCB has authority over OWTS from a water quality perspective. As required by the State OWTS Policy, the Water Quality Control Plans for the Sacramento,

San Joaquin, and Tulare Lake Basins were amended by the Central Valley RWQCB in 2014 to incorporate the OWTS Policy requirements.

Local agencies have the option to propose Local Agency Management Programs (LAMPs) for RWQCB approval. San Joaquin County has a LAMP that was adopted by the Central Valley RWQCB in 2017 (San Joaquin County Environmental Health Department 2016). As required by OWTS Policy Section 9.3.3, local agencies with approved LAMPs must periodically submit Water Quality Assessment (WQA) Reports to the Central Valley RWQCB. Because the WQA Reports include nitrogen and pathogen laboratory results from potentially relevant water supply wells and surface water bodies, WQA Reports assess the potential effect of OWTS on water quality. Reports are due once every 5 years. As required by OWTS Policy Section 3.3, all local agencies must also submit annual spreadsheet format reports. Annual reports summarize complaints about OWTS maintenance and operation and their resolutions (e.g., repairs); applications and registrations under California Health and Safety Code Section 117400 et seq. (i.e., septic tank cleaning program); and permits for new and replacement OWTS.

Specific requirements for OWTS in San Joaquin County are contained in the County's *Onsite Wastewater Treatment Systems Standards* (San Joaquin County Environmental Health Department 2017). The Standards set forth specific requirements for percolation ("perc") tests, septic tanks, residential and commercial OWTS, alternative OWTS, subsurface effluent dispersal fields, and holding tanks. A permit is required to obtain County Environmental Health Department approval of proposed OWTS design and operation.

3.7.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of geology, soils, and paleontological resources is based on current land uses in the planning area, and on changes that could occur at the SVRA from implementation of the General Plan.

Thresholds of Significance

Geology and Soils

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a significant impact on geology and soils if it would:

a) Directly or indirectly cause potential substantial adverse impacts, 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. Refer to Division of Mines and Geology Special Publication 42;
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction; or
- landslides;

b) Result in substantial soil erosion or the loss of topsoil;

c) 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;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;

e) 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; or

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature..

Paleontological Resources

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a significant impact on paleontological resources if it would directly or indirectly destroy a unique paleontological resource or site. A "unique paleontological resource or site" is one that is considered significant under the following professional paleontological standards.

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

a) a type specimen (i.e., the individual from which a species or subspecies has been described);

b) a member of a rare species;

c) a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;

d) a skeletal element different from, or a specimen more complete than, those now available for its species; or

e) a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies, depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates generally are common, the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils generally are considered scientifically important because they are relatively rare.

Issues Not Discussed Further in this EIR

Destruction of Unique Geologic Features—A unique geologic feature consists of a major natural element that stands out in the landscape, such as a large and scenic river, gorge, major waterfall, unique rock formation, volcanic cinder cone, lava field, or glacier. There are no unique geologic features at the project site (which has been used for OHV riding since the 1940s and became a unit of the State Park system in 1980) or within the project viewshed. Thus, no impact from destruction of a unique geologic feature would occur from implementation of the Carnegie SVRA General Plan and this issue is not discussed further in this EIR.

Environmental Impacts

Impact 3.7-1. Seismically Induced Risks to People and Structures from Surface Fault Rupture, Strong Seismic Ground Shaking, and Liquefaction?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10% and for which grading is generally minor. All buildings would be designed and constructed according to applicable building codes, including the California Building Standards Code (CBC), which are designed to reduce risks from seismic and geologic hazards to the maximum extent practicable during the operational life of the structures. Furthermore, the General Plan includes goals and guidelines that would be implemented to reduce potential damage from surface fault rupture, strong seismic ground shaking, and liquefaction. Therefore, the impacts related to seismic hazards from General Plan implementation would be **less than significant**.

New and Improved Facilities

Construction and Operations
As discussed in detail in Section 2.3.1 in Chapter 2 of the General Plan, there are no faults within the SVRA that have been delineated under the Alquist-Priolo Earthquake Fault Zoning Act. The Greenville Fault is the closest fault zoned under the Alquist-Priolo Act and is located approximately 3 miles west of the SVRA.

A portion of the Corral Hollow Fault is located within the SVRA, along the bed of Corral Hollow Creek (see Figure 2-4 in Chapter 2 of the General Plan). Although this fault has not been classified as “active” by the California Geological Survey and is not zoned under the Alquist-Priolo Act, evidence has been presented to State Parks that trenching conducted in 1990 in northeast Section 33, Township 3 South, Range 3 East showed that Holocene-age gravel deposits overlying the Tesla Formation had been offset downward on the south side of the fault. This evidence indicates that the Corral Hollow Fault may be active. The Corral Hollow Fault is underneath the existing and proposed SVRA maintenance area and bridge improvements project and is immediately adjacent to the proposed helicopter pad relocation site, existing and proposed expansion of the ranger station, existing and proposed enhancements to the volunteer area, proposed new greenhouse site, and the proposed water tower relocation site.

In addition, the Carnegie Fault, which may be active, traverses the SVRA in a northwest to southeast direction (see Figure 2-4 in Chapter 2 of the General Plan), just north of Corral Hollow Creek and the existing campground and ranger station and then crossing the creek southeastward in the vicinity of the existing 4x4 riding area an MX track. The Carnegie Fault is immediately adjacent to the existing and proposed improvements to the SVRA headquarters area, existing and proposed upgrade of the water treatment facility, proposed remodel of the campground, as well as the potential water tower relocation site.

Finally, the Tesla Fault, which may also be active, traverses the southern portion of the SVRA from west to east through multiple existing OHV trail riding areas (see Figure 2-4 in Chapter 2 of the General Plan). An unnamed branch of the Tesla Fault is approximately 800 feet east of the existing and proposed improvements to the SVRA maintenance area project.

Active faults are more likely to result in surface fault rupture; thus, the Corral Hollow, Tesla, and Carnegie Faults may have a potential to cause surface rupture. Strong seismic ground shaking could occur during an earthquake on any of these three faults, or on other faults in the region to the west such as the Las Positas, Calaveras, Hayward-Rodgers Creek, and the San Andreas Fault. Therefore, surface fault rupture and strong seismic ground shaking are potential hazards for the proposed facilities described in Chapter 2, “Project Description,” of this EIR.

Liquefaction potential is determined by the soil type, distance from an active seismic source, level and duration of seismic ground motions, and depth to groundwater. As discussed above, the Corral Hollow, Tesla, and Carnegie Faults are present within the SVRA, and these faults may be active. Most rock formations in the SVRA consist of older sedimentary and metamorphic rocks (Wagner et al. 1991), which are not expected to liquefy during an earthquake. However, the Holocene-age alluvium (recent stream deposits found along the bed of Corral Hollow Creek in the SVRA (see Figure 2-3 in Chapter 2 of the General Plan) has a high liquefaction potential because of the unconsolidated nature of the soil, the shallow depth to groundwater, and the short distance to known seismic sources. Many locations where the new and improved facilities would be installed are underlain by Holocene alluvium, except the new Front Hills Motorbike Trail, SVRA headquarters area improvements, water treatment facility upgrade, proposed new group campsite site, the Waterfall Canyon trails, and Franciscan riding area projects. Therefore, liquefaction is a potential hazard for the remaining proposed projects installed in Holocene alluvium along Corral Hollow Creek, which has a high liquefaction potential.

However, construction of all project-related buildings that are intended for human habitation is required by law to comply with the requirements of the CBC. Based on the seismic design category, the CBC requires an analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil

strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires that measures to reduce damage from seismic effects be incorporated in structural design. Measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. As required by the CBC, a geotechnical report would be prepared that encompasses each site-specific building; the geotechnical report is required to provide appropriate engineering and design recommendations related to seismic, soils, and other geologic considerations at each site-specific building site.

Carnegie SVRA General Plan Geo Goal 1 requires the SVRA to be managed to minimize geologic hazards while maintaining a quality OHV recreational experience. Geo Goal 1 and Geo Guidelines 1.1 and 1.2 in the General Plan (shown below), contain provisions that are specifically intended to minimize hazards from surface fault rupture, strong seismic ground shaking, and liquefaction.

Geo Goal 1: Manage the SVRA to minimize geologic hazards while maintaining a quality OHV recreational experience.

- **Geo Guideline 1.1:** To minimize seismic hazards from surface fault rupture, avoid placing buildings or other structures intended for human occupancy on top of or within 50 feet of the traces of the Corral Hollow, Carnegie, or Tesla Faults[1]. If buildings must be placed within 50 feet of a fault trace, incorporate geotechnical design and engineering methods consistent with the California Building Standards Code to provide increased building stability.
- **Geo Guideline 1.2**: To minimize seismic hazards from liquefaction, avoid placing buildings or other structures intended for human occupancy within 300 feet of Corral Hollow Creek unless a site-specific liquefaction analysis prepared by a geotechnical engineer determines otherwise.

With adherence to these General Plan goals and guidelines and the engineering requirements contained in the CBC (which is required by law), site-specific geotechnical reports would be prepared by licensed engineers, and recommendations contained therein to provide for seismic safety (as determined by CBC requirements) would be incorporated into the project design and construction of all buildings. Because the CBC is designed to reduce hazards from surface fault rupture, seismic ground shaking, and liquefaction to the maximum extent practicable, construction and operational impacts related to seismic hazards from the proposed new and improved visitor and operations facilities would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.7-2. Risks to People and Structures from Landslides and Unstable Soils?

General Plan Implementation

All buildings or other structures in the SVRA must be designed according to the requirements of the CBC, which contains criteria for reducing structural damage and personal injury from geologic hazards (such as landslides) to the maximum extent practicable. Ongoing operation of park management programs and plans involves structural maintenance and upkeep, including trail maintenance and stabilization of off-trail riding areas, some of which may be located in landslide deposits or other areas of unstable soils. The General Plan includes Guidelines that would be implemented to reduce hazards from landslides and unstable soils. With required compliance with General Plan goals and guidelines, Carnegie SWMP, Off-Highway Motor Vehicle Recreation (OHMVR) Soil Standard, and the CBC (which is required by law), the impact related to landslides and unstable soils resulting from General Plan Implementation would be **less than significant.**

[1] The Alquist-Priolo Act prohibits the construction of structures intended for human occupancy within 50 feet of the trace of any fault classified by the California Geological Survey as “active.” Although the faults in the SVRA have not been classified by the California Geological Survey as active, scientific publications investigating these faults (discussed under “Geology, Soils, Minerals, and Paleontological Resources” in Section 2.3.1, “Physical Resources,” of the General Plan) indicate that they may be active. Therefore, structures would not be placed within 50 feet of any known fault in order to protect public safety.

New and Improved Facilities

Construction and Operations
Landslides may be the result of natural processes, such as seismic activity and intensive rainfall (in California, primarily during the winter months) on unstable slopes. Landslides also may be caused by construction activities, when heavy equipment is used or structures are installed on steep, unstable slopes without proper engineering controls. Mudflows are similar to landslides, but are composed primarily of mud and water. The same factors that trigger landslides also may trigger mudflows.

The Tesla Formation, and some areas of the San Pablo Group, both contain mudstone (in addition to other types of rocks). Because of the steep slopes present in the planning area, mudflows are a potential hazard during periods of heavy winter rainfall. As shown in Figure 2-3 in Chapter 2 of the General Plan, these two rock formations occur in east-west bands parallel to and north of Corral Hollow Creek. As shown in Figure 4-1 in Chapter 4, "The Plan," of the General Plan, most of the area located on the Tesla Formation in the SVRA is designated as Limited Recreation, and would contain only limited roads or trails necessary to provide connectivity within the SVRA. Where the proposed Front Hills motorbike trail would be installed within the San Pablo Group, it would be situated within the Neroly Sandstone member, which is not subject to mudflow hazards. Portions of the proposed motorbike trail would be installed within the Tesla Formation and these areas could be subject to mudflow hazards.

Landslide deposits in the SVRA have been mapped by Nilsen (1972) and Dibblee (1980a, 1980b). As shown in Figures 2-4 and 2-5 in Chapter 2 of the General Plan, landslide deposits larger than 500 feet are present in approximately 75 percent of the SVRA within Alameda County. As shown in Figure 4-1 in Chapter 4 of the General Plan, these areas are designated for distributed riding and advanced trails. Another large landslide deposit is also present just east of the Alameda County line in the San Joaquin County portion of the SVRA, south of Corral Hollow Creek. This area is designated for limited recreation, and a small portion of the proposed Front Hills motorbike trail would be installed across this landslide deposit. Nilsen (1972) indicated that the older, deep-seated landslides were more stable. However, the smaller landslides could potentially be recent, shallow failures. Younger, shallower landslides have greater potential to be reactivated by such causes as changes in watershed hydrology, stream erosion, or seismically induced ground shaking. Therefore, a small portion of the proposed motorbike trail could be subject to future landslide movement.

As discussed under "Minerals and Mineral Resources" in Section 2.3.1.2 of the General Plan and in detail in the *Corral Hollow Watershed Assessment* (State Parks 2007a), the SVRA historically was used for mining activities, and abandoned mine pits and mine shafts associated with the Alameda Mine, French Company Mine, and Ladd Mine could represent areas of unstable soils. However, the mine openings have been gated or sealed to prevent visitor entry and protect visitor safety.

Unstable soil hazards related to liquefaction for all new and improved facilities are evaluated in Impact 3.7-1 above.

As indicated in Water Guideline 2.6 in the General Plan (shown at the end of this impact discussion), the planning area would be operated according to the *Storm Water Management Plan, Carnegie State Vehicular Recreation Area* (SWMP) (State Parks 2012). The SWMP includes operational road and trail construction and rehabilitation measures that would be economical and feasible, and that are designed to reduce the downslope effects from road and trail drainage (including landslides). In addition, as indicated in Water Guideline 2.8 (also shown below), portions or all of the SVRA may be closed during periods of winter rainfall to reduce landslide hazards. The SVRA is currently closed during and immediately following strong winter storms and closure information is posted on the SVRA website. This practice will continue in the future during implementation of the General Plan.

Soils Guideline 1.4 in Chapter 4 of the General Plan (shown at the end of this impact discussion) limits construction of trails and buildings, depending on the amount of slope. Because steeper slopes are more prone to landslides, adhering to this guideline would help reduce the potential damage if a landslide were to occur. Construction of buildings or other structures intended for human occupancy generally would be limited to locations that are outside mapped landslide areas. If landslide areas cannot be avoided entirely,

site-specific building placement would be investigated by a licensed engineer, and all construction methods recommended by the engineer would be implemented to ensure public safety. In addition, State Parks personnel would periodically inspect trails that cross through landslide areas, and trails would be maintained and/or closed to preserve rider safety related to landslides as necessary.

Soils Guideline 1.1 (shown below) requires all Carnegie SVRA facilities to meet the current OHMVR Division *Soil Conservation Standard and Guidelines* (Soil Standard) (State Parks 2020). The Soil Standard states that trail and road networks should be designed to avoid known unstable areas such as landslides and earthflows, and that if an unstable area is unavoidable, an engineer or geologist is to be consulted to determine the proper layout and design of the trail or road.

Water Goal 2: Manage the SVRA for the protection of water quality while maintaining a quality OHV recreational experience.

- **Water Guideline 2.6**: To reduce erosion and sedimentation, improve areas that have experienced substantial erosion from surface water runoff as determined by annual inspections. Implement rehabilitation concepts for these features as described in the SWMP or subsequent or replacement documents.
- **Water Guideline 2.8**: To minimize erosion problems, landslide hazards, and costly maintenance, consider invoking the temporary closure of portions or all of the SVRA based upon conditions established by the rain closure policy. That policy will be reviewed and updated as necessary.

Soils Goal 1: Manage the SVRA for a balance of uses that allow protection and conservation of soil while maintaining a quality OHV recreational experience.

- **Soils Guideline 1.1**: Manage Carnegie SVRA facilities to meet the current OHMVR *Division Soil Conservation Standard and Guidelines* or subsequent amendments or replacement documents.
- **Soils Guideline 1.3:** Incorporate the guidance provided in the OHV BMP Manual [*OHV BMP Manual for Erosion and Sediment Contro*l] or subsequent or replacement document when planning for the development of new facilities. Select, implement, and maintain BMPs [best management practices], including those designed for stockpiles, during and after construction activities to avoid soil loss and the potential for resulting air pollution or degradation of water quality.
- **Soils Guideline 1.4:** Use slope to help manage soils. A full range of park facilities may be considered on areas with less than 20 percent slopes. Trails may be constructed (with BMPs) in areas with slopes between 20 percent and 45 percent, but buildings should not be constructed in these areas. On areas with slopes in excess of 45 percent, trails and park facilities should be limited and serve only the most advanced riders. Appropriate BMPs should be implemented in each area to manage erosion potential.

With adherence to the General Plan goals and guidelines, Carnegie SWMP, and the OHMVR Soil Standard, the impact related to landslides and unstable soils resulting from construction and operation of the proposed Front Hills motorbike trail would be **less than significant.**

Construction and operation of the proposed campground remodel, new group campsite, new campfire center, new kid's minibike track, concession store upgrade and relocation, Creekside pedestrian trail, interpretive loop trails, new visitor recreation area, and the Waterfall Canyon Trails and Franciscan riding area trails and recreational vehicle (RV) dump station would not occur in areas subject to mudslides or landslides. Additionally, none of the proposed new and improved operations facilities would not be installed in areas that contain or are adjacent to known landslide deposits, or in geologic units that contain mudstone. Therefore, construction and operation of these proposed new and improved facilities would result in **no impact** related to landslides and unstable soils.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.7-3. Potential for Short-Term Construction-Related Erosion and Loss of Topsoil?

General Plan Implementation

Operation and maintenance activities associated with General Plan implementation may include grading of areas larger than 50 cubic yards (the standard amount that is typically considered routine maintenance). Grading of amounts larger than 50 cubic yards is subject to all resource management guidelines, and would be conducted in full compliance with all applicable permits such as the National Pollutant Discharge Elimination System (NPDES) permits issued by the State Water Resources Control Board. OHV riding in the SVRA would continue. The Soil Conservation Standard and Guidelines (State Parks 2020) require that OHV recreation facilities be managed for sustainable long-term prescribed use including the minimization of negative effects such as soil loss, erosion, and sedimentation. OHV facilities are further mandated by PRC Sections 5090.2, 5090.35, and 5090.53, which emphasize that OHV use should be managed for sustained long-term use and that the protection of public safety, the appropriate utilization of lands, and the conservation of land resources are of the highest propriety in the management of SVRAs. The *OHV BMP Manual for Erosion and Sediment Control* (OHV BMP Manual) provides guidance on selecting, implementing, and maintaining BMPs for OHV-type facilities and construction activities (State Parks 2007b). The manual provides details on BMPs for erosion control (e.g., blankets, mulches, hydroseeding techniques), scour control (e.g., check dams and armoring as in upland swales and ditches), dust control, sediment traps, and waste management. Furthermore, ground disturbance of areas larger than 1 acre requires a Stormwater Pollution Prevention Plan (SWPPP) with associated BMPs specifically designed to prevent erosion. Continued implementation of the Carnegie SWMP (State Parks 2012) would include site-specific BMPs designed to prevent and reduce erosion. Furthermore, the General Plan includes guidelines that would be implemented to prevent and reduce soil erosion. Therefore, the impact related to erosion hazards resulting from General Plan implementation would be **less than significant**.

New and Improved Facilities

Construction and Operations
The proposed campground remodel, new campfire center, new kids minibike track, new Creekside pedestrian trail, new interpretive loop trails, additional visitor recreation area, concessions store upgrade and relocation, new RV dump station, ranger station expansion, emergency helicopter pad relocation, volunteer training area enhancements, campground host sites, new greenhouse, proposed water tower relocation site, and new maintenance area bridge would be constructed within the Xerofluvents-Xerorthents Complex soil type (see Figure 2-6 in Chapter 2 of the General Plan). The proposed new maintenance area bridge, which would replace the existing aging bridge across Corral Hollow Creek, would not be constructed within the bed or bank of the creek. As shown in Table 2-3 in Chapter 2 of the General Plan, this Xerofluvents-Xerorthents Complex soil type is rated by the U.S. Natural Resources Conservation Service (NRCS) with only a “slight” erosion hazard and a low stormwater runoff potential. This soil type is also rated by NRCS with a moderately low wind erosion hazard. However, earthmoving activities associated with construction of all proposed new and improved facilities would temporarily disturb the soil and would expose disturbed areas to storm events. Rain of sufficient intensity could dislodge soil particles from the soil surface. If the storm were large enough to generate runoff, localized erosion could occur. In addition, summertime soil disturbance resulting from construction activities could result in soil loss from wind erosion.

The proposed Front Hills motorbike trail (composed of bare soil/rock) and the Waterfalls Canyon trails and Franciscan riding area upgrades would be located in the Alo-Vaquero Complex, the Wisflat-Arburua-San Timoteo Complex and the Honker-Vallecitos-Honker Eroded complex soil types. These soils are rated by NRCS with a “severe” off-trail erosion hazard and a high stormwater runoff potential (see Table 2-3 in Chapter 2 of the General Plan). Therefore, erosion could occur along the proposed motorbike trail during winter rain events.

However, as indicated in Water Guideline 2.4 in Chapter 4 of the General Plan (shown at the end of this impact discussion), State Parks would prepare a SWPPP as required by the statewide NPDES Construction General Permit for all projects subject to the permit (i.e., with a disturbance area of 1 acre or

more). The SWPPP would include BMPs to reduce water quality degradation of receiving waters from construction activities. Construction-related BMPs from the OHV BMP Manual (State Parks 2007b, or most current version at time of construction) that are specifically designed to reduce erosion and control sedimentation would be implemented at each construction site. BMPs that could be used during construction activities fall into the following broad categories: erosion prevention, surface stabilization, tracking control, runoff control, sediment control, and road and trail drainage (State Parks 2007b).

Examples of specific types of construction-related BMPs from the OHV BMP Manual that could be used include the following:

a) Erosion control (e.g., blankets, mulches, hydroseeding techniques)

b) Scour control (e.g., check dams and armoring as in upland swales and ditches)

c) Sediment basins

d) Sediment traps

e) Silt fences

f) Fiber rolls

g) Track-walking techniques

h) Dust control

i) Tracking control

j) Waste management

In addition, Water Guideline 2.2 (shown at the end of this impact discussion) calls for implementation throughout the planning area of the measures identified in the Carnegie SWMP. The Carnegie SWMP (State Parks 2012) includes a detailed set of requirements to control construction-related stormwater runoff: training of engineers and contractors, inspection and monitoring of the construction site, and use of BMPs in the OHV BMP Manual and/or the BMP handbooks published by the California Stormwater Quality Association. During construction of each New and Improved Visitor Facility, State Parks would implement a construction site management program that would include the following monitoring and reporting requirements as outlined in the Carnegie SWMP (State Parks 2012):

a) Name of the inspector and contractor

b) Date and time of the inspection

c) Phase of construction

d) Brief description of current construction activities

e) List of each BMP installed at the site

f) Statement of whether or not each BMP was installed and maintained in accordance with the SWPPP and OHV BMP Manual

g) Brief description of any deficiencies noted with the BMPs

h) Brief description of the maintenance requirements for each deficient BMP

i) Evidence or lack of evidence of an off-site discharge of pollutants

The OHMVR Division would file copies of each inspection form in the sector office, along with the associated notice of intent and SWPPP. The OHMVR Division would track and monitor the number and nature of the deficiencies noted for each contractor, if any. Any contractor that consistently failed to implement any component of the SWPPP would be dismissed.

The water goal and guidelines shown below and the soils goal and guidelines shown above under Impact 3.5-2 are specifically designed to reduce erosion and sedimentation and to protect construction-related water quality.

Water Goal 2: Manage the SVRA for the protection of water quality while maintaining a quality OHV recreational experience.

- **Water Guideline 2.1:** Avoid siting facilities in and immediately adjacent to riparian or stream corridors or within waters of the United States or the state, including seeps, ponds, or drainages. Stream corridors shall be managed with vegetated buffers and crossings shall be properly sited for circulation and designed to minimize erosion and other water quality impacts. Design measures include but are not limited to:
  - armoring approaches,
  - providing sediment traps or filter areas,
  - hardening the crossing surface,
  - protecting the streambanks from vehicle backwash and overflow during flooding, and
  - modifying super elevation (direction of tilt) such that roads and trails drain away from stream corridors.

  Culverts or bridge crossings shall be considered in highly erosive areas.
- **Water Guideline 2.2:** Implement best management practices (BMPs) in operating the SVRA, consistent with the *Storm Water Management Plan for Carnegie SVRA* (SWMP) or applicable subsequent document. Monitor water quality regularly and implement adaptive management practices as warranted. Adaptive management practices used may include permanent or seasonal area closures, facility redesign, and hillside restoration.
- **Water Guideline 2.4:** Before, during, and after the construction of facilities proposed and envisioned in this General Plan, implement all water quality control measures required under the National Pollutant Discharge Elimination System Construction General Permit. Develop a storm water pollution prevention plan, including the identification of BMPs that must be implemented to reduce water quality degradation of receiving waters during and after construction activities. Incorporate construction BMPs from the *OHV BMP Manual for Erosion and Sediment Control* (OHV BMP Manual) or subsequent applicable document, as appropriate.

With adherence to the General Plan guidelines, OHV BMP Manual, Carnegie SWMP, OHMVR Soil Standard, and preparation and implementation of a SWPPP with BMPs for each construction project subject to the NPDES Construction General Permit, the impact related to short-term construction-related erosion and loss of topsoil that could result from implementation of the proposed new and improved facilities would be **less than significant**.

Operational impacts related to soil erosion from the proposed new and improved visitor and operations facilities are addressed in Section 3.10, “Hydrology and Water Quality,” in this EIR.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.7-4. Geologic Hazards from Expansive Soils?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10% and for which grading is generally minor. All buildings would be designed and constructed according to applicable building codes, including the CBC, which are designed to reduce risks from geologic hazards, including expansive soils, to the maximum extent practicable during the operational life of the structures. Therefore, the impact related to geologic hazards from expansive soils resulting from General Plan implementation would be **less than significant**.

New and Improved Facilities

Construction and Operations
Expansive soils shrink and swell as a result of moisture change. Over time, these volume changes can damage building foundations, underground utilities, and other subsurface facilities and infrastructure, if they are not designed and constructed appropriately. Soils in the SVRA are shown in Figure 2-6 in Chapter 2 of the General Plan. The expansion potential of each soil type in the SVRA, as rated by the NRCS (2022), is shown in Table 2-3 in Chapter 2 of the General Plan. The proposed campground remodel, new campfire center, new kids minibike track, new Creekside pedestrian trail, new interpretive loop trails, additional visitor recreation area, concessions store upgrade and relocation, new RV dump station, ranger station expansion, emergency helicopter pad relocation, volunteer training area enhancements, campground host sites, new greenhouse, water tower relocation would be constructed in the Xerofluvents-Xerorthents Complex soil, which consists of sediment deposited from periodic flooding mixed with man-made deposits (cut-and-fill materials or mine tailings); this soil type is not expansive. The proposed SVRA maintenance area improvements and proposed group campsite site would be located in the Riverwash soil type, which is not expansive. The proposed Front Hills motorbike trail and the Waterfall Canyon trails would be located in the Alo-Vaquero Complex and the Wisflat-Arburua-San Timoteo Complex soils while the Franciscan riding area expansion would be in the Honker-Vallecitos-Honker complex; these soils have a high, low and high expansion potential, respectively.

Most of the proposed new and improved facilities, including those listed above, would be installed in soils that are not expansive. The proposed Front Hills motorbike trail would be a dirt trail utilizing the existing ground surface, and thus the fact that some of the soil underlying the trail is expansive would not affect trail construction or operation. Thus, there would be **no impact** related to expansive soil from construction and operation of the above proposed new and improved facilities.

The proposed SVRA headquarters area improvements and water treatment facility upgrade would be located in the Carbona clay loam soil type, which has a high expansion potential. Both of these proposed improvements would include the construction of new and/or expansion of existing buildings. The CBC includes engineering practices that require special design and construction methods to reduce or eliminate hazards from construction in expansive soil. State Parks is required by law to comply with the CBC, which that ensures appropriate design and construction of building foundations to resist soil movement would be implemented. In addition, the CBC also contains drainage-related requirements to reduce seasonal fluctuations in soil moisture content. As required by the CBC, a geotechnical report would be prepared that includes appropriate recommendations for soil treatment to reduce the expansion potential. These recommendations would include design and construction techniques such as post-tensioned building foundation systems, soil treatment with lime, or excavation of expansive soil and replacement with engineered fill material. Therefore, the impact related to soil expansion from construction and operation of the proposed SVRA headquarters area improvements and the water treatment facility upgrade would be **less than significant.**

Mitigation Measures

With implementation of the goals and guideline, no mitigation is required.

Impact 3.7-5. Geologic Hazards from Soils Unsuitable for Septic Systems?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep of existing vault toilets, septic tanks, and leachfields. Existing systems are maintained in proper working order to ensure that adverse water quality effects (i.e., surface water or groundwater contamination) do not occur. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10% and for which grading is generally minor. Furthermore, the General Plan includes Guidelines to ensure proper siting and use of septic systems. Therefore, the impacts related to soil suitability for septic systems from General Plan Implementation would be **less than significant**.

New and Improved Facilities

Construction
During construction of the proposed new and improved facilities, temporary portable restrooms would be used at each project site. The construction contractor would contract with a portable restroom supplier to provide facilities and to pump wastewater for off-site disposal. Thus, there would be **no impact** related to soil suitability for septic systems during construction of the proposed New and Improved Visitor Facilities.

Operation
The proposed RV dump station near the campground would require installation of a septic effluent disposal field in the Xerofluvents-Xerorthents Complex soil type, which consists of sediment deposited from periodic flooding mixed with man-made deposits (cut-and-fill materials or mine tailings). This soil type is rated by the NRCS (2022) as “very limited” for septic fields based on a high potential for flooding (which results in a lack of absorption of the effluent in the leach field resulting in surface water contamination), and based on the likelihood that the soil permeability rate is too high (which can result in rapid movement of the effluent through the soil so quickly that bacteria do not have enough time to “treat” the effluent, resulting in groundwater contamination). State Parks has consulted with San Joaquin County regarding the septic systems, and the County has determined that an anaerobic septic system may be used.

An anaerobic septic system typically involves a septic tank with two main pipes. One of these pipes goes to the effluent source (i.e., the RV septic tank or the restroom tank), and the other goes into a subsurface effluent dispersal field. Inside the septic tank, solid waste settles and is digested by anaerobic bacteria. Liquid waste floats to the top. Wastewater from the tank moves out to the dispersal field, which may be one of several different types depending on site soil conditions. Once in the soil, further effluent treatment occurs through the action of aerobic soil bacteria.

OWTS are regulated at the State level by the SWRCB, which has delegated enforcement authority to the nine RWQCBs. OWTS in San Joaquin County are regulated under the San Joaquin County OWTS LAMP, adopted by the Central Valley RWQCB in 2017 (San Joaquin County Environmental Health Department 2016), and must also comply with the requirements contained in the County’s *Onsite Wastewater Treatment Systems Standards* (San Joaquin County Environmental Health Department 2017).

Before a septic system can be installed, San Joaquin County regulations require that a septic system permit be obtained from the San Joaquin County Environmental Health Department as part of the Central Valley RWQCB requirements under the LAMP. During the application process, the County Environmental Health Department consults with applicants on a case-by-case basis to determine the specific requirements at any given project site prior to issuance of a permit, which must include a perc test conducted by a registered civil or geotechnical engineer. The permit terms and conditions may also include a requirement for groundwater monitoring to ensure that appropriate water quality levels are maintained. The results of the perc test would determine what types of wastewater treatment facilities may be constructed at each facility to meet State and County requirements.

Carnegie SVRA General Plan Geology (Geo) Goal 1 (shown below) requires the SVRA to be managed to minimize geologic hazards while maintaining a quality OHV recreational experience. Geo Guideline 1.3 in the General Plan (shown below), applies to restroom and septic system requirements.

Geo Goal 1: Manage the SVRA to minimize geologic hazards while maintaining a quality OHV recreational experience

- **Geo Guideline 1.3:** All new restrooms shall use wastewater containment systems (i.e., wastewater holding tanks such as those used in portable toilets or concrete vault toilets), with periodic removal, treatment, and disposal off-site by a licensed contractor. If construction of septic leach fields cannot be avoided, an engineered septic system should be designed by a licensed civil or geotechnical engineer and constructed according to the engineer’s specifications.

Compliance with Geo Guideline 1.3, San Joaquin County OWTS LAMP requirements, and conditions included in the OWTS permits to protect water quality would ensure that water quality would not be

adversely affected from OWTS operation at the proposed RV dump station; therefore, this impact would be **less than significant**.

Mitigation Measures

With implementation of the goals and guideline, no mitigation is required.

Impact 3.7-6. Potential for Damage to or Destruction of Unique Paleontological Resources?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10% and for which grading is generally minor. Thus, there is a low potential to encounter paleontological resources. Furthermore, Chapter 4 of the General Plan includes goals and guidelines to protect paleontological resources. Therefore, the impact from potential damage to or destruction of unique paleontological resources from General Plan Implementation would be **less than significant**.

New and Improved Facilities

Construction
A detailed assessment of potential paleontological resources and a sensitivity determination for each rock formation present in the SVRA is provided in Table 2-5 in Chapter 2 of the General Plan and the location of the geologic formations in the SVRA are shown in Figures 2-3 and 2-4. As presented in Table 2-5, Holocene-age rock formations contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources under CEQA. Thus, the Holocene-age rock formations (which underlie all of the locations where the new and improved facilities would be installed except the Front Hills motorbike trail, SVRA headquarters area improvements, and Waterfall Canyon trails area and Franciscan riding area upgraded and water treatment facility upgrade), are not paleontologically sensitive. Therefore, construction-related earthmoving activities associated with the proposed facility project would have **no impact** on unique paleontological resources.

The proposed Front Hills motorbike trail would be installed primarily within the Moreno and Tesla Formations. As discussed in Table 2-5, both of these formations are considered to be of high paleontological sensitivity due to the number of vertebrate fossils recovered from these formations in the vicinity of the SVRA and in other California counties such as Merced and Fresno. However, the trail would not involve excavating or paving, and only minor grading. The trail would be composed of existing native rock and dirt with signage.

The proposed SVRA headquarters area improvements and water treatment facility upgrade would be constructed within the Neroly Formation, which is part of the San Pablo Group. As presented in General Plan Table 2-5, the San Pablo Group is considered to be of high paleontological sensitivity due the number of vertebrate fossils that have been recovered from this formation near the SVRA, and throughout Alameda and San Joaquin counties. Therefore, fossils could be encountered during construction-related earthmoving activities associated with the proposed SVRA headquarters area improvements and water treatment facility upgrade.

Carnegie SVRA General Plan Geo Goal 2 requires the promotion of staff education and visitor awareness of paleontological resources and proper procedures to be followed if fossils are discovered. As indicated in Geo Guidelines 2.1 and 2.2 in the General Plan (shown below), paleontological resources training would be provided to State Parks personnel, and if paleontological resources were encountered then a recovery plan would be prepared and implemented.

Geo Goal 2: Promote staff education and visitor awareness of paleontological resources and proper procedures to be followed if fossils are discovered.

- **Geo Guideline 2.1**: Provide annual paleontological resource training to SVRA staff members. Inform State Parks peace officers (SPPOs) about the areas most likely to contain the unique paleontological resources that would be most susceptible to looting, vandalism, or damage by SVRA visitors, so that the SPPOs can watch for site impacts and vandalism. Also educate the SPPOs on current laws related to paleontological resources. SVRA field staff such as maintenance and trails team members shall be educated on what to do if paleontological resources are inadvertently discovered during a project. All SVRA staff members shall be educated on what to do if they or SVRA visitors find a paleontological object.
- **Geo Guideline 2.2:** If paleontological resources are discovered inadvertently during construction activities, cease construction activities within and in the vicinity of the fossil and consult an OHMVR Division archaeologist or other qualified paleontological resource professional to determine the potential significance of the find. If the fossil is determined to be a unique paleontological resource, develop and implement a recovery plan consistent with Society of Vertebrate Paleontology (SVP 2010) criteria. The recovery plan may include but is not limited to a field survey, construction monitoring, sampling and data recovery procedures, curation for any specimen recovered, and a report of findings.
- **Geo Guideline 2.3:** If fossils become exposed during operation of the SVRA, require that they be collected by paleontologists or properly trained unit staff members, as designated by the State Parks geologist and area manager. Keep careful records of all paleontological finds. Fossils should be properly identified by qualified persons. Specimens may be stored or displayed in the unit (in adequate facilities), or at a designated repository, in accordance with State Parks' artifact management policies.

With adherence to the General Plan goals and guidelines, the impact from potential damage to or destruction of unique paleontological resources from construction of the proposed Front Hills motorbike trail, SVRA headquarters area improvements, and water treatment facility upgrade would be **less than significant**.

Operations
Operation of the new and improved facilities would not require substantial earthmoving activities such as excavating or grading, and therefore would be unlikely to encounter paleontological resources. Therefore, the proposed facilities in Chapter 2 of this EIR would result in **no impact** from damage to or destruction of unique paleontological resources during operational activities.

Mitigation Measures

With implementation of the goals and guideline, no mitigation is required.

3.8 Greenhouse Gas

This section provides background information about greenhouse gas (GHG) emissions. Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. The analysis presented in this section is based on proposed goals and guidelines and an assessment of anticipated development under the proposed Carnegie SVRA General Plan. Information to inform the environmental and regulatory setting relevant to the impacts analyzed in this section are provided in Chapter 2 of the proposed General Plan and are incorporated by reference herein.

3.8.1 Existing Conditions

The planning area is located on the border of Alameda and San Joaquin Counties. These counties are under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively. Existing conditions are discussed in the "Climate Change" discussion in Section 2.3.1, "Physical Resources," of the General Plan and briefly summarized below.

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. The "greenhouse effect" is a phenomenon in which a portion of solar radiation entering the earth's atmosphere is absorbed by GHGs in the atmosphere and instead of escaping back into space is "trapped", resulting in the warming of the atmosphere. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, and fluorinated compounds.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. The precise quantity of GHGs that it takes to ultimately result in climate change is not known. No single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or microclimate changes. However, cumulative emissions from many projects and activities affect global GHG concentrations and the climate system, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years), or long enough to be dispersed around the globe. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. GHG emissions are often expressed in terms of CO_2 equivalents (CO_2e).

3.8.2 Regulatory Setting

Information to inform the regulatory setting applicable to the potential impacts analyzed in this section are detailed in the "Greenhouse Gas Emissions and Energy Regulations" discussion in Section 2.7.3, "Regulatory Influences," of the General Plan. Note that although State Parks is not generally subject to regional or local land use plans and regulations, it is subject to plans and regulations implementing delegated federal authority, and these local air district policies and regulations have been used to develop the impact analyses for this resource. A brief summary of information detailed in the proposed General Plan is provided below to inform and support the impact analysis that follows.

While many federal, State, regional, and local GHG-related plans, policies, and regulations do not directly apply to the implementation of the Carnegie SVRA General Plan, the regulatory framework is helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions. The statewide legislative context for GHG emissions analysis is established by Assembly Bill (AB) 32 (2006), which requires reduction of statewide GHG emissions to 1990 levels by 2020, Senate Bill (SB) 32, which established a reduction mandate of 40 percent below 1990 statewide emissions levels by 2030,

and AB 1279, which established a statewide policy of achieving carbon neutrality no later than 2045 and achieving and maintaining net negative emissions thereafter.[1] In addition, a long-term GHG emissions reduction goal has also been established through Executive Order (EO) S-3-05; while not adopted legislation, this EO establishes a State goal for the reduction of GHG emissions generation by 80 percent compared to 1990 levels by 2050. These near-term and long-term legislative targets create a framework that can be used to inform the level of emissions reductions necessary and whether GHG emissions associated with a project would represent a cumulatively considerable contribution to the significant cumulative impact of climate change. As the Supreme Court held, "consistency with meeting [those] statewide goals [is] a permissible significance criterion for project emissions" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 220).

With respect to the State's long-term target established through AB 1279 for carbon neutrality no later than the year 2045, the California Air Resources Board (ARB) 2022 Scoping Plan, which was approved by ARB on December 15, 2022, assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. Carbon neutrality is not a standard to be achieved on an individual project basis or even by an individual municipality, but through the implementation of best available technology, increasingly stringent regulations to reduce emissions from various sources, State and regional plans to reduce vehicle miles traveled (VMT) and increase carbon-free vehicle use, and carbon capture and sequestration actions focused on the natural and working lands sector, as identified in the final 2022 State Scoping Plan.

California has established several regulatory actions to reduce GHG emissions from the transportation sector. EO B-16-12 orders state entities through several actions to support the rapid commercialization of zero emission vehicles (ZEV). EO N-79-20 sets the goal to transition to 100 percent ZEVs for in-state sales of new passenger cars and trucks by 2035 and for medium-and heavy-duty vehicles by 2045. In addition, EO N-79-20 sets the goal for California to transition to 100 percent zero-emission off-road vehicles and equipment by 2035. The Low Carbon Fuel Standard requires the state to further reduce the fuel carbon intensity of transportation fuels to 20 percent or greater by 2030. The Advanced Clean Cars Program/Zero Emission Vehicle Program establishes requirements to achieve the maximum feasible reduction in GHG emissions from vehicles used for personal transportation and under the proposed Advanced Clean Cars II Regulations, establishes the phasing to reach the goal of EO N-79-20 for all new passenger vehicles sold within the state to be zero emission by 2035.

There are several energy sector regulations established to reduce GHG emissions in California. Established in 2002, California's Renewables Portfolio Standard (RPS) requires electricity providers to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. The RPS requires retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030 with interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045. In addition, new buildings constructed in California must comply with the standards contained in California Code of Regulations (CCR) Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, which are designed to increase energy efficiency and conservation.

The Sustainable Communities and Climate Protection Act (SB 375) was signed in September 2008, and requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). Each MPO is required to incorporate these GHG emissions targets into the regional transportation planning process identify land use, housing, and transportation strategies that will achieve the regional GHG reduction targets.

In August 2008, SJVAPCD's governing board adopted a climate change action plan. The plan authorized SJVAPCD's air pollution control officer to develop guidance documents to assist land use agencies and

[1] "Carbon neutrality" is defined in Executive Order B-55-18 as the point at which the removal of carbon pollution from the atmosphere meets or exceeds carbon emissions. Carbon neutrality is achieved when carbon dioxide and other GHGs generated by sources such as transportation, power plants, and industrial processes are less than or equal to the amount of carbon dioxide that is stored, both in natural sinks and mechanical sequestration.

other permitting agencies in addressing GHG emissions during the CEQA process; investigate development of a GHG banking program; enhance the existing emissions inventory process to include GHG emission reporting consistent with state requirements; and administer voluntary GHG reduction agreements.

On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan which describes a comprehensive control strategy that the Air District will implement to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases to protect public health and the climate. Consistent with the GHG reduction targets adopted by the state of California, the Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The Alameda County Board of Supervisors approved a climate action plan in February 2014 which establishes a strategy to enable the County to reduce its community-wide emissions by more than 15% by the year 2020. However, the draft *Alameda County (Unincorporated Areas) Community Climate Action Plan* does not address OHVs.

3.8.3 Impact Analysis and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the proposed General Plan may result in a significant impact related to GHG emissions if it would:

a) generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

CEQA Guidelines Section 15064.4(b) also states that, when assessing the significance of impacts from GHG emissions, a lead agency should consider (1) the extent to which a project may increase or reduce GHG emissions compared with existing conditions, (2) whether a project's GHG emissions would exceed a threshold of significance that the lead agency has determined to be applicable to the project, and (3) the extent to which a project would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations.

In December 2009, SJVAPCD adopted the *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*, which established a method for evaluating the GHG impacts of development projects within SJVAPCD's jurisdiction (SJVAPCD 2009). SJVAPCD considers that demonstrating a 29 percent reduction in GHG emissions from business as usual would reduce a project's impact to a less-than-significant cumulatively significant impact. However, the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* in January 2016 established that the use of Business as Usual analysis and application of an across the board percentage-based mitigation level for projects does not sufficiently establish an individual project's "fair share" of what is needed to achieve the State's long-term GHG reduction goals. In addition, the 29 percent reduction does not reflect subsequent legislative actions taken by the state to further reduce GHG emissions since 2009.

The most recent BAAQMD CEQA Air Quality Guidelines were published in April 2023 and include nonbinding recommendations for how a lead agency can evaluate, measure, and mitigate air quality and climate impacts generated from land use construction and operational activities (BAAQMD 2023). BAAQMD's CEQA air quality guidelines include the following thresholds of significance which are discussed in detail in Chapter 6, "Project-Level Climate Impacts" of the air quality guidelines:

A) Projects must include, at a minimum, the following project design elements:

   1) Buildings

a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

b) The project will not result in any wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2) Transportation

a) The project will achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted SB 743 VMT target that reflects the recommendations provided in the Governor's Office of Planning and Research's *Technical Advisory: Evaluating Transportation Impacts in CEQA*:

(i) Residential projects: 15 percent below the existing VMT per capita

(ii) Office projects: 15 percent below the existing VMT per employee

(iii) Retail projects: no net increase in existing VMT

b) The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

B) Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

This method of impact assessment and proposed project design elements were designed for the purposes of GHG reductions in residential, commercial, and mixed-use development projects and would not be applicable to an open-space recreational land use development such as the Carnegie SVRA General Plan. Neither the BAAQMD nor SJVAPCD's GHG thresholds of significance are applicable to buildout of the General Plan, as they do not account for the State's current long-term climate goals or strategies and/or are not applicable to the unique nature of open-space recreational land uses. Therefore, recent thresholds established by other air districts were assessed.

The Placer County Air Pollution Control District (PCAPCD) has established thresholds of:

- a de minimis level of 1,100 metric tons of CO_2e per year for operational emissions;
- an efficiency matrix for the operational phase of land use development projects when emissions exceed the de minimis level of emissions; and
- a bright-line threshold of 10,000 metric tons of CO_2e per year for the construction and operational phases of land use projects as well as stationary source projects;

PCAPCD's objective was to identify a "reasonable threshold which would capture larger-scale projects with significant GHG emission contributions that should implement mitigation" that was largely based on the work of other air districts for mass emissions and considered how the selected thresholds would affect projects. The De Minimis Level for the operational phases of 1,100 metric tons CO_2e/yr represents an emissions level which can be considered as less than cumulatively considerable and be excluded from the further GHG impact analysis (PCAPCD 2016).

Sacramento Metropolitan Air Quality Management District (SMAQMD) has established similar CEQA thresholds of significance as PCAPCD in order to support jurisdictions which have not yet adopted a qualified climate action plan or GHG reduction plan with the appropriate horizon year for given projects. Even for jurisdictions with adopted climate action plans or GHG reduction plans, the jurisdiction may also choose to pursue projects that do not demonstrate consistency with a local agency's climate action plan, so the ability to instead show compliance with the SMAQMD thresholds would allow flexibility (SMAQMD 2020). The SMAQMD Board of Directors adopted an updated land development GHG threshold on April 23, 2020. The current GHG thresholds are the following:

- a construction threshold (1,100 metric tons GHG/year),

- a land use operational threshold (1,100 metric tons GHG/year) including implementation of Tier 1 Best Management Practices.[2], and
- a stationary source operational threshold (10,000 metric tons GHG/year).

For similar reasons as noted above for BAAQMD's project design elements, the tier 1 Best Management Practices (BMPs) established by SMAQMD are not applicable to the unique open-space recreational land use types within the General Plan area. The updated numerical GHG thresholds reflect the targets established by the 2017 Climate Change Scoping Plan to reduce GHG emissions to 40 percent below 1990 levels by 2030 and reduce GHG emissions to 80 percent below 1990 levels by 2050. SMAQMD states that projects whose emissions are expected to meet or exceed the significance criteria will have a potentially significant adverse impact on global climate change (SMAQMD 2020).

Since these thresholds were last updated by SMAQMD, ARB has finalized the 2022 Climate Change Scoping Plan which establishes a framework for achieving the carbon neutrality target set by AB 1279. Carbon neutrality is not a standard to be achieved on an individual project basis, but through the implementation of best available technology, increasingly stringent regulations to reduce emissions from various sources, state and regional plans to reduce VMT and increase carbon-free vehicle use, and carbon capture and sequestration actions focused on the natural and working lands sector, as identified in the draft 2022 Scoping Plan. Evaluating consistency with the State's emissions reduction targets shows alignment with the State's approach to reduce the generation of GHG emissions from existing and anticipated future sources, a key component of the draft 2022 Scoping Plan (ARB 2022).

Therefore, in order to demonstrate consistency with the State's long-term climate goals or strategies, and to determine whether implementation of the General Plan would have a significant impact on the environment, this analysis will use the SMAQMD established numerical thresholds of 1,100 metric tons of CO_2e per year for construction and operational emissions.

Methodology

Construction-related and operational GHG emissions were modeled using the same methods and assumptions as those described in Section 3.3, "Air Quality," of this EIR. In addition to criteria air pollutants, the California Emissions Estimator Model (CalEEMod) also estimates GHG emissions associated with construction and operational activities. For construction, GHG emissions were estimated for off-road construction equipment, material delivery trucks, haul trucks, and construction worker vehicles. For operational activities, CalEEMod estimates GHG emissions associated with mobile, area, and energy sources, similar to criteria air pollutant emissions, in addition GHG emissions associated with refrigeration and solid waste disposal. Emissions associated with an increase in visitor attendance were estimated using the maximum projected annual growth rate between San Joaquin County and Alameda County (0.71 percent), historical SVRA attendance records and transportation data collected in online and in-person surveys as part of this EIR, and emission factors obtained from ARB's Recreation Vehicle 2013 (RV2013) model and EMFAC2021. Please see Appendix C of this draft EIR for model details, assumptions, inputs, and outputs.

Environmental Impacts from General Plan Implementation

Implementation of the goals and guidelines under the proposed General Plan would not result in a net increase in GHG emissions or any conflict with a policy or regulation adopted for the purpose of reducing the emissions of GHGs. Park facilities and grounds maintenance activities, as well as the majority of the other programs and plans, under the proposed General Plan have been occurring and presently occur in the General Plan area, and, therefore, are considered part of the baseline conditions for this analysis; as demonstrated in this EIR, they do not increase emissions or conflict with any relevant policy or program. There is **no impact** associated with GHG emissions and implementation of the General Plan goals and guidelines.

[2] 1,100 MT CO_2e/year is the current SMAQMD de minimis threshold. By complying with Best Management Practices 1 and 2 (removing natural gas, EV-ready), SMAQMD suggests that small projects would reduce emissions to be consistent with State goals (SMAQMD 2020).

Environmental Impacts from New and Improved Facilities

Impact 3.8-1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Greenhouse gas emissions associated with proposed General Plan construction or operations would not exceed the thresholds of 1,100 MT CO_2e. The impact is **less than cumulatively considerable**.

Implementation of the proposed General Plan's new and improved facilities would generate short-term construction and long-term operational GHG emissions. During construction of the proposed General Plan, exhaust GHG emissions would be generated from a variety of sources such as heavy-duty construction and clearing equipment, haul trucks, material delivery trucks, and construction worker vehicles. Construction would be temporary, anticipated to last approximately 5 years, and the generation of construction-related GHG emissions would cease at the end of construction.

Operational GHG emissions can be direct and indirect. Direct GHG emissions are generated at the location of consumption or use; for example, mobile-source emissions are direct emissions because GHG emissions are generated as a vehicle begins to move. Other direct emissions sources include on-site natural gas use, landscape equipment, and fugitive emissions from refrigerant use in equipment such as air conditioning units. Conversely, indirect emissions occur at a different time or location from the point of consumption or use. For example, electricity-related GHG emissions are indirect emissions because, as consumers use electricity at their workplace or in their residence, the fuel combustion and emissions associated with creating that electricity likely occurred off-site or at a different time. Other indirect GHG emissions include emissions from solid waste disposal and water consumption. Operations for the General Plan horizon year of 2054 have conservatively not adjusted the emissions intensity factor for electricity to zero (0) to reflect of RPS standards under SB 100, which requires renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045. Therefore, total operational GHG emissions are likely to be overestimated.

As shown in Table 3.8-1, the maximum annual construction-related and operational emissions would each be well below the SMAQMD threshold of 1,100 MT CO_2e per year. The SMAQMD quantitative thresholds of significance for GHGs were developed with the intent to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to GHG emissions reductions goals set forth by AB 32 and SB 32.

As explained above in the 'Thresholds of Significance' discussion, consistency with the State's planning for carbon neutrality by 2045 is evaluated by providing an analysis of consistency with the 2022 Scoping Plan, as the only relevant plan that considers this relatively recently adopted legislation. It provides the framework, based on extensive modeling and scenario evaluation, of what is required to achieve the State's 2045 carbon neutrality target and, specifically, what is required of new development to contribute to the achievement of the target. The premise of the 2022 Scoping Plan is that State and federal regulations, policies to influence community behavior, and advances in technology, both market-based and regulation-incentivized, will act in tandem with certain design features and best management practices for new development in order to realize the State's carbon neutrality goal. As part of the 2022 Scoping Plan Update, ARB staff performed modeling on four scenarios to achieve both the 2030 GHG Target and carbon neutrality. Each scenario relied on reductions in fossil fuel dependence, deployment of non-combustion technology, growth in production and distribution of clean energy, phasedown of fossil fuel production and distribution, consumer adoption of clean technology and fuel, and some reliance on carbon capture and sequestration. Ultimately, ARB staff recommended Alternative 3 (the Proposed Scenario), which included the carbon neutrality of 2045, consistent with AB 1279, and applied a portfolio of existing and emerging technologies, fossil fuel alternatives, and adoption trends for such clean technologies and emissions reducing behaviors. This scenario does not phase out all combustion; legacy combustion technologies would be allowed to reach end-of-life. Oil and gas extraction and refining would continue but phase down with reduction in demand. As noted in the Scoping Plan, achieving carbon neutrality requires both significant reductions in GHG emissions and removal of carbon dioxide from the atmosphere, including technological carbon capture and sequestration in natural and working lands. Reaching carbon neutrality requires working across all sectors. Therefore, the discussion of consistency

in this EIR focuses on those actions identified in the 2022 Scoping Plan that are applicable to the General Plan.

Table 3.8-1. Construction and Operational GHG Emissions from Buildout of the Proposed General Plan

Description	Metric Tons CO_2e
Total Construction Emissions, 2023	204
Total Construction Emissions, 2024	487
Total Construction Emissions, 2025	140
Total Construction Emissions, 2026	415
Total Construction Emissions, 2027	148
Maximum Annual Construction Emissions	**487**
SMAQMD Construction Threshold	**1,100**
Exceeds Thresholds?	**No**
Operational Mobile Emissions	229
Operational Area Emissions	5
Operational Energy Emissions	194
Operational Waste Emissions	20
Operational Water Emissions	37
Operational Refrigerant Emissions	82
Operational Stationary Emissions	1
Total Operational Emissions	**568**
SMAQMD Operational Threshold	**1,100**
Exceeds Thresholds?	**No**

Notes: GHG = greenhouse gas; CO_2e = carbon dioxide equivalents; SMAQMD = Sacramento Metropolitan Air Quality Management District.

The actions for the Proposed Scenario under the 2022 Scoping Plan are laid out by Air Quality 32 GHG inventory sector in Table 2-2 of the 2022 Scoping Plan. While many actions are indirectly relevant to the proposed General Plan, such as integrating renewable natural gas and renewable hydrogen blended into natural gas pipelines, reducing the carbon intensity of electricity generation, and increasing the sales and adoption of ZEV – these and other actions are achieved external to actions of the proposed General Plan. Other actions that are more directly actionable by project-level or plan-level development include the reduction of VMT per capita by 12 percent from 2019 levels by 2030 and 22 percent below 2019 levels by 2045, and for new residential buildings and commercial buildings to incorporate all electric (no natural gas) appliances beginning in 2026 and in 2029, respectively. Note that these actions were designed with a focus on residential, retail and commercial land uses and are not relevant to the unique open-space recreational land uses within the Carnegie SVRA General Plan area.

In addition, State Parks would implement the following goals and guidelines from the General Plan to reduce GHG emissions from Carnegie SVRA construction and operational activities and from mobile sources associated with OHV recreation with the park:

OM Goal 1: Provide visitor services and infrastructure that encourage responsible visitor use of Carnegie SVRA and meet visitor needs.

- **OM Guideline 1.2:** Investigate and implement the use of solar and other innovative and renewable technologies to provide electricity at the SVRA.

- **OM Guideline 1.3:** Promote opportunities to incorporate sustainability into SVRA development, operations, and maintenance. Sustainability initiatives could include supporting and encouraging the use of electric vehicles, promoting energy efficiency, using reclaimed water, and applying energy efficiency and green building standards to new construction and other initiatives that may be developed in the future.

OM Goal 6: Limit potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 6.2:** Implement current Bay Area Air Quality Management District (BAAQMD) Table 6-1 Best Management Practices for Construction-Related GHG Emissions for all projects as feasible and applicable, which may include the following measures:
  - Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation (CARE) area or Assembly Bill 617 community.
  - Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
  - Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.
  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
  - Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
  - Use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on-road trucks.
  - Use U.S. Environmental Protection Agency SmartWay certified trucks for deliveries and equipment transport.
  - Require all construction equipment is maintained and properly tuned in accordance with manufacturer’s specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
  - Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
  - Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
  - Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
  - Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.

- Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15% more by weight than the diversion requirement in Title 24.
- Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.
- Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
- Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

OM Goal 7: Manage the SVRA to reduce regional air quality impacts from OHV recreation and related activities.

- **OM Guideline 7.4:** Implement the following operational emission reduction measures to help reduce regional emissions:
  - Prohibit campfires on all summer and winter Spare the Air days identified by either BAAQMD or SJVAPCD. In addition, campfires throughout the park from November 1 to the end of February should be limited to SJVAPCD's "Check Before You Burn" program where campfires are restricted on days designated as "no burning for all" or "no burning unless registered."
  - Replace diesel-fueled maintenance equipment with alternative-fuel equipment (e.g., propane, electricity) when feasible.
  - Install and utilize electric vehicle (EV) charger(s) to promote the use of low or zero-emission vehicles.
  - Inform and suggest to all park visitors to limit the use of diesel generators for reactional vehicle cooling or heating during winter and summer Spare the Air days identified by either BAAQMD or SJVAPCD.
  - Limit maintenance equipment engine idling to 2 minutes.

Additionally, State Parks would implement the following goals and guidelines from the General Plan to make climate considerations explicit in planning documents, prioritize and carry out management actions, and align Parks' efforts with the overall statewide approaches to address climate change:

Climate Goal 1: Understand the climate impacts felt to date and predict impacts based on the best available information.

- **Climate Guideline 1-1**: Collect local weather data and determine whether changes recorded in climate data correlate with trends observed in vegetation, wildlife, fire, and hydrology.
- **Climate Guideline 1-2**: Evaluate statewide and regional summaries of anticipated climate change impacts and vulnerabilities. These include but are not limited to the regional summaries in California's Fourth Climate Change Assessment, the California Climate Change Adaptation Plan, and California Department of Fish and Wildlife's Vulnerability Assessments for a range of fish, wildlife, and plants. Track these and other sources of climate science information and guidance as they continue to evolve.

Climate Goal 2: Develop a strategy to address and adapt to potential climate impacts (e.g., wildfire, flooding), and sustain SVRA goals through management actions and other activities.

- **Climate Guideline 2-1**: Develop management plans and establish operational priorities based on the data and understanding of climate impacts identified in Climate Goal 1, Climate Guidelines 1.1 and Climate Guideline 1.2. Management plans should prioritize protecting and restoring primary natural and cultural resource values, improving habitat linkages, and responding to changed visitation patterns.
- **Climate Guideline 2-2**: Improve collaboration with statewide and local partners to better understand and implement best practices for climate resilience in this region, such as other state agencies and local governments, National Park Service partners; these may include researchers in the University of California Natural Reserve System and other allied agencies.
- **Climate Guideline 2-3**: Follow recommendations for climate adaptation actions in relevant State Parks guidance documents prepared to address foreseeable climate change risks, with an emphasis on risks caused by flooding and wildfire.

In summary, because the proposed General Plan's GHG emissions would be below the SMAQMD 1,100 metric tons of CO_2e thresholds of significance, the General Plan would result in the generation of GHG emissions at a level would align with its fair share of emissions reductions consistent with the State 2030 GHG reduction target and 2050 GHG reduction goal. OM Guidelines 1.2, 1.3, 6.2 and 7.4 would serve to further reduce both construction and operational GHG emissions associated with buildout of the General Plan. In addition, the General Plan's proposed land uses do not conflict with the key actions for new development under the 2022 Scoping Plan for carbon neutrality by 2045. Finally, the General Plan's proposed Climate Goals 1 and 2 and associated guidelines would make climate considerations explicit in planning documents, prioritize and carry out management actions, and align Parks' efforts with the overall statewide approaches to address climate change. Therefore, implementation of the General Plan would not result in the generation of GHG emissions at a level that may have a significant impact on the environment or conflict with State GHG emission targets adopted for the purpose of reducing the emissions of GHGs. This impact is **less than cumulatively considerable**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

3.9 Hazards and Hazardous Materials

This section describes existing conditions related to hazards and hazardous materials in the planning area. It also discusses the federal, state, and local regulatory framework, and analyzes the potential impacts of implementing the Carnegie SVRA General Plan related to hazards and hazardous materials.

3.9.1 Existing Conditions

Hazardous Materials

"Hazardous materials" are both hazardous substances and hazardous wastes. Federal regulations define a hazardous material as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (Title 49, Section 171.8 of the Code of Federal Regulations [49 CFR 171.8]). Section 25501 of the California Health and Safety Code defines a "hazardous material" as follows:

> Hazardous material means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Section 25141(b) of the California Health and Safety Code defines "hazardous wastes" as wastes that:

> …because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Known Hazardous Materials Sites

In 2023, AECOM performed an updated site-specific search of several databases maintained as part of the Cortese List. The Hazardous Waste and Substances Site List (the "EnviroStor" database) is maintained by the California Department of Toxic Substances Control (DTSC) as part of the requirements of Public Resources Code Section 65962.5 (i.e., the Cortese List). The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, an information management system for groundwater. Data on leaking underground storage tanks (USTs) and other types of soil and groundwater contamination, along with associated cleanup activities, are part of the information that the SWRCB must maintain under PRC Section 65962.5. Sites that are listed in the databases with a status of "Closed" (e.g., SRI International, which is south of SVRA) have been remediated and are no longer part of the Cortese List.

The only open, active site in the vicinity of the SVRA that is listed on the GeoTracker and EnviroStor databases is Lawrence Livermore National Laboratory (LLNL), Site 300 (SWRCB 2023, DTSC 2023). Although the Tesla Coal Mine is not listed on any regulatory databases, stormwater runoff from the waste rock piles is known to cause water quality issues downstream within Corral Hollow Creek (including that portion of the creek which flows through the SVRA) as described in the *Final Corral Hollow Watershed Assessment* (State Parks 2007). Both of these hazardous materials sites are described in detail below.

AECOM also performed a search of the U.S. Environmental Protection Agency's (EPA) Superfund database (which includes records maintained under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [CERCLA]). The LLNL Site 300 is an active Superfund site (EPA 2022).

Tesla Coal Mine and Surface Workings

The Tesla Coal Mine Site is approximately 1.5 miles northwest of the SVRA, west of Tesla Road. The Tesla mine was operated for the production of coal from 1890 to 1905, and for the production of clay and glass sand until 1911. Intermittent underground and surface mining occurred at the site in the 1920s and 1930s. In the 1940s and 1950s, surface mining for clay and glass was carried out using shovels and scrapers.

The major underground mine entries at the Tesla Coal Mine included a main shaft, five coal adits, one sand adit, one clay shaft, and one clay adit. Surface workings that supported mining activities were located primarily around the main shaft and in the vicinity of the main adit. The following discussion of Tesla Coal Mine shafts, adits, and the associated surface workings is from the *Tesla Mine Site Characterization Report* (Resource Design Technology 2002).

Main Shaft
The main shaft, at an elevation of approximately 1,000 feet, was inclined to the northeast and was sunk to a depth of 800 feet in a hanging wall of sandstone. At intervals of 200 feet, levels were driven off the shaft, extending 1,333 feet east and 2,616 feet west of the main shaft. Mining maps show an exploration tunnel heading south from the main shaft for a distance of approximately 2,000 feet on the 600-foot level.

A shaft house and hoisting plant were located at the main shaft, and a large coal washing plant extended down the hillside. Directly below the main shaft sat the coal bunkers, boiler house, and condenser plant. The main shaft was used as a garbage dump for many years, until it was filled with rock and soil by bulldozing around the shaft collar. This created a shallow surface depression, known as the “thousand gallon pond.”

Main Adit
The main coal adit (Tunnel No. 3) was approximately 100 feet lower in elevation and was located approximately 1,000 feet southwest of the main shaft. The main adit extended about 3,150 feet northwest of the portal. A drift from the main adit extended 3,417 feet to the west and a second drift extended 1,066 feet to the east. The portal of the main adit was bulldozed shut and is difficult to find from surface indications; however, the main adit can be identified in historical photos. Several small workshops, a compressor, electrical shops, the car repair and mechanics shop, a blacksmith shop, and a large warehouse were located in the vicinity of the main adit. A northeast-southwest trending waste dump was located along the slope at the portal of the main adit.

Other Mine Workings
An upper coal adit (Tunnel No. 1) was approximately 1,050 feet north of the main adit. This adit followed the Eureka coal seam for approximately 1,066 feet.

A third coal adit was in the ravine below the main adit at an elevation of 950 feet. The adit headed north for 200 feet and ended at the intersection with the Eureka coal seam. A small waste rock pile remains and the adit still is open for at least 50 feet. Two additional coal adits were located nearby but are no longer visible.

A glass sand adit was at an elevation of 1,100 feet just north of Tunnel No. 1. The adit followed the sand bed westward for about 100 feet. Several raises and chutes are opened in the sand bed on the south side of the main haulage adit. This adit is still open, but the wooden sand bunker below it has collapsed.

A clay adit was located approximately 1,000 feet to the east on the railroad bed grade, at an elevation of 900 feet. This adit headed north for approximately 600 feet from the portal. Drifts ran east and west from this adit.

The Ryan Clay Mine was located east of the Tesla Coal Mine. The clay mine was developed by an inclined shaft; however, the extent of the workings is unknown.

Tesla Mine Site Soil Characterization
Extensive mining activities led to the formation of waste rock piles along Corral Hollow Creek. The area between the main adit of the Tesla Mine and Corral Hollow Creek was used as a disposal area for waste rock from 1890 to 1905. The remains of these waste rock piles extend along the north bank of Corral Hollow Creek for approximately 1,000 feet below the former mine.

In 2005, Salix Applied Earthcare and Geosyntec identified seven test pit locations that then were excavated to identify subsurface soil information:

- Test Pit A—near the western end of the waste rock pile, adjacent to Corral Hollow Creek
- Test Pit B—in the sandy material downgradient from the Tesla Mine's main shaft
- Test Pit C—at the toe of the waste rock pile south of the "thousand gallon pond" and north of the main access road
- Test Pit D—in a flat area between the main access road and the slope of the waste rock pile approximately 500 feet east of Test Pit C
- Test Pits E1, E2, and E3—in a single line perpendicular to the proposed realignment of Corral Hollow Creek

Soil samples were collected near the Tesla Coal Mine, from waste rock piles along Corral Hollow Creek (Test Pit A) and from landlocked waste rock piles below the main adit of Tesla Mine (Test Pit C), to determine whether soils contained metal concentrations in excess of hazardous-waste criteria. The soil samples were analyzed using the California Waste Extraction Tests (WET) method to determine metal concentrations.

The total metals concentrations in all soil samples were consistently lower than hazardous-waste criteria (State Parks 2007:83, 85). Soil samples collected from Test Pits A and C exhibited acidic characteristics, with a pH ranging from 2.9 to 4.4. Soil samples from Test Pit A that were taken directly from the waste rock pile exhibited detectable concentrations of WET metals (i.e., arsenic, barium copper, iron, lead mercury, selenium, vanadium, and zinc). However, the total metal concentrations did not exceed the hazardous-waste criteria (State Parks 2007:85).

Water quality data from Corral Hollow Creek related to the former Tesla Coal Mine (State Parks 2007, State Parks 2015) are presented in General Plan Chapter 2, "Existing Conditions," Section 2.3.1, "Physical Resources."

Lawrence Livermore National Laboratory, Site 300

LLNL Site 300 covers approximately 11 square miles north of Corral Hollow Road, straddling the Alameda/San Joaquin County line (see Figure 2-1, "Surrounding Land Uses," in Chapter 2 of the General Plan). LLNL has owned and operated Site 300 for the U.S. Department of Energy (DOE) since the 1950s. Site 300 is primarily a high-explosives test facility that supports LLNL's weapons program in research, development, and testing associated with weapons components. This work has involved processing explosives; preparing new explosives; and pressing, machining, and assembling explosives components. Workers at Site 300 also have conducted hydrodynamic testing to verify computer simulation results, obtained equation-of-state data for weapons materials, evaluated material behavior at assembly joints and welds, evaluated the quality and uniformity of implosion, and evaluated the performance of post nuclear test design modifications. Over the years, these activities have caused the groundwater and soil to become contaminated by solvents and other volatile organic compounds (VOCs), tritium, uranium-238, high explosive compounds, nitrate, and perchlorate (DOE 1999:1-2). Because of contaminants found in groundwater at Site 300 and the tonnage of material deposited in Site 300 landfills, Site 300 was added to the EPA's Superfund National Priorities List on August 30, 1990 (EPA Superfund Site Identification No. CA 2890090002).

Investigations and Remediation
Before August 1990, investigations of potential chemical contamination at LLNL Site 300 were conducted under the oversight of the Central Valley Regional Water Quality Control Board (RWQCB). Since 1990,

when EPA designated Site 300 as a Superfund site, all investigations at Site 300 have been conducted in accordance with the CERCLA under the oversight of EPA, DTSC, and the Central Valley RWQCB. In June 1992, EPA, DOE, DTSC, and the Central Valley RWQCB signed a federal facility agreement to provide the framework for site cleanup and preparation of necessary regulatory documents to achieve the goals delineated in CERCLA.

Contamination at LLNL Site 300 was addressed through a combination of removal and remedial actions. In 1994, DOE completed a sitewide remedial investigation report that characterized groundwater and soil contamination at Site 300 and evaluated the potential for future human-health hazards from exposure to on-site contamination. In 1999, a sitewide feasibility study was prepared that developed and evaluated alternatives for remedial actions. A sitewide proposed plan that was prepared in 2000 identified DOE's preferred interim remedial actions. In February 2001 an interim sitewide record of decision (ROD) for Site 300 was signed, allowing interim remediation activities to begin while DOE continued to test and evaluate cleanup technologies and negotiated final groundwater cleanup standards. A final sitewide ROD for a portion of LLNL Site 300 was signed in June 2008, indicating that remedial actions had been completed and that no unacceptable risks would be posed to human health or the environment.

Pit 6 Landfill

LLNL Site 300 is divided into nine operable units to allow administrators to track the progress of contamination remediation. The operable units were determined by the specific locations, nature, and extent of contamination. The Pit 6 Landfill (Operable Unit 3) is north of Corral Hollow Road on approximately 2.6 acres near the southern boundary of Site 300.

The Pit 6 Landfill is located approximately 200 feet north of the SVRA, opposite the existing ranger station. The groundwater well that supplies water to Carnegie SVRA is north of Corral Hollow Road on State Parks-owned land, approximately 1,000 feet east of the Pit 6 landfill. From 1964 to 1973, approximately 1,900 cubic yards of waste materials were placed in nine unlined debris trenches at the Pit 6 Landfill (DOE 1999:1-3). The buried materials included laboratory and shop debris and biomedical waste. Plumes of VOCs and tritium originating from the landfill were identified in groundwater and were determined to be primary contaminants of concern (COCs) (DOE 1999:1-3). Perchlorate and nitrate also were detected in groundwater to a lesser extent and were identified as secondary COCs. No COCs were identified in surface or subsurface soils (DOE 1999:1-3).

The landfill was capped as a removal action in 1997, to prevent further leaching of contaminants from the buried waste and mitigate potential inhalation risks. The engineered, multilayer cap was intended to prevent infiltration of rainwater into the landfill, mitigate potential damage by burrowing animals and vegetation, prevent potential hazards caused by collapses of void spaces in the buried waste, and prevent the potential flux of VOC vapors through the soil. A diversion channel on the north side of the engineered cap and drainage channels on the east, west, and south sides minimize flows of surface water onto the landfill.

The interim ROD for the Pit 6 Landfill identified monitored natural attenuation as the remedy for VOCs and tritium in groundwater at the landfill. This process allows contaminants to degrade naturally in the environment while remaining under close observation and includes protocols to assess the progress of remediation (DOE 2001:2-96). DOE monitors groundwater elevations and contaminants regularly to evaluate the efficacy of the natural-attenuation remedy in reducing contaminant concentrations and detect any new releases of chemicals from the landfill. Primary and secondary groundwater COCs at the Pit 6 Landfill show stable to decreasing trends. Groundwater levels beneath the landfill are well below the buried landfill waste, and VOCs have not migrated to groundwater supply wells (DOE 2008:2-24).

Water quality data from Corral Hollow Creek related to LLNL Site 300 (State Parks 2007, State Parks 2015) are presented in General Plan Chapter 2, Section 2.3.1.

Schools

There are no schools within 0.25 mile of the SVRA. The nearest school is the Anthony Traina Elementary School, approximately 6.4 miles northeast near Carbona.

Airports

There are no airports within 2 miles of the SVRA. The nearest airport is Tracy Municipal, approximately 5.7 miles to the northeast.

Wildland Fires

Wildland fires are evaluated in EIR Section 3.20, “Wildfire.”

3.9.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

U.S. Environmental Protection Agency

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List, which is a list of contaminated sites warranting further investigation by the EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Emergency Planning and Community Right-To-Know Act

The Emergency Planning Community Right-to-Know Act of 1986 was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. The Act was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. The Act establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 Code of Federal Regulations [CFR] Appendix B). The Community Right-to-Know provisions help increase the public’s knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 was created to provide adequate protection from the risks to life and property related to the transportation of hazardous materials in commerce by improving regulatory enforcement authority of the Secretary of Transportation.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration is the federal agency responsible for enforcing and implementing federal laws and regulations pertaining to worker health and safety. The administration’s Hazardous Waste Operations and Emergency Response regulations require training and medical supervision for workers at hazardous waste sites (29 CFR Section 1910.120). Additional regulations have

been developed regarding exposure to lead (29 CFR Section 1926.62) and asbestos (29 CFR Section 1926.1101) to protect construction workers.

State Plans, Policies, Regulations, and Laws

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) was established in 1972 by the State of California to establish a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources. CalEPA administers and enforces many of the laws, rules, and regulations promulgated by EPA. CalEPA also oversees various other state agencies involved with hazardous materials regulation and cleanup, including DTSC, California Department of Pesticide Regulation (DPR), and SWRCB.

California Department of Toxic Substances Control

The 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, DTSC has been authorized to implement the state's hazardous waste management program for CalEPA.

State Water Resources Control Board

The SWRCB was established in 1967. The Central Valley RWQCB is authorized by the SWRCB 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 is threatened and to require remediation of the site, if necessary.

California Occupational Safety and Health Administration

California Occupational Safety and Health Administration (CalOSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within California. Regulations pertaining to the use of hazardous materials in the workplace (Title 8 of the California Code of Regulations [CCR]) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and preparation of emergency action and fire prevention plans. CalOSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labelling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous-waste sites. The hazard communication program requires that employers make Safety Data Sheets available to employees, and requires documentation of informational and training programs for employees.

The CalOSHA regulations also include requirements for protective clothing, training, and limits on exposure to hazardous materials. CalOSHA also enforces occupational health and safety regulations specific to lead and asbestos investigation and abatement. These regulations equal or exceed their federal counterparts. Specific worker safety measures for excavation hazards (e.g., falling or cave-in of excavation walls) are described in the Title 8 CCR Section 1541.

Cortese List, California Government Code Section 65962.5

The provisions of Section 65962.5 of the California Government Code are commonly referred to as the "Cortese List" (after the legislator who authored the legislation that enacted it). The Cortese List is a planning document used by state and local agencies to comply with CEQA's requirement to provide information about the location of hazardous-materials release sites. Government Code Section 65962.5 requires CalEPA to develop an updated Cortese List at least annually. DTSC and SWRCB are responsible for most of the information contained on the Cortese List. Other state and local government agencies, including the RWQCBs and local cities and counties, are also required to provide additional information for the Cortese List about releases of hazardous materials.

In addition, Section 65962.5 requires all project applicants to consult the Cortese List and determine whether any site-specific project is within a hazardous materials site on the list. If so, the project applicant is required to notify the lead agency in writing prior to the issuance of a building permit, so the lead agency can determine the appropriate course of action (which generally includes environmental site assessments and site-specific remediation).

Hazardous Materials Transport

Statutory requirements governing hazardous waste transportation in California are contained in the California Health and Safety Code, Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13. Hazardous waste transporters must have a valid registration permit issued by DTSC. In addition, hazardous waste transporters must comply with a variety of other State and federal regulations, including the California Vehicle Code (CCR Title 13); California State Fire Marshal Regulations (CCR Title 19); U.S. Department of Transportation regulations (Title 49 Code of Federal Regulations); and EPA regulations (Title 40 Code of Federal Regulations).

The California Highway Patrol, Caltrans, and DTSC are responsible for enforcing federal and State regulations pertaining to the transport of hazardous materials. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill); the transporter is also responsible for cleanup (22 Cal. Code Regs. Section 66260.10 et seq.).

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulations, or ordinances related to hazards and hazardous materials that apply to the proposed Carnegie SVRA General Plan.

3.9.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts is based on a review of environmental risk databases maintained by DTSC, SWRCB, and EPA. In addition, reports documenting potential hazardous conditions in and near the SVRA were reviewed, including RODs for LLNL Site 300, the *Corral Hollow Watershed Assessment* (State Parks 2007), and the *Tesla Mine Site Characterization Report* (Resource Design Technology 2002).

The information obtained from these sources was used to establish existing conditions and determine whether any known hazardous materials may be present at active sites within 0.5 mile of the planning area. The evaluation of hazards and hazardous materials impacts is based on current land uses in the planning area, and on changes that could occur at the SVRA from implementation of the General Plan.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a significant impact related to hazards and hazardous materials if it would:

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/or 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 §65962.5 and, as a result, would it create a significant hazard to the public or the environment;

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impacts associated with wildland fire hazards are evaluated in EIR Section 3.20, “Wildfire.”

Issues Not Discussed Further in this EIR

Hazardous Materials within One-Quarter Mile of a School—There are no K-12 schools within 0.25 mile of the SVRA. The nearest school is the Anthony Traina Elementary School, approximately 6.4 miles northeast, near Carbona. Therefore, no impact related to emissions or handling of hazardous materials within 0.25 mile of a school would occur from implementation of the Carnegie SVRA General Plan, and this issue is not discussed further in this EIR.

Hazards from Cortese-Listed and Other Environmental Contamination Sites—The SVRA does not include any known hazardous materials contamination sites, including Cortese-listed sites or Superfund sites. As described previously, the Pit 6 Landfill, which is part of the LLNL Site 300 Superfund site and is also on the Cortese list, is located approximately 1,000 feet west of the SVRA’s groundwater well and approximately 200 feet north of the existing ranger station. However, groundwater elevations and contaminants at the LLNL Site 300 Superfund site are monitored regularly, to evaluate the efficacy of the natural-attenuation remedy in reducing contaminant concentrations and detect any new releases of chemicals from the landfill (if any were to occur). The concentrations of primary and secondary groundwater COCs at the Pit 6 Landfill show stable to decreasing trends. The groundwater level beneath the landfill remains well below the buried landfill waste, and VOCs have not migrated off the Pit 6 Landfill site. No COCs were identified in off-site surface or subsurface soils. As also described previously, the former Tesla Coal Mine is approximately 1.5 miles northwest of the SVRA. The total metals concentrations in all soil samples obtained from the mine’s waste rock piles were consistently lower than hazardous waste criteria (State Parks 2007:83, 85). As discussed in detail in General Plan Section 2.3.1, “Physical Resources,” water quality was sampled at multiple locations in Corral Hollow Creek upstream of the Carnegie SVRA (to account for former Tesla Coal Mine and LLNL Site 300 water quality issues), and at four locations within the SVRA. Concentrations of metals such as silver, lead, and arsenic did not exceed any regulatory thresholds and were substantially below the hazardous waste criteria (State Parks 2007:165–167). Concentrations of aluminum, cadmium, and copper measured during 2014 sampling events exceeded threshold limits; however, the aluminum and cadmium concentrations were identified as originating from off-site sources (i.e., the former Tesla Coal Mine and the LLNL Site 300). The elevated copper concentrations also occurred from these off-site sources, and also from within the SVRA based on naturally-occurring copper that is present in the underlying rock strata throughout the project area. The 2014 sampling results demonstrated that water quality from runoff leaving the SVRA through Corral Hollow Creek was either in compliance with all applicable water quality standards, comparable, or of better quality than runoff entering the SVRA via Corral Hollow Creek (State Parks 2015:9–12). Therefore, implementation of the Carnegie SVRA General Plan would not be affected by hazardous materials from off-site Superfund or Cortese-listed sites, or the off-site Tesla Coal Mine site, and this issue is not discussed further in this EIR.

Airport Hazards—There are no airports within 2 miles of the SVRA, nor is the SVRA located within an airport land use plan. The nearest airport is Tracy Municipal, which is approximately 5.7 miles to the northeast. Therefore, no impact related to airport or aircraft safety, including excessive aircraft noise at

the SVRA, would occur from implementation of the Carnegie SVRA General Plan and this issue is not discussed further in this EIR.

Interference with Emergency Response or Evacuation Plans—Corral Hollow Road/Tesla Road is a paved arterial roadway that serves as the primary evacuation route out of the Carnegie SVRA. The roadway is named Corral Hollow Road in San Joaquin County and Tesla Road in Alameda County, to the east and west, respectively. Construction of the proposed new and improved facilities would not affect Corral Hollow Road/Tesla Road or any other internal SVRA roadway because all construction equipment, personnel, and materials would be staged in parking areas adjacent to each site-specific facility within the SVRA. The existing SVRA campground would be temporarily closed during renovations associated with the proposed campground remodel. Many of the existing SVRA facilities are already located within the 100-year floodplain associated with Corral Hollow Creek. Upgrading and improving these facilities as part of operation of the new and improved facilities would not change visitor or SVRA employee access to the internal SVRA roadway evacuation network or to Corral Hollow Road/Tesla Road. Removal of several trees at the northern edge of the campground as part of the proposed campground remodel would improve line-of-sight visibility for motorists on Corral Hollow Road in the event of an evacuation and during daily travel. All site-specific projects would be designed according to State and local standards related to road widths, emergency vehicle access, and turn radii. Therefore, no impact related to impairment or interference with emergency response or evacuation plans would occur from implementation of the Carnegie SVRA General Plan, and this issue is not discussed further in this EIR.

Environmental Impacts

Impact 3.9-1. Potential Risks Associated with the Routine Use, Transport, Disposal, Upset, and Accidental Discharge of Hazardous Materials?

General Plan Implementation

State Parks routinely uses and stores unleaded gasoline, diesel fuel, oil, solvents, paint, and tires at the maintenance yard within the SVRA. State Parks employees are required to use and dispose of hazardous materials in accordance with all federal, state, and local regulations, thus minimizing any potential for an accidental release of or exposure to such materials. Training related to use, storage, and handling of hazardous material is routinely provided to employees at the SVRA maintenance yard. Hazardous materials are collected at a minimum annually by a hazardous materials recycler. The SVRA is operated under a site-specific Storm Water Management Plan (State Parks 2012), which includes measures to prevent spills of hazardous materials and to appropriately clean up any accidental spills that may occur. Therefore, General Plan implementation would result in **less-than-significant impacts** associated with the routine use, transport, disposal, upset, and accident conditions related to hazardous materials.

New and Improved Facilities

Construction and Operation
Hazardous materials typically used in construction operations such as diesel fuel, solvents, and paints would likely be used during construction activities associated with all of the proposed new and improved visitor and operations facilities presented in Chapter 2, “Project Description,” of this EIR. Hazardous materials used during construction activities would be handled and stored in accordance with all federal, state, and local regulations, thus minimizing any potential for an accidental release of or exposure to such materials.

The enhancement of facilities and recreational opportunities at the Carnegie SVRA is not anticipated solely to attract additional visitors to the SVRA; however, attendance is anticipated to fluctuate over time, which during times of high use would increase the use of gasoline and oils needed for the operation of OHVs. The increased use of these common materials would not create a substantial hazard to the public or environment because individuals would handle relatively small volumes to operate OHVs at the Carnegie SVRA. In addition, SVRA staff members are required to promptly clean up hazardous spills (if any occur) and dispose of trash for the health and safety of the environment. Furthermore, State Parks requires that construction, maintenance, and operation of all facilities occur in compliance with federal,

state, and local regulatory requirements regarding the handling and disposal of hazardous materials for the protection of surface water and groundwater, soils, and people.

In addition, General Plan Operations and Maintenance (OM) Guidelines 3.4 and 3.11 (shown below) apply to handling and disposal of hazardous materials for the protection of surface water and groundwater, soils, and people throughout the Carnegie SVRA, including the proposed new and improved facilities.

OM Goal 3: Provide facilities and services that contribute to the safety and convenience of visitors and staff.

- **OM Guideline 3.4:** Construct, maintain, and operate all facilities in compliance with all federal, state, and local regulatory requirements regarding the handling and disposal of hazardous materials for the protection of surface water and groundwater, soils, and people.
- **OM Guideline 3.11:** Promptly clean up and dispose of trash and hazardous spills for the health and safety of the environment and the public and to encourage good visitor stewardship of the SVRA.

Therefore, impacts from the routine use, transport, disposal, and accidental discharge of hazardous materials associated with all of the new and improved facilities would be **less than significant**.

Mitigation Measures

With implementation of the goal and guidelines, no mitigation is required.

3.10 Hydrology and Water Quality

This section addresses drainage, hydrology, erosion and sediment transport, stream geomorphology, and water quality in the planning area. It analyzes the potential impacts of implementing the Carnegie SVRA General Plan on hydrology and water quality.

3.10.1 Existing Conditions

Section 2.3.1, “Physical Resources,” in Chapter 2, “Existing Conditions,” of the General Plan includes a discussion of the existing hydrology and water quality setting.

3.10.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Section 2.7.3.2, “Hydrology and Water Quality Regulations,” in Chapter 2 of the General Plan includes a discussion of federal plans, policies, regulations, and laws applicable to hydrology and water quality in the planning area.

State Plans, Policies, Regulations, and Laws

Section 2.7.3.2, “Hydrology and Water Quality Regulations,” in Chapter 2 of the General Plan includes a discussion of state plans, policies, regulations, and laws applicable to hydrology and water quality in the planning area.

Regional and Local Plans, Policies, Regulations, and Ordinances

Section 2.7.3.2, “Hydrology and Water Quality Regulations,” in Chapter 2 of the General Plan includes a discussion of regional and local plans, policies, regulations, and ordinances applicable to hydrology and water quality in the planning area.

3.10.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of hydrology and water quality is based on current land uses in the planning area, and on changes that could occur at the SVRA from implementation of the General Plan.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a significant impact related to hydrology and water quality if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there the project may impede sustainable groundwater management of the basin;

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

d) result in substantial erosion or siltation on- or off-site;

- substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
- impede or redirect flood flows;

e) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

f) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Issues Not Discussed Further in This DEIR

Hazards from Seiches or Tsunamis—The SVRA is located in a seismically active region; however, no enclosed bodies of water exist in the planning area that would be large enough to pose a hazard from seismic seiches. Furthermore, because of the long distance of the SVRA from the Pacific Ocean, tsunamis would not represent a hazard. Thus, no impact from seiches or tsunamis would occur from implementation of the Carnegie SVRA General Plan, and these issues are not discussed further in this EIR.

Environmental Impacts

Impact 3.10-1. Violation of Water Quality Standards or Waste Discharge Requirements, or Substantially Alter Drainage Patterns Resulting in Substantially Increased Erosion or Siltation?

General Plan Implementation

State Parks implements a Storm Water Management Plan (SWMP) that is specific to the Carnegie SVRA (State Parks 2012). As part of the SWMP, construction activities as well as operations and maintenance (O&M) activities are evaluated for their potential to discharge pollutants into stormwater and all corresponding Best Management Practices (BMPs) are routinely inspected. Activities such as vehicle and equipment maintenance, fueling, and washing; material handling and storage; and waste storage and litter control occur at the Park Maintenance Area. Repair of roadways and trails; landscaping; vector and weed control; painting; litter control; OHV use; and patrols by State Parks peace officers occur at all facilities throughout the SVRA. These activities and their standard operational practices are evaluated quarterly and enhanced, as needed, to prevent impacts to stormwater. Trail maintenance to address erosion occurs throughout the SVRA on an ongoing basis, and is specifically addressed through implementation of BMPs contained in the Carnegie SWMP and the OHV BMP Manual (State Parks 2007b). Operation and maintenance activities associated with General Plan Implementation may include grading of areas larger than 50 cubic yards (the standard amount that is typically considered routine maintenance). Grading of amounts larger than 50 cubic yards is subject to all resource management guidelines and would be conducted in full compliance with all applicable permits such as the National Pollutant Discharge Elimination System (NPDES) permits issued by the State Water Resources Control Board (SWRCB). Furthermore, construction ground disturbance of areas larger than 1 acre requires a site-specific Stormwater Pollution Prevention Plan (SWPPP) with associated BMPs specifically designed to control stormwater discharges and prevent pollutant transport into downstream receiving waters. Finally, the General Plan includes Guidelines that are specifically intended to prevent erosion and ensure compliance with the Basin Plan. Therefore, General Plan Implementation would not violate water quality standards or Waste Discharge Requirements (WDRs), and would not result in substantial increases in erosion or sedimentation. This impact would be **less than significant**.

New and Improved Facilities

Construction

Construction-related water quality impacts associated with new and improved facilities are evaluated in Impact 3.7-3 in EIR Section 3.7, “Geology and Soils/Paleontological Resources.”

Operation

Many of the proposed facility projects described in Chapter 2, “Project Description,” of this EIR (e.g., campground remodel, ranger station expansion, concession store upgrade and relocation) would be situated within the Stream Corridor Watershed (State Parks 2007a:18–24). The proposed new Front Hills motorbike trail would be situated within the northern edge of portions of the Tyson’s Pond, Carroll Canyon, and Kiln Canyon watersheds (State Parks 2007a:24–26). Details regarding these watersheds are summarized in Section 2.3.1 in Chapter 2 of the General Plan.

The Basin Plan (Central Valley Regional Water Quality Control Board [RWQCB] 2019) sets forth water quality standards for surface waters and groundwater in the region. These standards include both designated beneficial uses of the water and the narrative and numeric objectives that must be maintained or attained to protect those uses. The Basin Plan does not specify beneficial uses or water quality objectives for Corral Hollow Creek. According to the tributary rule, the beneficial uses assigned to any downstream water body also would apply to the creek. However, Corral Hollow Creek often infiltrates within the western reaches of the San Joaquin Valley, and it lacks a surface connection to the San Joaquin River most of the time, connecting via surface water only during large and extended storm events. As a result, downstream water bodies are directly affected only occasionally by water quality in Corral Hollow Creek. The Basin Plan specifies general water quality objectives for all water bodies within the Sacramento and San Joaquin River Basin. These objectives include numeric and narrative standards that are designed to preserve the quality of the receiving waters.

Corral Hollow Creek has not been evaluated and is not included on the SWRCB’s 303(d) list of impaired water bodies (SWRCB 2022). However, there are known sediment and metals transport issues in Corral Hollow Creek associated with stormwater runoff through the Tesla Coal Mine waste rock piles and the LLNL Site 300 (upstream from the SVRA), and from sediment transport from OHV trail use during stormwater runoff on steep slopes within the SVRA (State Parks 2007a, 2015). The results of water quality testing conducted in 2005 and 2006 (State Parks 2007a) and in 2014–2015 (State Parks 2015) both within and upstream of the SVRA are presented in Section 2.3.1 in Chapter 2 of the General Plan. (Off-site water quality impacts associated with metals are addressed in EIR Section 3.9, “Hazards and Hazardous Materials.”)

Currently, State Parks does not have a separate storm sewer system to manage stormwater runoff from the planning area. Runoff from the planning area infiltrates into the subsurface, evaporates, or flows directly into Corral Hollow Creek and its tributaries as surface water runoff. The Tyson’s Pond, Carrol Canyon, and Kiln Canyon watersheds in the SVRA have sediment basin systems that help to reduce pollutant transport (primarily sediment) into Corral Hollow Creek (State Parks 2012:59–60):

- **Tyson Basin System**. Most of the Tyson Basin drainage area (400 acres) is used for OHV recreation. Before entering the main stem Corral Hollow Creek, runoff flows through a series of sediment ponds from higher elevation to lower elevation: Franciscan Pond, Clear Pond, and finally the 10,000-square-foot Tyson’s Pond (approximately 300 feet south of Corral Hollow Creek). Tyson’s Pond is approximately 300 feet south of the proposed Front Hills motorbike trail, and is adjacent to and upstream of the proposed SVRA maintenance area improvements. Sediment is removed annually from this pond.
- **Carrol Basin System**. Most of the Carrol Basin Drainage area (328 acres) is used for OHV recreation. Before entering Corral Hollow Creek, stormwater runoff from the Carrol Canyon subwatershed flows through Lower Juniper Pond and then into the 4,500-square-foot Carrol Basin. Carrol Basin is located at the outlet of the Carrol Canyon drainage area, approximately 200 feet south of Corral Hollow Creek and immediately adjacent to the proposed Front Hills motorbike trail. Flows exiting the basin are routed to a drainage channel that discharges to Corral Hollow Creek. Sediment is removed annually from this basin.
- **Kiln Basin System**. Kiln Basin is located within the Kiln Canyon drainage area, approximately 1,500 feet south of Corral Hollow Creek. The basin receives flows from approximately 345 acres (90 percent) of the 383-acre drainage area. Flows exiting the basin enter the natural drainage path of Kiln Canyon to the north and eventually discharge to Corral Hollow Creek. Kiln Basin is

approximately 0.25 mile south of the proposed Creekside pedestrian trail. Sediment is removed annually from this basin.

Operation of the proposed campground remodel, new group campsite, new campground host sites, new recreation vehicle (RV) dump station, new campfire center, SVRA maintenance area improvements, ranger station expansion, volunteer training area enhancements, new greenhouse, helicopter pad relocation, SVRA headquarters area improvements, water treatment facility upgrade, water tower relocation, and concession store upgrade and relocation would affect long-term water quality by adding impervious surfaces (in the form of pavement and buildings) and thereby increasing urban stormwater runoff. Operation of the proposed new kid's minibike track, Front Hills motorbike trail, Creekside pedestrian trail, interpretive loop trails, and the additional visitor recreation area would affect long-term water quality by increasing the potential for operational erosion. New non-motorized access in Waterfall Canyon and rebuilt trails in the Franciscan area could also increase the potential for operational erosion in the watershed. These projects include intensification of development on existing sites, and limited changes from undeveloped to developed uses. New development activities have the potential to alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Changes to a more developed state, if not properly managed, can adversely affect water quality because additional urban runoff pollutants such as sediment, trash, organic contaminants, nutrients, trace metals, pathogens (e.g., bacteria and viruses), and oil and grease compounds can degrade receiving water quality.

The SVRA maintenance area operates under an existing operational SWPPP with site-specific BMPs designed to reduce the downstream transport of sediment and other pollutants. Stormwater runoff from the SVRA maintenance area is discharged into a vegetated swale along the east side of the facility. From this swale, water flows into a culvert and is discharged into Corral Hollow Creek. Operational BMPs include maintenance of the vegetated swale, along with straw wattles around the swale, both of which serve to filter out sediment and other pollutants prior to discharge into the creek. In addition to the sediment basins on the south side of Corral Hollow Creek, there are a variety of culverts on the north side of Corral Hollow Creek through which stormwater runoff from the SVRA is discharged. These existing culverts, and the existing sediment basins would continue to be utilized in conjunction with other BMPs as specified in the *Stormwater Management Plan for the Carnegie State Vehicular Recreation Area* (SWMP) (State Parks 2012) to serve runoff from the proposed new and improved facilities.

Several existing regulations would apply to operation of the proposed new and improved facilities, which would reduce or avoid impacts related to long-term operational erosion, sedimentation, and water quality degradation. The SWRCB requires implementation of BMPs where a discharge has the potential to cause or contribute to pollution or contamination of stormwater, an existing storm drainage system, or receiving waters. Receiving waters include both groundwater and surface water. Groundwater quality can be affected either by direct contact during construction-related earthmoving activities, or by indirect contact as a result of percolation of stormwater. Earthmoving activities that could encounter groundwater are issued WDRs by the Central Valley RWQCB through the project-specific permitting process; the WDRs contain provisions that are specifically intended to protect groundwater quality. Protection of surface water and groundwater quality from stormwater runoff and percolation is accomplished through compliance with the SWRCB's *Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems* (Phase II Small MS4 General Permit), Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004 (SWRCB 2013). Under the MS4 Phase II General Permit for stormwater discharge, State Parks is required to develop, administer, implement, and enforce a SWMP (discussed below) to protect and improve stormwater quality.

The SWMP was developed to comply with the SVRA's MS4 General Permit. It was designed to reduce or eliminate pollutant discharges from the planning area (according to the "maximum extent practicable" performance standard specified in CWA Section 402[p]) by providing descriptive BMPs that are currently being used or are proposed for stormwater management in the planning area. The SWMP includes provisions related to the following components as required by SWRCB:

- Pollution Prevention of Stormwater and Non-Stormwater Runoff
- Education and Outreach Program

- Public Involvement and Participation Program
- Illicit Discharge Detection and Elimination Program
- Construction Site Runoff Control Program
- Pollution Prevention/Good Housekeeping Program
- Post-Construction Stormwater Management Program
- total maximum daily loads (TMDL) Compliance Requirements
- Annual Reporting Requirements

Post-construction storm water management primarily consists of non-structural and structural BMPs. Non-structural BMPs include strategies and planning procedures for guiding growth and development away from sensitive areas. Preservation of riparian zones, minimization of disturbance and imperviousness, and maximization of open space are also considered non-structural BMPs. Structural BMPs include treatment devices designed to reduce pollutants through sedimentation, adsorption, decomposition, filtration, plant up-take, and infiltration. The SWMP requires implementation of BMPs to protect water quality and beneficial uses of receiving waters as designated in the Basin Plan. As part of the Carnegie SWMP, structures, roads, and trails in the planning area would be properly sited with vegetated buffers. In addition, stream crossings would be sited for circulation and design measures that would reduce erosion, minimize the downstream sedimentation effects of crossings, and limit other water quality effects. Two of the five existing stream crossings in the SVRA have already been hard surfaced. Design measures for roads and trails may include providing sediment traps or filter areas, armoring stream channel approaches, installing culverts, hardening the stream crossing surface, protecting streambanks from vehicle backwash and overflow during flooding, and modifying super elevation (direction of tilt) so that roads and trails drain away from stream corridors to the extent possible. The sediment basins in the Tyson's Pond, Carrol Canyon, and Kiln Canyon watersheds are structural BMPs that will continue to function as directed in the SWMP.

The SWRCB requires that an element be included regarding detection and elimination of illicit discharges, to encourage operators to develop an extensive awareness of their storm sewer systems and the potential situations that can result in an illicit discharge. State Parks has implemented and would continue to implement BMPs throughout the planning area to reduce runoff and control erosion, using sediment ponds, erosion control blankets, seed, mulch, fiber rolls, gully rehabilitation, and dust suppressants. To meet the minimum requirements for detection and elimination of illicit discharges as required by the MS4 Permit, the Carnegie SWMP contains the following key requirements (State Parks 2012:25–31):

- mapping of pollutant sources;
- signage explaining why discharges are detrimental and directing visitors to contact park headquarters if an illicit discharge is observed;
- an inspection and elimination program that includes:
  - regular detailed visual inspections of the planning area, with results recorded on an inspection form filed at the park headquarters, including the type of discharge and the corrective measure taken; and
  - investigation of illicit discharges that are brought to the attention of park staff by visitors, also requiring that results be recorded on an inspection form filed at the park headquarters, including the type of discharge and the corrective measure taken; and
  - dissemination of educational materials to park visitors.

To meet the minimum requirements for pollution prevention and good housekeeping as required in the MS4 Permit, the Carnegie SWMP includes the following key requirements (State Parks 2012:40–45):

- presentation of an annual training program for all maintenance personnel, to educate Carnegie SVRA staff members about proper operation and maintenance techniques, designed to minimize or prevent pollutants from being mobilized into receiving water bodies;
- enforcement of vehicle and equipment maintenance, fueling, and washing standards, such as inspection and prompt repair of leaks and limiting vehicles washing to designated areas;
- implementation of appropriate hazardous-materials handling and storage procedures;
- spill prevention and control, as specified in the injury and illness prevention plan prepared by State Parks for the planning area;
- proper waste storage and litter control; and
- implementation of sanitary/septic tank management procedures, designed to prevent contamination of surface water or groundwater.

The SWMP also includes detailed requirements to reduce erosion and sediment transport, in the Construction Site Stormwater Runoff Control, Post Construction Storm Water Management, and OHV Trails and Facilities Management elements.

All regulated State Parks projects that create and/or replace 5,000 square feet or more of impervious surface are required to implement site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification management. The implementation of Low Impact Development (LID) measures will also be evaluated for feasibility. Specific details related to required design, stormwater runoff calculation and storage/detention, treatment methods, and LID features are contained in the SWMP.

The SVRA maintenance area implements BMPs consistent with the CASQA *Municipal Stormwater BMP Handbook* (CASQA 2004) or its equivalent, including annual reporting of any structural control measures and treatment systems.

The OHV BMP Manual (State Parks 2007b) provides the methods necessary for Carnegie SVRA staff to minimize the impacts of erosion, sedimentation and other non-stormwater pollutants related to OHV trails and other improvements. The BMP Manual includes measures that minimize or eliminate the effects of soil erosion and sedimentation due to stormwater and non-stormwater discharges. The BMP Manual includes a variety of site-specific practices including measures that are designed to prevent erosion; provide surface stabilization; control dust track out, runoff, and sediment; ensure proper design of roads and trails; provide for restoration and rehabilitation; along with measures developed specifically for park operations and maintenance.

Soils and water goals and guidelines in Chapter 4 “The Plan,” of the General Plan (shown below) would be implemented to reduce operational erosion and sedimentation, and ensure compliance with Basin Plan standards.

Water Goal 2: Manage the SVRA for the protection of water quality while maintaining a quality OHV recreational experience.

- **Water Guideline 2.2:** Implement best management practices (BMPs) in operating the SVRA, consistent with the *Storm Water Management Plan for Carnegie SVRA* (SWMP) or applicable subsequent document. Monitor water quality regularly and implement adaptive management practices as warranted. Adaptive management practices used may include permanent or seasonal area closures, facility redesign, and hillside restoration.
- **Water Guideline 2.3:** Implement the requirements of the SWMP or subsequent amendments or replacement documents. These requirements include use of sediment basins, revegetation and erosion control blankets, dust suppressants, gully rehabilitation, and monitoring for water quality as prescribed in the plan and may include additional measures in the future.
- **Water Guideline 2.4:** Before, during, and after the construction of facilities proposed and envisioned in this General Plan, implement all water quality control measures required under the National

Pollutant Discharge Elimination System Construction General Permit. Develop a storm water pollution prevention plan, including the identification of BMPs that must be implemented to reduce water quality degradation of receiving waters during and after construction activities. Incorporate construction BMPs from the *OHV BMP Manual for Erosion and Sediment Control* (OHV BMP Manual) or subsequent applicable document, as appropriate.

- **Water Guideline 2.5:** When developing detailed plans for facilities proposed and envisioned in this General Plan, incorporate permanent water quality control features, as appropriate, with guidance from the SWMP and any subsequent amendments or replacement documents. Incorporate information from the OHV BMP Manual and the OHMVR *Soil Conservation Standard and Guidelines* (or subsequent amendments) as appropriate to designs. Select water quality control features appropriate to site conditions at Carnegie SVRA and consistent with state-of-the art science on water quality management.
- **Water Guideline 2.6:** To reduce erosion and sedimentation, improve areas that have experienced substantial erosion from surface water runoff as determined by annual inspections. Implement rehabilitation concepts for these features as described in the SWMP or subsequent or replacement documents.
- **Water Guideline 2.7:** Close an area to OHV use if it has been determined that the area cannot feasibly be rehabilitated or reclaimed in accordance with OHMVR Division water quality management standards.
- **Water Guideline 2.8:** To minimize erosion problems, landslide hazards, and costly maintenance, consider invoking the temporary closure of portions or all of the SVRA based upon conditions established by the rain closure policy. That policy will be reviewed and updated as necessary.
- **Water Guideline 2.9:** Prohibit recreational use of special vehicles and accessories, such as “widowmaker” tires, chained tires, or tracked vehicles, in the SVRA unless special permission is given by the District Superintendent. The District Superintendent has the authority to prohibit use of any vehicle or accessory that is inappropriate in the SVRA.

Soils Goal 1: Manage the SVRA for a balance of uses that allow protection and conservation of soil while maintaining a quality OHV recreational experience.

- **Soils Guideline 1.1:** Manage Carnegie SVRA facilities to meet the current OHMVR Division *Soil Conservation Standard and Guidelines* or subsequent amendments or replacement documents.
- **Soils Guideline 1.3:** Incorporate the guidance provided in the OHV BMP Manual or subsequent or replacement document when planning for the development of new facilities. Select, implement, and maintain BMPs, including those designed for stockpiles, during and after construction activities to avoid soil loss and the potential for resulting air pollution or degradation of water quality.
- **Soils Guideline 1.4:** Use slope to help manage soils. A full range of park facilities may be considered on areas with less than 20 percent slopes. Trails may be constructed (with BMPs) in areas with slopes between 20 percent and 45 percent, but buildings should not be constructed in these areas. On areas with slopes in excess of 45 percent, trails and park facilities should be limited and serve only the most advanced riders. Appropriate BMPs should be implemented in each area to manage erosion potential.

All of the proposed new and improved facilities are required to adhere to the SWRCB’s Phase II MS4 Permit requirement, along with the Carnegie SWMP and OHV BMP Manual requirements related to stormwater management and discharge and control. Compliance with these existing laws, regulations, and plans and adherence to General Plan goals and guidelines would serve to minimize long-term operational water quality impacts associated with operation of the proposed facility projects to reduce erosion and sedimentation, protect beneficial uses of receiving waters as designated in the Basin Plan, and comply with WDRs issued to meet pollutant total maximum daily loads (TMDLs) established by the Central Valley RWQCB. The new SVRA maintenance area bridge would replace the existing bridge and would be of a similar size, and therefore would not add new impervious surfaces. Furthermore, the new bridge would not be located in the bed or bank of Corral Hollow Creek and therefore would not result in

increased hydraulic scouring or associated downstream sediment transport. Therefore, the impact is considered **less than significant**.

The proposed water treatment facility upgrade would include a new water treatment facility building, new water monitoring equipment with a chlorine injection system, and other modern efficiency and safety features including generator backup power. However, the proposed facility upgrades have not yet been designed and no details are available regarding the water quality treatment system. Since no details are available, it would be too speculative to attempt to reach an impact conclusion. A future CEQA analysis would be required for the water treatment facility upgrade project.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation required.

Impact 3.10-2. Substantially Deplete Groundwater Supplies or Substantially Interfere with Groundwater Recharge such that Sustainable Groundwater Management of the Basin Would be Impeded?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10%. New sources of groundwater or substantial increases in groundwater use would not be required. Therefore, General Plan implementation would result in **no impact** related to substantial depletion of groundwater supplies or interference with recharge, and would have **no impact** related to groundwater sustainability.

New and Improved Facilities

Construction and Operation
The SVRA is not located in a groundwater basin as defined by the California Department of Water Resources (DWR 2019). Therefore, the SVRA is not subject to the requirements of the Sustainable Groundwater Management Act. A Groundwater Sustainability Plan for the SVRA or the surrounding area is not required nor are there any plans to prepare one. Therefore, the proposed new and improved facilities would have **no impact** related to groundwater sustainability.

The SVRA is situated in an undefined groundwater area where water is drawn from fractured bedrock. Groundwater quantity and quality varies from well site to well site because of the unpredictable yields of the fractured rock system that typifies the regional geology. The primary source of groundwater recharge in the planning area is located within the alluvial soils in and around Corral Hollow Creek. However, some groundwater recharge also occurs throughout the planning area as rainfall penetrates through the shallower soil layers and into the cracks of fractured bedrock on the hillsides. As part of the *Corral Hollow Watershed Assessment,* Salix and Geosyntec indicated that less than 5 percent of the SVRA consists of impervious surfaces (State Parks 2007a:25). The new and improved facilities that would include new impervious surfaces consist of small parking pads within the campground remodel, campground host sites, and group campsite; a small amphitheater and stage in the campfire center; and a small concrete apron around the RV dump station. New impervious surfaces would also be associated with the upgraded and relocated concessions store, SVRA maintenance area improvements, ranger station expansion, volunteer training area enhancements, new greenhouse, helicopter pad relocation, SVRA headquarters area improvements, and water tower relocation. However, this would represent a very small area of new impervious surfaces as compared to the large amount of pervious acreage in the planning area.

The new kid's minibike track, Front Hills motorbike trail, Creekside pedestrian trail, interpretive loop trails, and visitor recreation area would not result in new impervious surfaces (e.g., pavement), although continued use of these areas over a period of many years would result in soil compaction that would reduce groundwater recharge to some extent. Trail improvements in the Waterfall Canyon and Franciscan area may also result in limited soil compaction that would reduce groundwater discharge.

Water Guideline 2.1 in Chapter 4 of the General Plan (shown below) requires the management of vegetated buffers along stream corridors that would allow for continued infiltration in those areas. Also, although OHV use would result in compaction of the roads and trails over time, the trails would not be hard surfaced, and some infiltration to groundwater would still occur.

Water Goal 2: Manage the SVRA for the protection of water quality while maintaining a quality OHV recreational experience.

- **Water Guideline 2.1**: Avoid siting facilities in and immediately adjacent to riparian or stream corridors or within waters of the United States or the state, including seeps, ponds, or drainages. Stream corridors shall be managed with vegetated buffers and crossings shall be properly sited for circulation and designed to minimize erosion and other water quality impacts. Design measures include but are not limited to:
  - armoring approaches,
  - providing sediment traps or filter areas,
  - hardening the crossing surface,
  - protecting the streambanks from vehicle backwash and overflow during flooding, and
  - modifying super elevation (direction of tilt) such that roads and trails drain away from stream corridors.
  - Culverts or bridge crossings shall be considered in highly erosive areas.

Due to the small size of the proposed new impervious surfaces, and with implementation of General Plan goal and guidelines, the proposed new and improved facilities would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge. Furthermore, the new maintenance area bridge would replace the existing bridge and would be of a similar size, and therefore would not add new impervious surfaces. The impact would be **less than significant**.

The proposed water treatment facility upgrade would include the potential for additional groundwater withdrawal to supply potable water for SVRA needs, and would result in new increased impervious surfaces from facility expansion. However, the exact amount of the potential groundwater increase is unknown at this time, and the facility has not yet been designed. Since no details are available, it would be too speculative to attempt to reach an impact conclusion. A future CEQA analysis would be required for the water treatment facility upgrade project.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation required.

Impact 3.10-3. Substantial Alteration of Drainage Patterns Resulting in Increased Stormwater Runoff Volumes that would Exceed Stormwater Drainage Capacity or Substantially Increase Downstream Flooding?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10%. Operation and maintenance activities associated with General Plan Implementation may include grading of areas larger than 50 cubic yards (the standard amount that is typically considered routine maintenance). Grading of amounts larger than 50 cubic yards is subject to all resource management guidelines and would be conducted in full compliance with all applicable permits such as the SWRCB's NPDES construction and operational permit requirements, Carnegie SWMP, and OHV BMP Manual. Therefore, General Plan Implementation would not result in substantial alteration of

drainage patterns that could in turn substantially increase downstream flooding or exceed stormwater drainage systems, and this impact is considered **less than significant**.

New and Improved Facilities

Construction and Operations
As described in Impact 3.10-1, the campground remodel, campground host sites, group campsite campfire center, RV dump station, upgraded and relocated concessions store, SVRA maintenance area improvements, ranger station expansion, volunteer training area enhancements, new greenhouse, helicopter pad relocation, SVRA headquarters area improvements, water tower relocation, and new maintenance area bridge could result in changes to drainage patterns and would increase the amount of impervious surface area that would increase the volume and peak-flow rate of stormwater runoff. The proposed new kids minibike track, Creekside pedestrian trail, interpretive loop trails, Front Hills motorbike trail, and visitor recreation area would not include new paved surfaces; however, continued use over a period of many years would result in soil compaction that could also increase the volume and peak-flow rate of stormwater runoff. This runoff could result in increased erosion and/or flooding if left unchecked. New and improved trails in the Waterfall Canyon and Franciscan area could also contribute to increased erosion, if unchecked. The new maintenance area bridge would not be installed within the bed or bank of Corral Hollow Creek and would be of the same size as the existing bridge.

State Parks does not have a separate storm water system to manage stormwater runoff from the planning area. Runoff from the planning area infiltrates into the subsurface, evaporates, or flows directly into Corral Hollow Creek and its tributaries as surface water runoff. As described in Impact 3.10-1, the Tyson's Pond, Carrol Canyon, and Kiln Canyon watersheds in the SVRA have sediment basin systems that help to reduce pollutant transport (primarily sediment) into Corral Hollow Creek. The OHV BMP Manual (State Parks 2007b) provides the methods necessary for Carnegie SVRA staff to minimize the impacts of erosion, sedimentation, and other non-stormwater pollutants related to OHV trails and other improvements. The BMP Manual includes measures that minimize or eliminate the effects of soil erosion and sedimentation due to stormwater and non-stormwater discharges. The BMP Manual includes a variety of site-specific practices including measures that are designed to prevent erosion; provide surface stabilization; control dust track out, runoff, and sediment; ensure proper design of roads and trails; provide for restoration and rehabilitation; along with measures developed specifically for park operations and maintenance.

The Carnegie SWMP (State Parks 2012) requires implementation of BMPs to protect water quality and beneficial uses of receiving waters as designated in the Basin Plan. As part of the SWMP, structures, roads, and trails in the planning area would be properly sited with vegetated buffers. Preservation of riparian zones, minimization of disturbance and imperviousness, and maximization of open space are also examples of non-structural BMPs included in the SWMP. Structural BMPs included in the SWMP include treatment devices designed to reduce pollutants such as the existing sediment basins. The SWMP also includes detailed requirements to reduce erosion and sediment transport in the Construction Site Stormwater Runoff Control, Post Construction Storm Water Management, and OHV Trails and Facilities Management elements.

The water and soils goals and guidelines described above in Impact 3.10-1 would reduce operational erosion, sedimentation, and flooding, and ensure compliance with Basin Plan standards. All of the proposed new and improved facilities are required to adhere to the SWRCB's Phase II MS4 Permit requirement, along with the Carnegie SWMP and OHV BMP Manual requirements related to stormwater management and discharge and control. Compliance with these existing laws, regulations, and plans and adherence to General Plan guidelines would serve to minimize long-term operational water quality impacts associated with operation of the proposed project facilities in order to reduce erosion, protect beneficial uses of receiving waters as designated in the Basin Plan, and reduce flooding. Therefore, this impact is considered **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation required.

Impact 3.10-4. Impede Flood Flows or Risk Release of Pollutants from Inundation in a Flood Zone?

General Plan Implementation

General Plan implementation would involve operations and maintenance activities at existing facilities, some of which are already located in flood hazard zones. General Plan implementation would not increase the hazards from new impedance of flood flows or risk of release of pollutants in these hazard zones as compared to existing conditions, and there would be **no impact**.

New and Improved Facilities

Construction and Operations
As shown in Figure 2-9 in Chapter 2 of the General Plan, a portion of the SVRA on both sides of Corral Hollow Creek has been mapped by the Federal Emergency Management Agency (FEMA) as a 100-year floodplain, Zone A (i.e., areas that do not have previously determined flood depths or base flood elevations). The remaining portion of the planning area is designated by FEMA as having a minimal flood risk (Zone X) (FEMA 2009).

Many of the proposed facility projects (e.g., ranger station expansion, campground remodel, new campfire center, portions of the new Front Hills motorbike trail) described in Chapter 2 of this EIR would be installed within a FEMA 100-year floodplain. In addition, the western portion of the proposed Creekside pedestrian trail (within Alameda County) would be located within a DWR Awareness 100-year floodplain (DWR 2023). However, most of the existing Carnegie SVRA facilities, such as the campground, concessions store, ranger station, SVRA maintenance area, ATV track, 4x4 area, and part of the MX track, along with numerous OHV trails, are already situated within these 100-year floodplains. The helicopter pad would be a flat paved surface that would not impede flood flows. The proposed SVRA maintenance area improvements, SVRA headquarters area improvements, new greenhouse, water treatment facility upgrade, and Waterfall Canyon and Franciscan trail improvement would not be located in a flood zone.

During construction activities, construction materials and equipment may be staged within each site-specific project site. Small quantities of hazardous materials such as fuels, oils, lubricants, and paint would be temporarily stored within each staging area. Most project-related work would occur during the spring, summer, and fall. If construction work is necessary during the winter rainy season, State Parks would require construction contractors to remove any hazardous materials from staging areas if flood warnings are issued.

Salix and Geosyntec (State Parks 2007a:113–118) prepared a hydraulic analysis for the floodplain area along Corral Hollow Creek within the SVRA (which they indicated was intended for use if structures were installed within the floodplain), and as supporting documentation for a Conditional Letter of Map Revision from FEMA. However, the modeling for that analysis was conducted for a proposed stream restoration project that would have involved installing bioengineered and gabion-type structures for streambank stabilization, constructing engineered low-water stream crossings, and excavating and realigning Corral Hollow Creek. This stream restoration project has not been implemented, and discussions between State Parks and the Central Valley RWQCB have concluded that it may never be implemented. Because the hydraulic analysis assumed that the stream restoration features and realignment would be implemented before development of any structures, the modeling results in the watershed assessment cannot be used for this impact analysis related to the future placement of structures within the 100-year floodplain.

Water Guideline 4.1 in the General Plan (shown below) applies to all structures that are proposed within the floodplain:

- **Water Goal 4**: Anticipate issues related to flood control when planning projects for development at the SVRA.
  - **Water Guideline 4.1:** When developing detailed plans for facilities envisioned in this General Plan, consider flood hazard areas in the Corral Hollow Creek floodplain. Design

facilities to be located outside of the flood hazard areas wherever possible. If facilities cannot be located outside of potential flood hazard areas, they should be designed to withstand occasional flooding; minimize effects on facilities from seasonal flooding; and protect visitors from flood hazards through design, and through applications of adaptive management such as seasonal closures of areas at risk of flooding. If structures must be located within potential flood areas, they should be designed such that the structure does not substantially impede or redirect flood flows.

If buildings or bridge overcrossings are planned for development in the 100-year floodplain, State Parks should do the following:

- Prepare an analysis using a standard hydraulic model, such as the U.S. Army Corps of Engineers' Hydraulic Engineering Center River Analysis System. Model existing and projected water surface elevations, flow rates, and flow widths for the 2-year, 10-year and 100-year (0.01 annual exceedance probability) storm events. The modeling results will demonstrate that flood flows will be appropriately channeled and contained, so that the risk to people or damage to structures within or downgradient from the proposed development in the Carnegie SVRA stream reach will not occur. The modeling results also will demonstrate that hydromodification will not be increased from predevelopment levels, indicating that existing stream geomorphology will not be altered.
- Prepare and submit a Conditional Letter of Map Revision to FEMA, showing the existing 100-year (0.01 annual exceedance probability) floodplain for the site, and obtain an approved Conditional Letter of Map Revision from FEMA for the proposed developed condition.

The campground, picnic areas, restrooms, and parking areas will not be included in these requirements.

As noted above, the proposed SVRA maintenance area improvements, SVRA headquarters area improvements, new greenhouse, water treatment facility upgrade and trails in the Waterfall Canyon and Franciscan area would not be located in a flood zone, and therefore would result in **no impact** from impedance of flood flows or risk of release of pollutants from inundation in a flood zone.

As noted above, most of the existing SVRA facilities are already located within the 100-year floodplain associated with Corral Hollow Creek. Upgrades and improvements associated with the proposed facilities would provide additional variety of recreational experiences without exposing substantial numbers of new visitors or park staff to new floodplain hazards, and would not impede flood flows. Compliance with General Plan goals and guidelines would ensure that the facility upgrades and relocations would not impede flood flows. Furthermore, State Parks' staff monitors weather events during the winter rainy season and would close facilities as necessary. Therefore, the proposed new and improved facilities would not impede flood flows or risk release of pollutants from inundation in a flood zone, and this impact is considered **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan?

General Plan Implementation

Ongoing operation of park management programs and plans involves structural maintenance and upkeep. New construction only includes facilities that are consistent with existing facilities and do not expand the existing footprint above 10%. Operation and maintenance activities associated with General Plan Implementation may include grading of areas larger than 50 cubic yards (the standard amount that is typically considered routine maintenance). Grading of amounts larger than 50 cubic yards is subject to all resource management guidelines and would be conducted in full compliance with all applicable permits

such as the SWRCB's NPDES construction and operational permit requirements, Carnegie SWMP, and OHV BMP Manual. New sources of groundwater or substantial increases in groundwater use would not be required. Therefore, General Plan Implementation would result in **less-than-significant impact** from conflicts with or obstruct implementation of the Basin Plan, and would result in **no impact** related to conflicts with groundwater sustainability.

New and Improved Facilities

Construction and Operations
As discussed in detail in Impact 3.10-1, all of the proposed new and improved facility projects within the SVRA are required to implement the SWRCB's NDPES Construction General Permit requirements and operational Phase II MS4 Permit requirements, and the Carnegie SWMP and OHV BMP Manual requirements, related to stormwater management and discharge and control. Soils and Water Guidelines in the General Plan would also be implemented to reduce construction and operational erosion, sedimentation, and flooding, and ensure compliance with Basin Plan standards. Compliance with these existing laws, regulations, and plans would serve to minimize both short-term water quality impacts from construction and long-term water quality impacts associated with development at the proposed new facilities in order to protect beneficial uses of receiving waters as designated in the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2019), and comply with WDRs issued to meet pollutant total maximum daily loads established by the Central Valley RWQCB. Therefore, the new and improved facilities would not conflict with or obstruct implementation of the Basin Plan, and this impact is considered **less than significant**.

As described in Impact 3.10-2, the SVRA is not situated within a DWR-defined groundwater basin and therefore is not subject to the requirements of the SGMA. Therefore, a Groundwater Sustainability Plan is not required and has not been prepared. Because there is no Groundwater Sustainability Plan, the proposed new and improved facilities would not conflict with basin planning. Because of the amount of new impervious surfaces would be minor in comparison to the permeable area throughout the SVRA, the proposed projects would not substantially reduce groundwater recharge. This is impact is considered **less than significant**.

The proposed water treatment facility upgrade would include the potential for additional groundwater withdrawal to supply potable water for SVRA needs and would result in new increased impervious surfaces from facility expansion. However, the exact amount of the potential groundwater increase is unknown at this time, and the facility has not yet been designed. Since no details are available, it would be too speculative to attempt to reach an impact conclusion. A future CEQA analysis would be required for the water treatment facility upgrade project.

Mitigation Measures

No mitigation required.

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3.11 Land Use and Planning

This section describes existing land use and conditions in the planning area. It also discusses the federal, state, and local regulatory framework and evaluates whether implementing the Carnegie SVRA General Plan would result in a physical division of an established community or adverse effects to land use and planning. This section further describes the General Plan's consistency with state, regional, and local plans that are not already addressed in the other resource sections of this EIR.

3.11.1 Existing Conditions

Carnegie SVRA is located in Alameda and San Joaquin counties, approximately 60 miles southeast of San Francisco, 12 miles east of Livermore, and 12 miles southwest of Tracy (see Figure 1-1 in Chapter 1, "Introduction," of the General Plan). Most of the SVRA lies south of Corral Hollow Road/Tesla Road. The roadway providing access to the SVRA is named Corral Hollow Road in San Joaquin County and Tesla Road in Alameda County; visitors may access this roadway from Interstate 580 in either county. A very small operations area for the SVRA north of Corral Hollow Road (approximately 4 acres) includes SVRA staff offices and residences, and the SVRA water treatment facility.

Section 2.1, "Regional Land Use and Facilities" in Chapter 2, "Existing Conditions," of the General Plan describes regional and surrounding land uses, and Section 2.2, "Existing Carnegie SVRA Land Use and Facilities," describes existing land uses and facilities in the planning area. Land uses near the planning area are shown in Figure 2-1 of the General Plan.

3.11.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to land use are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

Section 5090.43 of the California Public Resources Code (PRC) outlines the following policies pertinent to Carnegie SVRA:

(a) State vehicular recreation areas shall be established on lands where there are quality recreational opportunities for off-highway motor vehicles and in accordance with the requirements of Section 5090.35. Areas shall be developed, managed, and operated for the purpose of making the fullest public use of the outdoor recreational opportunities present. The natural and cultural elements of the environment may be managed or modified to enhance the recreational experience consistent with the requirements of Section 5090.35.

(b) Lands for state vehicular recreation areas shall be selected for acquisition so as to minimize the need for establishing sensitive areas.

(c) After January 1, 1988, no new cultural or natural preserves or state wildernesses shall be established within state vehicular recreation areas. To protect natural and cultural values, sensitive areas within state vehicular recreation areas may be designated by the division if the Off-Highway Motor Vehicle Recreation Commission holds a public hearing and makes a recommendation therefore. These sensitive areas shall be managed by the division in accordance with Sections 5019.71 and 5019.74, which define the purpose and management of natural and cultural preserves. If facility use by off-highway motor vehicles damages natural or cultural resources, appropriate measures must be taken to protect these lands from further damage. These measures may include building physical barriers and will include restoring natural resources and repairing damage to cultural resources.

State Parks prepares general plans for its park units (e.g., SVRAs), which direct the long-range development and management of those park units by providing broad policy and program guidance.

Every State Park unit must have an approved general plan before any major park facilities can be developed. State Parks adopted the first general plan for Carnegie SVRA in 1981. Updating the Carnegie SVRA General Plan will result in a new broad-based policy document that establishes a long-range vision for the SVRA and provides goals and guidelines to direct future improvements, services, and programs. By providing a clear purpose, a vision, and long- and short-term goals and guidelines, the General Plan defines the broadest possible management framework for program development, ongoing management, and public use of Carnegie SVRA. This framework is intended to guide day-to-day decision making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals.

General plans do not expire; rather, they are reconsidered for amendments, revisions, or updates when circumstances and needs dictate or when substantial development considerations arise that were not addressed in the general plan or evaluated during the general plan process.

Regional and Local Plans, Policies, Regulations, and Ordinances

Because Carnegie SVRA is owned and operated by the state, it is not subject to local policies or ordinances. However, Alameda County General Plan (1994) and San Joaquin County General Plan (2016) land use policies are described in this section of the EIR as a reference. There are no additional General Plan policies applicable to land use and planning that are not already addressed in the other resource sections of this EIR.

Alameda County

The western portion of the planning area is within the East County Plan Area (ECAP), which covers 418 square miles in the eastern portion of Alameda County, including the area surrounding Bethany Reservoir.[1] The ECAP was adopted in 1994 and amended in 2002. The plan identifies the need for public facilities and services in eastern Alameda County, and it provides the basis for county zoning and approvals and other regulatory actions (Alameda County 2002). In November 2000, Alameda County voters passed Measure D, which amended the ECAP to specify the location and definition of land uses in eastern Alameda County.

The planning area is designated by the ECAP as Parklands (Alameda County 2022a) (see Figure 2-23 in Chapter 2 of the General Plan). This designation provides for existing and planned public parks, open space, and recreational uses, including community, subregional, and regional facilities.

Alameda County Code

Title 17, “Zoning,” of the County’s Municipal Code sets out the zoning regulations applicable throughout the County. Title 17 promotes and protects the public health, safety, peace, comfort, convenience and general welfare by implementing the general plan of the county through guiding and regulating development; protecting the character and stability of existing development, and to encourage orderly and beneficial new development; providing adequate light, air, privacy, and convenience of access to property, and to secure safety from fire and other dangers; preventing overcrowding the land and undue congestion of the population; and regulating the location of buildings and the use of buildings and land so as to prevent undue interference with existing or prospective traffic movements on public thoroughfares.

The planning area is zoned by the County as Agriculture (A) (Alameda County 2022b). As described in Section 17.06 of the Alameda County Zoning Code, this district promotes implementation of general plan land use proposals for agricultural and other nonurban uses, to conserve and protect existing agricultural uses, and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare. Permitted land uses include single-family dwelling units; agricultural land uses, including crop, vine or tree farm, truck garden, plant nursery, greenhouse, apiary, aviary, and horticulture; wineries, microbreweries, or olive oil mills; grazing and breeding of horses

[1] The Alameda County General Plan is comprised of three Area Plans that each contain land use and circulation elements for their respective geographic areas, as well as area-specific goals, policies, and actions pertaining to open space, conservation, safety, and noise. Each Area Plan also contains a land use diagram which designates the type, distribution and general intensity of land uses allowed within the plan area.

and cattle; fish hatcheries and rearing ponds; private and public hiking and riding trails; and boarding stables (Alameda County 2022c).

San Joaquin County

General Plan Land Use Designation
A narrow strip of Carnegie SVRA along Corral Hollow Road is designated as Open Space–Resource Conservation (OS/RC) and the rest of the SVRA in San Joaquin County is designated as Public (P/F) (San Joaquin County 2017a) (see Figure 2-23 in Chapter 2 of the General Plan). The San Joaquin County General Plan describes these land use designations as follows (San Joaquin County 2016):

- **Open Space–Resource Conservation (OS/RC):** This designation provides for areas with substantial natural resources that should remain in open space, used for recreation, or preserved and used for resource production (e.g., mining). The Open Space–Resource Conservation designation may be applicable to any area of the county that is essentially unimproved and planned to remain open in character, improved for recreational uses, managed in the production of resources, protected from development-related impacts, or restricted from access for the protection of the community (e.g., floodplains).
- **Public (P/F):** This designation provides for location of services and facilities that are necessary to the health and welfare of the community. The Public designation may be applicable to any area of the County where a public or quasi-public use is appropriate or where a public agency owns property. Building types vary based on use.

San Joaquin County Code
Title 9, “Development Title,” of the County’s Municipal Code sets out the zoning regulations applicable throughout the County. Title 9 promotes and protects the public health, safety, peace, comfort, convenience and general welfare by implementing the general plan of the county. The objectives of Title 9 include encouraging the most appropriate use of land and the harmonious relationship among land uses; promoting a safe and efficient traffic circulation system; providing open spaces for light and air; preventing overcrowding of land and the undue concentration of population; securing safety from fire and other dangers; facilitating the provision of needed community facilities; and conserving the County's natural beauty, to improve its appearance, and to enhance its physical character.

The planning area is designated by the County as AG-160 (General Agriculture,160-acre minimum parcel size) (San Joaquin County 2017b). The AG zone is established to preserve agricultural lands for the continuation of commercial agricultural enterprises. Permitted land uses include single-family dwelling units, general animal raising, family food production, crop production, and minor utility services (San Joaquin County 2022). Parks, nature preserves, and campgrounds are permitted uses with issuance of a use permit (San Joaquin County 2022).

3.11.3 Impact Analysis and Mitigation Measures

Methodology

As stated previously, Carnegie SVRA is owned and operated by the state; therefore, it is not subject to local policies or ordinances. However, Alameda County and San Joaquin County land use designations and zoning for the planning area were considered as part of this analysis.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact on land use and planning if it would:

a) Physically divide an established community; or

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Issues Not Discussed Further in this EIR

Physically Divide an Established Community - The only existing housing within the planning area is within the Park Headquarters Area. These residences are not known formally or informally as an established community. The nearest established community is a small private residential area containing single-family dwellings and a small rodeo arena located along Corral Hollow Creek near Mitchell Ravine. Ongoing park management programs and plans, new and improved visitor facilities, and new and improved operational facilities would be internal to the SVRA and would not physically divide an established community. Thus, **no impact** would occur and this issue is not discussed further in this EIR.

Environmental Impacts

Impact 3.11-1. Cause an Environmental Impact Due to a Conflict with a Land Use Plan, Policy, or Regulation?

General Plan Implementation

The Carnegie SVRA General Plan is a broad-based policy document that establishes a long-range vision for the SVRA and provides goals and guidelines to direct future improvements, services, and programs. By providing a clear purpose, a vision, and long- and short-term goals and guidelines, the General Plan defines the broadest possible management framework for program development, ongoing management, and public use of Carnegie SVRA. This framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals.

Management of the SVRA is undertaken in compliance with all applicable statutory and regulatory requirements as described in Section 4.4, “Goals and Guidelines,” in Chapter 4, “The Plan,” of the General Plan and each technical section of this EIR, as appropriate. Ongoing park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, are consistent with the Carnegie SVRA General Plan and would continue to be consistent with the revised General Plan. Therefore, General Plan implementation would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and there would be **no impact**.

New and Improved Facilities

New and improved visitor and operations facilities are described in Chapter 2, “Project Description,” of this EIR. The new and improved facilities support General Plan Visitor Experience and Opportunities (VEO) goals and guidelines:

VEO Goal 1: When planning for recreation opportunities and visitor services, provide a broad range of OHV recreation experiences and opportunities for visitors to enjoy and appreciate.

- **VEO Guideline 1.1:** Plan a variety of OHV activities that visitors will engage in, including off-highway motorcycles, trials bikes, ATVs, side-by-side utility vehicles, 4WD vehicles, and additional activities that may become popular in the future.
- **VEO Guideline 1.2:** Provide appropriate facilities for a range of age and skill levels from novice through expert OHV recreationists.

VEO Guideline 1.6: Allow nonvehicular uses such as hiking and picnicking in areas attractive for such use and where such activities would not be in conflict with OHV recreation or create unsafe circumstances for visitors.

VEO Goal 2: Provide state-of-the-art visitor-serving facilities to enhance the visitor experience.

- **VEO Guideline 2.1:** Develop additional recreation facilities to provide a more diverse visitor experience, to meet the recreation needs of the regional and local community, and to attract visitors from outside the region.

- **VEO Guideline 2.2:** Locate facilities to allow for effective and efficient visitor use and to provide opportunities for social interaction between user groups while minimizing potential user conflicts.

VEO Goal 3: Enhance individual-, family-, and community-centered recreational opportunities.

- **VEO Guideline 3.1:** Provide recreational opportunities that respond to local needs and interests. These could include special events for children new to OHV recreation, events planned to celebrate important local historical events, and events that emphasize safety and responsible OHV recreation.
- **VEO Guideline 3.2:** Seek to provide additional group-oriented recreational opportunities, social gathering opportunities, and facilities that are compatible with OHV use.

State Parks land use guidelines and regulations, described in Section 5090.43 of the California PRC, regulate development in Carnegie SVRA. As described in Section 4.3.2, "Visitor Experience Areas," in Chapter 4 of the General Plan, Carnegie SVRA includes eight visitor experience areas, each with different characteristics, activities, or allowable uses, and resources and related management mandates. In all of the visitor experience areas, State Parks manages natural and cultural resources to protect their integrity and comply with relevant state and federal laws and regulations regarding their management and protection. Table 4-1 in Chapter 4 of the General Plan provides descriptions of the visitor experience areas, including definitions, allowable uses, and area-specific resource management prescriptions or considerations, if applicable. Resource management goals and guidelines described in Section 4.4.6 in Chapter 4 of the General Plan would apply to all visitor experience areas. All proposed new and improved visitor facilities would be consistent with the visitor experience area in which they are located as shown in Figure 4-1 in Chapter 4 of the General Plan.

Lands in the westernmost portion of the planning area in Alameda County are designated by the ECAP as Parklands and zoned by the County as Agriculture (AG) District (Alameda County 2022a, Alameda County 2022b). The Parklands land use designation allows existing and planned public parks, open space, and recreational uses, and permitted used in the AG district include private and public hiking and riding trails. The portion of the pedestrian loop trail within Alameda County would be consistent with this land use designation and zoning.

The remainder of the planning area is in San Joaquin County and designated by the San Joaquin County General Plan as Open Space–Resource Conservation and Public and zoned by the County as AG-160 (General Agriculture, 160-acre minimum parcel size) (San Joaquin County 2017a, San Joaquin County 2017b). The Public land use designation is used for major institutional facilities, including parks and recreation facilities, and the Open Space–Resource Conservation land use designation is used for areas with significant resources that generally are to remain open space. Parks, nature preserves, and campgrounds are permitted uses with issuance of a use permit under the AG-160 zoning (San Joaquin County 2022). New and improved visitor facilities would be internal to the SVRA, and because Carnegie SVRA is owned and operated by the state, no use permit would be required.

Consistency issues between implementation of new and improved visitor facilities and other applicable land use plans and policies are related to land use regulations, which are, in part, based on avoiding or otherwise restricting uses that would adversely impact resources of the development site or adjacent land uses.[2, 3] Land use inconsistencies are not physical effects on the environment under CEQA unless it relates to a physical impact on the environment that is significant in its own right.

For an impact to be considered significant under this threshold, any inconsistency would also need to result in a significant adverse change in the environment not already addressed in the other resource sections of this EIR. Specific impacts and consistency issues associated with other resource and issue areas are addressed in each technical section of this EIR, as appropriate. These technical sections provide a detailed analysis of other relevant physical environmental effects that could result from

[2] Carnegie SVRA is owned and operated by the state; therefore, it is not subject to local policies or ordinances. Nonetheless, State Parks intends to develop Carnegie SVRA in a manner compatible with the surrounding community. Therefore, local plans, policies, and regulations are considered in each technical section of this EIR, as appropriate.

[3] "The issue of whether a proposed project is consistent with a county's general plan is not a CEQA issue…" (*The Highway 68 Coalition v. County of Monterey, et al.* [6th Dist. 2017] Cal.App.5th).

implementation of new and improved visitor facilities and identify Carnegie SVRA General Plan goals and guidelines, as necessary, that reduce impacts. Implementation of new and improved visitor facilities would not conflict with adopted land use plan, policy, or regulation that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR (air quality, biological resources, cultural resources, etc.); therefore, this impact would be **less than significant**.

For the same reasons described above, new and improved operational facilities would not conflict with adopted land use plan, policy, or regulation that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR (air quality, biological resources, cultural resources, etc.); therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation required.

3.12 Mineral Resources

This section analyses the potential impacts of implementing the Carnegie SVRA General Plan on mineral resources.

3.12.1 Existing Conditions

Section 2.3.1, “Physical Resources,” in Chapter 2 of the General Plan includes a discussion of the existing setting for mineral resources.

3.12.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

There are no federal plans, policies, regulations, or laws related to mineral resources that would apply to the proposed General Plan.

State Plans, Policies, Regulations, and Laws

There are no state plans, policies, regulations, or law related to mineral resources that would apply to the proposed General Plan.

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulations, or ordinances related to mineral resources that would apply to the proposed General Plan.

3.12.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on minerals resources is based on current land uses in the SVRA, and on changes that could occur at the SVRA from implementation of the proposed General Plan.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact on mineral resources if it would:

a) 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

b) result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Environmental Impacts

Impact 3.12-1. Result in the Loss of Availability of Regionally Important Known Mineral Resources?

General Plan Implementation

The SVRA is not located within the boundaries of a mineral land classification study under the Surface Mining and Reclamation Act, and therefore, is not part of a present-day, regionally designated “significant” mineral resource recovery zone (i.e., deposits classified as MRZ-2 by the California Geological Survey) (Jensen and Silva 1988, Stinson et al. 1987). Although the SVRA and the surrounding area formerly contained mineral resources, a substantial amount of the area’s mineral resources was removed as a

result of historic mining activities. Mining activities ended in 1960. Since that time, additional mineral resources (sand and gravel) have been discovered in the Corral Hollow alluvial fan deposits approximately 5 miles east of the SVRA near Carbona (east of Interstate 5). Mineral resource extraction has focused on that area since the 1970s (Jensen and Silva 1988).

Mining is not a currently permitted use within the SVRA, and no mining activities are planned with the SVRA in the future. Therefore, General Plan Implementation would not result in the loss of regionally designated "significant" deposits of mineral resources (i.e., deposits classified by the California Geological Survey as MRZ-2), and there would be **no impact**.

New and Improved Facilities

Construction and Operations
As discussed in detail in the *Corral Hollow Watershed Assessment* (State Parks 2007:28–33), coal, clay, gravel, lime, manganese, and sand were mined in and adjacent to the SVRA between 1855 and 1960. Several coal mining companies explored, mined, and transported coal within Corral Hollow, most notably from the Tesla Coal Mine west of the SVRA. Clay mining began in 1901 and continued intermittently west of the SVRA until 1952.

Gravel was mined from the bed of Corral Hollow Creek near the mouth of Corral Hollow and at the former townsite of Carnegie. Gravel mining operations began in 1895 and ceased in 1947. A limestone quarry was mined from 1901 to 1904, for limestone used to make cement. Mining for manganese began in 1863, at a site located approximately 1 mile southeast of the SVRA, and continued until 1922. Sand was mined from 1902 until 1960.

Because the SVRA was extensively mined for more than 100 years, substantial amounts of mineral deposits are no longer available, and the SVRA does not include deposits classified by the California Geological Survey as "regionally significant" (i.e., MRZ-2). Carnegie SVRA became a unit of the State Park system in July 1980; mining is not a permitted use within the SVRA, and no mining activities are planned with the SVRA in the future. Therefore, construction and operation of the new and improved facilities would not result in the loss of regionally designated "significant" deposits of mineral resources, and there would be **no impact**.

Mitigation Measures

No mitigation is required.

Impact 3.12-2. Result in the Loss of Availability of Locally Important Known Mineral Resources?

General Plan Implementation

As a State agency, State Parks is not required to consider the impacts of its projects related to local general plans. However, to comply with this CEQA threshold, State Parks has consulted the relevant local general plans, and presents the following for informational purposes.

The SVRA is not located in a locally designated mineral-resource recovery area in the *San Joaquin County General Plan 2035* (San Joaquin County 2016: Part 3.4). The historic coal, clay, and gravel mining operations that took place in and near the SVRA are mentioned in the mineral resources background discussion of the *Alameda County General Plan* (Alameda County 1994: Conservation Element), but the SVRA is not in a locally designated mineral-resource recovery area.

Thus, General Plan Implementation would not result in the loss of availability of locally-designated areas of significant mineral resources, and there would be **no impact.**

New and Improved Facilities

Construction and Operations
For the same reasons described above under “General Plan Implementation,” the construction and operation of new and improved facilities would result in **no impact** from loss of availability of locally important known mineral resources.

Mitigation Measures

No mitigation is required.

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3.13 Noise

This section describes ambient noise conditions in the planning area. It also discusses the federal, state, and local regulatory framework and analyses the potential noise impacts of implementing the Carnegie SVRA General Plan (also referred to as the "project").

3.13.1 Existing Conditions

Section 2.3.5, "Sound," in Chapter 2 of the General Plan includes a discussion of the existing setting for noise including acoustic fundamentals, existing sound environment, and existing noise-sensitive land uses.

Applicable Noise Terminology

The following definitions (Caltrans 2013) are applicable to this project and are provided here for reference. Additional definitions of commonly used acoustical terminology are provided in Appendix D. Appendix D also offers detailed acoustical background information – including the effects of topography, ground type, and atmospheric conditions on sound propagation. These issues are of considerable importance when addressing sound propagation and noise exposure in such an expansive project area with such varied terrain.

- **Decibels (dB):** The measure of sound pressure level. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 µPa to 100,000,000 µPa. Because of this huge range of values, sound is rarely expressed in terms of pressure. Instead, a logarithmic scale is used to describe sound pressure levels (SPLs) in terms of dB. A-weighted decibels (dBA) are commonly used to describe environmental SPLs. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment. All noise levels reported in this section are in terms of A-weighting.
- **Equivalent Sound Level (L_{eq}):** represents an average of the sound energy occurring over a specified time period. In effect, the L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour, A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a 1-hour period and is the basis for noise abatement criteria (NAC) used by Caltrans and the FHWA.
- **Day-Night Average Sound Level (L_{dn} or DNL):** is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours (10 p.m.-7 a.m.). The L_{dn} is often noted as the DNL.
- **Community Noise Equivalent Level (CNEL):** is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours (10 p.m.-7 a.m.), and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours (7 p.m.-10 p.m.). The CNEL is usually within 1 dB of the L_{dn}, and for all intents and purposes, the two are interchangeable. As it is easier to compute and of more common use, the L_{dn} is used as the long-term noise measure in this study.
- **Maximum Sound Level (L_{max}):** is the highest instantaneous sound level measured during a specified period.

Land Uses Sensitive to Noise in the Project Vicinity

Land uses in the project area are described in detail in Section 3.11, "Land Use and Planning," of this EIR. The project area is generally surrounded by open space areas. Residential housing on parcels greater than 5 acres is located to the northwest of the project site. Residences are located within 1,000 feet north and south of Tesla Road, and approximately 1,000 feet to the west of the Carnegie SVRA boundary. Residences are the only noise-sensitive land uses in the project area. Another property

surrounding the project site is ranchland. Parcel sizes consist of large parcels (110 to 280 acres) and smaller parcels (ranging in size from approximately 5 acres to 45 acres).

Ambient Noise Level Measurements

Local traffic and OHV operations in the Park are the dominant sources of noise in the project area. Ambient sound level measurements were conducted at four locations in the project area to quantify existing noise conditions. Please see Figure 2-22 in Chapter 2, "Existing Conditions," of the General Plan for the measurement locations. Continuous noise level measurements were recorded at two locations from approximately 12:00 p.m. on Wednesday, June 21, 2023, to 2:00 p.m. on Thursday, June 24, 2023. The ambient noise level measurement results are summarized in Table 3.13-1.

Table 3.13-1. Summary of Noise Measurements

Measurement Site	Noise Level Measurement Location	A-Weighted Sound Level (dBA)				
		Daytime		Nighttime		L_{dn}
		L_{eq}	L_{max}	L_{eq}	L_{max}	
LT-01	Residential West of the Project Area Boundary	45	61	43	52	50
LT-02	Office Area, North of Moto Mart	57	73	56	66	62
ST-01	Maintenance Area south of West Valley Pump	51	63	NA	NA	NA
ST-02	18600 Corral Hollow Rd	51	63	NA	NA	NA

Notes:

dBA = A-weighted decibels; L_{dn} = day-night average noise level; L_{eq} = Equivalent Sound Level; L_{max} = Maximum Sound Level; LT = Long Term; ST = Short Term.

Source: Modeled by AECOM in 2023

All measurements were taken using Larson-Davis Laboratories (LDL) Model 820 and 831 precision integrating sound level meters. The meters were calibrated prior to the measurements using an LDL Model CA200 acoustical calibrator. The measurement equipment used meets the applicable criteria established by the American National Standards Institute (ANSI) for Class 1 sound level meters (ANSI S1.4). Measurement microphones were placed on tripods approximately 5 feet above the ground and were equipped with appropriate windscreens. The sound level meters were programmed to record hourly sound levels in terms of the L_{eq}, L_{max}, and other statistical descriptors.

Atmospheric conditions were observed during the long-term noise level measurement session. Wind speeds typically ranged from 3 to 16 miles per hour (mph). Temperatures ranged from 48-81°F, with humidity (approximately 21-87%). These atmospheric conditions were verified using historical data from www.localconditions.com. In general, the atmospheric conditions from June 21-22, 2023, were appropriate for environmental acoustics measurements.

Existing Traffic Noise

Traffic noise is the dominant noise source in the planning area and is generated by the main road (Corral Hollow Road/Tesla Road) adjacent to the planning area. Existing noise levels from vehicle traffic in the planning area vicinity, including regional roadways, were modeled using the Federal Highway Administration (FHWA 1978) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic count data provided by the traffic consultant for the Carnegie SVRA General Plan (KD Anderson & Associates 2012; Appendix D). The FHWA model is based on California Vehicle Noise (CALVENO) reference noise factors for automobiles, medium trucks, and heavy trucks, with vehicle volume, speed, roadway configuration, distance to the receptor, and ground attenuation factors considered.

Table 3.13-2 summarizes the modeled traffic noise levels, provides noise levels at 100 feet from the centerline of each major roadway in the vicinity of the planning area, and lists distances from the roadway centerlines to the 60-dBA, 65-dBA, and 70-dBA L_{dn} traffic noise contours. These traffic noise modeling results are based on existing peak-hour traffic volumes. As shown in Table 3.13-2, the location of the 60-

dBA L_{dn} contour ranges from 5 feet to 202 feet from the centerline of the modeled roadways. The extent to which existing land uses in the planning area are affected by existing traffic noise depends on their proximity to the roadways and their individual sensitivity to noise.

Table 3.13-2. Summary of Existing Traffic Noise Levels Modeled in the Vicinity of the Planning Area

Roadway	Segment		L_{dn}, 100 Feet from Roadway Centerline (dBA)	Distance (feet) from Roadway Centerline to L_{dn} Contour		
	From	To		70 dBA	65 dBA	60 dBA
Tesla Road	Vasco Road	West of Vasco Road	64.6	44	94	202
Tesla Road	Vasco Road	East of Vasco Road	61.6	28	60	129
Vasco Road	Tesla Road	North of Tesla Road	58.8	18	39	83
Tesla Road	Greenville Road	West of Greenville Road	61.6	28	60	129
Tesla Road	Greenville Road	East of Greenville Road	59.7	21	45	96

Notes: dBA = A-weighted decibels; EB = eastbound; I-580 = Interstate 580; L_{dn} = day-night average noise level; NB = northbound; SB = southbound; SVRA = State Vehicular Recreation Area; WB = westbound

Source: Modeled by AECOM in 2014

3.13.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After inception, the EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health and welfare, and the environment. A summary of the EPA's recommended guidelines for noise levels considered safe for community exposure is presented below in Table 3.13-3 (EPA 1974). To prevent hearing loss over the lifetime of a receptor, the yearly average L_{eq} should not exceed 70 dB. To minimize interference and annoyance, noise levels should not exceed 55 dB L_{dn} at outdoor activity areas and 45 dB L_{dn} within residential structures.

Table 3.13-3. Summary of EPA-Recommended Noise Level Standards

Effect	Level	Area
Hearing loss	$L_{eq(24)} \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoor areas of residences and farms, and other areas where people spend widely varying amounts of time or where quiet is a basis for use.
	$L_{eq(24)} \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{dn} \leq 45$ dB	Indoor residential areas.
	$L_{eq(24)} \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Notes:

dB = decibels; L_{dn} = day-night average noise level; $L_{eq(24)}$ = equivalent noise level (the sound energy averaged over a 24-hour period)

Source: U.S. Environmental Protection Agency, 1974 (March). *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* Washington, DC. Page 3.

EPA administrators determined in 1981 that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments.

State Plans, Policies, Regulations, and Laws

The *State of California General Plan Guidelines*, published by the Governor's Office of Planning and Research, provides guidance for the compatibility of projects relative to environmental noise exposure levels (Governor's Office of Planning and Research, 2017). While these Guidelines pertain to general plans for cities and counties, State Parks has used them here as guidance. Generally, residential uses are considered "normally acceptable" in areas where exterior noise levels do not exceed 60 dB CNEL/L_{dn}. Normally acceptable noise levels are those in which no special noise reduction techniques are required to achieve satisfactory living conditions. The guidelines also present flexibility and adjustment factors that may be used to arrive at noise-acceptability standards reflecting the particular community's noise-control goals, sensitivity to noise, and assessment of the relative importance of noise issues.

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, occupational noise levels, and building noise insulation. For example, the State of California Vehicle Code specifies limits on the noise produced by OHVs: Section 38370 states that OHVs cannot produce a maximum noise level exceeding 96 dB at 50 feet for vehicles manufactured on or after 1986, while OHVs manufactured before 1986 cannot produce a maximum noise level exceeding 101 dB at 50 feet.

Regional and Local Plans, Policies, Regulations, and Ordinances

Because Carnegie SVRA is owned and operated by the state, it is not subject to local policies or ordinances. However, Alameda County General Plan (1994) and San Joaquin County General Plan (2016) noise policies are described in this section of this EIR as a reference.

County of Alameda General Plan Noise Element

The Alameda County Noise Element (Alameda County 1994) of the General Plan contains goals, objectives, and implementation programs for the entire county to provide its residents with an environment that is free from excessive noise and promotes compatibility of land uses with respect to noise. However, the County-wide Noise Element does not provide quantitative land use compatibility standards. Instead, the Noise Element recognizes the Federal Environmental Protection Agency (EPA) noise level standards for residential land uses. These standards include an exterior limit of 55 dB L_{dn} and an interior limit of 45 dB L_{dn} to minimize interruption and annoyance due to noise at residential uses. The Noise Element also references noise and land use compatibility standards developed by an Association of Bay Area Governments (ABAG) sponsored study, which establishes a "normally acceptable" limit of 60 dB CNEL/L_{dn}, and a "conditionally acceptable" limit of 70 dB CNEL/L_{dn}, for residential land use. Levels exceeding 70 dB CNEL/L_{dn} would be considered "unacceptable." Figure 3.13 illustrates land use compatibility for the Noise Element of the Alameda General Plan.

Alameda County Municipal Code

Section 6.60.040 of the Alameda County Municipal Code establishes regulations and standards for noise exposure at sensitive land uses. The regulations identify exterior noise levels from non-transportation sources affecting residential or commercial land uses. The noise level performance standards are summarized in Table 3.13-4 and Table 3.13-5.

Table 3.13-4. Non-commercial[a] Noise Ordinance Limits

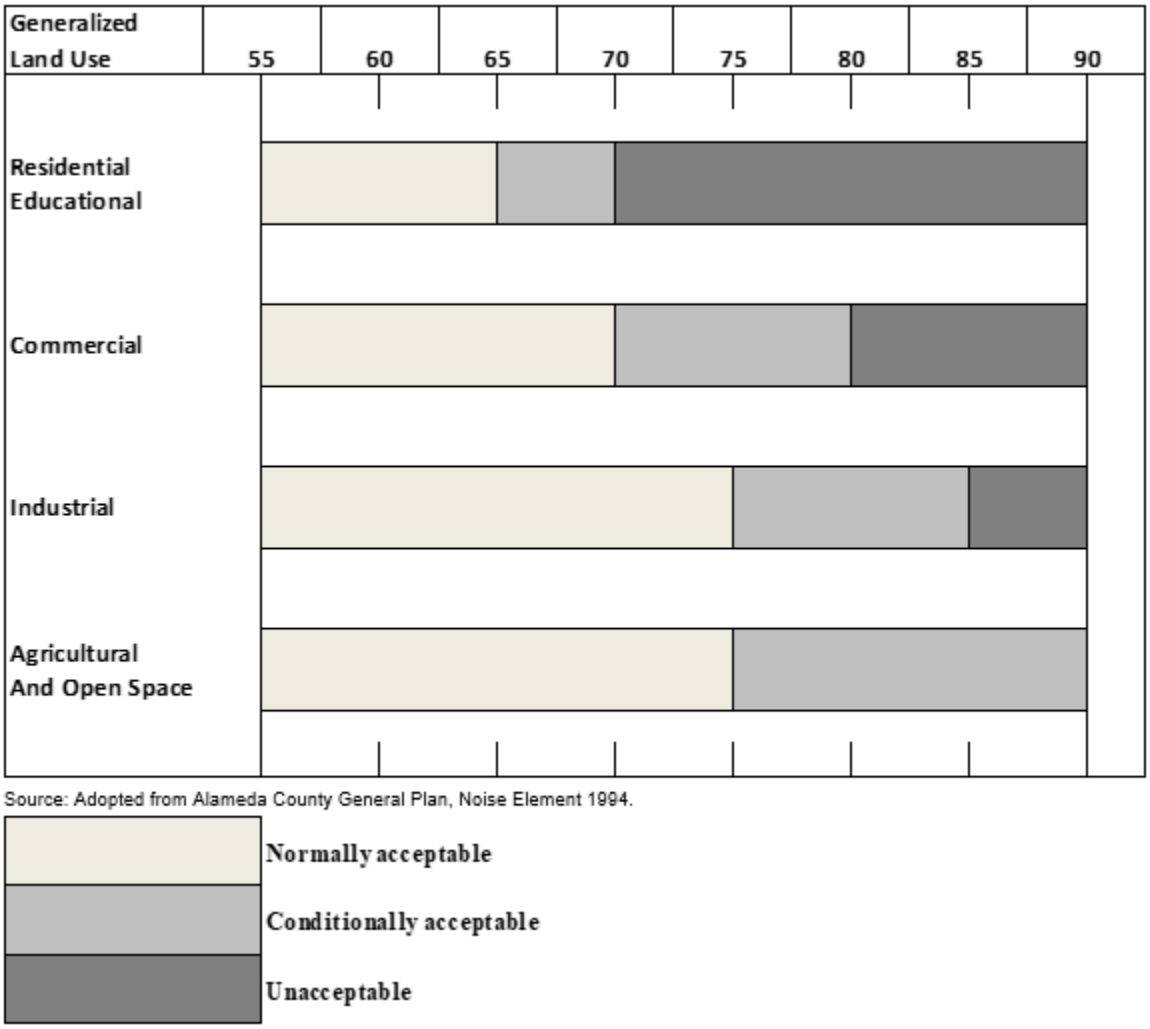
Category/Noise Level Descriptor	Cumulative Minutes in 1-Hour Period	Daytime Noise Level, dB (7 a.m. – 10 p.m.)	Nighttime Noise Level, dB (10 p.m. – 7 a.m.)
$1/L_{50}$	30	50	45
$2/L_{25}$	15	55	50
$3/L_{8}$	5	60	55
$4/L_{2}$	1	65	60
$5/L_{max}$	0	70	65

Note:

dB = decibels; Ln =Statistical Descriptor; L_{max} = Maximum Noise Level

[a] Non-commercial uses include single- or multi-family residential, school, hospital, church or public library properties.

Source: Alameda County Municipal Code, Section 6.60.040, Table 6.60.040A.



Source: Adopted from Alameda County General Plan, Noise Element 1994.

Figure 3.13-1. Simplified Land Use Interpretation of Community Equivalent Level Noise Exposure (CNEL)

Table 3.13-5. Commercial Noise Ordinance Limits

Category/Noise Level Descriptor	Cumulative Minutes in 1-Hour Period	Daytime Noise Level, dB (7 a.m. – 10 p.m.)	Nighttime Noise Level, dB (10 p.m. – 7 a.m.)
1/L_{50}	30	65	60
2/L_{25}	15	70	65
3/L_{8}	5	75	70
4/L_{2}	1	80	75
5/L_{max}	0	85	80

Notes:

dB = decibels; Ln =Statistical Descriptor; L_{max} = Maximum Noise Level

Source: Alameda County Municipal Code, Section 6.60.040, Table 6.60.040B.

County of San Joaquin General Plan Noise Element

San Joaquin County regulates noise through the objectives and policies contained within the San Joaquin County General Plan Noise Element (San Joaquin County 2016). The Noise Element contains thresholds for maximum acceptable noise exposure at noise-sensitive land uses.

- The maximum allowable noise exposure at outdoor activity areas from transportation noise sources shall be 65 dB L_{dn} for residential development, transient lodging, hospitals, nursing homes and similar health-related facilities, churches, and meeting halls and similar community assembly facilities.
- The maximum allowable noise exposure at interior spaces from transportation noise sources shall be 45 dB L_{dn} for residential development, transient lodging, hospitals, nursing homes and similar health-related facilities, churches, meeting halls and similar community assembly facilities, office buildings, schools, libraries, museums, and child day-care facilities.
- The maximum hourly equivalent sound level from stationary noise sources shall be 50 dB (Hourly L_{eq}) or less during the daytime (7 a.m. to 10 p.m.) and 45 dB (Hourly L_{eq}) during the nighttime (10 p.m. to 7 a.m.) at outdoor activity areas of residential development, transient lodging, hospitals, nursing homes and similar health-related facilities, churches, meeting halls and similar community assembly facilities, office buildings, schools, libraries, museums, and child day-care facilities.
- The maximum sound level from stationary noise sources shall not exceed 70 dB (L_{max}) during the daytime (7 a.m. to 10 p.m.) and 65 dB (L_{max}) during the nighttime (10 p.m. to 7 a.m.) at outdoor activity areas of residential development, transient lodging, hospitals, nursing homes and similar health-related facilities, churches, meeting halls and similar community assembly facilities, office buildings, schools, libraries, museums, and child day-care facilities.

The Noise Element policies also state that development shall be planned and designed to minimize noise impacts on neighboring noise-sensitive areas and noise interference from outside noise sources.

San Joaquin County Development Title (Municipal Code)

The San Joaquin County Development Title, Section 9-1025.9, prohibits excessive noise that is incompatible with nearby sensitive land uses.

- Construction activities conducted between 6 a.m. and 9 p.m. on any day are exempt from the County's noise standards. Furthermore, construction/demolition of structures or infrastructure and vibration caused by motor vehicles or trains are exempt from the County's vibration standards.
- Projects that will result in new stationary noise sources must not create daytime (7 a.m. to 10 p.m.) noise levels over 50 dB Hourly L_{eq} or nighttime (10 p.m. to 7 a.m.) noise levels over 45 dB Hourly L_{eq} at the nearest location of offsite, noise-sensitive outdoor activity.
- Maximum sound levels (L_{max}) must not exceed 70 dB in the daytime or 65 dB in the nighttime at the nearest location of offsite, noise-sensitive outdoor activity. Where the location of outdoor activity

areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use.

- For single-tone noise (such as a hum), impulsive noise, or noise consisting primarily of speech or music, these standards are reduced by 5 dB.
- Vibration at any lot line must not be perceptible, except within industrial zones.

Noise exposure levels permitted at noise-sensitive land uses from transportation and stationary noise sources are summarized in Table 3.13-6 and Table 3.13-7, respectively.

Table 3.13-6. San Joaquin County Maximum Allowable Noise Exposure from Transportation Noise Sources [1]

Noise-Sensitive Land Use (Use Types)	Outdoor Activity Areas[2] dB L_{dn}	Interior dB L_{dn}
Residential	65	45
Administrative Office	NA	45
Child Care Services, Child Care Facilities	NA	45
Community Assembly	65	45
Cultural and Library Services	NA	45
Educational Services-General	NA	45
Funeral and Interment Services-Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	NA	45
Public Services (excluding Hospitals)	NA	45
Hospitals	65	45
Recreation-Indoor Spectator	NA	45

Notes: These standards apply to new or existing residential areas affected by new or existing non-transportation sources.
dB = decibels; L_{dn} = Day-Night Average Sound Level; L_{max} = Maximum Noise Level; NA = not applicable

1. Refer to Mountain House Master Plan, Chapter 11, Noise, for Mountain House Noise Standards.
2. Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

Source: San Joaquin County 2016

Table 3.13-7. San Joaquin County - Non-Transportation Noise Level Performance Standards for Noise-sensitive Uses At Outdoor Activity Areas [1, 2]

	Outdoor Activity Areas	
	Daytime[3] (7 a.m. to 10 p.m.)	Nighttime[3] (7 a.m. to 10 p.m.)
Hourly Equivalent Sound Level (L_{eq}), dB	50	45
Maximum Sound Level (L_{max}), dB	70	65

Notes: These standards apply to new or existing residential areas affected by new or existing non-transportation sources.
dB = decibels; L_{eq} = Equivalent Sound Level; L_{max} = Maximum Noise Level; NA = not applicable

1. Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.
2. Refer to Mountain House Master Plan, Table 11.2, Exterior Noise Standards for Noise-Sensitive Uses Affected by Non-Transportation Noise Sources, Page 11.12, for Mountain House Noise Standards.
3. Each of the noise level standards specified shall be reduced by 5 dB for impulsive noise, single tone noise, or noise consisting primarily of speech or music.

Source: San Joaquin County 2016

3.13.3 Impact Analysis and Mitigation Measures

Methodology

To assess potential short-term noise impacts associated with the implementation of the General Plan, nearby sensitive receptors and their relative exposure to noise were identified. The noise levels from activities that could be heard at these sensitive receptors were predicted using the federal *Transit Noise and Vibration Impact Assessment* (FTA 2018).

For the purposes of this analysis, OHVs operating at Carnegie SVRA and traffic noise during project operation are assumed to remain unchanged due to the proposed project. Therefore, the evaluation of project operational noise will not be included in this EIR.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the General Plan would have a significant impact related to noise and vibration if it would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b) Generation of excessive groundborne vibration or groundborne noise levels,

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure for people residing or working in the project area to excessive noise levels.

Issues Not Discussed Further

Generation of Excessive Groundborne Vibration or Groundborne Noise Levels - Due to the distance between proposed project facilities and existing acoustically sensitive uses, project-related construction and operations is not expected to produce substantial vibration levels at acoustically sensitive receptors outside of the project boundary. Therefore, vibration-related impacts are not discussed in this EIR.

For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two miles of a Public Airport or Public Use Airport, Exposure for People Residing or Working in the Project Area to Excessive Noise Levels.

There are no airports within 2 miles of the SVRA, nor is the SVRA located within an airport land use plan. The nearest airport is Tracy Municipal, which is approximately 5.7 miles to the northeast. The next nearest airport to the Carnegie SVRA General Plan project area is the Livermore Municipal Airport in the City of Livermore. This airport is located approximately 20 miles from the SVRA. Implementing the General Plan would not expose any noise-sensitive receptors to excessive aircraft noise. The project area is not located within the boundaries of an airport land use plan or within 2 miles of a public, public-use, or private airport/airstrip. Thus, no impact related to aircraft noise would occur, and this topic is not discussed in this EIR.

Regarding project-related construction traffic, to create a minimum perceptible increase (+3 dBA) in traffic noise, the number of trips would need to double (i.e., increase by 100 percent). Given the scale of facilities envisioned with the General Plan and the fact that the facilities would be constructed over time, the anticipated temporary and short-term increase in traffic volumes from construction activities would be substantially less than 100 percent. Therefore, construction traffic noise would not be evaluated in this EIR.

Furthermore, OHVs operating at Carnegie SVRA and traffic noise are assumed to remain unchanged with implementation of the General Plan. Therefore, the evaluation of operational noise resulting from implementation of the General Plan will not be included in this EIR.

These significance criteria are applied broadly. Under CEQA, the required analysis extends only to whether the project will cause impacts on the existing environment. The following assessments are limited to impacts on existing noise-sensitive uses outside of the project boundary.

Environmental Impacts

Impact 3.13-1. Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies?

Construction and maintenance activities for facilities envisioned in the Carnegie SVRA General Plan would generate short-term, temporary, and intermittent noise at or near individual noise-sensitive locations near the planning area. Noise levels generated during construction and maintenance would fluctuate depending on the physical location of construction activities at the SVRA, and on the particular type, number, and duration of use of various pieces of equipment. Noise levels from construction and maintenance activities are typically considered a point source and drop off at a rate of 6 dB/DD over hard site surfaces such as streets and parking lots. Noise levels drop off at a rate of approximately 7.5 dB/DD over soft site surfaces such as grass fields and open terrain with vegetation (FTA 2018).

Equipment required for construction and maintenance activities in the planning area would consist of a paver, backhoe, bulldozer, tractor, and various trucks. The maximum noise levels produced by one of these types of equipment, at a distance of 50 feet and without the implementation of noise controls, could range from 80 to 85 dBA L_{max} (Table 3.13-8). Noise levels vary for individual pieces of equipment because equipment comes in different sizes and with different engines. Noise levels for construction equipment also vary as a function of the activity level or duty cycle. Typical construction projects, with equipment moving from one point to another, including work breaks and idle time, have long-term noise averages that are lower than many short-term noise events. Additionally, noise levels are calculated from the center of the activity because of the dynamic nature of a construction site. Using these parameters, construction activities, including the simultaneous operation of multiple pieces of equipment, were modeled to generate a combined noise level of 87 dBA L_{eq} at 50 feet from the center of construction activity (Appendix D).

Table 3.13-8. Typical Noise Levels Caused By Construction Equipment[1]

Equipment Type	Typical Noise Level (dBA L_{max}) at 50 feet
Backhoe	78
Concrete mixer truck	79
Concrete pump truck	81
Dozer	82
Dump truck	76
Generator	81
Grader	85
Paver	77
Tractor	84
Excavator	81
Total Noise Level (L_{max})	**84**
Total Noise Level (L_{eq})	**87**

Notes: dBA = A-weighted decibels; L_{eq} = energy-equivalent noise level; L_{max} = maximum instantaneous noise level during a specific period

[1] All equipment fitted with properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are the actual measured noise levels for each piece of heavy construction equipment.

Sources: FHWA 2006

The closest private residence is located along Tesla Road approximately 3,000 feet from the nearest construction activity. The intervening ground type is primarily hilly and open space and is considered acoustically soft. When modeled using FHWA noise methodology (FHWA 2006) and the above parameters, noise from construction activities would reduce to 43 dBA L_{eq} at this residence south of Tesla Road. This level is reflecting the shielding effect of hills situated between the construction site and the noise-sensitive area. The presence of hills obstructs the direct line of sight between the construction sites and the noise-sensitive area, resulting in a reduction of construction noise by over 10 dB. As a result, the noise level at the LT-01 location resulting from construction activities would be reduced to below 30 dB.

Construction noise would be temporary and the existing noise environment surrounding Carnegie SVRA is already relatively loud because of OHV use, explosives testing on adjacent parcels, and traffic along Corral Hollow Road/Tesla Road. Ambient noise levels measured at the western boundary of the SVRA closest to this noise-sensitive receptor (LT-01 in Table 3.13-1) was 45 L_{eq} on weekdays. Anticipated noise levels generated by construction and maintenance activities (30 dBA L_{eq}) would not exceed existing noise levels in this area and would not exceed the daytime standard of 50 dBA L_{dn} and nighttime standard of 45 dBA $L_{dn,}$ established in the Municipal Code of Alameda County. Additionally, Carnegie SVRA General Plan Operation and Maintenance (OM) Goal 5, Guideline OM 5.2, OM Guideline 5.3, and OM Guideline 5.5 (shown below) require implementation of noise-reduction measures during construction and maintenance activities within 500 feet of the residences. Furthermore, OM Goal 6 to limit air quality impacts includes OM Guideline 6.6 (see below), which maintains a minimum 250-foot buffer around residential properties in the planning area. This impact is considered **less than significant**.

OM Goal 5: Develop and maintain SVRA facilities and monitor OHV activities to ensure compatibility with surrounding land uses.

- **OM Guideline 5.2**: Require that noise levels not exceed applicable jurisdiction (county) noise standards for 24-hour exposure at or beyond the boundary line of the SVRA. In the SVRA, similar limits shall be met in areas of permanent human habitation (e.g., residences). All vehicles operating in the SVRA shall meet applicable noise limits set in the California Vehicle Code.
- **OM Guideline 5.3:** Employ practices to reduce noise levels for noise-sensitive receptors during construction of facilities. Reduce noise generated during construction and maintenance activities by:
  - properly maintaining equipment with noise-reduction devices in accordance with manufacturer specifications (e.g., mufflers, shrouds, filters);
  - using quieter than standard equipment when possible (e.g., electrically powered equipment);
  - limiting activities to between 8:00 a.m. and 6:00 p.m., Monday through Saturday (excluding emergency work);
  - restricting equipment travel and use within 500 feet of noise-sensitive receptors, unless the equipment used would not exceed the daytime standard of 50 dBA L_{dn} and nighttime standard of 45 dBA L_{dn} at the property line of noise-sensitive receptors;
  - turning off equipment during prolonged periods of nonuse;
  - restricting alarms to warn of safety issues only;
  - using noise-attenuating buffers when activities take place within 500 feet of adjacent sensitive receptors (e.g., berms, stationary barriers, noise blankets, shrouds);
  - following standard construction practices;
  - locating equipment staging areas and material loading and unloading zones greater than 500 feet from the nearest sensitive receptor;
  - using rubber-tired equipment as much as feasible to minimize groundborne noise; and
  - locating any stationary noise sources (e.g., generators) within noise enclosures.

- **OM Guideline 5.5:** Place rest areas and steep uphill trails at locations to provide a barrier effect and/or increase the distance to noise-sensitive uses.

OM Goal 6: Limit potential air quality impacts on residential properties within the planning area that could result from construction, maintenance, and OHV recreation activities.

- **OM Guideline 6.6:** Maintain a buffer of at least 250 feet around any non-State Park owned residential properties within the planning area during and after implementation of the General Plan.

Implementing the General Plan guidelines would reduce temporary, short-term construction and maintenance noise impacts within 500 feet of noise-sensitive receptors such that ambient noise levels would not increase. The measures included in the guidelines include restrictions on hours of operation, equipment movements, noise barriers, additional noise-muffling devices on equipment, and idling restrictions that would reduce noise related to construction activities. Therefore, with implementation of the General Plan guidelines, the impact related to increases in temporary short-term off-site noise levels during construction and maintenance activities would be **less than significant**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

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3.14 Population and Housing

This section describes population and housing in the planning area. It also discusses the federal, state, and local regulatory framework and analyses the potential impacts of implementing the Carnegie SVRA General Plan on population and housing.

3.14.1 Existing Conditions

Currently, State Parks employs 24 full-time employees and 20-30 seasonal employees at Carnegie SVRA.

One permanent residence typically occupied by one SVRA staff member (and family) is located in the Park Headquarters Area, north of the campground and Corral Hollow Road, and east of California Fire Station 21. Two trailer homes that house SVRA staff are also located in this area. No seasonal on-site housing for temporary employees is available during the busy season. SVRA employees typically commute to the SVRA from surrounding communities. State Parks owns several single-family residences outside the planning area, along both sides of Corral Hollow Creek east of Mitchell Ravine. Some of these residences house State Parks employees, including three State Parks peace officers who are available after hours for campground emergencies.

Two private residential areas containing single-family dwellings and a small rodeo arena also are situated along Corral Hollow Creek near Mitchell Ravine west of the SVRA. A few houses in the upper portion of the Corral Hollow watershed belong to private ranchers (State Parks 2007:36–38). Ranches and rural residences are located to the east, northwest and south of Carnegie SVRA.

3.14.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to population and housing issues are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

No state plans, policies, regulations, or laws related to population and housing issues are applicable to the planning area.

Regional and Local Plans, Policies, Regulations, and Ordinances

No regional or local plans, policies, regulations, or ordinances related to population and housing issues are applicable to the planning area.

3.14.3 Impact Analysis and Mitigation Measures

Methodology

Potential impacts associated with population and housing is evaluated based on the potential for the General Plan implementation to induce substantial unplanned population growth, either directly or indirectly, and the potential for the project activities to displace existing people or housing. The evaluation of these impacts uses relevant population and housing data from the project's surrounding areas to support the analysis.

Thresholds of Significance

a) Induce substantial 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 people or housing, necessitating the construction of replacement housing elsewhere.

Issues Not Discussed Further

Displace Substantial Numbers of Existing Numbers of People and Housing— The only existing housing within the planning area is within the Park Headquarters Area. New housing may be developed in this area, as discussed in Impact 3.14-1. None of the existing housing would be displaced. Therefore, the Park Headquarters Area Improvements would not displace a substantial number of existing residences or people to necessitate construction of replacement housing elsewhere. No other developments or improvements to visitor or operational facilities would displace existing people or housing. **No impact** would occur from implementation of the Carnegie SVRA General Plan, and this issue is not discussed further in this DEIR.

Environmental Impacts

Impact 3.14-1. Induce Substantial Population Growth?

General Plan Implementation

Ongoing State Parks management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, associated with the implementation of the Carnegie SVRA General Plan would not induce substantial population growth in an area, either directly by proposing new homes and businesses or indirectly through extension of roads or other infrastructure, or result in the displacement of existing people or housing.

State Parks currently employs 24 full-time employees and approximately 20 to 30 seasonal employees. State Parks anticipates the need to hire 7 additional full-time employees and 7 to 8 seasonal employees to meet existing and future demands for operations and maintenance. Although the source of new employees is unknown, it would be expected that some of the new employees could be drawn from the existing local workforce, others would transfer in from other state parks, and some may be new to both the area and State Parks. In addition, if some non-local staff were employed, the relatively small number of new employees would not be expected to cause substantial increase in population growth or a substantial increase in housing demand. Only a limited number of State Park employees in the District receive State Park housing – there is currently one permanent residence and two mobile homes in the Park Headquarters Area. Plan implementation would not change the regional population and related housing demand. Therefore, implementation of the Carnegie SVRA General Plan would not directly or indirectly induce population growth, and **no impact** would occur.

New and Improved Facilities

The proposed new and improved facilities described in Chapter 2 of this EIR would not directly induce substantial unplanned population growth by developing additional housing or business.

Developments associated with the General Plan would be internal to the SVRA and would not indirectly induce population growth. The improved, relocated, and/or new infrastructure (i.e., roadways and water, wastewater, electrical, and telecommunications infrastructure) for all Carnegie SVRA facilities would be those necessary to serve visitors to Carnegie SVRA and the staff working and living at the Park. All of the infrastructure facilities would be built only to the necessary capacity to serve intended uses internal to Carnegie SVRA and would not serve the general vicinity, which therefore would not lead to changes in location population and associated housing need. **No impact** would occur.

Park Headquarters Area Improvements

The Plan includes improvements to the Park Headquarters Area to accommodate existing staff, and the additional 7 full-time employees that are anticipated under implementation of the General Plan. Improvements to this area may include upgrading or expanding staff housing, including the construction of new double-wide modular homes and/or additional trailer homes for Park staff. This addition of modular

or trailer homes would only be accessible to Park staff and not available to residents from surrounding communities. This additional housing would allow for minor increases in population within the planning area, but it would not induce population growth in the region because this housing would provide a more convenient living option for Park staff that would otherwise have to commute from nearby communities. Therefore, any population growth associated with additional housing in the planning area is directly associated with projected staffing needs which would not exceed 16 full-time employees and 12 seasonal employees. The development of new and improvements to existing operational facilities would not directly or indirectly induce population growth, and **no impact** would occur.

Mitigation Measures

No mitigation is required.

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3.15 Public Services

This section describes existing conditions for public services in the planning area. It also discusses the state and local regulatory framework and analyses the potential impacts of implementing the Carnegie SVRA General Plan on public services.

3.15.1 Existing Conditions

The existing setting for public services is described in detail in Chapter 2, “Existing Conditions,” of the General Plan. Specifically, Section 2.4.2, “Public Safety,” characterizes security and emergency services in the planning area, including fire protection, medical aid, and emergency access and egress.

3.15.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to public services and utilities are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment,” the California Occupational Safety and Health Administration (OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting equipment.

Fire Codes and Guidelines

The California Fire Code contains regulations relating to construction, maintenance, and use of buildings. The code addresses the topics of fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards, storage and use of hazardous materials, provisions to protect and assist fire responders, industrial processes, and other fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

Spark Arrester Regulations

Section 4442 of the California Public Resources Code and Section 38366 of the California Vehicle Code prohibit the use or operation of any off-highway motor vehicle on land covered by forest, brush, or grass unless the vehicle is equipped with a spark arrester that is maintained in effective working order. In addition, a spark arrester affixed to the exhaust system cannot be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite flammable material.

Regional and Local Plans, Policies, Regulations, and Ordinances

No regional or local plans, policies, regulations, or laws related to public services and utilities are applicable to the planning area.

3.15.3. Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts related to public services is based on a review of emergency services (park security, fire protection, medical aid, and emergency access and egress). Impacts were evaluated in relation to actions needed for General Plan implementation that potentially could lead to physical environmental effects.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact related to public services if it would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

   Fire protection?

   Police protection?

   Schools?

   Parks?

   Other public facilities?

Issues Not Discussed Further

Increased Demand for Schools, Parks, or Other Public Facilities—New residential units proposed as part of the Park Headquarters Area Improvements would be occupied by existing State Parks staff. Therefore, Carnegie SVRA General Plan Implementation would not result in new housing that generates an increase in population or increases the demand for school services, parks, and other public facilities. **No impact** related to schools, parks, or other public facilities would occur, and this issue is not discussed further in this DEIR.

Environmental Impacts

Impact 3.15-1. Increased Demand for Fire Protection Services?

Fire protection?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, would not result in new housing that would increase the local population, necessitating the construction or expansion of existing fire protection facilities. **No impact** would occur.

New and Improved Facilities

The following site-specific improvement projects would not include any new structures that increase the demand for fire protection services, and **no impact** would occur:

- Campground Remodel
- New Dump Station
- New Campfire Center
- New Kid's Minibike Track

- New pedestrian trails (including interpretive loop trails, Front Hills pedestrian trail)
- New Front Hills Single Motorcycle Track
- New Recreation Area
- New Group Campsite
- New Concession Store
- Emergency Helicopter Pad Relocation
- Water Plant Upgrade

New structures constructed as part of the following site-specific improvement projects would be required to incorporate California Fire Code requirements and OSHA fire suppression standards to reduce the risk of fires. Therefore, implementation of the following site-specific improvement projects would not substantially increase the demand for fire protection services, and **no impact** would occur:

- SVRA Maintenance Area Improvements (auto shop remodelling/addition)
- Ranger Station Expansion (expansion of existing Ranger Station to include new staff work areas/stations and offices, a breakout room, and more)
- Volunteer Training Area Enhancements (expansion of existing area to include facilities and features such as a classroom for safety/trainings/meetings)
- New Greenhouse (cold frame structure)
- Park Headquarters Area Improvements (expansion of existing office space and other operations facilities and staff housing)
- Restrooms

Attendance at the SVRA is anticipated to increase as a result of general economic conditions. Increased attendance over time has the potential to increase demand for fire protection services. With expansion of recreation facilities envisioned in the General Plan (e.g., campfire center, kid's mini-bike track, OHV trails and tracks, interpretive pedestrian trails, gathering/picnic areas), the Park is expected to better support the recreational interests of a broader demographic of visitors thereby attracting a wider audience and increasing attendance. This increase in attendance could also increase the potential for accidental fires and the need for fire suppression. However, future development of Carnegie SVRA would continue to be focused on community- and family-oriented OHV uses. The family-focused atmosphere and focus on novice and intermediate riding conditions at the SVRA would help to minimize the risk of potential emergency (e.g., high-risk challenges or high-speed collisions).

First response to fires would be SVRA personnel as well as Alameda County Fire Department personnel located at Alameda County Fire Station #21 at LLNL Site 300. Designated segments of the multiple-use trail system in the existing Carnegie SVRA provide emergency access for wildfire suppression and would continue to do so in the future. The SVRA staff also maintains a truck with a water tank and pumping capability on-site. Fire tools are carried by all Parks' staff vehicles, fire tools and limited water supplies are carried by patrol vehicles. The Wildfire Management Plan for Carnegie SVRA discusses current practices that the Park implements in order to reduce risk of wildfire. This is more thoroughly discussed in Section 3.20, "Wildfire."

First-responder medical aid in the SVRA is provided by SPPOs. SPPOs patrol State Parks lands 7 days a week and provide all public safety functions. The need for emergency services would likely increase slightly over time with implementation of the General Plan. Under typical operating conditions, however, the full-time SPPOs who currently serve Carnegie SVRA would be sufficient to meet this need. SPPOs would continue to patrol the SVRA during open hours and would still be the first to respond to medical emergencies. Additionally, the proposed relocation of the existing helicopter pad from the maintenance yard to the grassy area next to the existing ranger station would better support emergency medical response.

Adherence to OM Goal 3 and OM Guidelines 3.5, 3.9, 3.10, and 3.13 in the General Plan (shown below) would provide facilities and services that would contribute to the safety of SVRA visitors and staff members. OM Guideline 3.5 aims to prevent accidental fire ignition and the spread of wildfire to adjacent areas through monitoring of OHVs for spark arresters and monitoring of fuel handling practices. OM Guideline 3.9 requires that the adequate provision for and access of emergency personnel be considered during planning for development of new facilities. OM Guideline 3.10 calls for providing adequate, easily accessible supplies of emergency response materials on-site and appropriately training staff members in emergency response practices. In addition, OM Guideline 3.13 requires continued coordination with state and local districts and agencies for emergency response.

OM Goal 3: Provide facilities and services that contribute to the safety and convenience of visitors and staff.

- **OM Guideline 3.5:** Prevent accidental fire ignition and spread of wildfire to adjacent areas by monitoring OHVs for spark arresters and by monitoring fuel handling practices.
- **OM Guideline 3.9:** Plan and design facilities to allow ease of access for emergency personnel and to allow a clear view of visitors by SPPOs. Locate restroom facilities in visible locations; avoid locating restroom facilities in remote locations.
- **OM Guideline 3.10:** Ensure that supplies of emergency response materials kept on-site are adequate and easily accessible. Ensure that staff members are adequately trained in emergency response practices.
- **OM Guideline 3.13:** Continue to coordinate with state and local districts and agencies for emergency response.

As discussed in Chapter 20, “Wildfire,” State Parks would comply with California Public Resources Code fire safety regulations and park visitors would be subject to regulations for lighting, building, and use of campfires. Incorporation of California Fire Code requirements, OSHA fire suppression and emergency medical services standards, and compliance with California Public Resources Code fire safety regulations would reduce the dependence on fire protection equipment and personnel by reducing fire hazards. Because the demand for fire protection and emergency services would not increase substantially and existing SRVA employees would be sufficient to address fire-related emergencies, and with adherence to the guidelines in the General Plan, existing fire protection and emergency services would be adequate to meet demand and implementation of the General Plan would not result in the construction of new or expansion of existing fire service facilities. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.15-2. Increased Demand for Police Protection Services?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, would not result in new housing that would increase the local population, necessitating the construction or expansion of existing police protection facilities. **No impact** would occur.

New and Improved Facilities

New and improved visitor and operational facilities would provide more recreational opportunities for beginner to intermediate OHV riders, new and improved visitor amenities, and diverse recreational opportunities for all SVRA visitors (e.g., campfire center, kid’s mini-bike track, OHV trails and tracks, interpretive pedestrian trails, gathering/picnic areas). These new facilities would enhance the area where visitors could recreate in Carnegie SVRA. Attendance is anticipated to increase over time, potentially resulting in an increased demand for security. However, future development of Carnegie SVRA would

continue to be focused on community- and family-oriented OHV uses. The family-focused atmosphere and focus on novice and intermediate riding conditions at the SVRA would help to minimize the risk of potential emergency and security situations (e.g., high-risk challenges or high-speed collisions).

Security in the SVRA is provided by SPPOs. SPPOs patrol State Parks lands 7 days a week and provide all public safety functions. Assistance is also provided by the Carnegie Volunteer Trail Patrol, who have been active for over 30 years and assist the rangers with monitoring the park trails to enhance visitor safety. In addition, the San Joaquin County Sheriff's Department's Off-Road Enforcement Unit assists park staff members with special events at Carnegie SVRA upon request.

The need for security and emergency services would likely increase slightly over time with implementation of the General Plan. Under typical operating conditions, however, the full-time SPPOs who currently serve Carnegie SVRA would be sufficient to meet this need. SPPOs would continue to patrol the SVRA during open hours, would still be the first to respond to security emergencies, and would continue to be backed up by the San Joaquin County Sheriff's Department, to provide adequate response should an emergency require outside attention. Additional staffing may be required and would continue to be used during special events, consistent with staffing levels provided at special events currently held at other SVRA facilities.

Adherence to guidelines associated with OM Goal 3 in the General Plan (shown above) would ensure the availability of facilities and services that would contribute to the safety of visitors and staff members. In particular, OM Guideline 3.9 requires that the adequate provision and access of emergency personnel be considered during planning for development of new facilities, and that SPPOs be allowed a clear view of visitors. OM Guideline 3.13 requires continued coordination with state and local districts and agencies for emergency response.

Because the demand for security and emergency services would not increase substantially, implementation of the General Plan would not result in the construction of new or expansion of existing police protection facilities. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.16 Recreation

This section analyzes the potential impacts of implementing the Carnegie SVRA General Plan on recreation.

3.16.1 Existing Conditions

Section 2.2 “Existing Carnegie SVRA Land Use and Facilities,” in Chapter 2, “Existing Conditions,” of the General Plan provides a detailed description of existing recreation facilities and ongoing recreation activities in the Carnegie SVRA. Recreation trends and projections for the Carnegie SVRA are provided in Section 2.7.4, “Trends and Projections,” in Chapter 2 of the General Plan.

3.16.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws regarding recreation are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Recreation Policy

The California State Legislature delegated responsibility for preparing the State’s Recreation Policy to the State Park and Recreation Commission in the belief that all Californians should be provided with an array of opportunities allowing them to pursue their recreational interests. California Public Resources Code (PRC) Section 540 directs the Commission to formulate, in cooperation with other state agencies, interested organizations, and citizens, and recommend to the Director of California State Parks for adoption, a comprehensive recreational policy for the State of California. The 2005 California Recreation Policy is intended to be broad in scope and considers the full range of recreation activities—active, passive, indoors, and out-of-doors. It is a comprehensive policy directed at recreation providers at all levels: federal, state, and local agencies and private and nonprofit suppliers. The policy mandates opportunities and access to recreation activities for all activities and populations while preserving natural and cultural resources.

Off-Highway Motor Vehicle Recreation (OHMVR) Division and the OHV Act

The OHMVR Division of State Parks promotes managed, environmentally responsible, and sustainable OHV use. OHMVR Division programs are carried out with the advisory oversight of the OHMVR Commission. The programs are funded directly by the recreation community through gasoline taxes, green and red sticker fees, and entrance fees at SVRAs like Oceano Dunes SVRA. This is in clear contrast with the rest of State Parks, which are funded from the State’s General Fund and are not required to specifically address legislative standards. This funding, along with very specific goals for soil erosion, water quality and the like, has enabled the Division to provide for the conservation of endangered species consistently and for continually cleaning up years of ill-used lands. Prior to the Division taking on management of these lands there were no standards and the OHV parks were for most part privately owned. Consistent with its mission statement, the OHMVR Division provides education, training, and information to promote safe and environmentally responsible OHV recreation. Marketing and outreach conducted by the OHMVR Division promotes widespread understanding of environmental protection and safe and appropriate OHV recreation.

PRC Section 5090.02 sets forth the State Legislature’s declaration that effectively managed areas and adequate facilities for the use of OHVs and conservation, and enforcement are essential for ecologically balanced recreation. Accordingly, with the passage of the OHMVR Act of 2003, the state legislature intended, in part, that: 1) Existing OHV recreational areas, facilities, and opportunities are expanded and managed to sustain long-term use (PRC Section 5090.02(c)(1)); 2) New OHV recreational areas, facilities, and opportunities be provided and managed in a manner that sustains long-term use (PRC

Section 5090.02(c)(2)); 3) The OHMVR Division supports both motorized recreation and motorized OHV access to non-motorized recreation (PRC Section 5090.02(c)(3)); and 4) When areas cannot be maintained to appropriate standards for sustained long-term use, they should be repaired to prevent accelerated erosion or closed and restored.

Also, PRC Section 5090.35(a) provides that protection of public safety, the appropriate utilization of lands, and the conservation of natural and cultural resources are of the highest priority in the management of SVRAs. The OHMVR Division shall promptly repair and continuously maintain areas and trails and anticipate and prevent accelerated and unnatural erosion and other OHV impacts to the extent possible. The OHMVR Division shall also take steps necessary to avoid damage to significant natural and cultural resources within SVRAs.

SVRAs consist of areas selected, developed, and operated to provide OHV recreation opportunities. State Parks must develop, manage, and operate SVRAs to give the fullest appropriate public use of the vehicular recreational opportunities present per the OHMVR Act while providing the conservation of cultural resources and the conservation and improvement of natural resources values over time (PRC Section 5090.43 (a)). To protect natural and cultural resource values, California State Parks may establish sensitive areas within SVRAs. If OHV use results in damage to any natural or cultural resources or damage within sensitive areas, appropriate measures must be taken to protect these lands from further damage. These measures may include erecting physical barriers, restoring natural resources, and repairing cultural resources damage (PRC Section 5090.43).

Regional and Local Plans, Policies, Regulations, and Ordinances

No regional or local plans, policies, regulations, or ordinances related to recreation are applicable to the planning area.

3.16.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts of General Plan implementation on recreation facilities is based on the potential for implementation of the General Plan to result in changes to the physical environment.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the General Plan could have a significant impact related to recreation and public access if it would:

a) Increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

b) Include recreational facilities or require the construction or expansion of recreational facilities, which might adversely affect the environment.

Environmental Impacts

Issues Not Discussed Further in this EIR

Increase the Use of Existing Neighborhood and Regional Parks Such that Substantial Physical Deterioration of the Facility Would Occur or Be Accelerated—Implementation of the General Plan including the continuation of management programs and maintenance activities, and implementation of the new and improved visitor and operational facilities would not directly or indirectly increase the local population by providing housing or otherwise contribute to population growth in the area by providing a substantial amount of new jobs. Therefore, implementation of the General Plan would not create an indirect demand for recreation at local parks or other local recreation facilities. Implementation of the General Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities to the extent that substantial physical deterioration of any facility would occur or be accelerated. Conversely, implementation of the General Plan would provide additional and enhanced

recreation facilities in the area and a beneficial impact on recreation facilities could occur. There is no adverse impact on local parks and recreation facilities, and this issue is not discussed further in this DEIR.

Impact 3.16-1. Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on the Environment?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, associated with the implementation of the Carnegie SVRA General Plan would not involve substantial alterations to or changes in the existing facilities. Minor building alterations or landscape changes could occur, as necessary, but these minor changes necessary for the upkeep of facilities and would not change the recreation opportunities provided by the sites. Therefore, General Plan implementation would have **no impact** related to adverse effects on recreation resources.

New and Improved Facilities

Construction
Construction of new and improved visitor and operations facilities consist of the projects described in Chapter 2, “Project Description,” of this DEIR, such as a campground remodel, new campfire center, new recreational vehicle (RV) dump station, new kid’s minibike track, new motorbike trial, expanded ranger station, upgraded water treatment facility, and new pedestrian trails.

Environmental impacts related to constructing new and improved visitor facilities are analyzed throughout the various environmental topic specific chapters of this DEIR in conjunction with overall development in the planning area. Where necessary, these chapters include mitigation measures and identify Carnegie SVRA General Plan goals and guidelines that would reduce or avoid the impacts of construction new and improved visitor facilities. Construction of new and improved visitor facilities would not generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR (air quality, biological resources, cultural resources, etc.); therefore, this impact would be **less than significant**.

The General Plan’s goals and guidelines provide guidance on how to achieve the purpose, vision, and management intent for the SVRA. The goals and guidelines address known planning issues while providing a foundation for resource protection, development, operation and management, and interpretation of the SVRA. They also provide a framework for subsequent planning and development for the General Plan’s concepts. As outlined in Section 4.4.6 and Table 4-1 in Chapter 4, “The Plan,” of the General Plan, natural and cultural resources in the visitor experience areas are to be managed to protect their integrity and comply with relevant state and federal laws and regulations regarding their management and protection. Furthermore, most of the larger proposed projects will be developed on previously disturbed land in the SVRA.

Operations
Environmental impacts related to operating new and improved facilities are analyzed throughout the various environmental topic specific chapters of this DEIR in conjunction with overall development in the planning area. Where necessary, these chapters Carnegie SVRA General Plan goals and guidelines that would reduce or avoid the impacts of operating new and improved visitor facilities. Operation of new and improved visitor facilities would not generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR (air quality, biological resources, cultural resources, etc.); therefore, this impact would be **less than significant**.

There are currently no pedestrian trails in the SVRA. Both motorized and non-motorized recreation users would see a benefit from implementation of the General Plan because of new or improved motorized recreation facilities, including related support facilities, and non-motorized amenities, such as a new campfire center and new pedestrian trails. Furthermore, the General Plan removes conflicts between motorists and pedestrians by implementing a pedestrian trail that runs parallel to the main SVRA road and

is in an area where OHV use is not allowed, and a new kids minibike track next to the campground that will redirect children from riding in the campground among pedestrians and moving cars, trucks, and RVs (some with trailers), to a safer riding environment. While not an impact on the physical environment, these effects would have a positive impact on the visitor experience.

Furthermore, all of the goals and guidelines in Chapter 4, “The Plan,” of the General Plan aim to balance visitor recreation and protection of physical environmental resources, such as air quality, biological resources, cultural resources, tribal cultural resources, geology, soils, paleontology, minerals, and water quality.

Mitigation Measures

No mitigation required.

3.17 Transportation and Traffic

This section describes existing roadways in the planning area. It also discusses the federal, state, and local regulatory framework and analyzes the potential impacts of implementing the Carnegie SVRA General Plan on transportation and traffic.

3.17.1 Existing Conditions

A description of regional and surrounding land use and facilities is provided in Section 2.1 in Chapter 2, "Existing Conditions," of the General Plan. General Plan Section 2.2 characterizes existing land uses, circulation, access, and facilities in the planning area.

The planning area is located along Tesla Road/Corral Hollow Road, midway between Livermore and Interstate 580 (I-580), straddling Alameda and San Joaquin Counties. The roadway is called Tesla Road in Alameda County and Corral Hollow Road in San Joaquin County. Carnegie SVRA provides recreation opportunities for off-highway motorcycle, all-terrain vehicle, and four-wheel-drive recreationists. The facility is open from 8 a.m. until dusk, 7 days a week. One primary SVRA entrance from Corral Hollow Road currently provides access to the site (see Figure 2-1 in Chapter 2 of the General Plan).

Existing Roadways

The study area for the traffic analysis includes intersections and roadway segments near Carnegie SVRA that provide both regional access and direct local access to the SVRA. The following intersections and roadway segments are located in the study area:

- Tesla Road/Vasco Road
- Tesla Road/Greenville Road
- Corral Hollow Road/SVRA park access
- Corral Hollow Road/I-580 southbound ramps
- Corral Hollow Road/I-580 northbound ramps
- Southfront Road/I-580 eastbound ramps
- Corral Hollow Road west of SVRA park access (roadway segment)

Nearby roadways are summarized below.

Corral Hollow Road provides regional access to I-580, which is approximately 4 miles east of the planning area. The roadway extends west from I-580 in San Joaquin County to the planning area and then continues as Tesla Road from the Alameda County line into the city of Livermore. In the vicinity of the planning area, Corral Hollow Road is a two-lane rural road that follows the area's rolling terrain. The roadway provides 11- to 12-foot travel lanes with 0- to 1-foot shoulders. The posted speed limit is 55 miles per hour. Access to Carnegie SVRA is provided via Corral Hollow Road just east of the Alameda County line. A stop sign controls access to Corral Hollow Road from the SVRA. There is no left-turn lane on Corral Hollow Road at its intersection with the SVRA access road. Corral Hollow Road adjacent to Carnegie SVRA carries an average of 2,400 daily vehicles on weekdays, with average daily volumes decreasing to 900 vehicles on weekends. Weekday volumes on Corral Hollow Road and Tesla Road are heavily influenced by commuter traffic because the roadways provide an alternate route to I-580 between Tracy and Livermore.

Tesla Road is a two-lane rural road that extends from the Alameda/San Joaquin County line west to South Livermore Avenue. The roadway provides access to Carnegie SVRA from the Livermore area and intersects several north-south roadways in Livermore, which in turn provides access to I-580 through Livermore. The roadway adheres to the rolling terrain from the Alameda County line west to Greenville Road and generally provides 12-foot travel lanes with 1- to 2-foot paved shoulders. The posted speed limit is 45 miles per hour. West of Greenville Road, the facility is relatively flat and straight and provides

12-foot travel lanes with 6-foot bike lanes. The Circulation Element of the *City of Livermore General Plan* (City of Livermore 2022) classifies Tesla Road as a "Major Street" west of Greenville Road.

Greenville Road is a north-south roadway that links Tesla Road in the south to Altamont Pass Road in the north at I-580. The facility is mostly a two-lane road, widening to four lanes at its northerly terminus near I-580. Two travel lanes are provided at the I-580 undercrossing and connection to Altamont Pass Road. Access to westbound I-580 is provided via Altamont Pass Road approximately 1,000 feet west of Greenville Road. Stop signs control the Greenville Road/Tesla Road intersection at all approaches. The roadway carries an average of approximately 4,000 vehicles per day in the south at Tesla Road and 10,500 vehicles per day in the north at Altamont Pass Road. The Circulation Element of the *City of Livermore General Plan* classifies Greenville Road as a "Major Street" north of Tesla Road.

Vasco Road extends from Tesla Road in the south through Livermore and provides an interchange with I-580. A traffic signal controls the Vasco Road/Tesla Road intersection. The roadway is a two-lane facility with a center turn lane in the south and widens to a four-lane facility at East Avenue. The roadway carries an average of approximately 9,500 vehicles per day in the south and 31,000 vehicles per day to the north near I-580. The Circulation Element of the *City of Livermore General Plan* classifies Vasco Road as a "Major Street."

Southfront Road parallels I-580 and provides a connection from the eastbound I-580 hook ramps to Greenville Road. This segment of Southfront Road is a four-lane facility. A traffic signal controls the Southfront Road/Greenville Road intersection.

3.17.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal regulations or laws related to transportation and traffic are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

Because Carnegie SVRA is owned by the State of California, it is not subject to compliance with San Joaquin County or Alameda County policies or ordinances. However, it is the intent of the OHMVR Division to continue to operate the SVRA in a manner compatible with planning values expressed by the surrounding community; therefore, these policies and ordinances were considered as part of this environmental evaluation.

SB 743

Governor Brown signed Senate Bill (SB) 734 in September 2013, which created a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA guidelines to provide an alternative to the level of service (LOS) for evaluations transportation impacts as well as recommended methodologies and significance thresholds. SB 743 does not change the discretion that the lead agencies have to select methodology or define significance thresholds. Under SB 743, the focus of transportation analysis essentially shifted from the social inconvenience of traffic congestion to adverse physical effects associated with vehicular travel demand. Measurements of transportation impacts may include total vehicle miles travelled (VMT), VMT per capita, automobile trip generation rates, or automobile trips generated. VMT has long been a common metric to use to measure travel demand. A VMT is one vehicle traveling on a roadway for one mile. Many communities have been estimating and developing policies related to VMT for years, including estimates and goals for VMT per person, VMT per employee, or other methods of normalization. SB 743 directs revisions to the CEQA guidelines that would create criteria for assessing travel demand, such as "vehicle miles traveled, vehicle miles traveled per capita, automobile trips generate" (OPR 2018).

Although OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (CEQA Guidelines Section 15064.7[c]). In

December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions, as follows:

- **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
- **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
- **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

Regional and Local Plans, Policies, Regulations, and Ordinances

No regional or local plans, policies, regulations, or ordinances related to recreation are applicable to the planning area.

Alameda County Congestion Management Program

The Alameda County Congestion Management Program (CMP) identifies countywide strategies to respond to future transportation on needs and procedures to reduce congestion. The CMP identifies existing and desired traffic conditions on a variety of roadways throughout the county. All freeways and state highways, and selected arterial roadways, are designated elements of the CMP Roadway System.

County of San Joaquin General Plan

As required by SB 743, the LOS and delay impact metric has been replaced by the VMT metric in the determination of transportation impacts. Therefore, LOS goals and policies of the respective affected jurisdictions are not assessed in this CEQA document.

3.17.3 Impact Analysis and Mitigation Measures

Methodology

Proposed facility projects include new and improved visitor and operations facilities that will be implemented under the General Plan.

This section briefly describes the approach used to prepare the analysis of the potential effects resulting from implementation of the General Plan to transportation and traffic. Operations following implementation of the General Plan would not change significantly compared to existing conditions. Therefore, an analysis of project-related traffic impacts using LOS was not performed because LOS is primarily used for analyzing the long-term effects of projects on traffic flow. While VMT is now the preferred methodology for assessing transportation impacts under CEQA, other programs, plans, ordinances and policies related to LOS are considered during a project's approval phase to the extent that such standards are present in applicable local plans (e.g., General Plan) and guidelines. However, no further analysis is warranted for purposes of this DEIR as relates to County plans, policies, and guidelines that relate to LOS.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the General Plan would have a significant impact related to transportation and traffic if it would:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d) Result in inadequate emergency access.

Environmental Impacts

Impact 3.17-1. Would the Project Conflict with a Program, Plan, Ordinance or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities?

Carnegie SVRA currently has one main entrance and several additional entrances for special purposes, including a special-event entrance and a public exit/entrance for the campground that opens when the main SVRA entrance closes. Several gates provide access to the project area from Tesla Road/Corral Hollow Road. For the analysis, it is assumed that the existing entrance would continue to function as the main entrance to the SVRA.

General Plan Implementation

The Carnegie SVRA General Plan is a broad-based policy document that establishes a long-range vision for the SVRA and provides goals and guidelines to direct future improvements, services, and programs. By providing a clear purpose, a vision, and long- and short-term goals and guidelines, the General Plan defines the broadest possible management framework for program development, ongoing management, and public use of Carnegie SVRA. This framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals.

Management of the SVRA is undertaken in compliance with all applicable statutory and regulatory requirements as described in Section 4.4, "Goals and Guidelines," in Chapter 4, "The Plan," of the General Plan and each technical section of this EIR, as appropriate. Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, are consistent with the Carnegie SVRA General Plan and would continue to be consistent with the revised General Plan. Therefore, General Plan implementation would not conflict with any transportation or traffic plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and there would be **no impact**.

New and Improved Facilities

The General Plan proposed projects would provide additional OHV and non-OHV recreation opportunities at the SVRA and attendance would likely grow naturally. It is unlikely to result in a "bump" in attendance solely because of the new opportunities within the SVRA's existing footprint. Furthermore, the expanded opportunities would be brought online over time, and the General Plan does not make schedule estimates that could be used to establish individual project "buildout" dates. Therefore, it is estimated that general economic conditions in the region have a larger effect on short-term attendance than new facility offerings.

Construction
During the implementation of the proposed facility projects described in Chapter 2, "Project Description," of this DEIR, construction vehicles would access the project site using the existing access driveway. Potential construction trips would include delivery of construction equipment (a backhoe and crane), delivery and transport of construction material, and arrival and departure of construction workers. All construction activities and staging would occur on the project site and would not alter public rights-of-way. Because these activities would be temporary and confined to the project site, and would not alter County transportation facilities, implementation of the General Plan would not conflict with County policies related to transportation, transit, pedestrian, or bicycle networks. This impact would be **less than significant**.

Operations
The General Plan's operational activity would fall within the existing range of daily trips and would not have the potential to substantially increase traffic volumes and impact the local or regional circulation system. Furthermore, due to the limited changes resulting from project operations, the impact on traffic circulation, and transit, bicycle, and pedestrian facilities would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.17-2. Would the Project Conflict or Be Inconsistent with CEQA Guidelines§ 15064.3, Subdivision (b)?

The above referenced section of the CEQA Guidelines provides guidance for the analysis of travel demand impacts. The section suggests that VMT is the most appropriate measure of travel demand impacts. The CEQA Guidelines also clarify that a project's effect on automobile delay shall not constitute a significant environmental impact. VMT can be an indicator of potential adverse physical environmental effects. The actual adverse physical environmental effects associated with VMT are analyzed in other sections of this document, including Air Quality, Greenhouse Gas Emissions, Noise and Vibration, and Energy.

General Plan Implementation

As discussed above, the Carnegie SVRA General Plan is a broad-based policy document that establishes a long-range vision for the SVRA and provides goals and guidelines to direct future improvements, services, and programs. By providing a clear purpose, a vision, and long- and short-term goals and guidelines, the General Plan defines the broadest possible management framework for program development, ongoing management, and public use of Carnegie SVRA. This framework is intended to guide day-to-day decision-making and serve as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement General Plan goals.

Management of the SVRA is undertaken in compliance with all applicable statutory and regulatory requirements as described in Section 4.4, "Goals and Guidelines," in Chapter 4, "The Plan," of the General Plan and each technical section of this EIR, as appropriate. Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, are consistent with the Carnegie SVRA General

Plan and would continue to be consistent with the revised General Plan. Therefore, General Plan implementation would not conflict or be inconsistent with CEQA Guidelines§ 15064.3, Subdivision (b) because VMT would not change due to Parks' ongoing management of Carnegie SVRA, and there would be **no impact**.

New and Improved Facilities

Construction
With respect to construction traffic, any truck trips would be limited to the length of time required for the project's construction and projects would be phased over several years spreading out VMTs related to new and improved facilities. The construction activities will not affect the long-term VMT of the proposed project. There is no adverse physical environmental impact associated with VMT that is not addressed fully in other relevant technical sections. The impact is **less than significant**.

Operations
The General Plan could have a significant impact relative to Section 15064.3(b) of the CEQA Guidelines if it would generate work VMT at a level that would exceed 15 percent less than the existing average work VMT per employee for the area in which the project is located. However, as stated above, the change in operations and maintenance practices that would occur after the completion of project construction would be minimal compared to existing conditions, and no new trips would be added due to implementation of the General Plan. Thus, VMT change resulting from General Plan implementation would not be substantial. Therefore, the operation of the SVRA under the General Plan would result in a **less-than-significant impact**.

Mitigation Measures

No mitigation is required.

Impact 3.17-3. Would the Project Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)?

The Carnegie SVRA General Plan includes the following operations and maintenance (OM) goals and guidelines to address issues related to transportation hazards:

OM Goal 3: Provide facilities and services that contribute to the safety and convenience of visitors and staff.

- **OM Guideline 3.6**: Design and maintain all access roads and entrances according to applicable safety standards.
- **OM Guideline 3.7**: Provide signage directing visitors to exit points for ease of egress in case of emergency.
- **OM Guideline 3.9:** Plan and design facilities to allow ease of access for emergency personnel and to allow clear view of visitors by State Parks peace officers. Locate restroom facilities in visible locations; avoid locating restroom facilities in remote locations.

OM Goal 4: Coordinate with special-event sponsors to ensure that special events are well managed and that appropriate visitor services are available.

- **OM Guideline 4.2**: Design and implement parking management plans to accommodate increased demand during special events.
- **OM Guideline 4.3**: During special events, implement dust control measures in dirt parking areas and traffic and parking measures, such as clearly defined staging and unloading areas for OHVs, designated parking areas for large vehicles and trailers, defined parking lots for regular-sized vehicles, designated emergency vehicle parking and access routes, barricades to direct vehicles and pedestrians. Provide travel and parking information in special event publications.

General Plan Implementation and New and Improved Facilities

Implementation of the General Plan would not involve the creation or alteration of roadways; therefore, it would not result in the creation of unsafe geometric design features. Construction-related traffic would use the existing site driveway, and all construction activities and staging would occur on the project site within the planning area. For these reasons discussed above, there would be **no impact**.

Mitigation Measures

With implementation of the goals and guidelines, no mitigation is required.

Impact 3.17-4. Would the Project Result in Inadequate Emergency Access?

New and Improved Facilities

Implementation of the General Plan would not involve the creation or alteration of roadways. During the construction of the proposed new and improved facility projects, construction vehicles would access the project site from Corral Hollow Road/Tesla Road, which is straight and easily passable by emergency vehicles. In addition, the planning area contains ample unused parking areas for vehicle queueing and parking, which would prevent back-ups onto Corral Hollow Road/Tesla Road. For these reasons, implementation of the General Plan would not result in inadequate emergency access and there would be **no impact**.

Mitigation Measures

No mitigation is required.

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3.18 Tribal Cultural Resources

This section describes tribal cultural resource conditions in the planning area, discusses the regulatory framework, and analyses the potential impacts of implementing the Carnegie SVRA General Plan on tribal cultural resources.

3.18.1 Existing Conditions

Section 2.3.3, “Cultural Resources,” in Chapter 2 of the General Plan describes the setting information for the planning area related to prehistoric land use patterns, and ethnography, and the historic era. An extensive study conducted by the Anthropological Studies Center (ASC) at Sonoma State University (ASC 2010) indicated that the planning area contains a rich prehistory associated with the Northern Valley Yokuts and Ohlone Native American populations.

3.18.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation’s master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:

   Criterion A — Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B — Is associated with the lives of persons significant in the past (persons).

   Criterion C — Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

   Criterion D — Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee consideration in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

State Plans, Policies, Regulations, and Laws

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of

California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1. 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.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

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

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

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "Tribal Cultural Resources." PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a Tribal Cultural Resource is a project that may have a significant effect on the environment." PRC Section 21074 states:

a) "Tribal Cultural Resources" are either of the following:

    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:

        i.) Included or determined to be eligible for inclusion in the CRHR.

        ii.) 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.

b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal Cultural Resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) 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 Tribal Cultural Resource if it conforms with the criteria of subdivision (a).

Assembly Bill 52 (AB 52)

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "Tribal Cultural Resources," defined in PRC Section 21074. Pursuant to CEQA requirements, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration.

Health and Safety Code, Section 7052

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the Native American Heritage Commission (NAHC), which notifies (and has the authority to designate) the most likely descendants (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Public Resources Code Section 21080.3.1.

Consultation with Native Americans is conducted for any project that would result in the undertaking of a negative declaration, mitigated negative declaration, or environmental impact report.

Public Resources Code Section 21084.3.

Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resources.

Government Code

Confidentiality of archaeological resource records and Native American consultation information. Government Code Section 6254 (r) states that records of Native American graves, cemeteries, sacred places, places, features, objects in the possession of a state agency are not required to be disclosed. Government Code Section 6254.10 states that archaeological site information and information from Native American consultation maintained by Department of Parks and Recreation is not required to be disclosed.

Executive Order W-26-92

All state agencies shall recognize and, to the extent prudent and feasible within existing budget and personnel resources, preserve and maintain the significant heritage resources of the State. Each state

agency is directed to administer the cultural and historic properties under its control in a spirit of stewardship and trusteeship for future generations; to initiate measures necessary to direct its policies, plans, and programs in such a way that state-owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and to ensure that the protection of significant heritage resources are given full consideration in all of its land use and capital outlay decisions

Executive Order B-10-11

Every state agency and department shall encourage communication and consultation with Native American Tribes.

California State Parks Department Operations Manual and Resource Management Policies and Directives

The Department Operations Manual (DOM) is the guiding policy manual for California State Parks. Included within the DOM is a volume of resource management policies and directives. These policies and directives provide guidance toward the preservation of natural and cultural resources and on the uses that may impact those resources, as well as to amplify the legal codes contained in the Public Resources Code, the California Code of Regulations, and the California State Park and Recreation Commission's Statement of Policy and Rules of Order.

The Resource Management Directives include policies on archaeological, historical, and cultural resource preservation, protection, consultation, research, and professional procedures and practices.

State Parks Cultural Resource Review and Related Procedures (Departmental Notice 2004-02)

The Department's procedures for protecting historical resources in conformance with PRC sections 5024 and 5024.5 and Executive Order W-26-92.

State Parks Consultation Policy (Departmental Notice 2007-05)

The Department recognizes its special responsibility as the steward of many sites of cultural and spiritual significance to living Native peoples of California. Therefore, it is the policy of California State Parks to engage in open, respectful, ongoing consultation with appropriate Native California Indian tribes or groups in the proper management of areas, places, objects, or burials associated with their heritage, sacred sites, and traditional cultural properties or cultural traditions in the State Park System.

Prior to implementing projects or policies that may have impacts to Native California Indian sites within the State Park System, the Department will actively consult with local Native California Indian tribes regarding the protection, preservation and/or mitigation of cultural sites and sacred sites in the State Park System.

State Parks Confidential Cultural Resource Data Governance (Departmental Notice 2021-09)

Established protocol to manage confidential cultural resources information that is critical for effective environmental compliance, risk management, and stewardship for California State Parks. Access to, and use of, the information is constrained by governance to restrict access, define allowable uses, and defend against misuse or inadvertent disclosure.

Regional and Local Plans, Policies, Regulations, and Ordinances

No regional or local plans, policies, regulations, or ordinances related to cultural resources are applicable to the planning area.

3.18.3 Impact Analysis and Mitigation Measures

Methodology

The evaluation of potential impacts on tribal cultural resources from implementation of the General Plan is based on current land use, existing conditions, and on changes that could occur at the SVRA from implementation of the General Plan including construction of the new and improved facility projects described in Chapter 2, “Project Description,” of this EIR.

PRC Section 21074 defines “Tribal cultural resources” as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a Tribal cultural resource. For the purposes of this impact discussion, “historical resource” is used to describe historic-period, built-environment resources. Tribal cultural resources, which may qualify as “historical resources” pursuant to CEQA, are analyzed separately from built-environment historical resources.

Native American Consultation

Native American consultation included correspondence between OHMVR Division archaeologists and the NAHC. Correspondence included OHMVR Division archaeologists’ request for a sacred lands files record search as well as a Native American contact list of the project area. Although a review of the sacred lands files by the NAHC failed to identify sacred sites within CSVRA, Native American consultation with Tribes listed on the NAHC contact list, including site visits with five Native American groups between August and October 2012, resulted in the identification of two sacred sites, resource impacts to one culturally sensitive site, and botanical resources of significance to the Native American community.

All of the consulting Tribes expressed concerns about the direct impacts associated with the portion of the Franciscan Loop Trail that bisects CA-ALA-443. In lieu of rerouting the road, many Native American representatives stated that an improved resource protection plan, such as capping the site with geo cloth followed by six inches of pavement as a preferred mitigation alternative. All representatives believe that the petroglyph, CA-ALA-571 is a very important ceremonial site, and that direct and indirect (visual and auditory) impacts should be avoided. Many tribal representatives have also identified P-11-011071 as a sacred area and have also requested that direct and indirect (visual and auditory) impacts should be avoided. CA-AlA-443 and P-11-011071 are not located in the Park and will not be subject to future impacts. In general, all of the consulting Tribes recommend that the OHMVR Division develop resource preservation, protection, and mitigation measures that prevent current and foreseeable adverse impacts to known and future documented prehistoric sites.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact on cultural resources if it would:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:

   – 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

   – 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact 3.18-1 Cause Potential Impacts on Tribal Cultural Resources?

As part of public outreach and Native American consultation during development of the Carnegie SVRA General Plan, Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok representatives expressed concerns regarding their ability to have access to the Carnegie SVRA to gather ethnographic botanical resources.

Tribal Cultural Resources (TCR) Goal 1 and associated guidelines (shown below) in Chapter 4, "The Plan," of the General Plan would address potential impacts to tribal cultural resources from General Plan implementation.

TCR Goal 1: Identify and interpret the tribal cultural resources, traditional cultural places, and past and present cultural uses in the Park and protect these culturally significant places.

- **TCR Guideline 1.1:** Conduct ethnographic studies using the historical accounts and ethnographic records of local California Native American groups (Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok) to identify and protect traditional cultural places, including sites of special cultural and/or religious significance that are located within Carnegie SVRA.
- **TCR Guideline 1.2:** Work with Native American groups to protect and preserve the tribal cultural resources, traditional cultural places, and sacred sites within the Park. Any maintenance, construction, or other activities that have the potential to encounter or disturb tribal cultural resources will involve consultation and monitoring in accordance with state law and State Parks policies. Native American monitoring will be conducted by a representative/representatives of a local Tribe/local Tribes, as identified by the NAHC.
- **TCR Guideline 1.3:** Identify and record traditional cultural places located within Carnegie SVRA in consultation with the local California Native American groups (Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok).
- **TCR Guideline 1.4:** Develop interpretation and education programs in conjunction with the California Native American groups (Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok) to highlight their culture (both past and present), and their long-time use and association of areas within Carnegie SVRA.
- **TCR Guideline 1.5**: Inform the local California Native American tribes and individuals that access and use of culturally significant and sacred sites within Carnegie SVRA will occur in compliance with State Parks' Native American consultation policy (Departmental Notice 2007, Native American Consultation Policy and Implementation Procedures) and with PRC Section 5097.9.
- **TCR Guideline 1.6:** Provide annual tribal cultural resource training to park staff members. Ensure that SVRA field staff, such as maintenance and trails team members, understand the procedures for what to do if tribal cultural resources, and most importantly human remains, are inadvertently discovered during a project or a park visitor. Involve local California Native American guest speakers as participants in annual tribal cultural resource training to share and teach park staff members about today's local Native American population, their heritage, and the important role of cultural resource management in protecting their heritage. Inform SPPOs about the location of known tribal cultural resources most susceptible to looting, vandalism, or damage by park visitors so that they can monitor site conditions and watch for site impacts and vandalism. Ensure that SPPOs have the latest information on current tribal cultural resource laws.

  If anyone identifies previously undocumented tribal cultural resources or suspected tribal cultural resources during any maintenance, construction, or other activities – work will be temporarily halted in the area of the resource/suspected resource. Work will not resume in that area until the Native American monitor inspects the resource, and appropriate avoidance, protection, or treatment is implemented.

In the event of an accidental discovery or recognition of human remains during any maintenance, construction, or other activities – all work will cease immediately in the area of the find in compliance with California Health and Safety Code §7050.5 and §7052; and Public Resources Code §5097.99. The State Parks' Sector Superintendent (or authorized representative) will notify the County Coroner/Medical Examiner in accordance with § 7050.5 of the California Health and Safety Code. If the coroner determines the remains represent Native American internment, the Native American Heritage Commission in Sacramento will be consulted to identify the most likely descendant/s and the appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC § 5097.98).

Hold to the highest standards and requirements any archaeological investigation/ collection permits. Such permits, especially those entailing archaeological excavations, should include comprehensive research designs that review existing literature and document existing collections and provide appropriate cataloging and curation of excavated materials. Excavation permits should also include Tribal review and approval, and approval from senior State Parks archaeological staff. Archaeological excavations that have not been reviewed as part of an existing project require evaluation under State Parks' environmental review process to avoid significant impacts on the environment and other State Parks' resources.

TCR Goal 1 and associated guidelines inform local Native American tribes and individuals that access and use of culturally significant and sacred sites in the Carnegie SVRA would occur in compliance with State Park's Native American consultation policy (Departmental Notice 2007 Native American Consultation Policy and Implementation Procedures) and PRC 5097.9, which excludes public agencies from interfering with or prohibiting "the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution." Access and use of these areas by Native Americans would require issuance of a DPR 246 "Special Event" permit. Approval of a Special Event permit would allow managed access to and use of culturally significant and sacred sites in the Carnegie SVRA by Native Americans while preventing inadvertent significant impacts on natural resources. The requesting Native American tribe, organization, and/or individual would need to complete the permit application, in consultation with the State Park District Superintendent or an appointed Carnegie SVRA employee. The SVRA staff would gather the information required to complete the permit from the requesting party, including intended date(s) of access, number of participating individuals, and location, respecting the confidential and culturally significant nature of the request. The permit is required to comply with State Parks mandates and policies regarding natural resource management and additional Carnegie SVRA procedures, facilities, or resources, while enabling Carnegie SVRA rangers and other staff to be aware and supportive of such Native American traditional practices. Therefore, the impact on ethnographic and sacred resources would be **less than significant**.

Mitigation Measures

With implementation of the goal and guidelines, no mitigation is required.

Impact 3.18-2 Lack of Access for Ceremonial and/or Traditional Practices by Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok?

Native American consultants have indicated that "in ancestral times there were cultural places of the type that exist on the Tesla property where only specially-initiated religious leaders and individuals would go to pray, not tribal members in general. They prayed in these places for the health and wellbeing of the world and everyone and everything in it. They would like this practice to be honored on the Tesla property by restricting access by the general public to ancestral cultural sites and the larger cultural landscape on the Tesla property."

TCR Goal 1 and associated guidelines (shown above under Impact 3.18-1) would consult with local Native American tribes and individuals (i.e., Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts, and Miwok) regarding the protection, preservation, and/or mitigation of cultural sites and sacred places in the Carnegie SVRA, in compliance with the Governor's Executive Order (EO) B-10-11, the Natural Resources Agency Tribal Consultation Policy, and State Park's Departmental Notice 2007 Native

American Consultation Policy and Implementation Procedures. The Carnegie SVRA would attempt to meet with Native American tribes and individuals at least twice a year as part of its ongoing Native American consultation efforts. Departmental Notice 2007-5 Native American Consultation Policy and Implementation Procedures identifies the following nine areas of project activity requiring consultation between local Native American tribes and individuals and State Parks: 1) acquisition of properties where cultural sites are present; 2) during the General Plan process and/or development of Management Plans; 3) planning, design, and implementation of capital outlay and other public works and development projects; 4) issues of concern identified by the tribes; 5) plant and mineral gathering by Native people; 6) access to Native ceremonial sites; 7) archaeological permitting; 8) mitigation of vandalism and development of protective measures at Native sites; and 9) when using the Native voice in presenting the story of Native people in park units.

Currently, access to the acquisition area is restricted to Carnegie SVRA staff. The results of the pending ethnographic study and further Native American consultation would guide all future management and planning efforts for particular locations in the acquisition area, taking into account the need for Native American groups to have access to specific locations where they can continue their ceremonial and traditional practices. Therefore, adherence to the TCR Goal 1 and associated guidelines would limit restrictions that would deny access by Native Americans to portions of the Carnegie SVRA for ceremonial and traditional practices. Therefore, the impact would be **less than significant**.

Mitigation Measures

With implementation of the goal and guidelines, no mitigation is required.

3.19 Utilities and Service Systems

This section describes utilities and service systems in the planning area. It also discusses the federal, state, and local regulatory framework and analyses the potential impacts of implementing the Carnegie SVRA General Plan on utilities and service systems.

3.19.1 Existing Conditions

Section 2.2.3, “Facilities,” in Chapter 2, “Existing Conditions,” of the General Plan includes a description of electrical service, telecommunications, water delivery and wastewater treatment, and solid waste disposal at Carnegie SVRA. Figure 2-1 of the General Plan depicts the location of a water treatment facility (with a well) within the SVRA headquarters area north of Corral Hollow Road, and Figure 2-2 in Chapter 2 of the General Plane depicts the locations of the existing electrical lines and easement in the planning area and vicinity.

3.19.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

There are no federal plans, policies, regulations, and laws applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Green Building Code Standards

The standards included in the 2022 California Green Building Standards Code (CALGreen Code) (Title 24, Part 11 of the California Code of Regulations) became effective on January 1, 2023. The CALGreen Code was developed to enhance the design and construction of buildings, and the use of sustainable construction practices, through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality (California Building Standards Commission 2022).

Chapters 4 and 5 of the 2022 CALGreen Code requires residential and nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resources’ Model Water Efficient Landscape Ordinance, whichever is more stringent. Both chapters of the 2022 CALGreen Code requires construction contractors to reduce construction waste and demolition debris by 65 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both. In addition, the 2022 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

Chapter 5 of the 2022 CALGreen Code defines standards for plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) and outdoor water use.

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulations, and laws applicable to utilities and service systems.

3.19.3 Impact Analysis and Mitigation Measures

Methodology

Impacts related to utilities and service systems were identified by comparing existing service capacity and facilities against future demand associated with proposed project implementation and identifying reasonably foreseeable service and facilities expansion required to serve the proposed project. When possible, a quantitative comparison was used to determine future demand.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Carnegie SVRA General Plan would result in a potentially significant impact related to utilities and service systems if it would:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments;

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or

e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

Issues Not Discussed Further in this EIR

Relocation or Construction of Utilities that Results in Significant Environmental Effects— Environmental impacts related to constructing or expanding utility infrastructure, including water and electrical infrastructure, to serve the planning area are analyzed throughout the various environmental topic specific chapters of this EIR in conjunction with overall development in the planning area. Where necessary, these chapters include mitigation measures and identify General Plan goals and guidelines that would reduce or avoid the impacts of developing infrastructure on the physical environment. There is no additional significant impact related to construction of new or expanded utilities and service systems within the planning area beyond what is comprehensively analyzed throughout this EIR; therefore, this topic is not discussed further in this section.

Wastewater Treatment Capacity— The planning area is not served by a municipal wastewater service provider. Therefore, General Plan implementation would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments. There would be no impact, and this issue is not discussed further in this EIR.

Environmental Impacts

Impact 3.19-1. Availability of Sufficient Water Supplies?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, and visitor service programs, associated with the implementation of the Carnegie SVRA General Plan would not increase water supply demand. Therefore, General Plan implementation would have **no impact** related to the sufficiency of existing and future available water supplies.

New and Improved Facilities

Some of the new and improved visitor facilities, such as a new group campsite and restrooms, described in Chapter 2, “Project Description,” of this EIR would make potable water more easily accessible to visitors. However, these facilities would not increase demand for potable and nonpotable water supplies at Carnegie SVRA. Currently, potable water is required for coin-operated showers, restrooms, and water faucets. The use of these facilities would likely increase with greater visitor use anticipated over time, resulting in an increase in water demand.

As described in the General Plan, Chapter 2 “Existing Conditions,” Section 2.7.4.3 “Carnegie SVRA Visitation,” over the last 20 years, Carnegie SVRA has hosted an average of 99,000 visits each year. Attendance peaked in the early 2000s and in 2015 stayed fairly steady until fiscal year 2007–2008, when a drop-off in attendance occurred. (Please note that these attendance figures are collected locally and may differ from attendance reported in annual State Parks statistical reports because of differences in reporting special-event attendance). The decrease could have been caused in part by the 2008 recession and the resulting decrease in disposable household incomes. The most recent data from fiscal years 2015 through 2019 show a decrease in visitors from the spike as well as conditions before the spike. It is assumed that attendance at Carnegie SVRA would likely rise with population growth and general economic conditions in the surrounding region. However, even if attendance doubled, which conservatively estimate water demands could increase to 7.6 million gallons per year from 5.9 million gallons per year, given that the potable-water well is capable of producing 26.3 million gallons per year, sufficient potable water supplies would be available to serve new development envisioned in the General Plan.

Potable water supplies would continue to be provided by the on-site well. This potable water well is capable of producing approximately 72,000 gallons per day, or 26.3 million gallons per year. Carnegie SVRA requires approximately 5.9 million gallons of potable water per year. Eight wells supply water to state residences, but they are shallow and only produce enough water for the building into which they are tied.

Nonpotable water is used for dust control as needed, fire protection, and landscape irrigation. Additionally, nonpotable water supplements a dust suppressant (e.g., Dust-Off) that is applied to the main park road, campgrounds, and staging areas. Tracks and the 4x4 challenge area also require watering in summer months to control dust and minimize soil movement. An existing nonpotable-water well is located adjacent to the potable wells and can produce 64,800 gallons per day, or 23.7 million gallons per year, and has an average use of 8.7 millions of gallons per year. Additional nonpotable water for dust control of new tracks and any new landscaping would be needed. Nonpotable water would also continue to be used for fire protection in the planning area. Because average (nondrought) nonpotable water use represents only about 35 percent of the nonpotable-water well’s capacity and given the limited number of new facilities that would be developed with the General Plan that would require additional nonpotable water, it is not anticipated that demands for nonpotable water would exceed the nonpotable-water well’s capacity of 23.7 million gallons per year.

In addition, implementation of Water Goal 3 and associated guidelines in the General Plan (shown below) would ensure that future development and improvements in Carnegie SVRA would conserve water resources. Plant Goal 1, Interpretive and Educational Program (IEP) Goal 3, and Operations and Maintenance (OM) Goal 1, which call for balancing uses with natural resource protections and water conservation and education, also include Plant Guideline 1.4, IEP Guideline 3.5, and OM Guideline 1.3 (shown below) that support State Parks effort to conserve water.

Water Goal 3: Manage the SVRA to conserve water resources while maintaining a quality OHV recreational experience.

- **Water Guideline 3.1:** When developing detailed plans for facilities envisioned in this General Plan, assess available water sources that will yield sufficient water supplies needed for operation and maintenance of the facilities. Develop water supply as appropriate in compliance with state regulatory requirements.

- **Water Guideline 3.2:** Use recycled water, as available, for dust control and irrigation as allowed by water quality and health regulations and as available at the site or nearby.
- **Water Guideline 3.3:** Manage facilities to accommodate periods of drought or low water supply. Restrict the use of water for dust control and use alternative dust suppression methods as necessary.
- **Water Guideline 3.4:** Implement water conservation measures that will reduce water use by 10 percent by 2015 and 20 percent by 2020 as measured against a 2010 baseline in accordance with Executive Order B-18-12 issued by Governor Edmund G. Brown Jr. on April 25, 2012, and with the Proclamation of a State of Emergency signed on January 17, 2014, and the Proclamation of Continued State of Emergency signed on April 25, 2014.

Plant Goal 1: Manage the SVRA for a balance of uses that allow protection of special-status plants and sensitive natural communities while maintaining a quality OHV recreational experience.

- **Plant Guideline 1.4:** Use drought-tolerant plants, and whenever feasible, use plants native to the site for landscaping. Select plants that require little or no irrigation. If irrigation is required for plant establishment, use temporary irrigation methods that allow a gradual tapering off of watering over a 3- to 5-year period. Regulate water pressure at a level that applies sufficient water without causing erosion, damage to plants, or runoff.

IEP Goal 3: Expand understanding of ecological relationships and heighten awareness of and sensitivity to human impacts.

- **IEP Guideline 3.5:** Promote water conservation on-site, for both visitor use and operational purposes.

OM Goal 1: Provide visitor services and infrastructure that encourage responsible visitor use of Carnegie SVRA and meet visitor needs.

- **OM Guideline 1.3**: Promote opportunities to incorporate sustainability into SVRA development, operations, and maintenance. Sustainability initiatives could include supporting and encouraging the use of electric vehicles, promoting energy efficiency, using reclaimed water, and applying energy efficiency and green building standards to new construction and other initiatives that may be developed in the future.

In addition, the design and construction of all facilities must comply with the water quality conservation requirements cited in Title 24 of the CALGreen Code. It requires compliance with the California Department of Water Resources' Model Water Efficient Landscape Ordinance for all outdoor irrigation. Furthermore, Section 5.303, "Indoor Water Use," of the CALGreen Code provides standards for plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads). The CALGreen Code limits effective flush volumes to 1.28 gallons per flush and maximum flow rates for restroom faucets to 0.5 gallon per minute (California Building Standards Commission 2022).

Therefore, the new and improved facilities would not substantially decrease the groundwater supplies available to serve existing and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.19-2. Increased Demand for Solid Waste Disposal and Compliance with Solid Waste Regulations?

General Plan Implementation

Ongoing Park management programs and plans, including operations and maintenance activities, cultural and natural resource management programs, associated with the

implementation of the Carnegie SVRA General Plan would not result in a substantial increase in solid waste generation as compared to existing conditions, and **no impact** would occur.

New and Improved Facilities

Construction
Some of the new and improved facilities include a campground remodel, a new campfire center, a new kids minibike track, and an expanded ranger station. Construction of the new and improved facilities described in Chapter 2 of this EIR could result in the generation of various construction-period wastes, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and nonrecyclable construction-related wastes. In addition, grading and vegetation removal could be required during construction of new facilities. The 2022 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction contractors to reduce construction waste and demolition debris by 65 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both (California Building Standards Commission 2022). In addition, the 2022 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled. Compliance with the 2022 CALGreen Code would support the attainment of solid waste reductions. Therefore, impacts related to increased generation of solid waste from construction of the new and improved visitor facilities would be **less than significant**.

Operations
Solid waste generated at Carnegie SVRA is transported by Delta Disposal Service Company to the Tracy Material Recovery and Transfer Station, located at 30703 South MacArthur Drive in Tracy. The solid waste is then transported to the San Joaquin County–owned Foothill Sanitary Landfill, located at 6484 North Waverly Road in the community of Linden. The Foothill Sanitary Landfill has a maximum permitted throughput of 1,500 tons per day, a total maximum permitted capacity of 138 million cubic yards, and a remaining capacity of 125 million cubic yards (CalRecycle 2023). This is the largest landfill in San Joaquin County and, based on its current permit, is projected to be in operation until 2082.

Considering existing remaining capacity at the Foothill Sanitary Landfill, there is sufficient capacity to accept the anticipated increase in solid waste generated by the new and improved visitor facilities. In addition, State Parks would comply with all State and local statues related to recycling. Thus, the new and improved visitor facilities would not generate solid waste in excess of State of local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reductions goals or other federal, state, and local management and reduction status and regulations. Therefore, impacts related to increased generation of solid waste would be **less than significant**.

Operation of the following new and improved operations facilities would not result in an increase in park visitation or other development that results in substantial increased solid waste generation as compared to existing conditions, and **no impact** would occur:

- SVRA Maintenance Area Improvements
- Ranger Station Expansion
- Emergency Helicopter Pad Relocation
- Volunteer Training Area Enhancements
- New Greenhouse
- SVRA Headquarters Improvements

State Parks anticipates the need to hire seven additional full-time employees and seven to eight seasonal employees to meet existing and future demands for operations and maintenance. The addition of these employees would not generate a substantial amount of solid waste. In addition, State Parks would

continue to comply with all State and local statues related to recycling. Thus, the new and improved operational facilities would not generate solid waste in excess of State of local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reductions goals or other federal, state, and local management and reduction status and regulations. Therefore, impacts related to increased generation of solid waste would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.20 Wildfire

Appendix G of the State CEQA Guidelines requires an analysis of wildfire if a proposed project is located in or near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones. As discussed further below the Carnegie SVRA is within a SRA.

This section describes wildfire conditions and wildfire behavior, identifies the California Department of Forestry and Fire Protection (CAL FIRE) fire hazard severity zones for the planning area, and describes first response to wildfires. Impacts are evaluated relative to the potential for the General Plan to exacerbate wildfire risks or expose people or structures to significant risks. In addition, this analysis identifies existing safety procedures, standards, and regulations related to managing fire risk that would be part of the General Plan.

3.20.1 Existing Conditions

Wildfire Classification and Behavior

Fires are classified by where in the fuel strata they burn: surface fires, understory fires, and crown fires (California Forest Stewardship Program 2015). Surface fires are the most common. Depending on the fuels, weather, and topography, these fires can be low to high intensity. Understory fires have flame lengths of up to 10 feet. They consume surface fuels, small trees, brush, and lower branches of overstory trees. Crown fires reach into the crowns of trees with flame lengths of more than 10 feet.

Wildland fire behavior is based on four primary factors: topography, weather, fuels, and human influences. The following discussion briefly describes how each of these factors influences wildfire behavior within and in the vicinity of the planning area.

Topography

Topographic features such as slope and aspect influence a fire's intensity, direction, and rate of spread. Fires burning in flat or gently sloping areas tend to burn more slowly and spread in wider ellipses than fires on steep slopes. Streams, rivers, and canyons can channel local diurnal and general winds, which can accelerate a fire's speed and affect its direction, especially during foehn (warm, dry, and unusually strong) wind events (California Forest Stewardship Program 2015).

The topography at Carnegie SVRA varies widely, ranging from approximately 600 feet above mean sea level along the eastern portion of Corral Hollow Creek (near the eastern boundary of the planning area) to approximately 1,700 feet above mean sea level along the southern border of the SVRA. Generally, hills with moderate to steep slopes trend down into narrow valleys, and slope down to more gently sloping and flat land along Corral Hollow Creek.

Weather

Weather conditions influence the potential for fire ignition, rates of spread, intensity, and the direction(s) toward which a fire burns. Temperature, relative humidity, and wind are the variables used to predict fire behavior.

Rainfall generally occurs as lengthy events of low intensity. On average, approximately 57 percent of annual rainfall occurs in the winter months (December through January) and 80 percent occurs between November and March. Very little rain falls between June and September.

The upper elevations in the region receive more rainfall than lower elevations. Intense rainfall is rare because the Coast Ranges moderate the spring storm systems coming onshore from the Pacific Ocean. As storm systems descend the northeastern-facing slopes, the air temperature increases and the air dries out, thus creating a "rain shadow." A rain shadow is a region that receives less rainfall and humidity than the surrounding areas because of topography and prevailing wind patterns.

The climate typically consists of mild to hot, dry summers and mild, wet winters. Temperatures are generally coolest in January and warmest in July. Humidity is highest during winter months and becomes quite low during hot summer months. Because of the summer's low humidity, the evaporation rate is high during the growing season. Therefore, soil moisture reserves are depleted rapidly during the summer months. Humidity is also highest in the morning and lowest in the afternoon. The dominant geomorphic processes that have shaped the watershed's hills and low mountains include mass wasting from landslides and fluvial erosion.

Data from the Carnegie SVRA weather station indicates the mean annual temperature for the planning area is 63.6°F with the warmest months being June, July, August and September. The coldest months are January and February. During the warm months the average temperature is 89.6 F (Department of Parks and Recreation [DPR or Department] and CAL FIRE 2020). It rises to over 100°F less than 1 percent of the time (DPR and CAL FIRE 2020).

Wind plays a role in the flammability of fuels by removing moisture through evaporation, preheating fuels in a fire's path, and increasing spotting distances (the distance at which a flying ember might ignite a spot fire). During summer, the prevailing wind direction over the SVRA comes from the south to south-west and settles into the central valley. The annual average wind speed is 5 miles per hour (DPR and CAL FIRE 2020). Occasionally, southeast winds occur at the SVRA, bringing the lowest relative humidity. The southeast winds occur in fall and winter seasons. Though, these cold season winds do not have as high an average wind speed as the summer months, they do have a higher wind speed max and have been recorded at 22 miles per hour (DPR and CAL FIRE 2020).

Fuels

Fuel, in the context of wildland fire, refers to all combustible material available to burn on an area of land. Each fuel has its own burning characteristics based on factors such as moisture content, volume, arrangement, crown cover, size, and the plants genetic makeup (California Forest Stewardship Program 2015).

The planning area is an ecologically transitional area that straddles the Coast Ranges and supports vegetation typical of both coast and inland communities. In total, 14 vegetation types are present in the planning area (see Table 2-8 in Chapter 2, "Existing Conditions," of the General Plan). These vegetation types include California juniper forest, buckeye forest, blue oak forest, Fremont cottonwood forest, desert olive, mulefat, bush mallow, black sage, California sage brush, California annual and perennial grassland, and purple needlegrass. Developed and barren areas are also present (see Figure 2-13 in Chapter 2 of the General Plan for a map of vegetation and land cover types). Approximately 50 percent of the planning area consists of annual and perennial grassland, which is considered a light fuel that burns rapidly with a short period of intense, maximum heat output.

Human Influence

Human influence on wildfire is broad and can be substantial. It includes direct influences such as the ignition and suppression of fires, and indirect influence through climate change and alterations in land use patterns that support modified vegetative regimes. Anthropogenic influence more directly controls fire frequency than area burned because anthropogenic ignitions are responsible for a large number of ignitions, but once started, fire spread and behavior become a function of fuel characteristics, terrain, and weather conditions. Areas where human influence is concentrated, but not so much so that the environment reflects an urban setting, greatly exacerbate the risk of wildfire due to the potential capacity for human-caused ignitions and fire spread (Balch et al. 2017).

Wildfire ignitions can be generated by either natural or human causes, the proportion of which depend on a variety of factors, including the presence of human activity and local climate and weather patterns. Human-induced wildfire ignitions have the ability change fire characteristics in two ways: (1) changing the distribution and density of ignitions, and (2) changing the seasonality of burning activity (Balch et al. 2017). A study of wildfires in California concluded that humans account for starting approximately 95 percent of wildfires in the state (Isaacs-Thomas 2020). Circumstances in California have made the

environment particularly vulnerable to human- caused fires with expansion of the wildland-urban interface and introduction of more people in areas susceptible to wildfire at all times of the year.

Human ignitions include a multitude of sources, including escapes from debris and brush-clearing fires, electrical equipment malfunctions, campfire escapes, smoking, fire play (e.g., fireworks), vehicles, and arson (Keeley and Syphard 2018). Areas near human development, especially areas near campgrounds and roads, consequently, generate fires at a more frequent rate than very remote or urban areas (Mann et al. 2016). Overall, CAL FIRE Santa Clara Unit t responded to 198 wildland fire incidents in 2021 that totaled 425.2 acres (CAL FIRE 2022). The four primary ignition sources in 2021 are listed as undetermined, vehicle, arson, and electrical (CAL FIRE 2022). The remaining causes, which are almost insignificant in number, are campfire, smoking, and playing with fire.

Impacts of Wildfire on Air Quality

As wildfires burn fuel, large amounts of carbon dioxide, black carbon, brown carbon, and ozone precursors are released into the atmosphere. Additionally, wildfires emit a substantial amount of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter. These emissions can lead to harmful exposures for first responders, nearby residents, and populations in regions which are farther from the wildfires (National Oceanic and Atmospheric Administration 2018). Exposure to these pollutants can cause asthma attacks, coughing, and shortness of breath. Chronic exposure to these pollutants can increase the risk of developing chronic health conditions such as heart disease, diabetes, and cancer (Hamers 2018). See Section 3.3, “Air Quality,” in this EIR for a general discussion of air contaminants.

California Department of Forestry and Fire Protection

The planning area is within CAL FIRE’s Santa Clara Unit (CAL FIRE 2022). The unit is located between the San Francisco Bay and the San Joaquin River, encompassing the Counties of Contra Costa, Alameda, Santa Clara, and Western portions of Stanislaus and San Joaquin. There are 1.34 million acres of direct protection area within the Unit with a combined population of 5.5 million people.

The Santa Clara Unit has twelve state funded fire stations, one helitack base (Alma Helitack), and an Emergency Command Center (ECC) under its jurisdiction. These stations and the helitack base are fully staffed during the declared fire season with five of the stations staffed year-round. These stations combined provide for the staffing of 16 state-owned fire engines, one state-owned helicopter, three state-owned transports/bulldozers, two Firefighter Hand Crews, and two California National Guard Hand Crews (CAL FIRE 2022).

The Unit’s Morgan Hill ECC provides dispatch as well as Command and Control through local government cooperative agreements with the City of Morgan Hill Fire Department, the South Santa Clara County Fire District, and the Alameda County Fire Department’s Sunol Fire Station. The ECC also provides dispatch under two Amador Contracts: Pacheco Fire Station and the Sunshine Fire Station in Contra Costa County (CAL FIRE 2022).

Planning Area Fire History

Wildfire records show that, within the last ten years, a large wildfire occurs in or around the SVRA every 3.33 years (DPR and CAL FIRE 2020). Carnegie SVRA has had four major fires in the area. The first being the Corral Fire that started on August 13, 2009, lasting three days and burning 12,500 acres. The second fire was the Tesla Fire that started on August 19, 2015, lasting 3 days and burning 2,700 acres. The Hollow Fire that started on July 3, 2019, lasting 2 days and burning 283 acres (DPR and CAL FIRE 2020). The Santa Clara Unit Lightning Complex fire that broke out in September 2020 denuded a portion of the drainage area of vegetation.

Fire Hazard Severity Zones

Fire hazard severity zones are measured qualitatively, based on vegetation, topography, weather, crown fire potential (a fire's tendency to burn upward into trees and tall brush), and ember production and movement within the area in question.

Fire prevention areas considered to be under state jurisdiction are referred to "state responsibility areas" or SRAs, and CAL FIRE is responsible for vegetation fires within SRA lands.[1] In general, SRA lands contain trees producing, or capable of producing, forest products; timber, brush, undergrowth, and grass, whether of commercial value or not, that provide watershed protection for irrigation or for domestic or industrial use; or lands in areas that are principally used, or are useful for, range or forage purposes.

California Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–51189 require identification of fire hazard severity zones within the State of California. In SRAs, CAL FIRE is required to delineate three wildfire hazard ranges: moderate, high, and very high.[2] As shown in Figure 3.20-1, all of the planning area is within a SRA.

As shown on Figure 3.20-2, a strip of areas north and south of Corral Hollow Road as well as Corral Hollow Creek are identified as a moderate fire hazard severity zone. The remained of the planning area is identified as a high fire hazard severity zone (Figure 3.20-2).

CAL FIRE identifies only very high fire hazard severity zones in "local responsibility areas." (LRAs) which are areas under the jurisdiction of local entities (e.g., cities and counties). As shown on Figure 3.20-1, no LRAs are in the vicinity of the planning area.

3.20.2 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to wildfire are applicable to the planning area.

State Plans, Policies, Regulations, and Laws

California Department of Parks and Recreation Operations Manual – Natural Resources Handbook

The Natural Resources Chapter of the Department of Parks and Recreation Operations Manual is the basic natural resource policy document for the State Park System. The policies, definitions, processes, and procedures contained in this chapter guide the management of the natural resources under the jurisdiction of the DPR, including naturally occurring physical and biological resources and associated intangible values, such as natural sounds and scenic qualities. The chapter guides and directs the various programs of the Department that affect the recognition, protection, restoration, and maintenance of the natural resources so that their heritage values may be effectively perpetuated and enjoyed by present and future generations of State Park System visitors.

- **Management Plan Section 0303.1.3.1.1:** *Planning* Section 0303.1.3.1.1 requires preparation of unit wildfire management plans and unit prescribed burn plans.

[1] California PRC Sections 4125–4127 define a SRA as lands in which the financial responsibility for preventing and suppressing wildland fire resides with the State of California.

[2] CAL FIRE has developed a Fire and Resource Assessment Program (FRAP) that uses a series of computer models to assess fire hazard. FRAP's data collection and models provide detailed analysis and mapping of fuels, fire weather, historical fire occurrences, and ignition location and frequency, all of which they have analyzed and modeled to develop fire hazard severity rankings for lands throughout California.

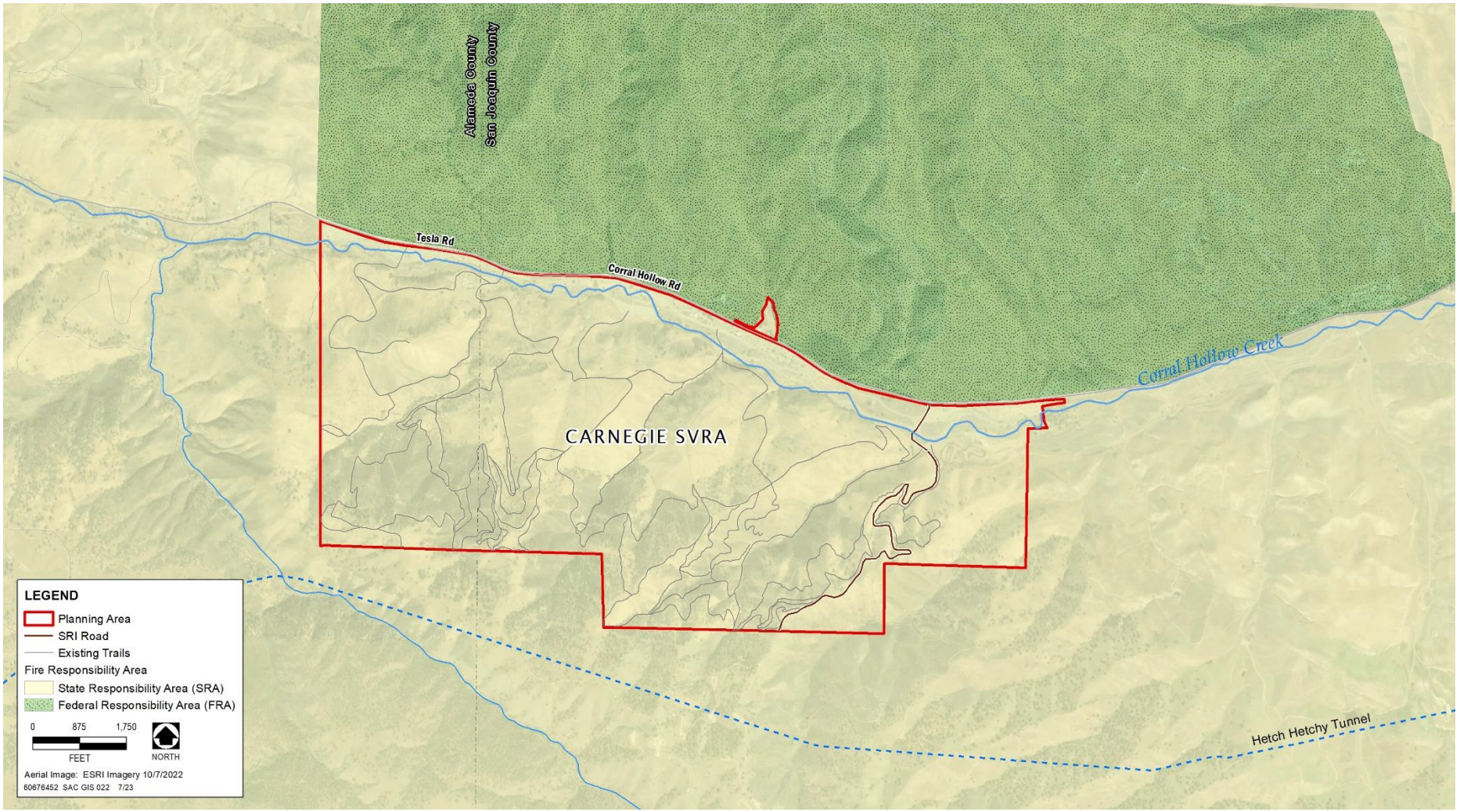

Figure 3.20-1. Fire Responsibility Areas

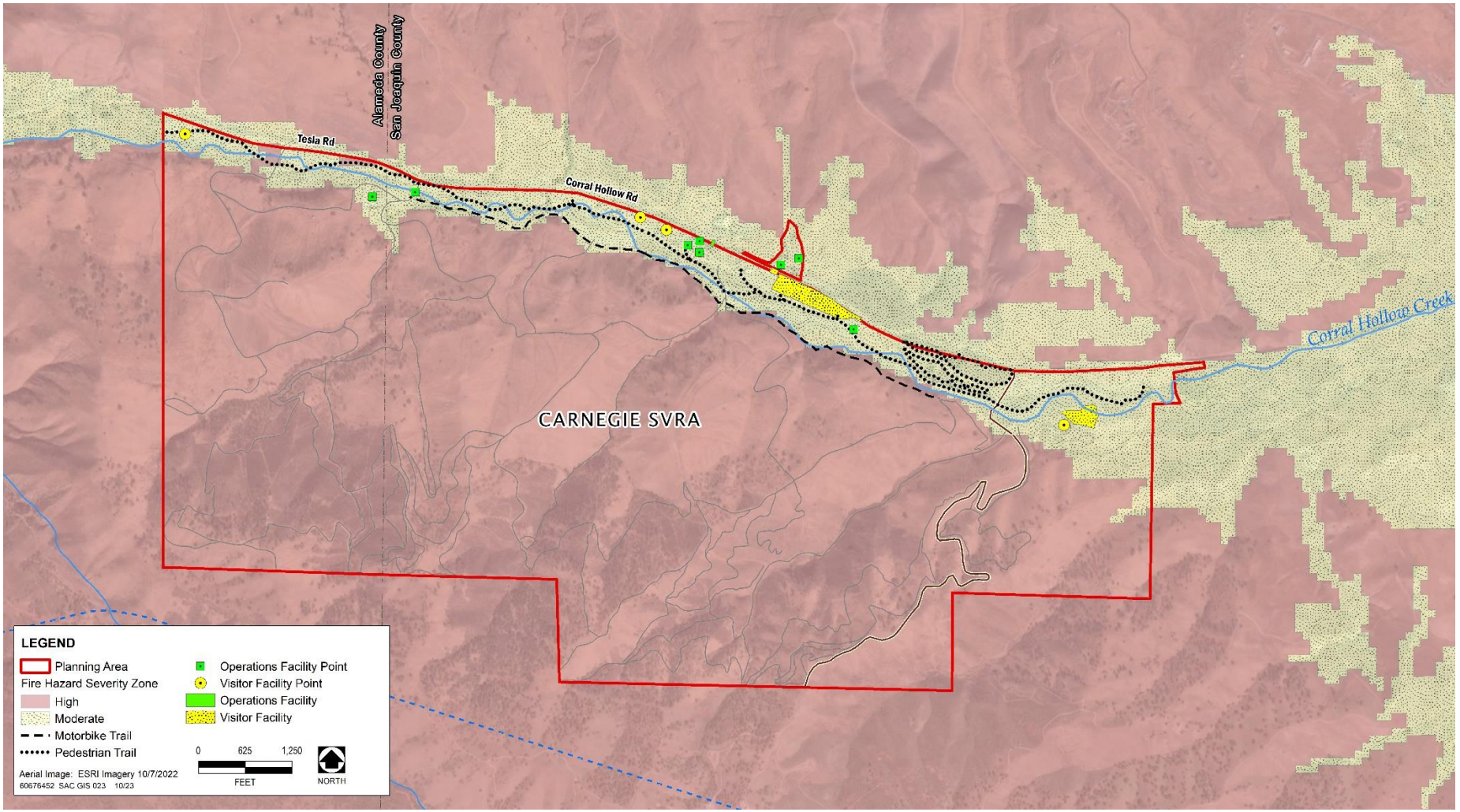

Figure 3.20-2. Fire Hazard Severity Zones

- **Management Plan Section 0131.2: Wildfire:** Section 0131.2 states that wildland fire, whether human-caused or naturally ignited, may contribute to or hinder the achievement of park management objectives. Therefore, park fire management programs will be designed to meet park resource management objectives while ensuring that firefighter and public safety are not compromised.
  - **0313.2.1.1 Wildfire Management Planning:** The Department can best protect its facilities, natural and cultural resources, and personnel and visitors by maintaining a park unit wildfire management plan that provides park staff and appropriate fire suppression personnel with important information on park infrastructure, resources values, and general suppression tactics before a wildfire occurs. The format for unit wildfire management plans can be found in the Natural Resources Handbook.
    - **0313.2.1.1.1 Wildfire Management Planning Policy:** It is the policy of the Department that each Department-operated unit that may experience wildland fires will have a wildfire management plan providing requisite information for managing wildfire events, such as the locations of sensitive park resources, facilities, water supplies and existing roads. Wildfire management plans will be reviewed by designated headquarters staff and approved by the District Superintendent.
  - **0313.2.2 Prescribed Fire Management:** Recurring fires were an integral part of the evolution of most wildland ecosystems in California. Although the restoration of fire as an ecological process remains an important goal, fire is also used to reduce threatening accumulations of fuels, control exotic plant species, protect forest soils, restore native plant assemblages, and improve habitat for wildlife. Prescribed fire is applied within appropriate ecological parameters. Fire is a disruptive influence in any ecosystem and must be used with assurance that the end result will be consistent with the Department's mandate to preserve and protect California's natural heritage.
    - **0313.2.2.1 Prescribed Fire Management Policy:** It is the policy of the Department to restore fire to its proper role in native ecosystems in accordance with the broader charge to restore and perpetuate natural ecological processes in the natural environments of the State Park System. Other important objectives consistent with the policy to restore fire to native ecosystems are the prevention of damaging fires from excessive fuel load and abnormal plant community structure, the improvement of wildlife habitat, the control of exotic species, and various other ecological objectives.

California Public Resources Code

Section 4290
California PRC 4290 was adopted for establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRAs. Under Section 4290, the future design and construction of structures, subdivisions, and developments in SRAs must provide for basic emergency access and perimeter wildfire protection measures as specified in Section 4290. These measures provide for road standards for emergency access, signing and building numbering, water supply reserves, and fuel breaks and greenbelts. Local standards that exceed those of Section 4290 supersede Section 4290.

Section 4291
Section 4291 of the PRC defines and describes fire protection measures and responsibilities for mountainous, forest, brush, and grass covered lands. These measures include, but are not limited to, the following:

- Maintenance of defensible space of 100 feet from each side and from the front or rear of a structure, but not beyond the property line.
- Removal of a portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe.
- Maintenance of a tree, shrub, or other plant adjacent to or overhanging a building free of dead or dying wood. Construction or rebuilding of a structure must comply with all applicable state and local building standards.

Section 4311
PRC Section 4311 prohibits lighting, building, or use of a fire within a Unit except in a camp stove or fireplace provided, maintained, or designated for such purpose. Portable camp stoves may be used in portions of Units approved by State Parks. Section 4311 further prohibits, upon a finding of extreme fire hazard by State Parks, smoking or building fires in portions of Units other than those designated by State Parks for such purposes.

Section 4427
PRC Section 4427 limits the use of any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices from which a spark, fire, or flame may originate, when the equipment is located on or near land covered by forest, brush, or grass. Before such equipment may be used, all flammable material, including snags, must be cleared away from the area around such operation for a distance of 10 feet. A serviceable round point shovel with an overall length of not less than 46 inches and a backpack pump water-type fire extinguisher, fully equipped and ready for use, must be maintained in the immediate area during the operation.

Section 4428
PRC Section 4428 limits industrial operations on or near any land covered by forest, brush, or grass between April 1 and December 1 of any year, or other times when ground litter and vegetation will sustain combustion permitting the spread of fire. Such operations must provide and maintain, for firefighting purposes only, suitable and serviceable tools in the following amounts, manner, and locations:

- A sealed box of tools must be located in the operating area, at a point accessible in the event of fire. The fire toolbox must contain a backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and enough shovels for each employee at the operation to be equipped to fight fire.
- Each passenger vehicle used must be equipped with a shovel and an ax, and any other vehicle used must be equipped with a shovel. Each tractor used must also be equipped with a shovel.

Section 4431
PRC Section 4431 requires users of gasoline-fueled internal combustion–powered equipment operating within 25 feet of flammable material on or near land covered by forest, brush, or grass to have a tool for firefighting purposes at the immediate location of use. This requirement is limited to periods when burn permits are necessary. Under Section 4431, the Director of Forestry and Fire Protection specifies the type and size of fire extinguisher necessary to provide at least a minimum assurance of controlling fire caused by use of portable power tools during various climatic and fuel conditions.

Section 4442
PRC Section 4442 prohibits the use of internal combustion engines running on hydrocarbon fuels on any land covered by forest, brush, or grass unless the engine is equipped with a spark arrestor and is constructed, equipped, and maintained in good working order when traveling on any such land.[3]

California Building Standards Code

The State of California's minimum standards for structural design and construction are provided in the California Building Standards Code (CBSC) (24 California Code of Regulations). The standards set forth in the CBSC are based on the International Building Code, which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous more detailed or more stringent regulations. The CBSC provides standards for various aspects of construction, including (but not limited to) excavation, grading, and earthwork construction. In accordance with California law, certain aspects of the proposed project would be required to comply with all provisions of the CBSC. The CBSC requires certain building requirements to adhere to the Fire Code (Part 9). Local agencies must ensure that development in their jurisdictions

[3] A spark arrester is a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles larger than 0.0232 inch from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the U.S. Forest Service.

comply with guidelines contained in the CBSC. Cities and counties can, however, adopt building standards beyond those provided in the code.

California Vehicle Code Division 16.5

Division 16.5, “Off-Highway Vehicles,” of the California Vehicle Code provides regulation related to the use of off-highway motor vehicles on lands other than a highway, that are open and accessible to the public, including any land acquired, developed, operated, or maintained, in whole or in part, with money from the Off-Highway Vehicle Trust Fund.

Section 38366(a) of Division 16.5 states that no person shall use, operate, or allow to be used or operated, any off-highway motor vehicle on any forest-covered land, brush-covered land, or grass-covered land unless the vehicle is equipped with a spark arrester maintained in effective working order.

Section 38366(b) of Division 16.5 states the spark arrester affixed to the exhaust system of a vehicle shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.

Carnegie State Vehicle Recreation Area Wildfire Management Plan

Each Unit of the State Park System that may experience wildland fires must have a Wildfire Management Plan DPR and CAL FIRE adopted the Carnegie SVRA Wildfire Management Plan in June 2020. The purpose of this plan is to:

- Inform CAL FIRE of park policy and sensitive park resources.
- Be the local working agreement between DPR and CAL FIRE for all activities related to wildland fires in Carnegie SVRA.
- Inform DPR and CAL FIRE staff of functions within the Incident Command System (ICS) with respect to wildland fire.
- Identify responsibility for all activities related to wildland fires.

In addition, the land management objectives for wildfire at Carnegie SVRA are to:

- Take educational and operational measures to prevent, insofar as possible, all unwanted fires.
- Protect life first, property and resources second.
- Plan and organize the personnel and equipment of the park to perform initial attack to control unplanned fires.
- Take initial action on all fires in any area considered threatening to DPR property and adjacent private and other public lands.
- Identify appropriate suppression methods at specific areas within the unit that minimize resource damage.
- Employ a fire use method, whereby the fire is allowed to burn itself out, as appropriate.
- Identify modified fire suppression activities.
- Identify appropriate mitigations after the fire.

Carnegie State Vehicle Recreation Area Camping Regulations

- Only wood and untreated wood products free from metal, petroleum products, or other toxic substances shall be used for campfires or recreational fires.
- No person shall import, transport, or possess any wood, plastic, or fiber pallet.
- No person shall ignite, burn, or maintain any wood, plastic, or fiber pallet fire.

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulation, and ordinances applicable to the planning area.

3.20.3 Impact Analysis and Mitigation Measures

Methodology

This analysis of the General Plan's effects related to wildfire is based on a review of CAL FIRE's Fire Hazard Severity Zone maps for Alameda and San Joaquin Counties; the Santa Clara Unit Strategic Fire Plan; the Carnegie SVRA Wildfire Management Plan; regulatory safety procedures, standards, and regulations; and the information resources cited herein. Effects were identified and evaluated qualitatively based on the environmental characteristics of the planning area and the magnitude of activities related to the implementation of the General Plan, new and improved visitor facilities, and new and improved operational facilities.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the General Plan would have a potentially significant impact related to wildfire if it would be located in or near SRAs or lands classified as very high fire hazard severity zones and would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan;

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Issues Not Discussed Further

Substantially Impair Adopted Emergency Response or Emergency Evacuation Plans—Corral Hollow Road/Tesla Road is a paved arterial roadway that serves as the primary evacuation route out of the Carnegie SVRA. The roadway is named Corral Hollow Road in San Joaquin County and Tesla Road in Alameda County, to the east and west, respectively. Construction of the proposed new and improved visitor and operations facilities would not affect Corral Hollow Road/Tesla Road or any other internal SVRA roadway because all construction equipment, personnel, and materials would be staged in parking areas adjacent to each site-specific facility within the SVRA. The existing SVRA campground would be temporarily closed during renovations associated with the proposed campground remodel. Many of the existing SVRA facilities are already located within the 100-year floodplain associated with Corral Hollow Creek. Upgrading and improving these facilities as part of operation of the new and improved facilities would not change visitor or SVRA employee access to the internal SVRA roadway evacuation network or to Corral Hollow Road/Tesla Road. Removal of several trees at the northern edge of the campground as part of the proposed campground remodel would improve line-of-sight visibility for motorists on Corral Hollow Road in the event of an evacuation and during daily travel. All site-specific projects would be designed according to State and local standards related to road widths, emergency vehicle access, and turn radii. Therefore, **no impact** related to impairment with emergency response or evacuation plans would occur from implementation of the Carnegie SVRA General Plan, and this issue is not discussed further in this DEIR.

Require the Installation or Maintenance of Associated Infrastructure that May Exacerbate Fire Risk or that May Result in Temporary or Ongoing Impacts to the Environment—Infrastructure that could exacerbate wildfire risks, in this case, refers to relocation and installation of utility infrastructure (i.e., water

and electrical). The Carnegie SVRA's existing on-site roads and trail network serve as a firebreak system. The potential for installation of this infrastructure to result in temporary or ongoing impacts to the environment are addressed in the applicable resource sections throughout this DEIR. Where necessary, these chapters identify General Plan goals and guidelines that would reduce or avoid the impacts of developing infrastructure on the physical environment. There is no additional significant impact related to construction of new or expanded utilities and service systems within the planning area beyond what is comprehensively analyzed throughout this DEIR; therefore, this topic is not discussed further in this section.

Environmental Impacts

Impact 3.20-1. Exacerbate Wildfire Risks?

General Plan Implementation

Operations and maintenance activities associated with implementation of the General Plan include the use of heavy equipment (e.g., loader, tractor) in all areas of the Carnegie SVRA. Depending on the location of maintenance activities and equipment required, fire risks could result from vehicle mufflers, gasoline-powered tools, and other equipment could produce a spark, fire, or flame. State Parks would comply with all PRCs related to fire safety and wildfire suppression identified in Section 3.20.2, "Regulatory Setting," above and discussed further below. Strict adherence to applicable PRCs requirements would ensure that wildfire risks are minimized. Therefore, impacts related to the potential for General Plan implementation to exacerbate wildfire risks is **less than significant**.

New and Improved Facilities

Construction
As stated above, Appendix G of the CEQA Guidelines determines wildfire impacts based on whether a proposed project would occur within or near a SRA or on lands classified as very high fire hazard severity zones. The campground remodel, new group campsite, new campfire center, relocated and/or upgraded concession store, new visitor recreation area, new kid's minibike track, new Front Hills single motorcycle trail, new interpretive loop trails, new Creekside pedestrian trail, and new recreational vehicle (RV) dump station are within an SRA (Figure 3.20-1) and designated by CAL FIRE as Moderate Fire Severity Zones (Figure 3.20-2). Other new visitor facilities may include another restroom near the motocross (MX) track and driving obstacles in the 4x4 riding area. New and improved operations facilities, including the SVRA maintenance area improvements, ranger station expansion, emergency helicopter pad relocation, volunteer training area enhancements, new campground host sites, new green house, SVRA headquarters area improvements, and water plant upgrade also are within an SRA (Figure 3.20-1) and designated by CAL FIRE as Moderate Fire Severity Zones (Figure 3.20-2). Other potential operations facility projects may include a new maintenance area bridge, other new or improved low-water creek crossing(s), maintenance of creek crossings, SVRA staff and public electric vehicle charging infrastructure, facilities for communications or technology support, shade ramada replacement, tree planting, and an ATV and/or MX track sprinkler system.

During construction, the primary fire hazards would be from vehicles and construction equipment. Construction vehicles use flammable fuels, such as diesel and gasoline, and would be operated in proximity to dry vegetation; their hot tailpipes or sparks from chains or other metal objects could ignite dry brush, especially during the warmer, dry months between June and October. Therefore, depending on the time of year and location of construction activities, there could be a temporary increase in exacerbated fire risk in the area.

Wildfire risks would be offset by State Parks compliance with fire safety and wildfire suppression measures identified in Section 3.20.2 above, including (but not limited to):

- PRC Section 4427, which identifies appropriate fire suppression equipment and stipulates removal of flammable materials to a distance of 10 feet from any equipment that could produce a spark, fire, or flame on days when burning permits are required;

- PRC Section 4428, which identifies additional firefighting equipment requirements during the period of highest fire danger (April 1–December 1);
- PRC Section 4431, which prohibits the use of portable tools powered by gasoline-fueled internal combustion engines within 25 feet of flammable materials when burning permits are required; and
- PRC Section 4442, which requires engines be equipped with a spark arrestor.

Adherence to these safety measures, when considered together, would minimize the risk of increased frequency, intensity, or size of wildfires and decrease the risk of exposure of people or structures to wildfire. Therefore, impacts related to the potential for construction of new and improved visitor facilities to exacerbate wildfire risks would be **less than significant**.

Operations
With expansion of recreation facilities envisioned in the General Plan (e.g., campfire center, kid's minibike track, OHV trails and tracks, interpretive pedestrian trails, gathering/picnic areas), the SVRA is expected to better support the recreational interests of a broader demographic of visitors thereby attracting a wider audience and increasing attendance, thereby increasing the potential for accidental fires and potentially increasing the number of people and structures that could be exposed to wildfire.

Designated segments of the multiple-use trail system in the existing Carnegie SVRA provide emergency access for wildfire suppression and would continue to do so in the future. The SVRA staff also maintains a truck with a water tank and pumping capability on-site. Fire tools are carried by all Park's staff vehicles, and fire tools and limited water supplies are carried by patrol vehicles. DPR staff conduct an on-site fire drill to ensure all staff knows their respective role during a fire. In addition, DPR implements fire prevention measures outlined in its Wildfire Management Plan, including using signs, posters, and notices on bulletin boards to educate the public about wildfire; delivering fire prevention talks at campfires aimed at further informing the general public, and campers in particular, about fire; and providing information and warnings to the public, especially during period of high fire danger, through both the media and public contacts made by Carnegie SVRA personnel. During periods of high fire danger, temporary closures may also be implemented for 4WD vehicles and other vehicles equipped with catalytic converters.

Wildfire risks would be offset by State Parks compliance with fire safety and wildfire suppression measures identified in Section 3.20.2 above. State Parks would prepare wildfire and prescribed burn management plans as well as implement additional SVRA fire management programs designed to meet Park resource management objectives while ensuring that firefighter and public safety are not compromised as required by the State Parks District Management Plan. Visitors to the SVRA would be subject to the provisions identified in the Carnegie SVRA Camping Regulations, which provides regulations for lighting, building, or use of campfires; and PRC 4311, which prohibits lighting, building, or use of a fire except in a camp stove or fireplace provided, maintained, or designated for such purpose. In addition, State Parks would enforce Division 16.5, "Off-Highway Vehicles," of the California Vehicle Code that provides regulation related to the use of off-highway motor vehicles on lands other than a highway.

Adherence to Operations and Maintenance (OM) Goal 3 and OM Guideline 3.5 in the General Plan (shown below) would provide facilities and services that would contribute to the safety of SVRA visitors and staff members. OM Guideline 3.5 aims to prevent accidental fire ignition and the spread of wildfire to adjacent areas through monitoring of OHVs for spark arresters and monitoring of fuel handling practices.

OM Goal 3: Provide facilities and services that contribute to the safety and convenience of visitors and staff.

- **OM Guideline 3.5:** Prevent accidental fire ignition and spread of wildfire to adjacent areas by monitoring OHVs for spark arresters and by monitoring fuel handling practices.

Adherence to these safety measures and General Plan goals and guidelines, when considered together, would minimize the risk of increased frequency, intensity, or size of wildfires and decrease the risk of exposure of people or structures to wildfire. Therefore, impacts related to the potential for the new and improved facilities to exacerbate wildfire risks would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.20-2. Expose People or Structures to Risks as a result of Runoff, Post-Fire Slope Instability, or Drainage Changes?

General Plan Implementation

Implementation of OM Guideline 3.16 (shown below) would ensure that post-fire runoff, slope instability, or drainage changes are minimized. Therefore, impacts related to the potential for General Plan implementation to expose people or structures to post-fire risks is **less than significant**.

New and Improved Facilities

As discussed in Section 3.7, Geology and Soils," because of the steep slopes present in the planning area, mudflows and landslides are potential hazards (see Figures 2-4 and 2-5 in Chapter 2 of the General Plan). As discussed in Section 3.10, "Hydrology and Water Quality," of this DEIR, the proposed campground remodel, campfire center, and recreational vehicle (RV) dump station could result in changes to drainage patterns and would increase the amount of impervious surface area that would increase the volume and peak-flow rate of stormwater runoff. The proposed kid's minibike track, Creekside pedestrian trail, interpretive loop trails, Front Hills motorbike trail, new visitor recreation area would not include new paved surfaces; however, continued use over a period of many years would result in soil compaction that could also increase the volume and peak-flow rate of stormwater runoff. In addition, these areas would be within a 100-year floodplain (see Figure 2-9 in Chapter 2 of the General Plan).

In the event of a fire, risks of run-off, slope instability, and drainage changes could occur. Adherence to OM Guideline 3.16 in the General Plan (shown below) would ensure that people and structures would not be exposed to risks by ensuring implementation of a post-fire resource damage management plan.

- **OM Guideline 3.16:** Implement Post-Fire Resource Damage Management Plan, including:
  - Returning land to original shape. Mineral soil which has been altered by suppression activities shall be returned as closely as possible to its original location.
  - Rehabilitating roads and trails. All roads and trails that were modified by suppression shall be returned to pre-fire conditions.
  - Protecting soil exposed by suppression activities. Cover all bare mineral soil with unburned organic matter such as leaves, needles, and woody material, when appropriate and available.
  - Eliminating new trails. New fire lines are sometimes used by the public, often creating erosion and other problems. New trails created by fire suppression activities shall be blocked by limbs and other material as available.
  - Installing erosion control devices. Temporary erosion control devices shall be installed when other means of landform restoration do not solve erosion problems created by suppression activities.
  - Removing incident bases, base camps, landing zones, and other sites used for fire suppression or control activities upon completion of use and the site returned as closely as possible to its original condition.
  - Evaluating land for possible hazards prior to reopening most notably for tree hazards.

With implementation of the General Plan guideline listed above, the General Plan would not create conditions that cause downstream runoff, post-fire slope instability, or drainage changes that would expose people or structures to significant risks. Therefore, impacts related to exposure of people or structures to post-fire risks would be **less than significant**.

Mitigation Measures

No mitigation is required.

4. Cumulative Impacts

4.1 Introduction

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Where a project's incremental effect is not cumulatively considerable, the effect need not be considered significant, but the basis for concluding the incremental effect is not cumulatively considerable must be briefly described. Cumulatively considerable, as defined in State CEQA Guidelines Section 15065(a)(3), means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (14 California Code of Regulations [CCR] § 15355).

As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone (14 CCR § 15130(b)). As stated in CEQA, "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable" (PRC § 21083(b)). An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR (14 CCR § 15130(a)(1)). The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (14 CCR § 15064(h)(4)). The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact (14 CCR § 15130(b)).

4.2 Cumulative Projects Considered in this Analysis

The CEQA Guidelines, Section 15130(b)(1), identifies two approaches to analyzing cumulative impacts. The first is the summary approach (also known as the "plan" approach), wherein the relevant projections, as contained in an adopted general plan or related planning document that evaluates regional or areawide conditions, are summarized. The second is the list approach, through which a defined set of past, present, and reasonably anticipated future projects producing related or cumulative impacts is considered for analysis. The following cumulative analysis is based on the list approach.

Relevant projects are those in the vicinity that have the possibility of interacting with the proposed project to generate a cumulative impact (based on proximity and construction schedule) and either are partially occupied or under construction, have received final discretionary approvals, or have applications accepted as complete by local agencies and are currently undergoing environmental review. The projects considered for the cumulative impact analysis are identified in Table 4-1.

Table 4-1. Cumulative Projects

Alameda County				
Arroyo Lago Residential Project	East of the City of Pleasanton city limits; Assessor's Parcel Numbers 946-4634-1, APN 946-4634-2, and APN 946-1350-3-10	Approximately 17 miles northeast	The project proposes 194 single family homes	NOP issued June 8, 2023
Sand Hill Wind Repowering Project	North and south sides of Altamont Pass Road, west of Grant Line Road, along both the east and west sides of Mountain House Road north of Grant Line Road, and on both sides of Bethany Reservoir, west of the Delta-Mendota Canal northwest of Mountain House Road, and southeast of the intersection of Christensen and Bruns Roads.	Approximately 15 miles northeast	Repower an estimated 671 existing wind energy turbine sites with up to 40 new turbines, on fifteen nearly contiguous parcels extending over approximately 2,600 acres within the eastern and Alameda County portion of the Altamont Pass Wind Resource Area	Approved/Unbuilt
Summit Wind Repower Project	Eastern Altamont Hills, between the Contra Costa County line and Interstate I-580, and mainly west of Dyer Road and the portion of Altamont Pass Road between Carroll Road and Dyer Road.	Approximately 20 miles east	Conditional Use Permit Modification to allow the Summit Wind Repower Project, to replace 569 wind turbines in the Altamont Pass Wind Resource Area, with up to 33 new turbines with a production capacity of 54 megawatts. The project area as originally proposed included 17 parcels over about 3,470 acres.	Operational
San Joaquin County				
Vecindad Street Shopping Complex PA-2300005	1140 S Vecindad St	Approximately 9 miles south	Administrative Use Permit application for the construction of a shopping complex to include 7 buildings. A 2,500-square-feet grocery store, a 2,500-square-feet day care, five 1,500-square-feet retail spaces, and a 2,400-square-feet retail space.	Approved
Pacific Gateway Specific Plan PA-2300092 PA-2300091	31606 S Tracy Blvd	Approximately 6.5 miles northeast	The project includes the implementation of a Specific Plan that would result in up to 27,650,000 sf of limited industrial use; 104,544 sf of general commercial uses; 93,654 sf of business park; a 29-acre private University, VFW post, and various open space, park, pedestrian and bicycles facilities within a 1,612-acre project site.	Assigned

San Joaquin County				
Questa Village, Wicklund Village, Tradition Street Development PA-2300057 PA-2300056 PA-2300055	705 N Great Valley Pkwy, 334 S De Anza Blvd, 145 S Tradition St	Approximately 10.8 miles north Approximately 9.3 miles north Approximately 9 miles north	The project consists of multiple applications to be processed concurrently in order to develop 145 medium-density lots on 22.6 acres, 106 medium-density lots on 17.8 acres, and 82 low-density lots on 20.3 acres.	Assigned
El Pescadero Park & Multi-Generational Recreation Center Project	West Kavanagh Avenue and West Grant Line Road	Approximately 10 miles northeast	The City of Tracy proposes to redevelop the existing El Pescadero Park to create a new multi-generational recreation center on West Grant Line Road in Tracy. The proposed multi-generational recreation center would consist of an approximately 52,244-square-foot, two-story building with a maximum height of approximately 35 feet that would include a three-court gymnasium, two multi-purpose rooms, and more.	Public Review period ended August 2023
International Park of Commerce Phase 2 Project	W Schulte Road/ S Lammers Road	Approximately 6.7 miles northeast	The Project consists of a General Plan Amendment, Zone Reclassification, and Specific Plan to establish a new industrial and warehousing development with 5.3 million square feet of building space on 284.3 acres.	NOP published 4/3/2023

Source: Alameda County 2023, San Joaquin County 2023; data complied by AECOM 2023

4.3 Geographic Scope

The geographic area that could be affected by the General Plan and its proposed projects varies depending upon the environmental resource being evaluated. Issues considered in a more local context (i.e., construction noise) are not addressed in a greater regional context because the impacts associated with these activities/resources generally occur in close proximity to the proposed project. However, the cumulative effects analysis for other environmental resources includes a larger area, when appropriate. For example, the regional context of air quality and greenhouse gas emissions issues considers the potential effects of projects occurring in surrounding counties and cities. Biological resources have both site-specific and regional geographic scopes, dependent upon the individual resource evaluated.

Table 4-2 presents the general geographic areas associated with the different environmental topics addressed in this EIR.

Table 4-2. Geographic Scope of Cumulative Impacts

Issue Area	Geographic Area
Aesthetics	General Plan boundary and surrounding local public viewpoints
Air Quality	San Francisco Bay Area Air Basin and San Joaquin Valley Air Basin
Biological Resources	Project site and surrounding areas, as well as areas of Alameda and San Joaquin Counties with similar affected species and habitat
Cultural Resources	General Plan boundary, with regional implications
Energy	The wasteful and inefficient use of energy is considered in the context of Alameda and San Joaquin Counties
Geology and Soils/Paleontological Resources	Local (immediate vicinity), and for paleontological resources, the significance of potential finds is considered in the context of California
Greenhouse Gas	Global with emissions levels and rates established at the statewide level
Hazards and Hazardous Materials	Local (immediate vicinity)
Hydrology and Water Quality	Project site and Corral Hollow watershed
Noise	Construction noise is limited to the General Plan area and would not be compounded with other known adjacent projects that will be under construction at the same time
Public Services	Individual service providers
Recreation	Local and regional projects that result in physical effects on the environment
Transportation and Traffic	Roadways affected by project traffic
Tribal Cultural Resources	General Plan boundary, with regional implications
Utilities and Service Systems	Individual service providers
Wildfire	Local and regional

Source: Data compiled by AECOM in 2023

4.4 Analysis of Cumulative Impacts

No impacts related to the conversion of agricultural land, mineral resources, of population and housing would occur from implementation of the General Plan, Therefore, no cumulative impacts would occur and these topics are not discussed further in this cumulative impacts analysis.

4.4.1 Aesthetics

Visual resources can be either localized or of regional concern, depending on the overall aesthetic environment. Portions of the higher peaks within Carnegie SVRA are visible from outside the planning area and are visually dominant features in the planning area. Thus, the geographic context for aesthetics consists of the General Plan boundary and public views of the Park from the surrounding area. There are no related cumulative projects within the viewshed of the Park. Thus, the proposed facilities within General Plan would not be visible within the same viewshed as the cumulative projects and would not combine to result in cumulative changes within the same viewshed.

As discussed in Section 3.1, “Aesthetics,” new and improved facilities envisioned in the General Plan are consistent with the existing character of Carnegie SVRA and the surrounding area. New structures would not substantially obstruct scenic views, and the character of these facilities would be consistent with the existing character of the planning area and vicinity. Many of the new and improved operational facilities, such as the SVRA maintenance area improvements, ranger station expansion, and emergency helicopter pad relocation, would be located in previously disturbed areas. Further, no permanent OHV facilities would be constructed in higher elevation areas visible from Corral Hollow Road/Tesla Road. In addition, implementing General Plan goals and guidelines and California State Parks Guiding Principles for Aesthetic Design would ensure new and improved visitor and operational facilities would not substantially degrade the existing visual character or quality of public views of the sites or their surroundings. As further discussed in Section 3.1, new and improved visitor facilities would not create a new source of substantial light or glare in the planning area. Therefore, the General Plan would have a **less-than-significant cumulative impact** related to aesthetics.

4.4.2 Air Quality

The planning area is located on the border of Alameda and San Joaquin Counties. These counties are part of the San Francisco Bay Area Air Basin (SFBAAB) and San Joaquin Valley Air Basin (SJVAB), respectively. As discussed in Section 3.3, “Air Quality,” both the SFBAAB and SJVAB are currently nonattainment for both the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) for ozone and particulate patter equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$), and nonattainment for the CAAQS for PM equal to or less than 10 micrometers in diameter (PM_{10}).

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of regional ambient air quality standards. Instead, a project’s individual emissions contribute to overall air quality conditions. The nonattainment status of regional pollutants is a result of past and present development within the air basin. Ongoing development and operation of new land uses would generate additional emissions of ozone precursors (ROG and NO_X) and PM, which may adversely affect the region’s ability to achieve attainment of the applicable air quality standards, representing a significant cumulative impact. Each additional project within the SFBAAB and SJVAB has the potential to cause a net increase in emissions that would contribute to this cumulative air quality impact. Construction activities throughout the region would emit criteria air pollutants from earthmoving activities and construction equipment. The operation of past, present, and future projects would contribute criteria air pollutant and precursor emissions to the region that when added to the other emissions occurring within the region.

As discussed in the SJVAPCD GAMAQI, if project emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase. Similarly, the BAAQMD CEQA Guidelines have developed the thresholds of significance to ensure that no

individual project has the potential to create a significance adverse impact, with a focus on criteria air pollutants for which the SFBAAB is designated as nonattainment. Therefore, the thresholds of significance can be used to inform whether a project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Table 3.3-7 for construction and Table 3.3-8 for operations in Section 3.3 show the overall maximum daily emissions in addition to the average daily and total annual emissions for each year of construction and for full buildout operations.

The average daily, maximum daily and annual emissions generated by construction-related activities would be below the respective BAAQMD and SJVAPCD-recommended threshold of significance for all pollutants. In addition, as discussed in Impact 3.3.1, all construction activities performed in the Alameda County portion of the planning area would be required to implement BAAQMD's basic construction mitigation measures and to follow applicable BAAQMD rules and regulations for particulate matter and other criteria pollutants generated by construction activities. Similarly, all construction activities performed in the San Joaquin County portion of the planning area would be required to implement SJVAPCD Regulation VIII for control of particulate matter emissions and comply with SJVAPCD rules and regulations regulating construction-related emissions. These measures serve to reduce the amount of criteria pollutant emissions that would be generated during construction. Therefore, construction activities would not be expected to contribute to an existing or projected air quality violation or result in a cumulatively considerable net increase and this impact would be **less than significant**.

Total operational emissions would slightly exceed the SJVAPCD thresholds for PM_{10}. Ninety-nine percent of the PM_{10} emissions generated from operational activities are fugitive dust emissions from OHV recreational usage. Implementation of OM Guideline 4.3, OM Goal 7 and OM Guidelines 7.1 through 7.4 in addition to the applicable SJVAPCD and BAAQMD rules and regulations would help reduce the potential for the General Plan's operational activities to contribute to an existing or projected air quality violation or result in a cumulatively considerable net increase. However, the comparison to the BAAQMD and SJVAPCD thresholds shows that operations could still potentially contribute to an existing or projected air quality violation and potentially conflict with efforts to reach attainment of any air quality standards. Therefore, impacts to air quality from long-term operations of the General Plan would be a **cumulatively considerable contribution to a significant cumulative impact**.

As discussed in Section 3.3, no feasible mitigation measures currently exist for directly treating fugitive dust emissions from OHV recreation, given the predominantly undeveloped, mountainous area of the planning area where water sources are limited and water and dust-suppressant application trucks would produce significant additional emissions of exhaust and fugitive PM dust. Without any feasible mitigation measures to minimize the potentially significant operational impact, the impact would be a **cumulatively significant and unavoidable**.

4.4.3 Biological Resources

The geographic scope for the analysis of cumulative impacts on biological resources are areas within Alameda and San Joaquin Counties with similar species and habitat. Given the number of present and reasonably foreseeable future development projects in Alameda and San Joaquin Counties, there would be an incremental cumulative loss of habitat and loss of plant and wildlife species, including special-status species. This is a significant cumulative impact.

There are a number of special-status species that currently utilize the Park and surrounding vicinity. Implementation of the General Plan, in addition to the other projects underway or proposed within Alameda and San Joaquin Counties, could have the potential to impact the same plant and wildlife species. Section 2.3.2 "Biotic Resources," in Chapter 2, "Existing Conditions," of the General Plan provides a detailed description of the landcover and vegetation types that occur in the planning area and detailed information on the status of common and special-status plants and wildlife species and which occur in the Carnegie SVRA and vicinity.

As discussed in Section 3.4, "Biological Resources," goals and guidelines of the General Plan were developed to protect biological resources in the SVRA and to mitigate impacts through programmatic

solutions of strategic site selection, habitat preservation, agency consultation, restoration of habitats, ongoing surveys, and annual monitoring and adaptive management plans using the best available science. As a result, the new and improved facilities would not cause substantial direct or indirect adverse effect on special-status species and their habitats, riparian habitat, sensitive natural communities, state or federally protected wetlands or the movement of fish and wildlife species. Therefore, the General Plan **would have a less than cumulatively considerable** contribution to any significant cumulative impact related to biological resources. Per California Code, Public Resources Code - PRC § 5090.32, State Parks has the duty and responsibility to conserve and restore lands in the state vehicular recreation areas. The SVRA is contributing to habitat conservation by preserving open space and targeted management of riding areas within that space. Through the reduction of open riding and use of designated routes, Parks is able to restore habitat, manage invasive species, and protect special-status species habitat. The SVRA has also developed requirements for a soils management plan, storm water management plan, and a wildlife habitat protection plan, all of which contribute to conservation.

4.4.4 Cultural Resources

Alameda and San Joaquin Counties has been inhabited by prehistoric and historic peoples for thousands of years. Cultural resources in the region generally consist of prehistoric sites, historic sites, historic structures, and isolated artifacts. Urbanization and agricultural use in the region has caused the destruction or disturbance of numerous prehistoric sites and historic structures. Specific federal, state, and local laws are designed to protect such resources. These laws have led to the discovery, recordation, preservation, and curation of artifacts and historical structures. The proposed project, as well as all other projects in the area, are required to comply with these laws. However, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds. This is a significant cumulative impact.

The General Plan, in combination with other development in the region, could cause a substantial adverse change in the significance of unique cultural resources. Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. federal, State, and local laws can protect these resources, in most instances.

Information about identified cultural resources within Carnegie SVRA planning area, which are reflective of pre-contact Native American habitation of the area and remnants of railroading, mining activities, brick making, lime production and other historic-era activities, are provided in Section 2.3.3, “Cultural Resources,” of the General Plan. Previous cultural resource inventories have identified historical resources in the Carnegie SVRA planning area including nine contributors to the Tesla Mining and Industry Historic District. Within the planning area are also built environment resources that are of historic age and used as secondary supporting facilities for park operations such as staff residences, garages/carports, and water utility infrastructure; however, these park-supporting historic-age resources have not yet been evaluated for historical significance.

As discussed in Section 3.5, “Cultural Resources,” the General Plan contains a detailed set of goals and guidelines aimed at protecting cultural resources present in the planning area so that the OHMVR Division will meet its mandate to protect cultural resources consistent with state law. In particular, these goals stipulate that complete cultural resource studies/inventories would be conducted at each location proposed for ground disturbance or development, and all known resources would be protected, stabilized,

and/or preserved in place. Park undertakings would avoid or minimize significant impacts on known cultural resources.

An ongoing program has been implemented to maintain and update the existing cultural resource inventory, recordation, studies, and evaluations for the SVRA. State Parks will continue to provide qualified historical resource specialists to document and evaluate any potentially eligible historical resources as required for compliance with CEQA and PRC 5024 and mandates for historical resource compliance with CEQA and PRC 5024.5 for any potential adverse effects occur to historical resources, and to consider, or to adopt prudent and feasible alternatives to eliminate or mitigate adverse effects on historical resources as specified in Section 5024.5(b).Therefore, the General Plan **would have a less than cumulatively considerable** contribution to any significant cumulative impact related to archaeological or historical cultural resources.

4.4.5 Energy

Increased demand for energy resources, primarily fuel, electricity, and natural gas, is a byproduct of all future land uses and development throughout the region. Energy is consumed during all construction activities, typically in the form of diesel fuel for off-road construction equipment and a mix of gasoline and diesel fuel for construction-related vehicle trips. Operational energy is consumed for heating, cooling, and electricity in homes and businesses; for public infrastructure and service operations; and for agriculture, industry, and commercial uses.

Alameda and San Joaquin Counties and some of the cities within the region implement general plans and other policy documents that include goals and policies to reduce energy demands through the use design features, building materials, and building practices; encourage the use of renewable energy sources; and ensure adequate electricity and natural gas and related distribution systems are available to meet energy demands. In addition, many service providers encourage energy conservation through programs.

Construction activities within the General Plan area would be temporary in nature and would be conducted in accordance with all applicable laws and regulations, including applicable federal, state, and local laws that are intended to promote efficient utilization of resources and minimize environmental impacts. The design and construction of new and retrofit buildings would be required to comply with the California Code of Regulations. Replacement of existing infrastructure would also result in new facilities built to current standards, which are more energy efficient than older facilities that were built to prior, less stringent, standards. There is no significant cumulative impact, and implementation of the General Plan **would not result in a cumulatively significant** incremental contribution to a significant cumulative impact related to the wasteful, inefficient, excessive, and unnecessary consumption of energy or interfere with any applicable renewable energy or energy efficiency plans.

4.4.6 Geology and Soils/Paleontological Resources

The potential for damage from seismic hazards is site-specific, and thus there is no additive effect. Therefore, there would be **no cumulative** effect due to seismic ground shaking. Please see the cumulative impact analysis under “Hydrology and Water Quality” for cumulative impacts related to soil erosion.

Fossil discoveries resulting from excavation and earthmoving activities associated with development are occurring with increasing frequency throughout California. The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions, such as part of a research project. The heritage encased in each fossil represents a non-renewable resource. If an organism has a fossil record, that record is represented by a finite number of specimens. That number decreases as they are destroyed by weathering, erosion, or the actions of humans. Unique, scientifically important fossil discoveries are relatively rare, and the likelihood of encountering them is specific to a site and based on the type of specific geologic rock formations found underground.

The proposed Motorbike Trail would be installed primarily within the Moreno and Tesla Formations. Both of these formations are considered to be of high paleontological sensitivity due to the number of vertebrate fossils recovered from these formations in the vicinity of the SVRA and in other California counties such as Merced and Fresno. In addition, the proposed Park Headquarters Area Improvements and Water Plant Upgrade would be constructed within the Neroly Formation, which is part of the San Pablo Group. The San Pablo Group is considered to be of high paleontological sensitivity due the number of vertebrate fossils that have been recovered from this formation near the SVRA, and throughout Alameda and San Joaquin counties.

As discussed in Section 3.7, Geology and Soils/Paleontological Resources," General Plan goals and guidelines promote staff education and visitor awareness of paleontological resources and proper procedures to be followed if fossils are discovered. Paleontological resources training would be provided to State Parks personnel, and if paleontological resources were encountered then a recovery plan would be prepared and implemented. Implementation of the General Plan goals and guidelines would ensure that impacts from damage to or destruction of unique paleontological resources would be less than significant. The General Plan's impact associated with potential damage to unique paleontological resources is **less than cumulatively considerable**.

4.4.7 Greenhouse Gas Emissions

The geographic scope for related projects considered in the cumulative effect analysis for greenhouse gas (GHG) emissions is global because impacts of climate change are experienced on a global scale regardless of the location of GHG emission sources. It is unlikely that a single project will contribute significantly to climate change, but cumulative emissions from many projects could affect global GHG concentrations and the climate system, which is considered a significant cumulative effect. Therefore, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to the significant impact of global climate change is cumulatively considerable.

As discussed in Section 3.8, "Greenhouse Gas Emissions," because the proposed General Plan's GHG emissions would be below the SMAQMD 1,100 metric tons of CO_2e thresholds of significance, the General Plan would result in the generation of GHG emissions at a level would align with its fair share of emissions reductions consistent with the State 2030 GHG reduction target and 2050 GHG reduction goal. General Plan guidelines would serve to further reduce both construction and operational GHG emissions associated with buildout of the General Plan. In addition, the General Plan's proposed land uses do not conflict with the key actions for new development under the 2022 Scoping Plan for carbon neutrality by 2045. Therefore, implementation of the General Plan would not result in the generation of GHG emissions at a level that may have a significant impact on the environment or conflict with State GHG emission targets adopted for the purpose of reducing the emissions of GHGs. Therefore, the contribution of GHG emissions generated by the General Plan would be **less than cumulatively considerable**.

4.4.8 Hazards and Hazardous Materials

Hazardous materials impacts associated with the past or current uses of a project site usually occur on a project-by-project basis and are site-specific rather than regional in nature. Any hazardous materials uncovered during construction activities would be managed consistent with applicable federal, state, and local laws to limit exposure and clean up the contamination. In addition, the use, storage, transport, and disposal of hazardous materials would be managed in accordance with applicable federal and state requirements to limit risk of exposure. Other projects in the vicinity of the Park that could create similar hazardous material effects during standard construction activities would also be required to comply with measures that would minimize and/or avoid exposure of hazardous materials to people or the environment. Therefore, there would be **no cumulative impact** associated with hazardous materials use, storage, transport, or accidental spills.

4.4.9 Hydrology and Water Quality

Cumulative effects related to hydrology and water quality should be considered in the context of the Corral Hollow watershed. The watershed is flanked by the Arroyo Seco watershed to the west, Lone Tree watershed to the south, Deep Gulch Creek watershed to the east, and a small unnamed subwatershed of the San Joaquin River to the north. The Corral Hollow watershed spans the Alameda/San Joaquin County line and is bordered on the north by Tesla Road/Corral Hollow Road. The cumulative plans and projects could implement projects that generate construction-related discharges of sediment and pollutants to receiving waters.

As discussed in Section 3.10, “Hydrology and Water Quality,” facilities proposed in the General Plan are required to adhere to the State Water Resources Control Board’s Phase II MS4 Permit requirement, along with the Carnegie Storm Water Management Plan and OHV Best Management Practices (BMPs) Manual requirements related to stormwater management and discharge and control. Compliance with these existing laws, regulations, and plans and adherence to General Plan Guidelines would serve to minimize long-term operational water quality impacts associated with operation of the proposed facilities in order to reduce erosion and sedimentation, protect beneficial uses of receiving waters as designated in the Basin Plan, and comply with WDRs issued to meet pollutant total maximum daily loads established by the Central Valley Regional Water Quality Control Board (RWQCB). Furthermore, construction ground disturbance of areas larger than 1 acre requires a site-specific Stormwater Pollution Prevention Plan (SWPPP) with associated BMPs specifically designed to control stormwater discharges and prevent pollutant transport into downstream receiving waters.

Project applicants that disturb more than 1 acre of land must prepare SWPPPs and implement BMPs that are consistent with Central Valley RWQCB requirements as part of the National Pollutant Discharge Elimination System Construction General Permit. Other private development and City and County agency projects must comply with local agency Stormwater Management Plans, and may also be required to obtain Clean Water Act permits, that also contain contains specific requirements for design and implementation of construction and operational stormwater control and quality facilities. Implementation of these regulatory requirements would substantially reduce construction and operational erosion and water quality impacts in compliance with the Central Valley RWQCB’s Basin Plan. Therefore, construction and operation-related impacts from erosion and water quality and potential conflicts with a water quality control plan from implementation of the General Plan and the other projects considered in this cumulative analysis would be **cumulatively less than significant.**

The planning area is located in an undefined groundwater area, where water is drawn from fractured bedrock. Groundwater quantity and quality varies from well site to well site because of the unpredictable yields of the fractured rock system that typifies the regional geology. The primary source of groundwater recharge in the planning area is located within the alluvial soils in and around Corral Hollow Creek. However, groundwater recharge occurs throughout the planning area as rainfall penetrates the shallower soil layers and enters the cracks of fractured bedrock on the hillsides. Due to the small size of the proposed new impervious surfaces, and with implementation of General Plan Guidelines, the proposed project would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge. Thus, the cumulative contribution of the General Plan to a decrease in regional groundwater supplies is considered **cumulatively less than significant**.

4.4.10 Land Use and Planning

The geographic scope for this cumulative analysis related to land use and planning consists of Alameda and San Joaquin Counties.

Cumulative development within the region would result in substantial changes in land use, and individual projects would need to be considered in context of their compliance with adopted land use plans. Plans with which compliance may be analyzed include general plans, habitat conservation plans, and regional transportation plans. As discussed in Section 3.11, “Land Use and Planning,” implementation of the General Plan would not conflict with plans, policies, or regulations in a way that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this Draft EIR

(e.g., agriculture, air quality, biological resources, cultural resources, etc.). Land use inconsistencies are not physical effects in and of themselves and combinations of policy inconsistencies would not rise to the level of a physical effect. Cumulative effects of the physical changes related to the General Plan are discussed in the other topics in this section. **No cumulatively considerable** impacts would occur.

4.4.11 Noise

Noise is a localized occurrence and attenuates rapidly with distance. Therefore, only cumulative development projects in the direct vicinity of the Park could add to anticipated project-generated stationary-source noise, thus resulting in cumulative noise impacts. Implementation of the General Plan improvements would not occur all at the same time and would be spread out over years. There are no related projects that would occur simultaneously in the vicinity of the Park that could result in a cumulative impact. Construction noise is temporary, with no associated long-term operations to add to the permanent noise environment as a cumulative impact. Therefore, there would be **no cumulative impacts**.

4.4.12 Public Services

Public service providers are responsible for ensuring adequate provision of public services within their service boundaries. Future development within each service providers boundaries would be required to assess impacts related to public services during the environmental review process to ensure that there are sufficient facilities and equipment to meet demand.

As discussed in Section 3.15, “Public Services,” first response to fires would be SVRA personnel as well as Alameda County Fire Department personnel located at Alameda County Fire Station #21 at LLNL Site 300. New structures constructed as part of the following site-specific improvement projects would be required to incorporate California Fire Code requirements and OSHA fire suppression standards to reduce the risk of fires. Because the demand for fire protection and emergency services would not increase substantially and existing SRVA employees would be sufficient to address fire-related emergencies, and with adherence to the guidelines in the General Plan, existing fire protection and emergency services would be adequate to meet demand and implementation of the General Plan would not result in the construction of new or expansion of existing fire service facilities. The demand for fire protection would not substantially increase and the new and improved visitor and operational facilities would not require the construction of new or expansion of existing fire service facilities. Therefore, impacts related to increased demand for fire protection services from implementation of the PWP and the other projects considered in this cumulative analysis would be **cumulatively less than significant**.

Security in the SVRA is provided by SPPOs. SPPOs patrol State Parks lands 7 days a week and provide all public safety functions. In addition, the San Joaquin County Sheriff’s Department’s Off-Road Enforcement Unit assists park staff members with special events at Carnegie SVRA upon request. The need for security and emergency services would likely increase slightly over time with implementation of the General Plan. Under typical operating conditions, however, the full-time SPPOs who currently serve Carnegie SVRA would be sufficient to meet this need. Because the demand for security and emergency services would not increase substantially, implementation of the General Plan would not result in the construction of new or expansion of existing police protection facilities. Therefore, impacts related to increased demand for law enforcement and emergency services from implementation of the new and improved visitor and operational facilities and the other projects considered in this cumulative analysis would be **cumulatively less than significant**.

4.4.13 Recreation

Future development projected in city and county general plans could include additional recreational facilities the construction or expansion of which could have an adverse physical effect on the environment. These potential cumulative impacts from construction of recreation-related projects could be similar to those identified in this EIR (e.g., air quality; biological resources; cultural, paleontological, and tribal cultural resources; geology and soils, hydrology and water quality; and noise) and could combine with the effects of the General Plan. Cumulative impacts from these recreation projects are not knowable

at this time, and it is speculative to gauge the extent to which this would create any cumulative impact. It is assumed that, cumulative projects would be required to undergo project-level environmental review and reduce potentially significant impacts to a less-than-significant level under CEQA and to minimize adverse effects under NEPA.

The General Plan's goals and guidelines provide guidance on how to achieve the purpose, vision, and management intent for the SVRA. The goals and guidelines address known planning issues while providing a foundation for resource protection, development, operation and management, and interpretation of the SVRA. They also provide a framework for subsequent planning and development for the General Plan's concepts. As outlined in Chapter 4, "The Plan," of the General Plan, natural and cultural resources in the visitor experience areas are to be managed to protect their integrity and comply with relevant state and federal laws and regulations regarding their management and protection.

As described in the specific resource topics of this cumulative impact analysis, implementation of the goals and guidelines contained in the General Plan, along with compliance with applicable federal and state laws and regulations, avoids most potential significant cumulative effects or maintains them at a 'less than significant' level. However, as discussed in Section 5.4.2, "Air Quality." impacts to air quality from long-term operations of the General Plan, including continued recreational activities, would be a cumulatively considerable contribution to a significant cumulative impact. Without any feasible mitigation measures to minimize the potentially significant air quality operational impact, the impact would be a cumulatively significant and unavoidable. However, this is not a recreation impact in the context of CEQA. The General Plan's contribution to potential cumulative impacts from adverse physical effects caused by construction or expansion of recreational facilities would be **less than significant**.

4.4.14 Transportation and Traffic

As discussed in Section 3.17, "Transportation and Traffic," during the construction of the proposed project, construction vehicles would access the project site using the existing access driveway. Potential construction trips would include delivery of construction equipment (a backhoe and crane), delivery and transport of construction material, and arrival and departure of construction workers. All construction activities and staging would occur on the project site and would not alter public rights-of-way. The project's operational activity would fall within the existing range of daily trips and would not have the potential to substantially increase traffic volumes and impact the local or regional circulation system. Therefore, there would be **no cumulative impacts**.

4.4.15 Tribal Cultural Resources

Alameda and San Joaquin Counties have been inhabited by prehistoric peoples for thousands of years. Urbanization and agricultural use in the region has caused the destruction or disturbance of numerous tribal cultural resources sites. Regulations protecting tribal cultural resources have substantially reduced the rate and intensity of these impacts. However, even with these regulations, tribal cultural resources are still degraded or destroyed as cumulative development in the region proceeds. This is a significant cumulative impact.

The project, in combination with other development in the region, could cause a substantial adverse change in the significance of a tribal cultural resource. Because all significant tribal cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. As stated previously, the cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

As discussed in Section 3.18, "Tribal Cultural Resources," the Carnegie SVRA would consult with local Native American tribes and individuals (i.e., Muwekma Ohlone, Mutsun Ohlone, Northern Valley Yokuts,

and Miwok) regarding the protection, preservation, and/or mitigation of cultural sites and sacred places in the Carnegie SVRA, in compliance with the Governor's Executive Order (EO) B-10-11, the Natural Resources Agency Tribal Consultation Policy, and State Park's Departmental Notice 2007 Native American Consultation Policy and Implementation Procedures. The results of the pending ethnographic study and further Native American consultation would guide all future management and planning efforts for particular locations in the acquisition area, taking into account the need for Native American groups to have access to specific locations where they can continue their ceremonial and traditional practices. Therefore, adherence to the General Plan would limit restrictions that would deny access by Native Americans to portions of the Carnegie SVRA for ceremonial and traditional practices. In the even that unknown/unexpected human remains are uncovered during any facility development project, steps outlined in § 7050.5 of the California Health and Safety Code will be followed as described in Section 5.18.

Compliance with federal and state law, State Parks' policies, State Parks' standard project requirements, and General Plan goals and guidelines would offset the General Plan's contribution to cumulative loss or destruction of tribal cultural resources. Therefore, the General Plan **would have a less than cumulatively considerable** contribution to any significant cumulative impact related to tribal cultural resources.

4.4.16 Utilities and Service Systems

The appropriate service providers are responsible for ensuring adequate provision of utilities within their service boundaries. Future development within each service providers' boundaries would be required to assess impacts related to demand for water supply and generation of solid waste during the environmental review process to ensure that sufficient water supply and solid waste facility capacity are available to meet demand.

Water supply for the new and improved visitor and operational facilities would be provided by existing groundwater wells. Nonpotable water is used for dust control as needed, fire protection, and landscape irrigation. nonpotable water use represents only about 35 percent of the nonpotable-water well's capacity, and given the limited number of new facilities that would be developed with the General Plan that would require additional nonpotable water, it is not anticipated that demands for nonpotable water would exceed the nonpotable-water well's capacity of 23.7 million gallons per year.

This potable water well is capable of producing approximately 28,800 gallons per day, or 10.5 million gallons per year. Carnegie SVRA requires approximately 5.9 million gallons of potable water per year. Eight wells supply water to state residences, but they are shallow and only produce enough water for the building into which they are tied. Implementation of guidelines in the General Plan would ensure that future development and improvements in Carnegie SVRA would conserve water resources. In addition, the design and construction of all facilities, including those associated with related projects, must comply with the water quality conservation requirements cited in Title 24 of the CALGreen Code. Therefore, the new and improved visitor facilities would not substantially decrease the groundwater supplies available to serve existing and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, this impact would be **cumulatively less than significant**.

New and improved visitor and operational facilities and the projects considered in this cumulative analysis would result in increased generation of solid waste as a result of new development. As discussed in Section 3.19, considering existing remaining capacity at the Foothill Sanitary Landfill, there is sufficient capacity to accept the anticipated increase in solid waste generated by new and improved visitor and operational facilities and future development of projects considered in this cumulative analysis. State Parks would comply with Cal-Recycling goals and guidelines for trash storage and removal. The existing waste facilities will be adequate to meet the waste generated by the Park. The cumulative projects would be required to implement all State and local recycling and solid waste reduction programs. Therefore, impacts associated with exceedance of local infrastructure capacity or impairment of solid waste reductions goals from implementation of the proposed project and the other projects considered in this cumulative analysis would be **cumulatively less than significant.**

4.4.17 Wildfire

Cumulative effects related to wildfire hazards are driven by the factors of climate, vegetation, human influences, and changes in land use that influence the three first factors. As climate change and human activity produce conditions that are more conducive to wildfire ignition and spread, and create fires that burn with greater intensity, it is likely that future ignitions will result in more wildfires of greater size and intensity. The regional environment is an area of existing high wildfire danger, and activities and conditions on adjacent lands pose a substantial threat in terms of wildfire risk.

Local and regional city and county general plans provide for additional local and regional development. Such development includes the introduction of new populations and expanded geographic areas of human influence. However, the Park is far from large population centers. The closest large population centers are downtown Livermore, which is approximately 12 miles east, and the City of Tracy, which is approximately 12 miles southwest. The cities of Livermore and Tracy are not within State Responsibility Areas (SRAs) or designated by CAL FIRE as Moderate, High, and Very High Fire Severity Zones. However, areas surrounding the City of Livermore are within a SRA and designated by CAL FIRE as Moderate and High Fire Severity Zones.

As discussed in Section 3.20, “Wildfire,” the Park is located within a SRA, and new and improved visitor and operational facilities would be located within areas designated by CAL FIRE as Moderate Fire Severity Zones. The SVRA staff also maintains a truck with a water tank and pumping capability on-site. Fire tools and limited water supplies are carried by patrol vehicles. DPR staff conduct an on-site fire drill to ensure all staff knows their respective role during a fire. Visitors to the SRVA would be subject to the provisions identified in the Carnegie SVRA Camping Regulations, which provides regulations for lighting, building, or use of campfires; and PRC 4311, which prohibits lighting, building, or use of a fire except in a camp stove or fireplace provided, maintained, or designated for such purpose. State Parks would enforce Division 16.5, “Off-Highway Vehicles,” of the California Vehicle Code that provides regulation related to the use of off-highway motor vehicles on lands other than a highway. State Parks would prepare wildfire and prescribed burn management plans as well as implement additional Park fire management programs designed to meet Park resource management objectives while ensuring that firefighter and public safety are not compromised as required by the State Parks District Management Plan. Vehicles would be maintained in good working order and equipped with spark arrestors consistent with PRC 4442. All projects within the SRA would provide minimum wildfire protection standards identified in PRC 4290, including providing adequate emergency access. Adherence to these safety measures, when considered together, would minimize the risk of increased frequency, intensity, or size of wildfires and decrease the risk of exposure of people or structures to wildfire. In addition, the continued implementation of fire safety protocols and vegetation management policies outlined in the Natural Resources Handbook and guidelines in the General Plan would further reduce the potential of wildfires. Therefore, the proposed project would result in **less than significant cumulative** effects related to wildfire risks.

5. Other CEQA Requirements

5.1 Growth-Inducing Impacts

As required by CEQA Guidelines Section 15126.2(d), an EIR must discuss the ways the proposed project could foster economic or population growth, either directly or indirectly, in the surrounding area. Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place in the absence of the proposed project. A project can be determined to have a growth inducing impact if it directly or indirectly removes obstacles to growth or encourages or facilitates other actions considered to be "growth accommodating." Growth inducement itself is not an adverse environmental effect, but it may lead to environmental impacts such as increased traffic and noise, degradation of air or water quality, degradation or loss of plant or wildlife habitats, or conversion of open space land to urban uses.

The Carnegie SVRA General Plan does not propose to construct or enable any non-Park related residential units in the planning area or surrounding area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., by extending roads and other infrastructure), and thus would not facilitate growth in the area.

Under the General Plan, attendance would likely grow naturally, there would not be a "bump" in attendance solely because of the proposed new recreation opportunities and improved facilities. Instead, an increase in attendance is expected as a result of general economic conditions in the region, rather than expansion of SVRA facilities. Furthermore, the expanded offerings in the expansion area would likely be brought online over time, and the General Plan does not currently make schedule estimates that could be used to establish a "buildout" date.

The construction of infrastructure is often considered an action that removes obstacles to growth in an area. The site is currently served by existing roadways, utilities, and public services. New infrastructure (e.g., office space, water treatment facility upgrade, recreational vehicle dump station) that would be installed with implementation of the Carnegie SVRA General Plan would serve only the SVRA's on-site facilities and would not extend off-site or result in service expansions that could serve or accommodate other future development in the planning area.

Carnegie SVRA historically has served and currently serves as an OHV recreation area and social gathering location for the OHV community. The Carnegie SVRA General Plan would not lead to significant new residential development or foster significant economic or population growth.

For these reasons, implementation of the General Plan would not result in primary or secondary environmental effects related to additional growth.

5.2 Significant Irreversible Environmental Changes

As required by CEQA Guidelines Section 15126(c), an EIR must include a discussion of any significant irreversible environmental changes that would be caused by the project. The EIR must analyze the extent to which the project's primary and secondary effects would affect the environment and commit nonrenewable resources to uses that future generations would not be able to reverse. Irretrievable commitment of these resources must be evaluated to ensure that such consumption is justified.

Implementing the Carnegie SVRA General Plan would cause the following irreversible environmental changes:

- Nonrenewable natural resources would be used for construction and operation of facilities envisioned in the General Plan. Resources may include diesel, gasoline, or oil for construction equipment and propane to provide power, heating, and cooling to buildings. The energy consumed in

future development and maintenance of Carnegie SVRA would be considered a permanent investment. This impact would be reduced by following sustainable practices in site design, construction, maintenance, and operations that are generally practiced by the OHMVR Division, and that are proposed in OM Guideline 1.3 in the General Plan

- **OM Guideline 1.3:** Promote opportunities to incorporate sustainability into SVRA development, operations, and maintenance. Sustainability initiatives could include supporting and encouraging the use of electric vehicles, promoting energy efficiency, using reclaimed water, and applying energy efficiency and green building standards to new construction and other initiatives that may be developed in the future.

Sustainable practices used in design, construction, and management may include the use of green building standards, resource conservation, recycling, and energy efficiency. With implementation of the General Plan, the overall rate of use of renewable natural resources would not increase substantially or result in the depletion of any renewable resource.

Various renewable natural resources would be used, such as water and lumber for construction and operations. Facilities associated with the General Plan would be a relatively minor consumer of these supplies relative to other types of development throughout the region. In addition, implementing Water Goal 3 and associated guidelines in the General Plan would ensure that future development and improvements in Carnegie SVRA would conserve water resources:

Water Goal 3: Manage the SVRA to conserve water resources while maintaining a quality OHV recreational experience.

- **Water Guideline 3.1:** When developing detailed plans for facilities envisioned in this General Plan, assess available water sources that will yield sufficient water supplies needed for operation and maintenance of the facilities. Develop water supply as appropriate in compliance with state regulatory requirements.
- **Water Guideline 3.2:** Use recycled water, as available, for dust control and irrigation as allowed by water quality and health regulations and as available at the site or nearby.
- **Water Guideline 3.3:** Manage facilities to accommodate periods of drought or low water supply. Restrict the use of water for dust control and use alternative dust suppression methods as necessary.

With implementation of the General Plan, the overall rate of use of renewable natural resources would not increase substantially or result in the depletion of any renewable resource.

5.3 Significant and Unavoidable Impacts

As required by CEQA Guidelines Section 15126.2(b), an environmental impact report (EIR) must describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less-than-significant level. Chapter 3 of this EIR describes potential environmental impacts that may occur with implementation of the General Plan. For all issue areas except operational air quality impacts, implementation of the General Plan would not result in unavoidable significant environmental impacts. As identified in Section 3.2, “Air Quality,” of this EIR, the following impacts would be significant and unavoidable during General Plan operations only, because no feasible mitigation measures currently exist to reduce these impacts to a less-than-significant level (the corresponding construction-related impacts would be less than significant with implementation of General Plan goals and guidelines that would reduce impacts during project construction):

- Impact 3.3-1, “Conflict with or obstruct implementation of the applicable air quality plan.”
- Impact 3.2-2, “Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is Nonattainment Under an Applicable Federal or State Ambient Air Quality Standard.”

6. Alternatives to the Proposed Plan

The guiding principles for the analysis of alternatives in this EIR are provided by the CEQA Guidelines (§ 15126.6), which indicate that the alternatives analysis must: (1) describe a reasonable range of alternatives to the project that could feasibly attain most of the basic objectives of the project; (2) consider alternatives that could reduce or eliminate any significant environmental impacts of the project, including alternatives that may be more costly or could otherwise impede the project's objectives; and (3) evaluate the comparative merits of the alternatives. The CEQA Guidelines [§ 15126.6(d)] permit the evaluation of alternatives to be conducted in less detail than is done for the proposed project. Descriptions of the project alternatives, including the No Project Alternative, are provided in this EIR to allow for a meaningful evaluation, analysis, and comparison of these alternatives with the Preferred Alternative, which is the General Plan as described in Chapter 4 - The Plan.

This EIR found that implementation of the General Plan would result in no impacts or less than significant impacts for most resources. The analysis is *Section 3.3 Air Quality* of this EIR found that operational impacts on air quality (Impact 3.3-1) and impacts related to a cumulative considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standards (Impact 3.3-2) are significant and unavoidable. The analysis further found that no feasible mitigation measures currently exist for directly treating emissions from OHV recreation, given the predominantly undeveloped, mountainous area of the planning area where water sources are limited, and water and dust-suppressant application trucks would produce significant additional emissions of exhaust and fugitive PM dust. Implementation of OM Goal 7 and OM Guidelines 7.1 would help reduce annual and daily air quality emissions.

OM Goal 7: Manage the SVRA to reduce regional air quality impacts from OHV recreation and related activities.

- **OM Guideline 7.1:** Implement the following operational emission reduction measures to help reduce regional emissions:
  - Prohibit campfires on all summer and winter Spare the Air days identified by either BAAQMD or SJVAPCD. In addition, campfires throughout the park from November 1 to the end of February should be limited to SJVAPCD's "Check Before You Burn" program where campfires are restricted on days designated as "no burning for all" or "no burning unless registered."
  - Replace diesel-fueled maintenance equipment with alternative-fuel equipment (e.g., propane, electricity) when feasible.
  - Install and utilize electric vehicle (EV) charger(s) to promote the use of low or zero-emission vehicles.
  - Inform and suggest to all park visitors to limit the use of diesel generators for reactional vehicle cooling or heating during winter and summer Spare the Air days identified by either BAAQMD or SJVAPCD.
  - Limit maintenance equipment engine idling to 2 minutes.

However, without any feasible mitigation measures to further minimize or reduce the potentially significant operational impact, the impact would remain **significant and unavoidable**.

The following alternative addresses different potential use patterns and their implications.

6.21 Alternative 1: Reduced Emissions Alternative

6.21.1 Description

Alternative 1 would aim to further reduce operational emissions by implementing additional air quality management measures. These would include the following:

- **OM Guideline 7.2:** Provide regional air quality information (e.g., basics of air quality, local ambient pollutant concentrations, summer Spare the Air day alerts) on the website and at the SVRA entrance. Materials could include but are not limited to educational information about fugitive dust and ozone precursors, low-emission OHV engines and models, and health risk exposure.
- **OM Guideline 7.3:** During high-wind conditions, prohibit OHVs from entering the recreational trails and OHV areas.
- **OM Guideline 7.4:** Implement the following operational emission reduction measures to help BAAQMD and SJVAPCD reduce regional air quality emissions:
  - Replace diesel-fueled maintenance equipment with alternative-fuel equipment (e.g., propane, electricity) when feasible.
  - Install and utilize additional electric vehicle (EV) charger(s) at the SVRA to promote the use of low or zero-emission vehicles.

6.21.2 Impact Evaluation

Because Alternative 1 focuses on air quality, impacts on all other resource topics other than air quality are expected to remain the same as with implementation of the General Plan as currently proposed.

Implementing the additional operational measures related to air quality would potentially help to further reduce the operational impacts of the SVRA on air quality, specifically during times when air quality in the region is most impaired. However, regional air quality is driven by the cumulative conditions in the region, rather than by use in the SVRA alone. Further, in the summer when air quality conditions are typically worst, use of the SVRA is generally low because of the extreme temperatures in the region. Furthermore, it is unlikely that implementation of the additional measures would be sufficient to bring air quality in the region to below the thresholds that would bring the region into non-attainment. Thus, while the additional measures may help to reduce pollutants, the impact is expected to remain significant and unavoidable even with implementation of these measures.

The mission of State Parks is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. The SVRA provides balanced and resource sensitive access for visitors to explore and enjoy its habitat, landscape, and natural and human history while providing opportunity for OHV (and other) recreation. Implementation of this alternative would put further restrictions on OHV use in the SVRA and create additional administrative burden on SVRA staff in implementing these additional measures without the benefit of substantially reducing operation impacts further to where they would be below regional exceedance of air quality thresholds. Thus, compared to the General Plan, the Reduced Emissions Alternative would result in **similar impacts** on regional air quality.

6.22 Alternative 2: SVRA Shutdown and Park Closure

6.22.1 Description

Alternative 2 would aim to further reduce operational emissions by shutting down the SVRA. This would mean that Carnegie SVRA would close and no OHV use or other Park activities would occur.

6.22.2 Impact Evaluation

Alternative 2 focuses on improving air quality; however, impacts to other resource topics besides air quality would result. For example, if the SVRA shut down, biological resources, including conservation and restoration efforts, would no longer be managed and the wildlife habitat protection plan would not be implemented. Similarly, cultural resources would no longer be managed or protected. Additionally, geology and soils and hydrology and water quality could be negatively impacted due to lack of implementing the soils management plan or the stormwater management plan.

As discussed above for Alternative 1, regional air quality is driven by the cumulative conditions in the region, rather than by use in the SVRA alone. It is unlikely that shutting down the SVRA would be sufficient to bring air quality in the region to below the thresholds that would bring the region into non-attainment. Thus, while shutting down the SVRA may help to reduce pollutants, the impact is expected to remain significant and unavoidable even with implementation of these measures.

Alternative 2 would not meet the duties and responsibilities of State Parks OHMVR as required by California Code, Public Resources Code - PRC § 5090.32, which includes but is not limited to: (a) Planning, acquisition, development, conservation, and restoration of lands in the state vehicular recreation areas. (b) Direct management, maintenance, administration, and operation of lands in the state vehicular recreation areas.

Alternative 2 does not meet the Declaration of Purpose required by California Public Resources Code (PRC) Section 5002.2(b), which is:

> The purpose of Carnegie SVRA is to provide effectively managed, responsible off-highway vehicle (OHV) and related recreational opportunities while protecting and interpreting the SVRA's valued cultural and natural resources.

Alternative 2 does not meet the SVRA Vision, which is:

> Carnegie SVRA will be a regional destination where children and adults of all skill levels can ride, play, and learn in an outdoor recreational setting. Carnegie SVRA will continue to be an affordable location where visitors can enjoy a wide variety of OHV recreation. Carnegie SVRA will be a model of exciting and well-managed OHV recreation as well as excellent environmental stewardship. Visitors will be able to learn about and contribute to the long-term sustainability of diverse cultural and natural resources present within the SVRA.

Carnegie SVRA was purchased by State Parks using OHV Trust Funds. Legislative action (California Public Resources Code [PRC], Section 5006.48) authorized State Parks to plan, acquire, and develop the site for OHV use. If the SVRA were to shut down, Parks would have to pay back those funds to the OHV Trust.

Alternative 2 would be a significant and unavoidable impact to recreation as it would be a complete loss of a SVRA.

Thus, compared to the General Plan, the SVRA Shutdown and Park Closure Alternative would result in **similar impacts** on regional air quality and would create a **significant unavoidable impact** on recreation.

6.23 No Project Alternative

6.23.1 Description

CEQA requires an evaluation of the "No Project Alternative" and its impact (CEQA Guidelines § 15126.6[e][1]). The No Project Alternative represents perpetuation of existing management actions and the 1982 General Plan, and its analysis is based on the physical conditions that are likely to occur in the future if the project (the updated General Plan) is not approved and implemented. The purpose of

describing and analyzing the no project alternative is to allow decision-makers to compare the impacts of approving the proposed General Plan with the expected impacts of not approving the General Plan.

The No Project Alternative would keep the previous 1982 General Plan in place with all of its goals and policies and the additional acreages as it relates to State Park use. It is assumed that the existing patterns of operation and management would continue, and recreational and operational facilities could be implemented as described with the 1982 General Plan. Visitation and Park use would be expected to increase as the statewide and regional populations grow. Many of the management actions that would protect, preserve, and restore natural, cultural, and other sensitive resources that have been identified for the General Plan would not be in place to guide the stewardship of the Park's resources.

6.23.2 Impact Evaluation

The No Project Alternative, which would continue to follow the management goals and guidelines within the original General Plan approved in 1982, would be difficult to implement due to the extensive policies that California State Parks has enacted since its approval. These policies provide a multitude of measures to protect resources within the Park and all other parks managed by State Parks. Based on the policies that exist now, many of the recreational and operational facilities upgrades or constructions proposed in the General Plan would be difficult to implement. The main reason that a revision to the previous General Plan was determined to be necessary, was because it was outdated, not compatible with current policies, and does not adequately address current resource issues.

Managing the Park under the existing 1982 General Plan would result in potentially significant impacts to sensitive resources.

Therefore, compared to the General Plan, the No Project Alternative would result in **more extensive impacts** than the General Plan.

6.24 Environmentally Superior Alternative

The General Plan, as presented in ***Chapter 4 – The Plan***, is the environmentally superior alternative because it balances protection of resources while allowing for high-quality recreation and focuses OHV use to areas that are not environmentally sensitive.

7. References

7.1 Executive Summary

No references cited.

7.2 Chapter 1, "Introduction

No references cited.

7.3 Chapter 2, "Project Description"

No references cited.

7.4 Chapter 3, "Environmental Analysis"

7.4.1 Section 3.1, "Aesthetics"

Alameda County. 2002. East County Area Plan. A Portion of the Alameda County General Plan. Available: https://www.acgov.org/cda/planning/generalplans/index.htm. Accessed May 30, 2023.

Caltrans. *See* California Department of Transportation.

California State Parks. 2020. Guiding Principles for Aesthetic Design.

California Department of Transportation. 2023. California State Scenic Highways. Available: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed May 30, 2023.

Research Maniacs. 2014. How Far Can the Human Eye See on the Ocean? Available: http://researchmaniacs.com/QuestionsAnswers/HowFarCanTheHumanEyeSeeOnTheOcean.html Accessed May 30, 2023.

San Joaquin County. 2016. San Joaquin County General Plan. Last Modified November 17, 2022. Available: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=gp2035. Accessed May 30, 2023.

7.4.2 Section 3.2, "Agriculture and Forestry Resources"

Alameda County. 2022a. Unincorporated Alameda County Public Access Map. Zoning. Available: https://www.acgov.org/cda/planning/ordinance/ordinance-links.htm. Accessed May 30, 2023.

———. 2022b. Code of Ordinances. Title 17 - Zoning. Available: https://www.acgov.org/cda/planning/ordinance/ordinance-links.htm. Accessed May 30, 2023.

California Department of Conservation. 2018a. Important Farmland Finder. Alameda County. Available: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed April 17, 2023.

———. 2018b. Important Farmland Finder. San Joaquin County. Available: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed April 17, 2023.

———. 2023. Important Farmland Categories. Available: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx. Accessed April 17, 2023.

DOC. *See* Department of Conservation.

San Joaquin County. 2017. District Viewer. Zoning. Available: https://sjmap.org/DistrictViewer/. Accessed May 30, 2023.

———. 2022. Division 6 – Agricultural Zones. Available: https://library.municode.com/ca/san_joaquin_county/codes/development_title?nodeId=TIT9DETI_DIV6AGZO_CH9-605AGZOUSRE. Accessed May 30, 2023.

7.4.3 Section 3.3, "Air Quality"

ARB. *See* California Air Resources Board.

BAAQMD. *See* Bay Area Air Quality Management District.

Bay Area Air Quality Management District. 2023 (April 20). *California Environmental Quality Act Air Quality Guidelines*. San Francisco, CA. Available: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed July 12, 2023.

California Air Resources Board. 2005 (April). *Air Quality and Land Use Handbook: A Community Health Perspective*.

_____. 2013a. *California Almanac of Emissions and Air Quality*. Available: https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac. Accessed July 12, 2023.

———. 2013b. *Attachment C: Emissions Estimation Methodology for Off-Highway Recreational Vehicles.* Sacramento, CA: Planning and Technical Support Division. Available: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2013/ohrv2013/ohrvattachc.pdf.

_____. 2016. *Ambient Air Quality Standards*. Available: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed August 11, 2023.

_____. 2020. *Ambient Air Quality Standards Designation Tool.* Available: https://ww2.arb.ca.gov/aaqs-designation-tool. Accessed August 16, 2023.

EPA. *See* U.S. Environmental Protection Agency.

OEHHA. *See* Office of Environmental Health Hazard Assessment.

Office of Environmental Health Hazard Assessment. 2015 (February). *Air Toxics Hot Spots Program: Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments*. Available: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

San Joaquin Valley Air Pollution Control District. 2015 (February 19). *Guidance for Assessing and Mitigating Air Quality Impacts*. Available: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.pdf.

_____. 2018. Project Ambient Air Quality Analysis Applicability Determination under CEQA (Apr-2030). Available: https://www.valleyair.org/policies_per/Policies/APR-2030.pdf.

_____. 2023. *Ambient Air Quality Standards & Valley Attainment Status*. Available: https://www.valleyair.org/aqinfo/attainment.htm. Accessed August 16, 2023.

SJVAPCD. *See* San Joaquin Valley Air Pollution Control District.

U.S. Environmental Protection Agency. 2022a. *Ozone Pollution and Your Patients' Health: Patient Exposure and the Air Quality Index*. Available: https://www.epa.gov/ozone-pollution-and-your-patients-health/patient-exposure-and-air-quality-index. Accessed July 12, 2023.

_____. 2022b. *Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution*. Available: https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution Accessed July 12, 2023.

_____. 2022c. *Basic Information about NO_2*. Available: https://www.epa.gov/no2-pollution/basic-information-about-no2. Accessed July 12, 2023.

_____. 2022d. *Learn about Lead*. Available: https://www.epa.gov/lead/learn-about-lead. Accessed September 7, 2022.

_____. 2023. *Sulfur Dioxide Basics*. Available: https://www.epa.gov/so2-pollution/sulfur-dioxide-basics. Accessed July 12, 2023.

WHO. *See* World Health Organization.

World Health Organization. 2021. *What are the WHO Air quality guidelines?*. Available: https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines. Accessed July 12, 2023.

Zhu, Yifang; William C. Hinds, Seongheon Kim & Constantinos Sioutas. 2002. *Concentration and Size Distribution of Ultrafine Particles Near a Major Highway*. Journal of the Air & Waste Management Association, 52:9, 1032-1042, DOI: 10.1080/10473289.2002.10470842. Available: http://dx.doi.org/10.1080/10473289.2002.10470842. Accessed July 12, 2023.

7.4.4 Section 3.4, "Biological Resources"

DFG. *See* California Department of Fish and Game.

California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency. March 7.

Western Bat Working Group. 2007. Colorado Bat Conservation Plan. "Considerations for Bat Roost Protection." Western Bat Working Group, Colorado Committee.

7.4.5 Section 3.5, "Cultural Resources"

Anthropological Studies Center. 2010. A Cultural Resources Study of Portions of the Carnegie State Vehicular Recreation Area, Alameda and San Joaquin Counties, California. Sonoma State University. Rohnert Park, CA.

ASC. *See* Anthropological Studies Center.

Office of Historic Preservation. 2012. Letter dated December 7, 2012, from the California Office of Historic Preservation regarding State Parks' determinations and its proposed list of contributors and noncontributors to the significance of the Tesla Mining and Industry Historic District.

OHP. *See* Office of Historic Preservation.

7.4.6 Section 3.6, "Energy"

California Energy Commission. 2023a. Electricity Consumption by Entity. Available: http://www.ecdms.energy.ca.gov/elecbyutil.aspx. Accessed August 25, 2023.

———. 2023b. Gas Consumption by Planning Area. Available: http://www.ecdms.energy.ca.gov/gasbyplan.aspx. Accessed August 25, 2023.

———. 2023c. Gas Consumption by County. Available: http://www.ecdms.energy.ca.gov/gasbycounty.aspx. Accessed August 25, 2023.

CEC. *See* California Energy Commission.

EIA. *See* United States Energy Information Administration.

Pacific Gas and Electric Company. 2022. PG&E Power Content Label. Available: https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2022/1022-Power-Content-Label.pdf.

PG&E. *See* Pacific Gas and Electric Company.

United States Energy Information Administration. 2022. (October 5). California State Energy Profile. Available: https://www.eia.gov/environment/emissions/co2_vol_mass.php. Accessed August 24, 2023.

7.4.7 Section 3.7, "Geology and Soils/Paleontological Resources"

California Department of Parks and Recreation. 2007a. *Final Corral Hollow Watershed Assessment.* Prepared by the Twin Cities District, Rancho Cordova, CA, in partnership with Geosyntec Consultants, San Diego, CA, and Salix Applied Earthcare, Redding, CA.

———. 2007b. *OHV BMP Manual for Erosion and Sediment Control.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA. Prepared by Salix Applied Earthcare, Redding, CA, and Geosyntec Consultants, San Diego, CA.

———. 2012. *Storm Water Management Plan, Carnegie State Vehicular Recreation Area.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

———. 2020. *2020 Soil Conservation Standard and Guidelines.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

Dibblee, T.W., Jr. 1980a. *Preliminary Geologic Map of the Midway Quadrangle, Alameda and San Joaquin Counties, California.* Scale = 1:24,000. U.S. Geological Survey, Open-File Report 80-535. Denver, CO.

———. 1980b. *Preliminary Geologic Map of the Cedar Mountain Quadrangle, Alameda and San Joaquin Counties, California.* Scale = 1:24,000. U.S. Geological Survey, Open-File Report 80-850. Denver, CO.

Natural Resources Conservation Service. 2022. Web Soil Survey—Soil Survey Data for Alameda and San Joaquin Counties. Available: https://websoilsurvey.nrcs.usda.gov/app/. Accessed June 1, 2023.

Nilsen, T.H. 1972. *Preliminary Photointerpretation Map of Landslide and Other Surficial Deposits of Parts of the Altamont and Carbona 15-minute Quadrangles, Alameda County, California.* U.S. Geological Survey, Miscellaneous Field Studies Map, MF-321. Denver, CO.

NRCS. *See* Natural Resources Conservation Service.

San Joaquin County Environmental Health Department. 2016. *Onsite Wastewater Treatment Systems Local Agency Management Program*. Available:

https://www.waterboards.ca.gov/centralvalley/water_issues/owts/lamp_reviews/. Accessed June 7, 2023.

———. 2017. *Onsite Wastewater Treatment Systems Standards.* Available: https://www.sjgov.org/docs/default-source/environmental-health-documents/liquid-waste/onsite-wastewater-disposal-standards.pdf?sfvrsn=1ae0589b_3. Accessed June 7, 2023.

Society of Vertebrate Paleontology. 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

State Parks. *See* California Department of Parks and Recreation.

SVP. *See* Society of Vertebrate Paleontology.

Wagner, D.L., E.J. Bortugno, and R.D. McJunkin. 1991. *Geologic Map of the San Francisco–San Jose Quadrangle.* Scale = 1:250,000. California Division of Mines and Geology, Regional Geologic Map Series, Map No. 5. Sacramento, CA.

7.4.8 Section 3.8, "Greenhouse Gas"

ARB. *See* California Air Resources Board

BAAQMD. *See* Bay Area Air Quality Management District.

Bay Area Air Quality Management District. 2023 (April). California Environmental Quality Act Air Quality Guidelines. San Francisco, CA. Available: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed August 23, 2023.

California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. Available: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf. Accessed August 23, 2023.

PCAPCD. *See* Placer County Air Pollution Control District.

Placer County Air Pollution Control District. 2016. *California Environmental Quality Act Thresholds of Significance Justification Report*. Available: https://www.placer.ca.gov/DocumentCenter/View/2061/Threshold-Justification-Report-PDF. Accessed August 23, 2023.

Sacramento Metropolitan Air Quality Management District. 2020. *Greenhouse Gas Thresholds for Sacramento County*. Available: http://www.airquality.org/LandUseTransportation/Documents/SMAQMDGHGThresholds2020-03-04v2.pdf. Accessed August 23, 2023.

San Joaquin Valley Air Pollution Control District. 2009 (December 17). Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. Available: http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf. Accessed August 23, 2023.

SJVAPCD. *See* San Joaquin Valley Air Pollution Control District.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

7.4.9 Section 3.9, "Hazards and Hazardous Materials"

California Department of Toxic Substances Control. 2023. EnviroStor. Available: https://www.envirostor.dtsc.ca.gov/public/. Accessed June 12, 2023.

California Department of Parks and Recreation. 2007. *Final Corral Hollow Watershed Assessment.* Prepared by the Twin Cities District, Rancho Cordova, CA, in partnership with Geosyntec Consultants, San Diego, CA, and Salix Applied Earthcare, Redding, CA.

———. 2012. *Storm Water Management Plan, Carnegie State Vehicular Recreation Area.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

———. 2015. *Metals Assessment – Phase I Report, Storm Water Management Plan, Carnegie State Vehicular Recreation Area.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

DOE. *See* U.S. Department of Energy.

DTSC. *See* California Department of Toxic Substances Control.

EPA. *See* U.S. Environmental Protection Agency.

Resource Design Technology. 2002. *Tesla Mine Site Characterization Report*, *Carnegie State Vehicular Recreation Area.* Resource Design Technology Project No. 067. Folsom, CA.

State Parks. *See* California Department of Parks and Recreation.

State Water Resources Control Board. 2023. GeoTracker. Available: https://geotracker.waterboards.ca.gov/. Accessed June 12, 2023.

SWRCB. *See* State Water Resources Control Board.

U.S. Department of Energy. 1999. *Final Site-Wide Feasibility Study for Lawrence Livermore National Laboratory Site 300*. UCRL-AR-132609. Environmental Protection Department, Environmental Restoration Division, Oakland Operations Office, Oakland, CA. Work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory, Livermore, CA, under Contract W-7405-Eng-48.

———. 2001. *Interim Site-Wide Record of Decision for Lawrence Livermore National Laboratory Site 300*. UCRL-AR-138470. Environmental Protection Department, Environmental Restoration Division, Oakland Operations Office, Oakland, CA. Work performed under the auspices of the U.S. Department of Energy by the University of California, Lawrence Livermore National Laboratory, Livermore, CA, under Contract W-7405-Eng-48.

———. 2008. *Site-Wide Record of Decision for Lawrence Livermore National Laboratory Site 300*. UCRL-AR-236665. Environmental Restoration Department, Livermore Site Office, Livermore, CA. Work performed under the auspices of the U.S. Department of Energy by Livermore National Laboratory, Livermore, CA, under Contract DE-AC52-07NA27344.

U.S. Environmental Protection Agency. 2022. Search Superfund Where You Live. Available: https://www.epa.gov/superfund/search-superfund-sites-where-you-live. Accessed June 12, 2023.

7.4.10 Section 3.10, “Hydrology and Water Quality”

California Department of Parks and Recreation. 2007a. *Final Corral Hollow Watershed Assessment.* Prepared by the Twin Cities District, Rancho Cordova, CA, in partnership with Geosyntec Consultants, San Diego, CA, and Salix Applied Earthcare, Redding, CA.

———. 2007b. *OHV BMP Manual for Erosion and Sediment Control.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA. Prepared by Salix Applied Earthcare, Redding, CA, and Geosyntec Consultants, San Diego, CA.

———. 2012. *Storm Water Management Plan, Carnegie State Vehicular Recreation Area.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

———. 2015. *Metals Assessment – Phase I Report, Storm Water Management Plan, Carnegie State Vehicular Recreation Area.* Off-Highway Motor Vehicle Recreation Division, Sacramento, CA.

California Department of Water Resources. 2019. SGMA Basin Prioritization Dashboard. Available: https://gis.water.ca.gov/app/bp-dashboard/final/. Accessed June 20, 2023.

———. 2023. Best Available Maps: Awareness Floodplains. https://gis.bam.water.ca.gov/bam/. Accessed June 19, 2023.

California Stormwater Quality Association (CASQA). 2004. *Municipal Stormwater Best Management Practice Handbook*. Available: https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook. Accessed June 28, 2023.

CASQA. *See* California Stormwater Quality Association.

Central Valley Regional Water Quality Control Board. 2019. *Water Quality Control Plan for the Sacramento and San Joaquin River Basins.* Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed June 28, 2023.

Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

DWR. See California Department of Water Resources.

Federal Emergency Management Agency. 2009. Flood Map Service Center. Available: https://msc.fema.gov/portal/home. Accessed June 20, 2023.

FEMA. *See* Federal Emergency Management Agency

State Parks. *See* California Department of Parks and Recreation.

State Water Resources Control Board. 2013. *Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems* (Phase II Small MS4 General Permit), Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2013/wqo2013_0001dwq.pdf. Accessed June 20, 2023.

———. 2022. *2020-2022 California Integrated Report*. https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html. Accessed June 20, 2023.

SWRCB. *See* State Water Resources Control Board.

7.4.11 Section 3.11, “Land Use and Planning”

Alameda County. 1994. Countywide General Plan. Available: https://www.acgov.org/cda/planning/generalplans/index.htm. Accessed May 30, 2023.

———. 2002. East County Area Plan. A Portion of the Alameda County General Plan. Available: https://www.acgov.org/cda/planning/generalplans/index.htm. Accessed May 30, 2023.

———. 2022a. Unincorporated Alameda County Public Access Map. General Plan. Available: https://www.acgov.org/cda/planning/ordinance/ordinance-links.htm. Accessed May 30, 2023.

———. 2022b. Unincorporated Alameda County Public Access Map. Zoning. Available: https://www.acgov.org/cda/planning/ordinance/ordinance-links.htm. Accessed May 30, 2023.

———. 2022c. Code of Ordinances. Title 17 - Zoning. Available: https://www.acgov.org/cda/planning/ordinance/ordinance-links.htm. Accessed May 30, 2023.

San Joaquin County. 2016. San Joaquin County General Plan. Last Modified November 17, 2022. Available: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=gp2035. Accessed May 30, 2023.

———. 2017a. District Viewer. General Plan. Available: https://sjmap.org/DistrictViewer/. Accessed May 30, 2023.

———. 2017b. District Viewer. Zoning. Available: https://sjmap.org/DistrictViewer/. Accessed May 30, 2023.

———. 2022. Division 6 – Agricultural Zones. Available: https://library.municode.com/ca/san_joaquin_county/codes/development_title?nodeId=TIT9DETI_DIV6AGZO_CH9-605AGZOUSRE. Accessed May 30, 2023.

7.4.12 Section 3.12, “Mineral Resources”

Alameda County. 1994. *Alameda County General Plan.* https://www.acgov.org/cda/planning/generalplans/index.htm. Accessed June 2, 2023.

California Department of Parks and Recreation. 2007. *Final Corral Hollow Watershed Assessment.* Prepared by the Twin Cities District, Rancho Cordova, CA, in partnership with Geosyntec Consultants, San Diego, CA, and Salix Applied Earthcare, Redding, CA.

Jensen, L.S., and M.A. Silva. 1988. *Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Stockton-Lodi Production-Consumption Region*. Special Report 160, Plate 14. California Division of Mines and Geology. Sacramento, CA.

San Joaquin County. 2016. *San Joaquin County General Plan 2035 Policy Document.* Available: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=gp2035. Accessed June 2, 2023.

State Parks. *See* California Department of Parks and Recreation.

Stinson, M.C., M.W. Manson, and J.J. Plappert. 1987. *Mineral Land Classification: Aggregate Materials in the San Francisco Monterey Bay Area: Classification of Aggregate Resource Areas. Part II South San Francisco Bay Production–Consumption Region.* Special Report 146. California Division of Mines and Geology. Sacramento, CA.

7.4.13 Section 3.13, “Noise”

Alameda County. 1994. Noise Element of the General Plan: County of Alameda, State of California. Adopted January 8, 1976; amended May 5, 1994, Board of Supervisors Resolution 94-272.

California Department of Transportation. 2013. Technical Noise Supplement. Sacramento, CA. Prepared by IFC Jones & Stokes, Sacramento, CA.

Caltrans. *See* California Department of Transportation.

EPA. *See* U.S. Environmental Protection Agency.

Federal Highway Administration. 1978 (December). *Highway Traffic Noise Prediction Model*. FHWA-RD-77-108. Washington, DC: Office of Research, Office of Environmental Policy.

———. 2006 (January). Roadway Construction Noise Model User’s Guide. FHWA-HEP-05-054. Washington, DC.

Federal Transit Administration. 2018 (September). Transit Noise and Vibration Impact Assessment. FTA Report No. 0123. Washington, DC: Office of Planning and Environment.

FHWA. *See* Federal Highway Administration.

FTA. See Federal Transit Administration.

Governor's Office of Planning and Research. 2017. State of California General Plan Guidelines. Sacramento, CA.

KD Anderson & Associates, Inc. 2012 (December 19). *Existing Traffic Conditions Report for the Carnegie SVRA GP and EIR.* Loomis, CA. Prepared for AECOM, Sacramento, CA.

San Joaquin County. 2016 (December). *San Joaquin County General Plan Public Health and Safety Element*.

U.S. Environmental Protection Agency. 1974 (March). Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Washington, DC. Page 3.

7.4.14 Section 3.14, "Population and Housing"

California Department of Parks and Recreation. 2007 (June). *Corral Hollow Watershed Assessment. Final.* Off-Highway Motor Vehicle Recreation Division, Rancho Cordova, CA. Prepared by Geosyntec Consultants, San Diego, CA.

State Parks. *See* California Department of Parks and Recreation.

7.4.15 Section 3.15, "Public Services"

No references cited.

7.4.16 Section 3.16, "Recreation"

No references cited.

7.4.17 Section 3.17, "Transportation and Traffic"

California Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA.

City of Livermore. 2022. General Plan Circulation Element.

7.4.18 Section 3.18, "Tribal Cultural Resources"

Anthropological Studies Center. 2010. A Cultural Resources Study of Portions of the Carnegie State Vehicular Recreation Area, Alameda and San Joaquin Counties, California. Sonoma State University. Rohnert Park, CA.

ASC. *See* Anthropological Studies Center.

7.4.19 Section 3.19, "Utilities and Service Systems"

California Building Standards Commission. 2022. CalGreen Code. Available: https://www.dgs.ca.gov/BSC/CALGreen. Accessed June 19, 2023.

California Integrated Waste Management Board. 2023. SWIS Facility/Site Activity Details. Foothill Sanitary Landfill (39-AA-0004). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1424?siteID=3097. Accessed June 19, 2023.

CalRecycle. *See* California Integrated Waste Management Board.

7.4.20 Section 3.20, "Wildfire"

Balch, J. K., B. A. Bradley, J. T. Abatzoglou, R. C. Nagy, E. J. Fusco, and A. L. Mahood. 2017 (March 14). Human-started wildfires expand the fire nice across the United States. Proceedings of the National Academy of Sciences 114(11):2946-2951.

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2022. Santa Clara Unit Strategic Fire Plan. Available: https://osfm.fire.ca.gov/media/hjndvue2/2022-santa-clara-contra-costa-alameda-west-stanislaus-west-sann-joaquin-unit-fire-plan.pdf.

California Department of Parks and Recreation and California Department of Forestry and Fire Protection. 2020 (June). Wildfire Management Plan.

California Forest Stewardship Program. 2015. Fire Behavior. Available: http://placerrcd.org/wp-content/uploads/2019/09/58-Foreststeward-Summer-2015.pdf.

DPR and CAL FIRE. *See* California Department of Parks and Recreation and California Department of Forestry and Fire Protection.

Hamers, Laurel. 2018. Wildfires are making extreme air pollution even worse in the northwest U.S. Science News. Available: https://www.sciencenews.org/article/wildfires-are-making-extreme-air-pollution-even-worse-northwest-us. Accessed February 12, 2023.

Isaacs-Thomas, Isabella. 2020 (September 14). California's catastrophic wildfires in 3 charts. PBS News Hour. Available at https://www.pbs.org/newshour/science/californias-catastrophic-wildfires-in-3-charts#:~:text=Ninety%2Dfive%20percent%20of%20wildfires,are%20caused%20by%20human%20activity. Accessed July 8, 2023.

Keeley, J.E., and A. Syphard. 2018 (November 7). Historical patterns of wildfire ignition sources in California ecosystems. *International Journal of Wildland Fire.* 27(12):781-799. Available: https://doi.org/10.1071/WF18026.

Mann, M.L. E. Batllori, M. A. Moritz, E. K. Waller, P. Berck, A. L. Flint, L. E. Flint, E. Dolfi. 2016 (April 28). Incorporating anthropogenic influences into fire probability models: effects of human activity and climate change on fire activity in California. *PLoS One* 11(4): e0153589.

National Oceanic and Atmospheric Administration. 2018. The Impact of Wildfires on Climate and Air Quality. Available: https://csl.noaa.gov/factsheets/csdWildfiresFIREX.pdf.

7.5 Chapter 4, "Cumulative Impacts"

Alameda County. 2023. Current Development Projects. Available: https://www.acgov.org/cda/planning/landuseprojects/currentprojects.htm. Accessed October 23, 2023.

San Joaquin County. 2023. List of Active Planning Applications. Available: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=actlist&typ=apd. Accessed October 23, 2023.

7.6 Chapter 5, “Other CEQA Requirements”

No references cited.

7.7 Chapter 6, “Alternatives”

No references cited.

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