

# Final General Plan



## PRAIRIE CITY

STATE VEHICULAR RECREATION AREA



September 2016





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## Final General Plan

Prepared for:

California State Parks  
Off-Highway Motor Vehicle Recreation Division

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Governor

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September 2016





RESOLUTION 01-2016  
Adopted by the  
CALIFORNIA OFF-HIGHWAY MOTOR VEHICLE RECREATION COMMISSION  
at a meeting conducted in  
Folsom, California  
September 9, 2016

**General Plan and Final Environmental Impact Report for  
Prairie City State Vehicular Recreation Area**

WHEREAS, the Commission is a public body established within the California Department of Parks and Recreation (California State Parks) with responsibility for advisory oversight of the California Off-Highway Motor Vehicle Recreation Program pursuant to Public Resources Code Section 5090.01 et seq.; and

WHEREAS, General Plans are submitted to the Off-Highway Motor Vehicle Recreation Commission for approval pursuant to Public Resources Code Sections 5002.2 and 5090.15 (c), which includes the requirement to hold a public hearing to consider and approve general plans prepared for State Vehicular Recreation Areas (SVRAs) pursuant to PRC section 5002.3; and

WHEREAS, the Director of California State Parks has presented to this Commission for approval the General Plan for Prairie City SVRA dated July 2016 (General Plan) together with the related Draft Environmental Impact Report (EIR), Final EIR, including Public Comments and Responses to Public Comments ; and

WHEREAS, the General Plan and EIR were developed through a public input and review process begun in June 2013, and the culmination of a collaborative public planning process led by California State Parks; and

WHEREAS, the General Plan is consistent with the California State Parks SVRA classification; and

WHEREAS, pursuant to Public Resources Code (PRC) Section 5002.2, prior to implementing facility improvements California State Parks must prepare a general plan containing elements defining and evaluating the proposed land uses, facilities, concessions, operation of the unit, any environmental impacts, and the management of resources to serve as a guide for the future development, management, and operation of the SVRA: and

WHEREAS, the General Plan is subject to the California Environmental Act (CEQA) and the General Plan and EIR function as a "tiered EIR" pursuant to PRC 21093, covering general goals and objectives of the General Plan, and that the appropriate level of CEQA review will be conducted for each project relying on the Plan; and



WHEREAS, the Commission toured Prairie City SVRA on September 8, 2016 and met in Folsom California on September 9, 2016 to receive comments from the public and consider for approval the General Plan and related environmental documents for Prairie City SVRA;

NOW, THEREFORE, BE IT RESOLVED: That this Commission has reviewed and considered the information and analysis in the General Plan and EIR prior to approving the General Plan and EIR, and this Commission finds that the General Plan and EIR reflects the independent judgement and analysis of this Commission and has been completed in accordance with CEQA; and be it

RESOLVED: In connection with its review of the General Plan and EIR prior to approving the General Plan, the Commission independently finds the environmental conclusions contained within the EIR are supported by facts therein and that each fact in support of the findings is true and is based on substantial evidence in the record and that the plan goals and guidelines have been incorporated into the General Plan, which will avoid or substantially lessen the potential impacts identified in the EIR; and be it

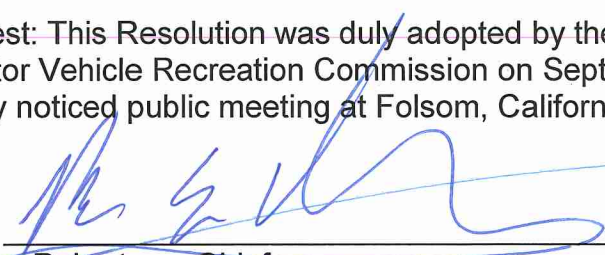
RESOLVED: That the commission acknowledges that additional project level environmental analysis will be required and completed prior to implementation of project specific plans; and be it

RESOLVED: The location and custodian of the General Plan and other materials which constitute the record of proceedings on which the Commission's decision is based is: Off-Highway Motor Vehicle Recreation Commission, 1725 23<sup>rd</sup> Street, Suite 200, Sacramento, California, 95816, Phone 916/324-4442; and be it

RESOLVED: The Off-Highway Motor Vehicle Recreation Commission hereby certifies the EIR prepared for the Prairie City SVRA General Plan and approves the July 2016 Prairie City SVRA General Plan; and be it

FURTHER RESOLVED: That a Notice of Determination will be filed with the Governor's Office of Planning and Research within five days of this approval.

Attest: This Resolution was duly adopted by the California State Parks, Off-Highway Motor Vehicle Recreation Commission on September 9, 2016, at the Commission's duly noticed public meeting at Folsom, California.

By:  Date: 9-9-16  
Brian Robertson, Chief  
Off-Highway Motor Vehicle Recreation Division  
for Lisa Mangat, Director  
California State Parks  
Secretary to the Commission

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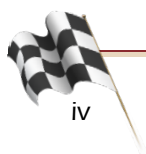


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## ACRONYMS AND OTHER ABBREVIATIONS

°F	degrees Fahrenheit
µg/m <sup>3</sup>	micrograms per cubic meter
µPa	micro-Pascal(s)
AB	Assembly Bill
Aerojet	Aerojet Rocketdyne Holdings Inc.
afy	acre-feet per year
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ARB	California Air Resources Board
ATV	all-terrain vehicle
BACM	best available control measure
Basin Plan	<i>Water Quality Control Plan for the Sacramento River and San Joaquin River Basins</i>
bioswale	biofiltration swale
BMP	best management practice
B.P.	Before Present
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	corporate average fuel economy
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
Central Basin	Central Sacramento County Groundwater Basin
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol



CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
Connector	Capital SouthEast Connector Project
Connector JPA	Capital SouthEast Connector Project Joint Powers Authority
CR	Cultural Resources Management (goals and guidelines)
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTR	California Toxics Rule
CVC	California Vehicle Code
CWA	Clean Water Act
dB	decibel(s)
dBA	A-weighted decibel(s)
diesel PM	particulate matter exhaust from diesel-fueled engines
DOF	California Department of Finance
EIR	environmental impact report
EISA	Energy and Independence Security Act of 2007
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERM	Environmental Resources Management
ESA	(federal) Endangered Species Act
FEMA	Federal Emergency Management Agency
FPASP	<i>Folsom Plan Area Specific Plan</i>
General Plan or Prairie City SVRA General Plan	<i>Prairie City State Vehicular Recreation Area General Plan</i>
Geo	Geology (goals and guidelines)
GHG	greenhouse gas
GPS	global positioning system
HMS	Habitat Monitoring System
IE	Interpretive and Educational (goals and guidelines)
IMP	interpretation master plan



JD	jurisdictional determination
kV	kilovolt(s)
LAFCO	Local Agency Formation Commission
L <sub>dn</sub>	day-night average sound level
L <sub>eq</sub>	equivalent sound level
L <sub>max</sub>	maximum sound level
LOS	level of service
m	meter(s)
Mather CLUP	<i>Mather Airport Comprehensive Land Use Plan</i>
MCV	<i>Manual of California Vegetation</i>
MLD	most likely descendant
MMT	million metric tons
mm/yr	millimeters per year
mph	miles per hour
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MS4	Small Municipal Separate Storm Sewer System
NA	not available, not known, or not applicable
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NDMA	n-nitrosodimethylamine
ng/L	nanograms per liter
NO <sub>2</sub>	nitrogen dioxide
NOA	naturally occurring asbestos
NORCOM	Northern Communications Center
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NR	not rated
NRHP	National Register of Historic Places
NRM	Natural Resource Management (goals and guidelines)
OHMVR	Off-Highway Motor Vehicle Recreation
OHV	off-highway vehicle



OHV BMP Manual	<i>OHV BMP Manual for Erosion and Sediment Control</i>
OM	Operations and Maintenance (goals and guidelines)
OSHA	Occupational Safety and Health Administration
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM <sub>2.5</sub>	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM <sub>10</sub>	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
ppm	parts per million
Prairie City SVRA or the SVRA	Prairie City State Vehicular Recreation Area
PRC	California Public Resources Code
ROG	reactive organic gases
ROV	recreational off-highway vehicle
RWQCB	regional water quality control board
Sacramento County Regional Parks	Sacramento County Department of Regional Parks
SB	Senate Bill
Scoping Plan	Climate Change Scoping Plan
Scoping Plan Update	<i>First Update to the Climate Change Scoping Plan: Building on the Framework</i>
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	California Surface Mining and Reclamation Act
SMFD	Sacramento Metropolitan Fire District
SMUD	Sacramento Municipal Utility District
Soil Standard	<i>2008 Soil Conservation Standard and Guidelines</i>
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	oxides of sulfur
SPPO	State Parks peace officer
State Parks	California Department of Parks and Recreation

SVAB	Sacramento Valley Air Basin
SVRA	State Vehicular Recreation Area
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethylene
TMDL	total maximum daily load
TT	tourist trophy
UCMP	University of California Museum of Paleontology
U.S. 50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VEO	Visitor Experience and Opportunities (goals and guidelines)
VM	Visitor Management (goals and guidelines)
Water	Wetlands, Water Quality, And Water Supply (Goals And Guidelines)
WDR	waste discharge requirement
WHPP	Wildlife Habitat Protection Program
WWTP	wastewater treatment plant



# 1 INTRODUCTION

## 1.1 LOCAL AND REGIONAL CONTEXT

Prairie City State Vehicular Recreation Area (Prairie City SVRA or the SVRA) is located in Sacramento County (Figure 1-1), approximately 20 miles east of downtown Sacramento and 3 miles south of U.S. Highway 50 (U.S. 50). The SVRA lies south of White Rock Road between Sunrise Boulevard and Prairie City Road. Primary access to the SVRA is from White Rock Road, which can be reached via either the Sunrise Boulevard exit or the Prairie City Road exit from U.S. 50.

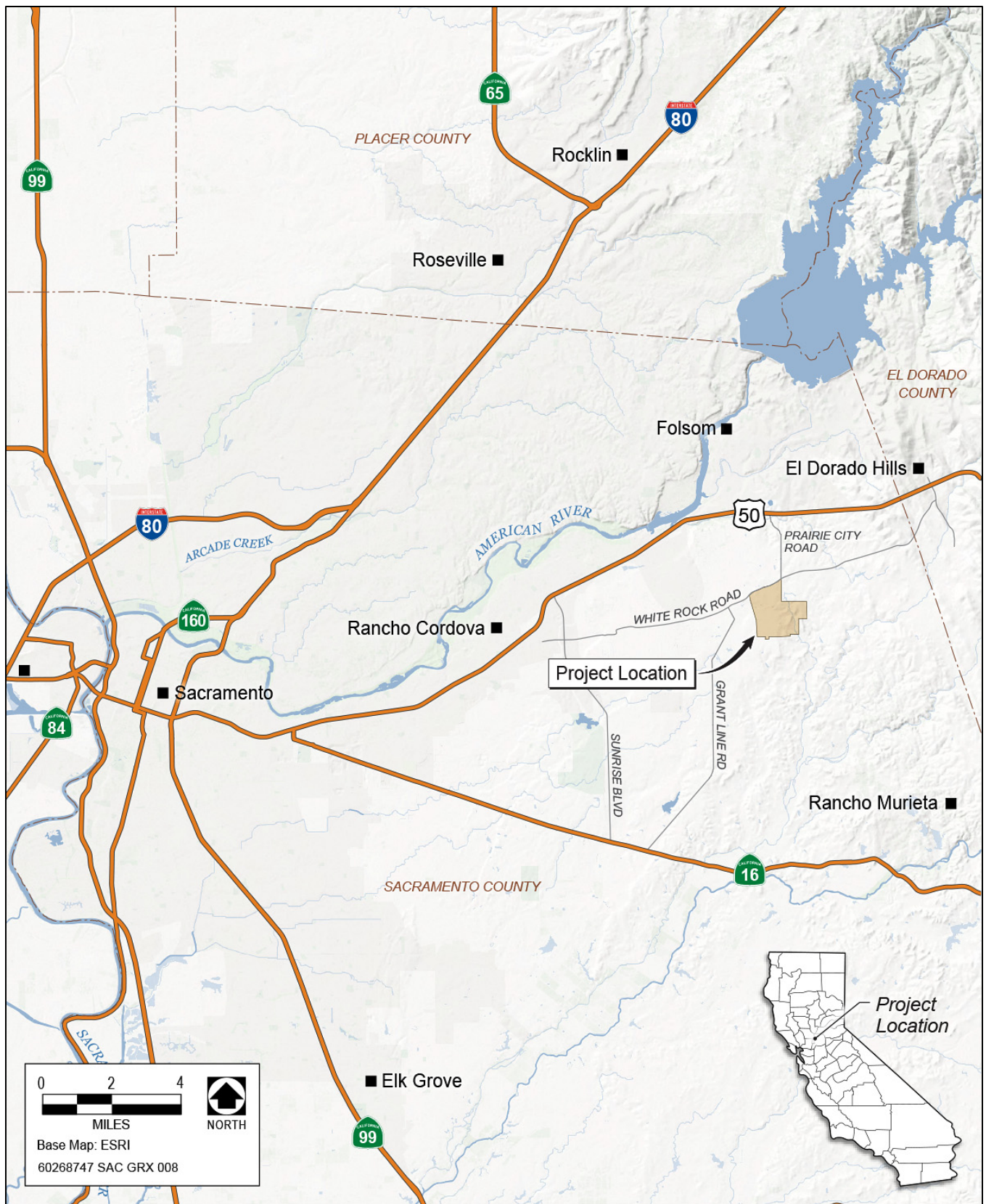
## 1.2 PURPOSE OF ACQUISITION

In 1972, Roy and Mary McGill leased 435 acres of the present park site from Aerojet Rocketdyne Holdings Inc. (Aerojet) and created a motorcycle riding and competition facility called McGills Cycle Park. Sacramento County purchased the area in 1975 with financial assistance from the Off-Highway Vehicle (OHV) Grants and Cooperative Agreements Program operated by the California Department of Parks and Recreation (State Parks). An additional area of 401 acres was purchased in 1976 with OHV Trust Funds. Sacramento County managed the park until July 1988, and then turned the operation over to the Off-Highway Motor Vehicle Recreation (OHMVR) Division of State Parks. Legislative action (Chapter 1210, Statutes of 1988) authorized State Parks to plan, acquire, and develop the site for OHV use.



Large dredge tailings dating to 1898–1899.

In November 2004, State Parks purchased another 211 acres in the northern portion of the SVRA, known as the Yost property. In 2014, 68 acres in the southeast corner of the property were acquired from the Barton Ranch. The purpose of the Barton Ranch acquisition is to help manage water quality and prevent development of incompatible land uses at the SVRA. The total acreage of the planning area currently is 1,115 acres.



Source: Data compiled by AECOM in 2014

**Figure 1-1. Vicinity Map**





### 1.3 SENSE OF PLACE

Prairie City SVRA is a showcase for OHV recreation. The SVRA offers enthusiasts of all ages a variety of terrain types and trails, an extensive selection of tracks, and an array of OHV-related facilities and amenities. Park elevations range from 240 to 350 feet above sea level. OHV recreational opportunities include trails, and tracks for motorcycles, all-terrain vehicles (ATVs), 4x4 vehicles, recreational OHVs, karts, and quarter midgets. In 2012, the SVRA's 4x4 area was expanded and improved with new obstacles and amenities. Most of the trails available for motorcycles and ATVs are beginner or intermediate level. Concessionaires operate preexisting specialty tracks including a quarter midget track, kart track, and arena cross tourist trophy (TT) track.



Motocross practice track

The Prairie City Motocross Track is home to the Hangtown Motocross Classic, the oldest and one of the most coveted trophies on the Lucas Oil AMA Pro Motocross Championship Series. In addition, mountain bike enthusiasts can enjoy the SVRA on Wednesday evenings during the spring and fall.



Aerial photo of Prairie City SVRA during the 2012 Hangtown Motocross Classic.

## 1.4 SITE CHARACTERISTICS

Most of the western portion of the SVRA is covered with piles of rock cobbles or dredge tailings deposited during hydraulic gold mining operations. The dredge tailings area is characterized by grassland and scattered cottonwood trees. The eastern portion of the SVRA is characterized by rolling hills and a vegetative cover of grassland and oak woodland.

The planning area (Figure 1-2) for this *Prairie City State Vehicular Recreation Area General Plan* (General Plan) consists of approximately 1,115 acres: the existing SVRA encompassing 836 acres, 211 acres purchased in 2004 (the Yost property), and 68 acres purchased in 2014 (the Barton Ranch acquisition). Approximately 644 acres of the existing 836 acres is currently devoted to OHV recreation.



Environmental Training Center.

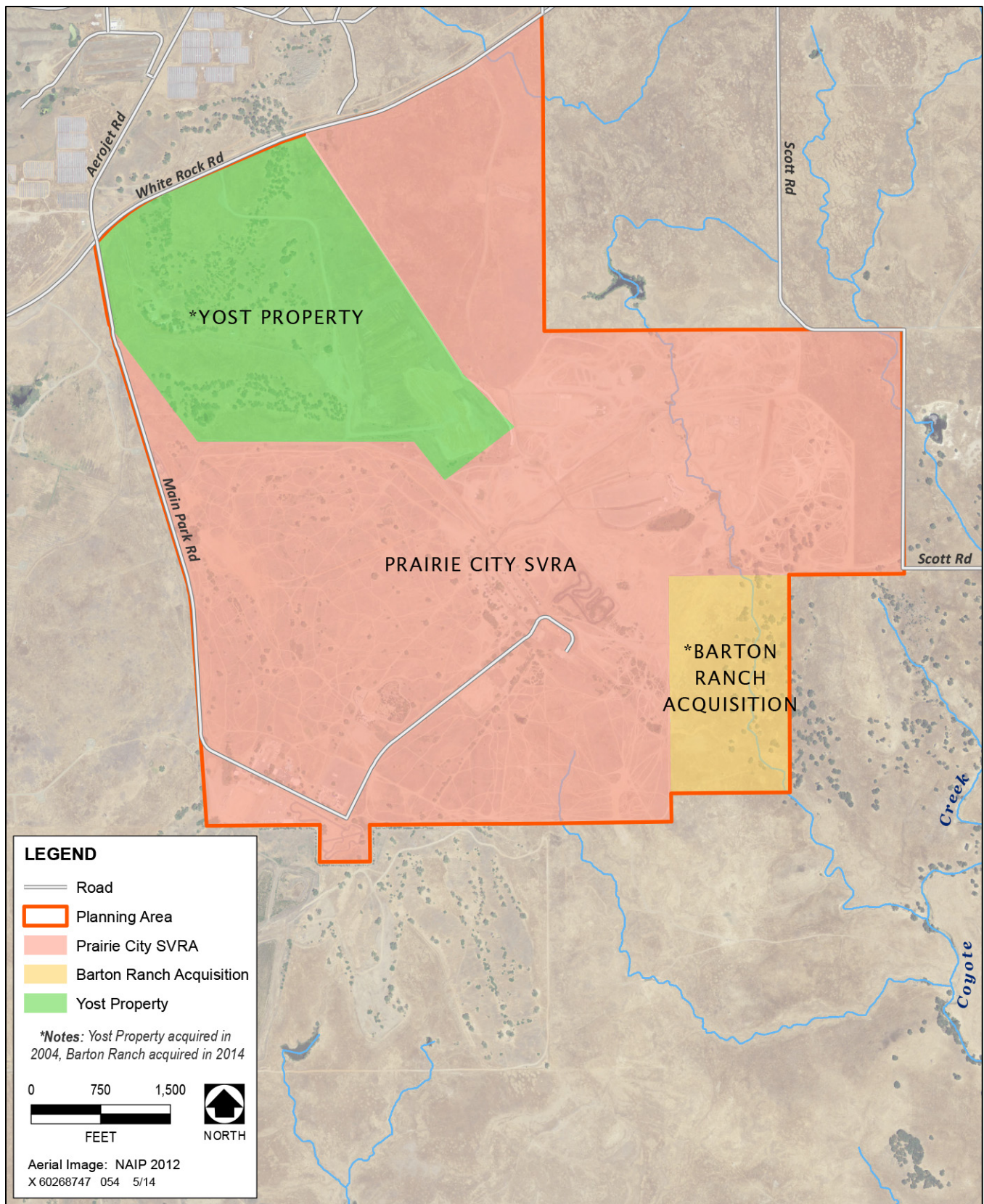
## 1.5 PURPOSE OF THE GENERAL PLAN

California's OHMVR Commission adopted a master plan for Prairie City SVRA in 1991. Upon adoption of this General Plan, the SVRA will have a new, broad-based policy document guiding future management of the park.

The General Plan establishes a clear purpose and long-range vision for the SVRA and provides goals and guidelines to direct future improvements, services, and programs. The General Plan defines the broadest possible management framework for program development, ongoing management, and public use of Prairie City SVRA. This framework is intended to guide day-to-day decision making and serves as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement the goals of the General Plan.

General plans do not expire; rather, they are reconsidered for amendments or revisions when circumstances and needs dictate, such as when additional land is acquired, or when substantial development considerations arise that were not addressed in the general plan or evaluated during the general plan process.





Source: Data compiled by AECOM in 2013

**Figure 1-2. Planning Area**

## 1.6 ORGANIZATION OF THE GENERAL PLAN

This Prairie City SVRA General Plan is organized into five chapters:

- ▶ **Chapter 1** introduces Prairie City SVRA and the General Plan.
- ▶ **Chapter 2** describes existing conditions, facilities, and important resources.
- ▶ **Chapter 3** summarizes and analyzes key issues identified during the planning process.
- ▶ **Chapter 4** contains the proposed General Plan components: SVRA classification, purpose, vision, goals and guidelines, and land use management.
- ▶ **Chapter 5** lists references cited.

## 1.7 SUBSEQUENT PLANNING

The Prairie City SVRA General Plan provides a framework to guide the management and planning for the SVRA; however, future programs and projects may offer more specific guidance or details. These subsequent plans may include management plans or project plans (Table 1-1). Any subsequent planning efforts must be consistent with the General Plan. If a subsequent program or project (e.g., a proposed change in use in a designated use area) would be inconsistent with the General Plan, the General Plan must be amended or revised before the program or project could be implemented, along with California Environmental Quality Act (CEQA) compliance.

Subsequent Plan Type	Description	Examples
Management plan	A management plan defines the objectives, methodologies, and/or designs for accomplishing management goals. The plan is consistent with systemwide plans and policies and with the unit’s general plan. Prepared as needed, management plans typically focus on specific management topics, goals, or issues.	<ul style="list-style-type: none"> <li>• Resource management plans</li> <li>• Trail management plans</li> <li>• Operation plans</li> <li>• Interpretive plans</li> <li>• Concession plans</li> </ul>
Specific project plan	Detailed implementation plans are needed to accomplish specific projects.	<ul style="list-style-type: none"> <li>• Design concepts</li> <li>• Facility development plans (e.g., off-highway vehicle track, developed trail system)</li> </ul>

Source: Data compiled by AECOM in 2014

A general plan is considered a “project” under CEQA and therefore is subject to environmental review under CEQA. The proposed project is the adoption of a general plan, which itself would cause no environmental impacts; however, implementing actions included in the Prairie City SVRA General Plan



could physically alter the environment. Possible actions that may result from adopting and implementing the General Plan have been anticipated, and the potential impacts of these actions have been analyzed in an environmental impact report (EIR). The EIR addresses all of the points required by Article 9 of the CEQA Guidelines, including existing setting, impact analysis, alternatives analysis, and cumulative impacts. The EIR is an accompanying document to this General Plan, prepared as a separate volume.

The EIR evaluates the goals, guidelines, types of uses, and facilities described in this General Plan for their potential effects on the environment. The environmental analysis was prepared concurrently with the General Plan. Mitigating goals and guidelines have been incorporated into the General Plan wherever possible to help ensure that planned actions described in the General Plan, including future actions, will not cause significant environmental impacts.

Therefore, the CEQA analysis detailed in the EIR accompanying this General Plan is intended to be adequate for future projects, as long as they are implemented in a manner consistent with the General Plan’s goals and guidelines. In addition, some actions described in the General Plan may require further CEQA analysis before implementation. This additional analysis would be conducted once the project details are known, before project implementation. According to Section 15168 of the CEQA Guidelines, projects that may be implemented in the future once this General Plan has been adopted must first be subjected to CEQA review, in light of the information in the General Plan EIR, to determine whether additional CEQA documentation is necessary. According to Section 15168 of the CEQA Guidelines, State Parks may refer to the EIR prepared for this General Plan as a starting point for a “tiered” CEQA analysis when implementing future projects that require additional environmental review.

## **1.8 THE PLANNING PROCESS**

### **1.8.1 OVERVIEW OF THE PLANNING PROCESS**

The Prairie City SVRA General Plan process involved several key phases: researching existing conditions and evaluating resources, gathering public input, developing and evaluating land use concepts, selecting a preferred concept, and preparing the General Plan and EIR documents. A planning website was specifically developed in support of the planning process. Figure 1-3 illustrates the eight major steps.



The planning team conducts a site visit.



## Prairie City SVRA General Plan and EIR Process: Step-by-Step



**Figure 1-3. The General Plan Process**

Researching existing conditions involved conducting field surveys for cultural and natural resources; mapping resources; completing a traffic study; conducting site-specific mapping of vegetation communities and a noise and sound assessment; completing a visitor survey; and reviewing technical documents and survey data. The specific steps used to gather input from the public, agencies, and stakeholders are described in Section 1.8.3. Information about existing conditions, the summary of opportunities and constraints, and input on land use alternatives from agencies, stakeholders, and the public were combined to develop goals, guidelines, and a land use plan.

### 1.8.2 PLANNING FRAMEWORK

The Prairie City SVRA General Plan was prepared consistent with the planning framework established by State Parks' Planning Division. The classification, Declaration of Purpose, SVRA vision, goals and guidelines, and use areas established in the General Plan guide the specific development of Prairie City SVRA under guidance set forth by the OHMVR Division. Table 1-2 describes the planning hierarchy that provides direction for the future of Prairie City SVRA.

### 1.8.3 INTERAGENCY AND STAKEHOLDER INVOLVEMENT

The planning team sought input from a wide variety of agencies, stakeholders, OHV enthusiasts, members of the public, and SVRA and OHMVR Division staff. The goal of the outreach program was to facilitate development of a General Plan that enjoys broad acceptance among stakeholders and staff members. To that end, the planning team facilitated public workshops to collect input and present updates, maintained a General Plan website, conducted online surveys, announced meetings through e-mail blasts, and collected input through multiple methods. The team considered input from agencies, stakeholders, staff members, and the public when developing the draft concepts, goals, guidelines, existing conditions, and environmental analysis. The various outreach efforts conducted during the Prairie City SVRA General Plan process are described in the next section.



<b>Table 1-2. Planning Hierarchy for Prairie City SVRA</b>	
<b>Planning Concept</b>	<b>Description</b>
OHMVR Division Mission	The OHMVR Division’s mission guides acquisition, planning, and management of the SVRAs as part of the divisional responsibility to provide leadership for a statewide OHV program.
Classification	SVRA management, operation, and development are guided by the classification of a park unit. Prairie City is an SVRA.
Declaration of Purpose	The Declaration of Purpose is a broad statement of direction unique to each SVRA. Section 5090.43(a) of the California Public Resources Code requires SVRAs to be developed, managed, and operated to make the fullest public use of the outdoor recreational opportunities present, while balancing the protection of natural and cultural resources.
SVRA Vision	The vision statement is a view of the desired future conditions for Prairie City SVRA. It expresses what the SVRA should ultimately be and look like and what kinds of visitor experiences should be available in the future.
Goals and Guidelines	Goals are developed to address existing issues and provide ongoing guidance for SVRA management. Guidelines provide the direction that the OHMVR Division will consider to achieve these goals.
Use Areas	Use areas allow for specialized management by area. These use areas are developed by considering a variety of factors: topographic features, resource values, ecological parameters, management issues and goals, types and intensities of use, and visitor use and experience. Targeted goals and guidelines are developed for each use area.
Notes: OHMVR = Off-Highway Motor Vehicle Recreation; OHV = off-highway vehicle; SVRA = state vehicular recreation area Source: Data compiled by AECOM in 2014	

## **AGENCY COORDINATION**

The following meeting was held with regulatory agencies:

- ▶ **Draft Preferred Concept Invite and Agency Site Tour:** The planning team invited regulatory agencies to provide feedback on the Draft Preferred Concept and to participate in site visits at the SVRA. Site visits were conducted with the Central Valley Regional Water Quality Control Board and the U.S. Army Corps of Engineers in July and August 2014.

## **NATIVE AMERICAN CONSULTATION**

Native American consultation by State Parks is guided by:

- ▶ Governor’s Executive Order (EO) B-10-11;
- ▶ Governor’s EO W-26-92;
- ▶ California Public Resources Code (PRC) Sections 5097 through 5097.933;

- ▶ the California Natural Resources Agency’s Departmental Notice “Adoption of Final Native American Consultation Policy” (November 20, 2012);
- ▶ State Parks Departmental Notice 2007-05, “Native American Consultation Policy & Implementation Procedures”; and
- ▶ the Amended Memorandum of Agreement with State Parks and the California State Historic Preservation Officer regarding compliance with PRC Sections 5024 and 5024.5 and Governor’s EO W-26-92.

Departmental Notice No. 2007-05 sets forth State Parks’ policy for consultation with Native California Indians about activities affecting matters related to their heritage, sacred sites, and cultural traditions. General plans are included in the list of potential activities. In September 2011, Governor Edmund G. Brown Jr. ordered state agencies (including State Parks) to “encourage communication and consultation with California Indian Tribes... and permit elected officials and other representatives of tribal governments to provide meaningful input” (Governor’s EO B-10-11). State Parks conducts Native American consultation in accordance with Departmental Notice 2007-05 and Governor’s EO B-10-11.

As part of Native American consultation, OHMVR Division archaeologists contacted the Native American Heritage Commission (NAHC) to request a record search of the sacred lands files and a Native American contact list for the planning area. The NAHC’s review of the sacred lands files failed to identify sacred sites within Prairie City SVRA. A Native American consultation meeting was conducted on July 30, 2013, and included a site visit with three Native American groups. During the meeting, the Native American representatives expressed the desire for access to the park to gather plant resources and for incorporating native plants of value to the Native American community into restoration efforts.

## **STAKEHOLDER OUTREACH**

The planning team met with the Prairie City Improvement Group, a group that represents the various user groups of the SVRA, on December 13, 2012, September 9, 2014, and November 10, 2014, to provide updates on the General Plan process. The goal of the meetings was to offer a more intimate forum to hear about the stakeholders’ particular concerns, answer questions, and collect input on solutions that the stakeholders would like incorporated into the Prairie City SVRA General Plan.





## PUBLIC INVOLVEMENT

State Parks puts a high priority on involving the public in planning the future use and management of park units. For this reason, the planning team reached out in a variety of ways to inform, involve, collaborate with, and educate the public. The planning team held public meetings, visited 13 OHV dealerships, posted information and activities on a project website, and invited interested members of the public to provide comments. Public notices of the scoping meeting were placed in the *Sacramento Bee* (June 6, 2013) and the *Folsom Telegraph* (June 12, 2013).



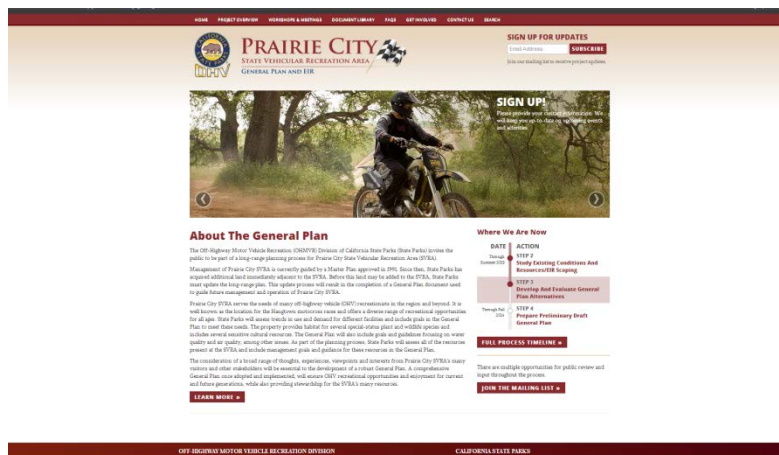
State Parks staff member talks with attendees of the first public workshop.

## Postcard Invitation

At the outset of the Prairie City SVRA General Plan process, the planning team passed out a postcard that included a request for contact information so that the recipient could mail the postcard back to the planning team and be added to the mailing list. The postcard also contained a tear-off card containing the address of the project website. The postcard was distributed to occupants of vehicles coming through the SVRA gate, to event attendees, and to local vendors for distribution to their customers. The postcard was also made available to all attendees of the public workshops.

## Project Website

A website ([www.PrairieCityGeneralPlan.com](http://www.PrairieCityGeneralPlan.com)) was specifically created for the planning effort and served as the main portal for all communication about the General Plan. This website contained information about the planning process, links to background reports and documents, a comment form, a mailing list signup form, announcements of upcoming meetings, and answers to frequently asked questions. In addition, materials used during public meetings (e.g., PowerPoint presentations, graphics, handouts) were posted and presented on the website to allow those unable to attend the meeting in person to review



[www.PrairieCityGeneralPlan.com](http://www.PrairieCityGeneralPlan.com)



and comment. The Preliminary General Plan/Draft EIR and Final General Plan/Final EIR and materials related to the OHMVR Commission hearing on the General Plan and EIR will also be posted on this website, when available.

### **Online Survey**

The planning team conducted an online survey available to anyone who visited the General Plan website between July 1 and October 31, 2013. Survey participation was solicited and encouraged through direct e-mail invitations, extended to visitors and stakeholders in person, and provided on a fact sheet and on the website. A total of 318 individuals participated in the survey, which consisted of a series of 15 questions. The questions fell into three categories: demographics of the respondents and their companions, visitor experiences, and possible improvements to the visitor experience at Prairie City SVRA. A summary of the survey results was posted to the website in January 2014.

### **Public Workshops**

#### ***Scoping/Public Workshop 1***

The first public workshop for the Prairie City SVRA General Plan and EIR was held at the Folsom Community Center on June 18, 2013, 6:30 p.m. to 8 p.m. This meeting also served as a CEQA scoping meeting. The workshop allowed the 11 attendees to talk to the planning team and SVRA staff members one-on-one.

During the public workshop, the Prairie City SVRA General Plan team held a presentation on the process for developing a general plan and EIR for a State Park unit. Additional materials presented at the open house-style meeting included poster boards on the topics of natural and cultural resources, park operations, visitor experience, and the planning process. The planning team provided information and answered meeting attendees' questions. Attendees were encouraged to provide their input, suggestions, and concerns about the contents of the Prairie City SVRA General Plan and the environmental effects of implementing the plan.

#### ***Concept Alternatives Public Workshops 2 and 3***

Two public workshops were held at Prairie City SVRA during Visitor Appreciation Day on October 13, 2013, and the Hare Scramble on November 2, 2013. Approximately 150 people attended these workshops to review the concepts, talk to the planning team, and provide their input on the concept alternatives. An online exercise with questions and activities identical to those posed during the two workshops was conducted between October 15, 2013, and January 15, 2014. A total of 83 individuals participated in the online exercise.



Attendees provide comments at Visitor Appreciation Day.



### ***Draft Preferred Concept Public Workshops 4 and 5***

The planning team hosted two public workshops and an online activity to present the Draft Preferred Concept. The first workshop was held at Prairie City SVRA on Sunday, April 27, 2014. The planning team was available from 10 a.m. to 3 p.m. and approximately 20 people visited the General Plan booth. The second workshop was held during the Hangtown Motocross Classic on Saturday, May 31, 2014, from 10 a.m. to 4 p.m., with approximately 40 people visiting the booth throughout the day. The website hosted an online activity that provided the same information and comment card as presented at the in-person workshops. The activity was available to the public from April 28 to June 3, 2014. The planning team received a total of 89 responses.



Hangtown attendees review the Draft Preferred Concept.

### ***Revised Draft Preferred Concept Public Workshop 6***

The planning team hosted a public workshop and an online activity to present the Revised Draft Preferred Concept. The workshop was held at Prairie City SVRA during Visitor Appreciation Day on Sunday, October 12, 2014. The planning team was available from 9 a.m. to 2 p.m. and approximately 20 people visited the General Plan booth. In addition, at the entrance station, OHMVR Division staff provided all visitors entering the SVRA with a comment card and told them about the General Plan booth. The website hosted an online activity that provided the same information and comment card as presented at the in-person workshop. The activity was available to the public from September 30 to October 31, 2014. The planning team received 489 responses: 150 comment cards, 17 e-mails, and 322 comments through the website.

### **Fact Sheet—Introduction to the General Plan**

A fact sheet was provided to SVRA visitors in June 2013 to alert them of the start of the Prairie City SVRA General Plan process and invite them to the first public workshop.

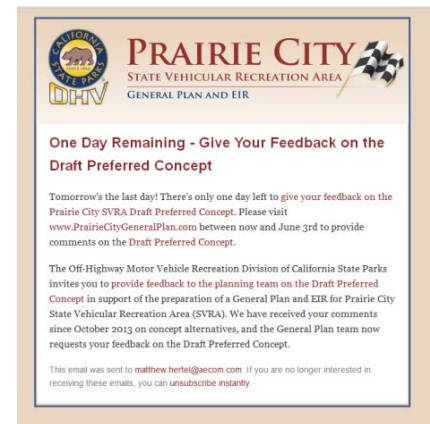


## Alerts/Notifications

### E-mail Blast

At important points throughout the planning process, the planning team sent e-mails to all individuals on the contact list. The following e-mail blasts were sent during the planning process for the Prairie City SVRA General Plan:

- ▶ *Upcoming Public Workshop for Prairie City SVRA General Plan!*, May 22, 2013—Sent to 50 e-mail addresses, this blast announced the first public workshop on June 18, 2013, and informed recipients of the website, [www.PrairieCityGeneralPlan.com](http://www.PrairieCityGeneralPlan.com).
- ▶ *Upcoming Public Workshop and Other Updates*, June 11, 2013—Sent to 51 e-mail addresses, this blast provided a reminder of the first public workshop, provided a fact sheet and the notice of preparation for the EIR associated with the General Plan, and announced the upcoming survey.
- ▶ *Ideas Accepted for Prairie City SVRA General Plan*, July 1, 2013—Sent to 58 e-mail addresses, this blast provided a link to the online survey, provided a summary of the first public workshop, and requested comments on the scope of the EIR.
- ▶ *Share Your Thoughts on Visitor Appreciation Day!*, October 4, 2013—Sent to 172 e-mail addresses, this blast provided the date, time, and location of the second public workshop held on Visitor Appreciation Day.
- ▶ *Prairie City SVRA General Plan Online Workshop Closes on January 16th*, January 9, 2014—Sent to 208 e-mail addresses, this blast reminded recipients to complete the online workshop.
- ▶ *Prairie City SVRA General Plan, Draft Preferred Concept Alternative—April 27th Workshop*, April 18, 2014—Sent to 253 e-mail addresses, this blast announced the upcoming Draft Preferred Concept workshop.
- ▶ *Prairie City SVRA General Plan, Draft Preferred Concept—Online Comment Form*, April 28, 2014—Sent to 260 e-mail addresses, this blast announced that the online comment form was available to provide comments on the Draft Preferred Concept until May 30, 2014.
- ▶ *Prairie City SVRA General Plan, Draft Preferred Concept—Comment Period Extended to June 3rd*, May 13, 2014—Sent to 263 e-mail addresses, this blast announced that the comment period for the Draft Preferred Concept was extended to June 3, 2014.



Prairie City SVRA General Plan e-mail blast



- ▶ *One Week Remaining—Give Your Feedback on the Draft Preferred Concept*, May 27, 2014—Sent to 266 e-mail addresses, this blast announced that there was only 1 week left to provide comments period on the Draft Preferred Concept.
- ▶ *One Day Remaining—Give Your Feedback on the Draft Preferred Concept*, June 2, 2014—Sent to 266 e-mail addresses, this blast announced that there was only 1 day left to provide comments on the Draft Preferred Concept.
- ▶ *Prairie City SVRA General Plan, Draft Preferred Concept Review Exercise Summary & Key Findings*, August 19, 2014—Sent to 316 e-mail addresses, this blast announced the online availability of the document summarizing input on the Draft Preferred Concept that was presented at two Prairie City SVRA workshops on April 27 and May 31, 2014, and feedback received during an online exercise that was available between April 28 and June 3, 2014.
- ▶ *Prairie City SVRA General Plan, Revised Draft Preferred Concept—Online Comment Form*, September 30, 2014—Sent to 321 e-mail addresses, this blast announced that the online comment form was available to provide comments on the Revised Draft Preferred Concept until October 31, 2014.
- ▶ *Prairie City SVRA General Plan, Visitor Appreciation Day*, October 12, 2014—Sent to 324 e-mail addresses, this blast announced that visitors could provide input on the Revised Draft Preferred Concept at the State Parks booth during the event, and that the online comment form would be available until October 31, 2014.
- ▶ *Reminder—Don't Miss This Opportunity to Guide the Future of Prairie City SVRA*, October 22, 2014—Sent to 326 e-mail addresses, this blast served as a reminder to provide comments on the Revised Draft Preferred Concept by October 31, 2014.
- ▶ *Prairie City SVRA General Plan, Revised Draft Preferred Concept Comment Card Summary & Key Findings*, December 17, 2014—Sent to 357 e-mail addresses, this blast announced the online availability of the document summarizing input on the Revised Draft Preferred Concept that was presented at a Prairie City SVRA workshop on October 12, 2014, and feedback received during an online exercise that was available between September 30 and October 31, 2014.

Additional e-mail blasts will be sent to announce other events of interest to the public and stakeholders such as the public release of the Preliminary General Plan/Draft EIR, the availability of the Final General Plan/Final EIR, and the OHMVR Commission hearing to approve the General Plan and the OHMVR Division to certify the EIR.

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## 2 EXISTING CONDITIONS

This chapter describes the environmental setting and context of Prairie City State Vehicular Recreation Area (SVRA). It summarizes agency roles and the influence of local planning efforts. It also describes recreational opportunities, natural and cultural resources, existing land uses, and aesthetic resources in the planning area. The information in this chapter provides the baseline data for the General Plan's goals and guidelines and serves as the setting for environmental review.

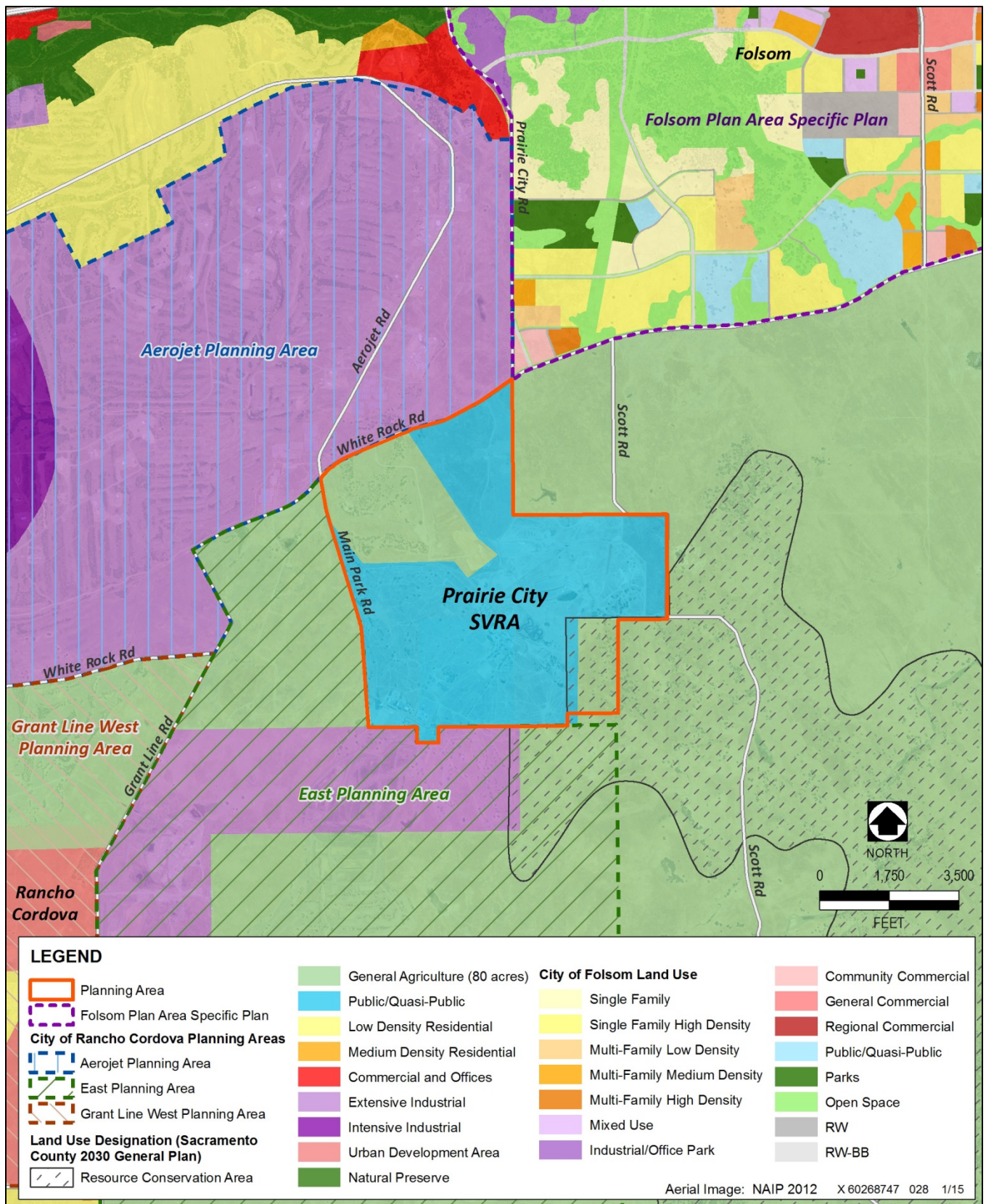
### 2.1 REGIONAL LAND USE AND FACILITIES

#### 2.1.1 REGIONAL AND SURROUNDING LAND USES

Prairie City SVRA is located in unincorporated Sacramento County, near the City of Folsom's *Folsom Plan Area Specific Plan* (FPASP) area and approximately 1.5 miles northeast of the Rancho Cordova city limits. The *Rancho Cordova General Plan*, adopted in 2006, includes two planning areas adjacent to the SVRA. Because SVRAs are owned and operated by State Parks, the general plans of local cities and counties do not guide SVRA planning. However, it is important from a regional and SVRA planning perspective to understand plans for proposed development near Prairie City SVRA. Nearby planning areas are described below, and Figure 2-1 shows their locations.

The land use designation for Prairie City SVRA has not been recently updated by Sacramento County. Therefore, a portion of the SVRA's land use is still obsoletely listed as General Agriculture (Figure 2-1). The land use designations for property adjacent to Prairie City SVRA are almost exclusively General Agriculture, except that the properties to the north are designated as Extensive Industrial in the Aerojet Planning Area and Community Commercial in the FPASP area (Figure 2-1). Portions of the General Agriculture land use designation to the northeast and southeast of Prairie City SVRA have a Resource Conservation Area combining designation that identifies areas with special resource management needs. Such needs may include vernal pool management, wetland creation, waterfowl management, peat soil conservation, and blue oak woodland harvesting (Sacramento County Community Planning & Development Department 2011a:14).

Prairie City SVRA is mainly surrounded by private land owned by Aerojet Rocketdyne Holdings Inc. (Aerojet), Teichert, and Barton Ranch. Aerojet owns the property to the west and north of the SVRA (approximately 8,000 acres), and uses the property for industrial operations and aerospace and defense product testing. Also present is a ground-mounted, 6-megawatt solar electric system that is the largest single-site photovoltaic solar-electric generating facility in California. A portion of the property is leased for use as rangeland (Aerojet Rocketdyne Holdings Inc. 2010a, 2010b:2-3). In 2015, Aerojet sold 703 acres to WestLand Capital Partners for the residential and commercial development (Wiese 2015). The Teichert-owned property located east and south of the SVRA is used for mining, and the Barton Ranch property, also located to the east and south, is used primarily for cattle grazing.



Sources: City of Rancho Cordova 2006; Sacramento County Community Planning & Development Department 2011b; AECOM 2009

**Figure 2-1. Surrounding Land Use Designations**





## **CITY OF FOLSOM**

In 2001, the Sacramento Local Agency Formation Commission (LAFCO) approved the City of Folsom's application to expand its sphere of influence south to include all of the land bounded to the north by U.S. Highway 50 (U.S. 50), to the south by White Rock Road, to the west by Prairie City Road, and to the east by the Sacramento County/El Dorado County boundary line (City of Folsom 2011). The Folsom City Council certified the environmental impact report/environmental impact statement and approved the general plan amendment for the FPASP on June 14, 2011 (City of Folsom 2014). The 3,600-acre FPASP was approved and the area was rezoned by the Folsom City Council on June 28, 2011 (City of Folsom 2012) (Figure 2-2).

On January 18, 2012, the LAFCO approved the annexation of the FPASP into the corporate city limits of the City of Folsom (City of Folsom 2014).

An anticipated full buildout of the FPASP would include 10,210 new residential units (approximately 27,000 new residents) and more than 5 million square feet of commercial development (City of Folsom 2011, 2014). In addition to these residential and commercial uses, the FPASP area would provide parks, open space, schools, and other community-serving uses. Also planned is a dedicated transit corridor running the entire breadth of the FPASP area, from Prairie City Road on the west to the intersection of White Rock Road and Placerville Road at the plan area's southern boundary.

The proposed land use adjacent to the northeast corner of Prairie City SVRA along Prairie City and White Rock Roads is community commercial. Other proposed land uses near Prairie City SVRA include multifamily low density, multifamily medium density, multifamily high density, single-family high density, and open space (City of Folsom 2011).

## **CITY OF RANCHO CORDOVA**

The city of Rancho Cordova is located in eastern Sacramento County; the city limits encompass 20,071 acres. The *Rancho Cordova General Plan*, adopted in 2006, covers a planning area of 62,000 acres that includes the unincorporated area extending east to Prairie City Road, south to Jackson Highway (State Route 16), west to Watt Avenue, and north to the American River. The City of Rancho Cordova does not currently have jurisdiction over lands outside of the city's boundaries, but intends to enter into cooperative agreements on land use and circulation planning for areas outside of its jurisdiction.

The overall planning area covered by the *Rancho Cordova General Plan* comprises 16 individual planning areas. Two of the planning areas, the East and Aerojet Planning Areas, are adjacent to Prairie City SVRA and a third, the Grant Line West Planning Area, is located nearby (Figure 2-1). The East and Aerojet Planning Areas are located entirely outside of the existing Rancho Cordova city limits, but a part of the Grant Line West Planning Area lies within city limits. All planning areas will require more

detailed subsequent land use planning (City of Rancho Cordova 2006:5, 14, 30) because the current land use plans are conceptual in nature and the areas must be annexed to the city.

### **East Planning Area**

The East Planning Area consists of 7,353 acres and is located on the western and southern borders of Prairie City SVRA (Figure 2-3). As envisioned, the East Planning Area also included the 211-acre Yost property, which was acquired by State Parks in 2004 and added to Prairie City SVRA. The conceptual land use plan anticipates approximately nine neighborhoods served by at least one village center and one local town center, with an estimated 27,781 residents and 5,644 jobs. The planning area is expected to include 10,390 dwelling units with an average density of 1.55 units per acre (City of Rancho Cordova 2006:56–58).

### **Aerojet Planning Area**

The Aerojet Planning Area encompasses 5,285 acres directly northwest of Prairie City SVRA (Figure 2-4). The planning area currently is the site of Aerojet operations. A portion of the planning area is located within the *Mather Airport Comprehensive Land Use Plan* (Mather CLUP) area (Figure 2-4), which provides regional policies to ensure land use compatibility.

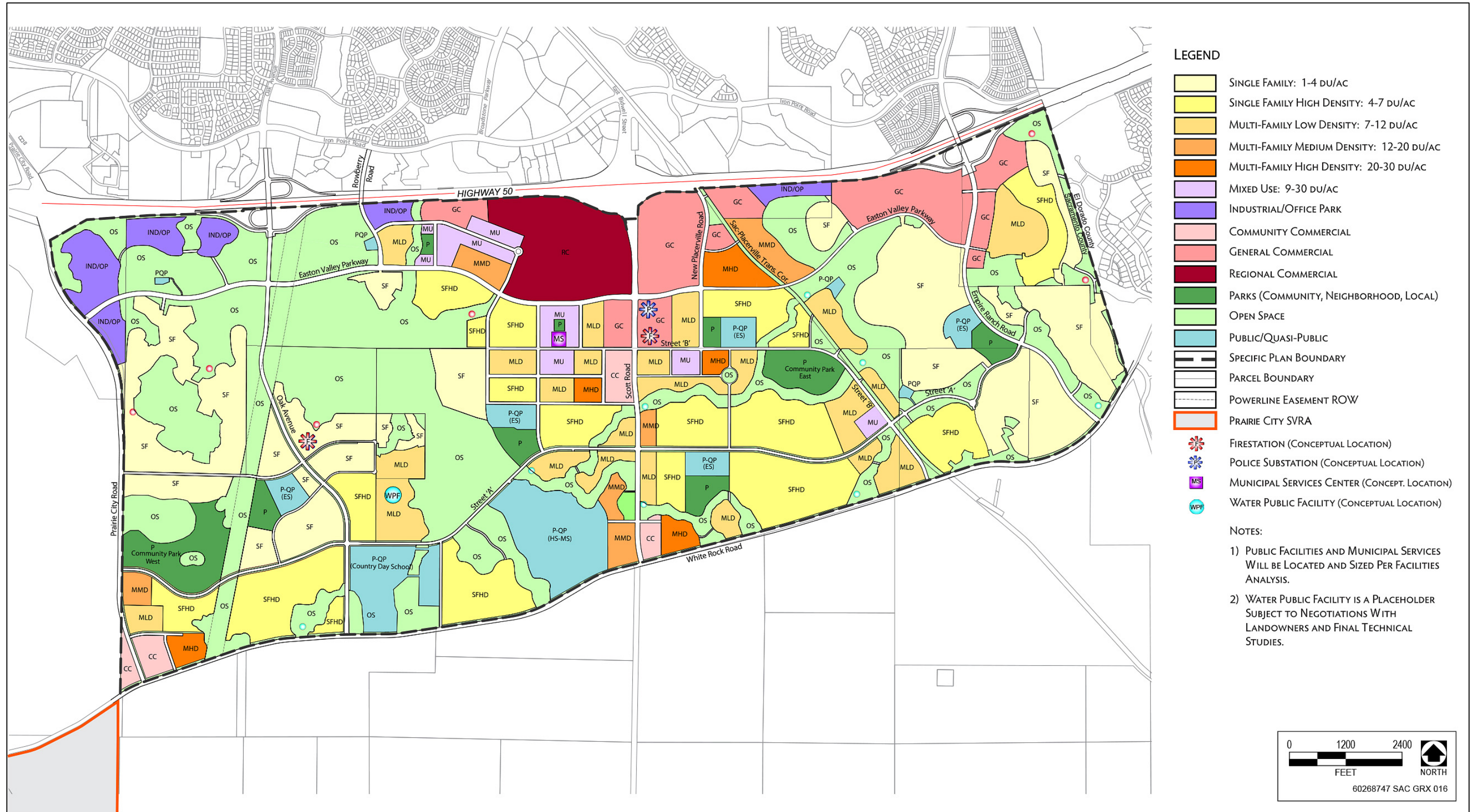
The conceptual land use plan for this planning area anticipates the near-term continuation of industrial use, research and development, mining operations, and remediation as well as light industrial and office uses near the center of the planning area and along White Rock Road. The conceptual land use plan also anticipates accommodating 570 jobs (City of Rancho Cordova 2006:49–50).

### **Grant Line West Planning Area**

The Grant Line West Planning Area is located west of Prairie City SVRA and adjacent to the East Planning Area; it encompasses 1,307 acres (Figure 2-5). The southern portion of this planning area is within the Rancho Cordova city limits. The northern portion is outside of the existing city limits and would first have to be annexed to be developed.

The conceptual land use plan for this planning area anticipates five or six neighborhoods with up to two on-site village centers in the planning area's northern and southern portions, an estimated population of 9,043, and 1,747 jobs. The planning area is expected to include 3,393 dwelling units with an average density of 2.88 units per acre (City of Rancho Cordova 2006:70–71).



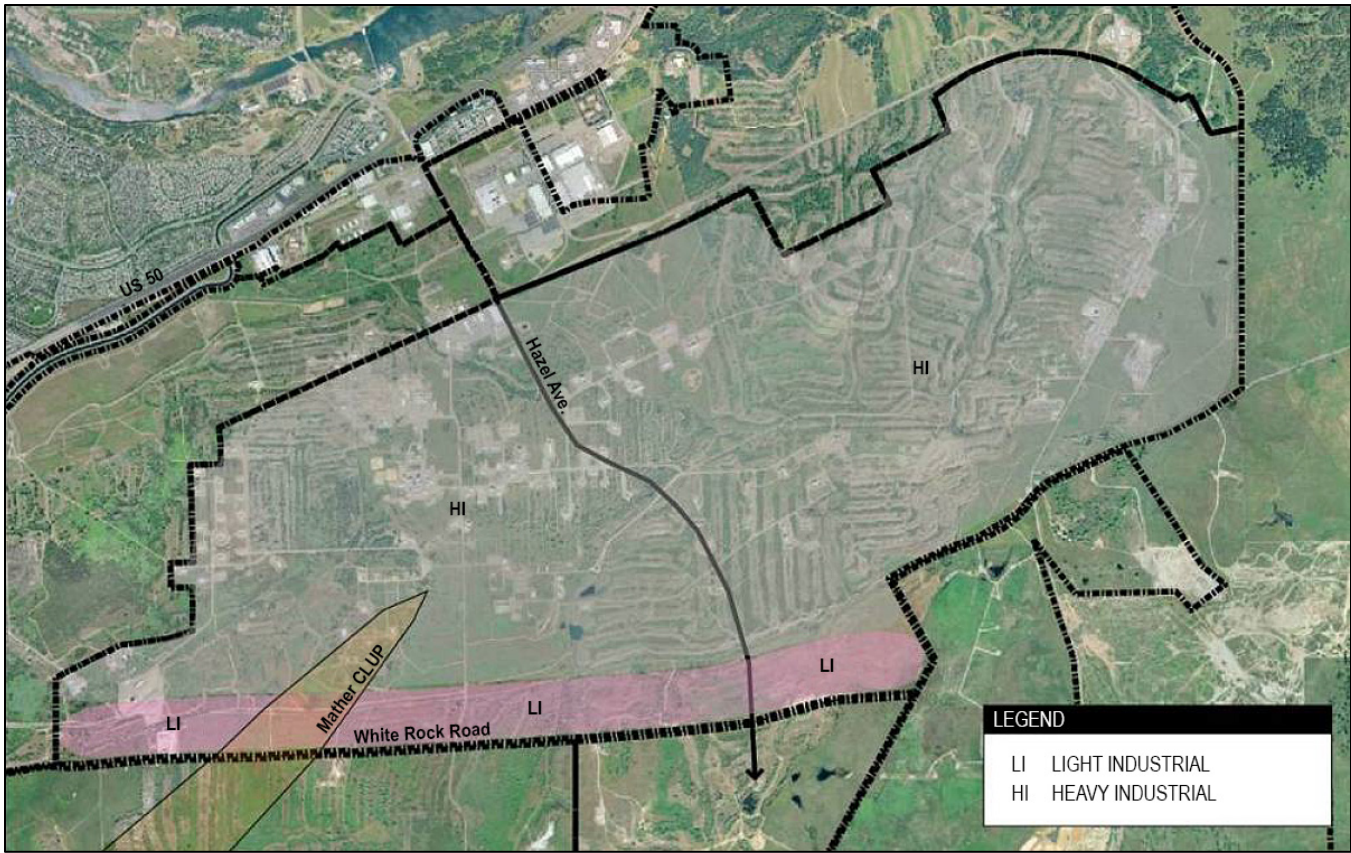


Source: City of Folsom 2011

**Figure 2-2. Folsom Plan Area Specific Plan Land Use Plan**

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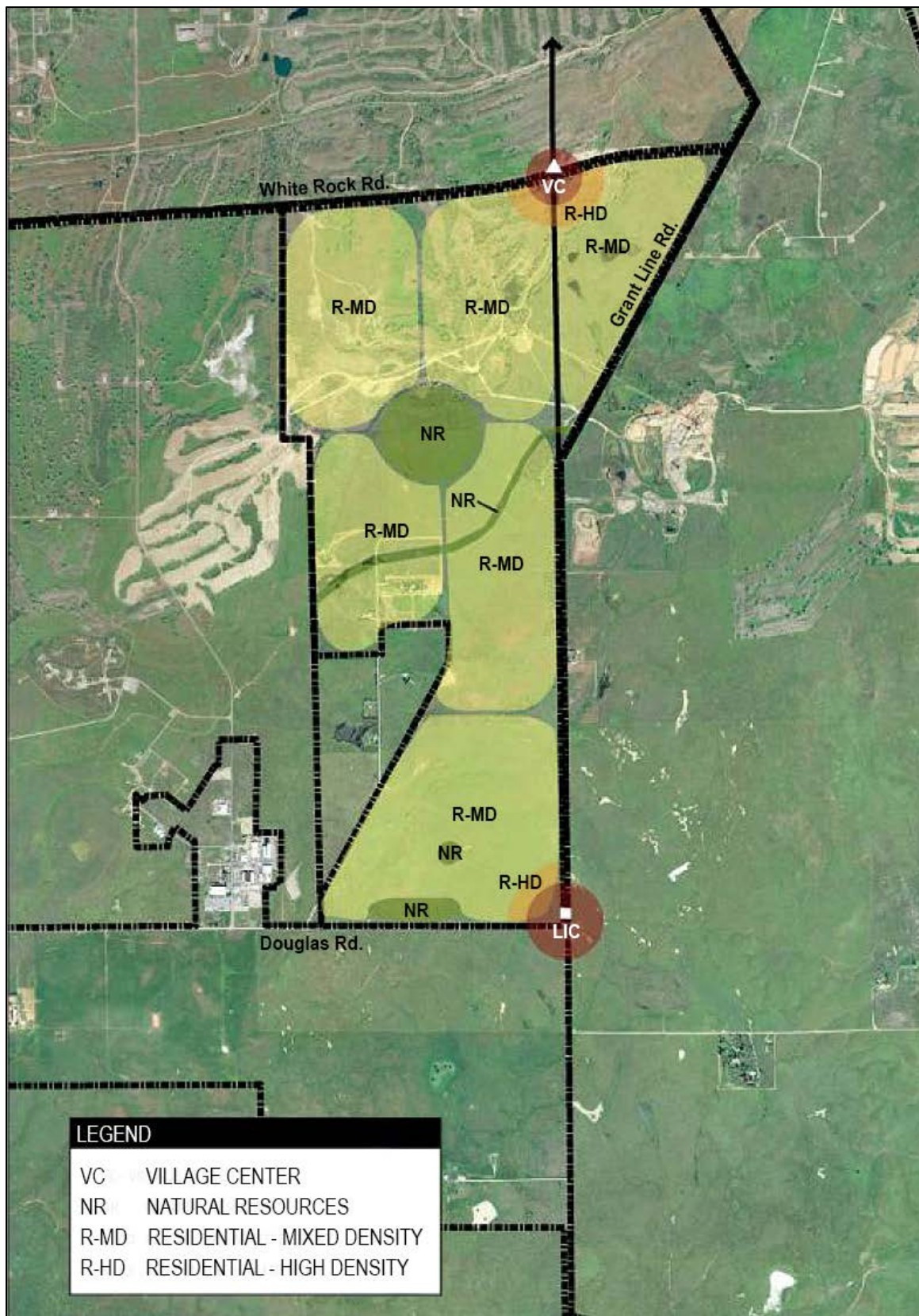




Source: City of Rancho Cordova 2006

**Figure 2-4. Conceptual Land Use Plan for the Aerojet Planning Area**





Source: City of Rancho Cordova 2006

**Figure 2-5. Conceptual Land Use Plan for the Grant Line West Planning Area**

## 2.1.2 REGIONAL RECREATION FACILITIES

Prairie City SVRA plays an important role in meeting the recreational needs of the local and regional community. As indicated by the name, the SVRA is used mainly for off-highway motor vehicle recreation, although it is also used by mountain bikers on Wednesdays when the SVRA is closed to off-highway vehicle (OHV) activity.

Many parks and recreational facilities are located in the region. The facilities located near Prairie City SVRA in Sacramento, El Dorado, and Placer Counties range from small neighborhood parks to regional recreation facilities and nature preserves. These parks provide facilities for passive and active recreation, such as picnic areas, sports fields, and hiking and equestrian trails, as well as fishing and boating opportunities.



Mountain biking.

### FEDERAL PROPERTIES

The North Central Valley Wildlife Management Area and Stone Lakes National Wildlife Refuge, both managed by the U.S. Fish and Wildlife Service (USFWS), are located approximately 23 miles to the west and 25 miles to the southwest, respectively. Eldorado National Forest, managed by the U.S. Forest Service, is located approximately 30 miles to the east. Common activities in these areas include hiking, camping, hunting, fishing, and water-based recreation. Neither of the nearby USFWS-managed properties provide OHV recreation; however, Eldorado National Forest provides 30 miles of trails and roads for OHV use in the Gold Note Route system, which is linked to 69 miles of trails and roads within the Elkins Flat OHV Route system. The Gold Note and Elkins Flat OHV Route systems are both located approximately 60 miles from Prairie City SVRA.

### STATE PARKS

Several State Parks and State Recreation Areas are located within 30 miles of Prairie City SVRA. Folsom Lake State Recreation Area covers 19,500 acres and includes the Folsom and Natoma reservoirs. Auburn State Recreation Area features recreational uses that include hiking, boating, fishing, camping, hunting, and the 1,200-acre Mammoth Bar OHV Area. Mammoth Bar, located approximately 23 miles north of Prairie City SVRA, serves primarily nearby residents with miles of OHV motorcycle/all-terrain vehicle (ATV) trails, motocross tracks, and Pacific International Trials areas. This area is under the jurisdiction of the U.S. Bureau of Reclamation and is operated by State Parks. Marshall Gold Discovery State Historic



Motorcycles.





Park, located approximately 19 miles northeast of Prairie City SVRA, features a museum, historic buildings, and walking trails. The closest SVRAs are Clay Pit SVRA, approximately 70 miles to the north, and Carnegie SVRA, about 90 miles to the south.

## **REGIONAL PARKS**

The Sacramento County Department of Regional Parks (Sacramento County Regional Parks) manages the American River Parkway and several regional parks including more than 15,000 acres of land (Sacramento County 2014a). The American River Parkway stretches 23 miles from the city of Sacramento to the city of Folsom and includes the multiuse Jedediah Smith Memorial Trail, which begins at the confluence of the Sacramento and American Rivers and extends along the American River to Folsom Lake. These parks offer amenities such as hiking and biking trails, equestrian trails, water recreation, fishing, camping, picnicking, nature viewing, and educational programs. No OHV opportunities are available on any of the land managed by Sacramento County Regional Parks. The closest regional park is Mather Regional Park, approximately 6 miles southwest of Prairie City SVRA. This 1,600-acre regional park offers activities that include golfing, picnicking, fishing, and bird-watching.

The Deer Creek Hills Preserve is a 4,060-acre preserve of grassland, oak woodland, and seasonal creeks, located approximately 6 miles south of Prairie City SVRA (Sacramento County 2014b). This preserve is managed jointly by the Sacramento Valley Conservancy and Sacramento County. Areas open to the public feature recreational activities that include hiking, bird-watching, and horseback riding (Sacramento County 2014b). State Parks owns approximately 668 acres in the northwest portion of the Deer Creek Hills Preserve, which is bordered by Scott Road on the west and Michigan Bar Road on the east. State Parks has a lease agreement with Sacramento County to provide for the preservation, operation, and maintenance of the property. The preserve's allowable uses have not been determined; however, low-impact recreational use or seasonal cattle grazing may be allowed on the property. Volunteer-led tours via electric OHV could also be considered for a portion of the preserve. The Rancho Murieta community is situated immediately south of the property, adjacent to the preserve's southern border. The *Deer Creek Hills Preserve Master Plan*, adopted in October 2011, guides decision-making regarding the anticipated uses of the Deer Creek Hills Preserve, namely open space, habitat preservation, grazing, and public recreation (Sacramento Valley Conservancy 2011).

## **CITY PARKS**

The Cordova Recreation and Park District is an independent special district in Sacramento County that serves primarily the city of Rancho Cordova and operates 40 parks. Recreation opportunities are available at playgrounds, ball courts, walking paths, and picnic and barbecue areas. The city of Folsom has 10 parks that also offer a wide array of activities.

## **PRIVATE OFF-HIGHWAY VEHICLE RECREATION FACILITIES**

In addition to public parkland, several nearby private recreational facilities provide opportunities for OHV use. Four of these private facilities are located within 80 miles of Prairie City SVRA. The following discussion is not intended to provide an all-inclusive list and is subject to change based on operator circumstances.

### **MMX Racing**

MMX Racing is located in Marysville, approximately 43 miles north of Prairie City SVRA. This private motocross facility is available for practice, group rental, and special events. Several groomed tracks are available for all ages and abilities, and practice fees are charged (MMX Racing 2010).

### **E-Street Motocross Track**

The E-Street Motocross Track, located in Marysville, is operated by E-Street MX and is open to the public for practice and special events. This facility has three tracks: a main track, a sandy track, and a 50cc track. There are fees for spectators and riders (E-Street MX 2014).

### **Riverfront Park**

Riverfront Park, located in Marysville, is also operated by E-Street MX. It has multiple tracks for users of all skill levels and age ranges, along with a drag strip. There are fees for spectators and riders.

### **Cycleland Speedway**

Located 14 miles south of Chico and 73 miles north of Prairie City SVRA, Cycleland Speedway includes several tracks accommodating karts, midgets, and motocross. The tracks are used for practice and events. There is an admission fee, and the cost to use the track depends on the vehicle type and rider level, and whether the rider is practicing or racing (Cycleland Speedway 2012).

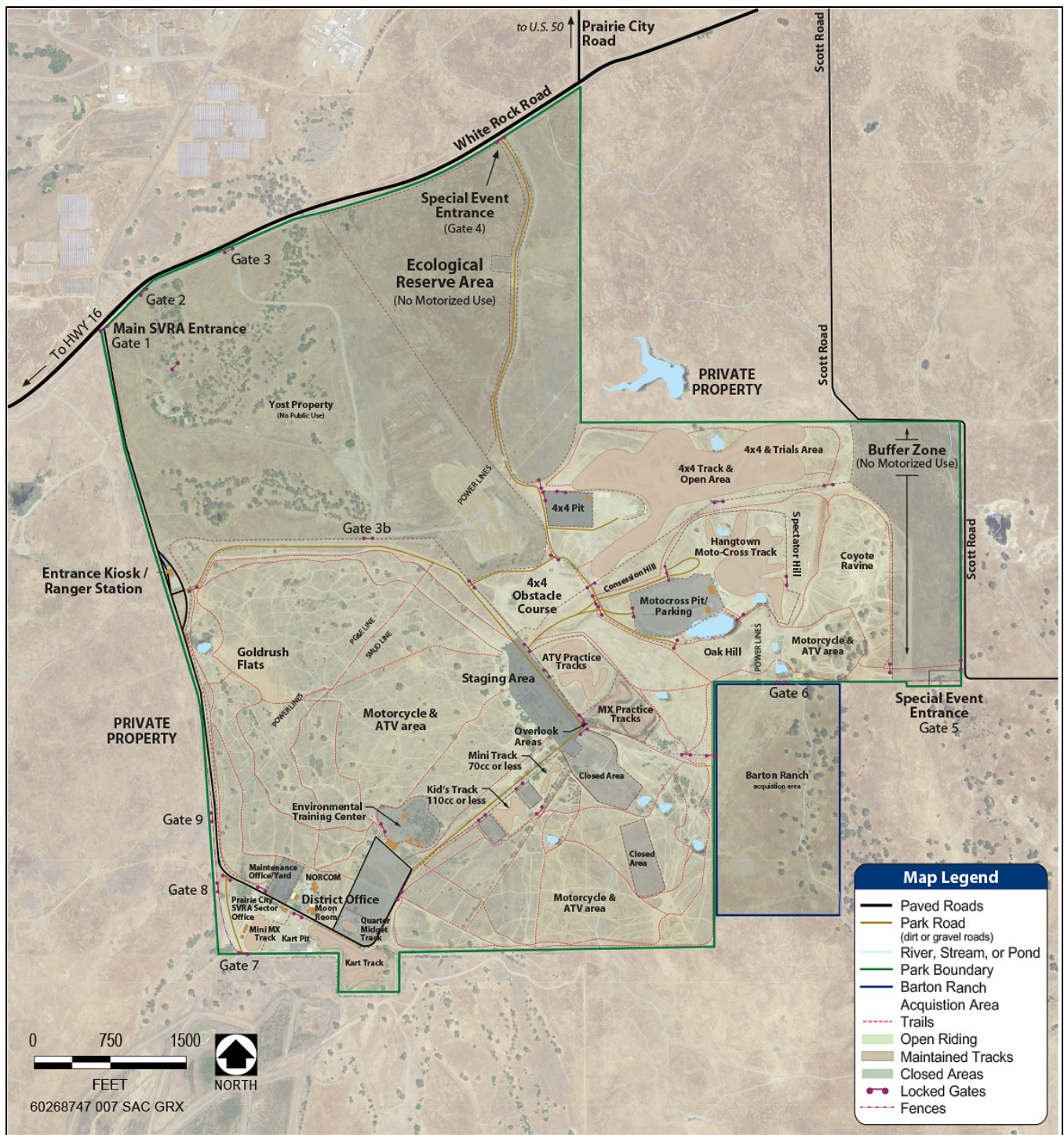
## **2.2 EXISTING LAND USE AND FACILITIES AT PRAIRIE CITY SVRA**

### **2.2.1 LAND USE**

Prairie City SVRA covers approximately 1,115 acres of land, with 644 acres devoted to OHV recreation (State Parks 2014a:137). The SVRA offers a variety of terrain, such as flat lands, open grasslands, rolling hills, and acres of cobbled mine tailings, that provide OHV enthusiasts of all levels a range of enjoyable and challenging recreation.

The northern 211 acres of the SVRA, acquired in 2004 and known as the Yost property, is currently not open for public use (California State Public Works Board 2004) (Figure 2-6). The Off-Highway Motor Vehicle Recreation (OHMVR) Division of State Parks owns three residences, located on the Yost property, which are leased by OHVMR Division staff members and their families, who benefit by living close to the SVRA (State Parks 2012a:26).





Source: Data provided by State Parks OHMVR Division in 2013 and adapted by AECOM in 2014

**Figure 2-6. Existing Facilities**

There is a 35-acre buffer zone in the eastern portion of the SVRA. With the exception of limited administrative and special event access, vehicular activity is not allowed in the buffer zone, which protects views and scenic quality along Scott Road from White Rock Road to Latrobe Road (Figure 2-6). Scott Road is a Sacramento County–designated scenic corridor in this area (Sacramento County Community Planning & Development Department 2014; Lenzie and Singh, pers. comms., 2015).

The ecological reserve area, which is a vernal pool buffer zone of approximately 160 acres in the northeastern portion of the SVRA, is closed to OHV use (Figure 2-6).

An area of 68 acres in the southeast corner of the SVRA property was acquired from Barton Ranch in 2014 as a buffer zone to address water quality issues on Coyote Creek (State Parks 2012a). Acquisition of the Barton Ranch area adds buffer land to Prairie City SVRA, providing as much as 10 contiguous acres along the existing property boundary for water quality improvement facilities. The OHMVR Division anticipates installing stormwater control features, such as a sediment basin or a biofiltration swale (bioswale), by 2020 to remove sediment from the stream system. The goal of this installation is to improve water quality in Coyote Creek so that discharges leaving the SVRA meet regulatory agency requirements for water quality standards. An additional 5 acres of the acquisition property may be used as a spray field for collected stormwater.

### **2.2.2 CIRCULATION AND ACCESS**

The main entrance to Prairie City SVRA, Main Park Road, is a two-lane paved roadway that extends south from White Rock Road into the SVRA. White Rock Road provides east-west circulation south of U.S. 50, and Prairie City Road extends north from White Rock Road into the city of Folsom, providing access to U.S. 50 approximately 3 miles north of the SVRA. The SVRA’s entrance station and ranger station are located approximately 0.5 mile south of White Rock Road. Main Park Road is gated when the SVRA is closed. This road provides primary vehicle access to Prairie City SVRA.

Secondary access to the SVRA for special events is provided west of the intersection of Prairie City and White Rock Roads (Gate 4). Sacramento County completed streetscape improvements along White Rock Road in early 2014. A landscaped median was constructed that prohibits crossing the median for left turns in and out of Gate 4. Subsequently, vehicles can only make a right turn in and a right turn out of Gate 4. In addition, special-event access is provided from Scott Road at the southeast corner of the Prairie City Motocross Track (Gate 5). Gate 5 is typically locked unless access through this gate is required for a special event.

Wayfinding signage is located along the internal paved roads and at the main staging area to direct visitors to the various SVRA facilities. Signage is also present at all major SVRA facilities notifying visitors of facility names and locations.



A traffic study was conducted for the General Plan in 2013 to determine roadway level of service (LOS) in the vicinity of Prairie City SVRA. LOS is a qualitative measurement of the operating conditions of transportation systems. LOS is typically used to indicate how well traffic is flowing on a particular roadway. LOS A is the highest rating and indicates free-flowing traffic with no stops. LOS F is the lowest rating, indicating that traffic is slowed to a halt.

The existing peak-hour intersection and roadway LOSs in the vicinity of Prairie City SVRA were evaluated during weekday and Saturday conditions. All intersections experienced LOS A except a northbound approach at the intersection of White Rock Road and Main Park Road, which experienced LOS B. Based on daily traffic volume thresholds, White Rock Road and Main Park Road operate well within roadway capacity, experiencing LOS A. Prairie City Road north of White Rock Road operates at LOS C (Saturday) and LOS D (weekday), which are within the acceptable standards for Sacramento County.

A traffic count was also performed on a Saturday during the annual Hangtown Motocross Classic, the SVRA event with the largest attendance. Special-event traffic results in large hourly peaks compared to typical average traffic conditions. A traffic management plan is implemented to channelize traffic in different directions away from the SVRA and minimize traffic conflicts on adjacent streets. California Highway Patrol (CHP) personnel direct traffic at key intersections adjacent to the SVRA during high-attendance special events. All intersections experienced LOS A or B during the Hangtown Motocross Classic except the northbound approaches at White Rock Road and the special-event access and at White Rock Road and Main Park Road, which experienced LOS C and LOS F, respectively. Based on daily traffic volume thresholds, roadway operations at White Rock Road both east and west of Main Park Road experienced LOS A during the special event. Prairie City Road north of White Rock Road and Main Park Road south of White Rock Road experienced LOS E and LOS D, respectively.

Prairie City SVRA can be accessed by vehicles and bicycles using the Class II bike lanes that were part of the recent White Rock Road improvements (Caltrans 2009). Class II bicycle lanes are generally located on paved roadways that are identified with striping and signs for preferential bicycle use (Sacramento County 2011). No other alternative modes of transportation, such as bus, rail, or pedestrian facilities, are available in the area. Because OHVs, with the exception of highway-licensed trucks, jeeps, and dual-sport motorcycles, are typically transported to recreational areas by a highway-licensed vehicle, the use of alternative transportation options is not necessary.

The planning team conducted an online survey between July 1 and October 31, 2013. Based on survey results, the median distance traveled to Prairie City SVRA was 13 miles. Seventy-five percent of respondents travel a distance of 25 miles or less to visit Prairie City SVRA. Only 17 percent travel more than 50 miles to visit the SVRA (Figure 2-7).

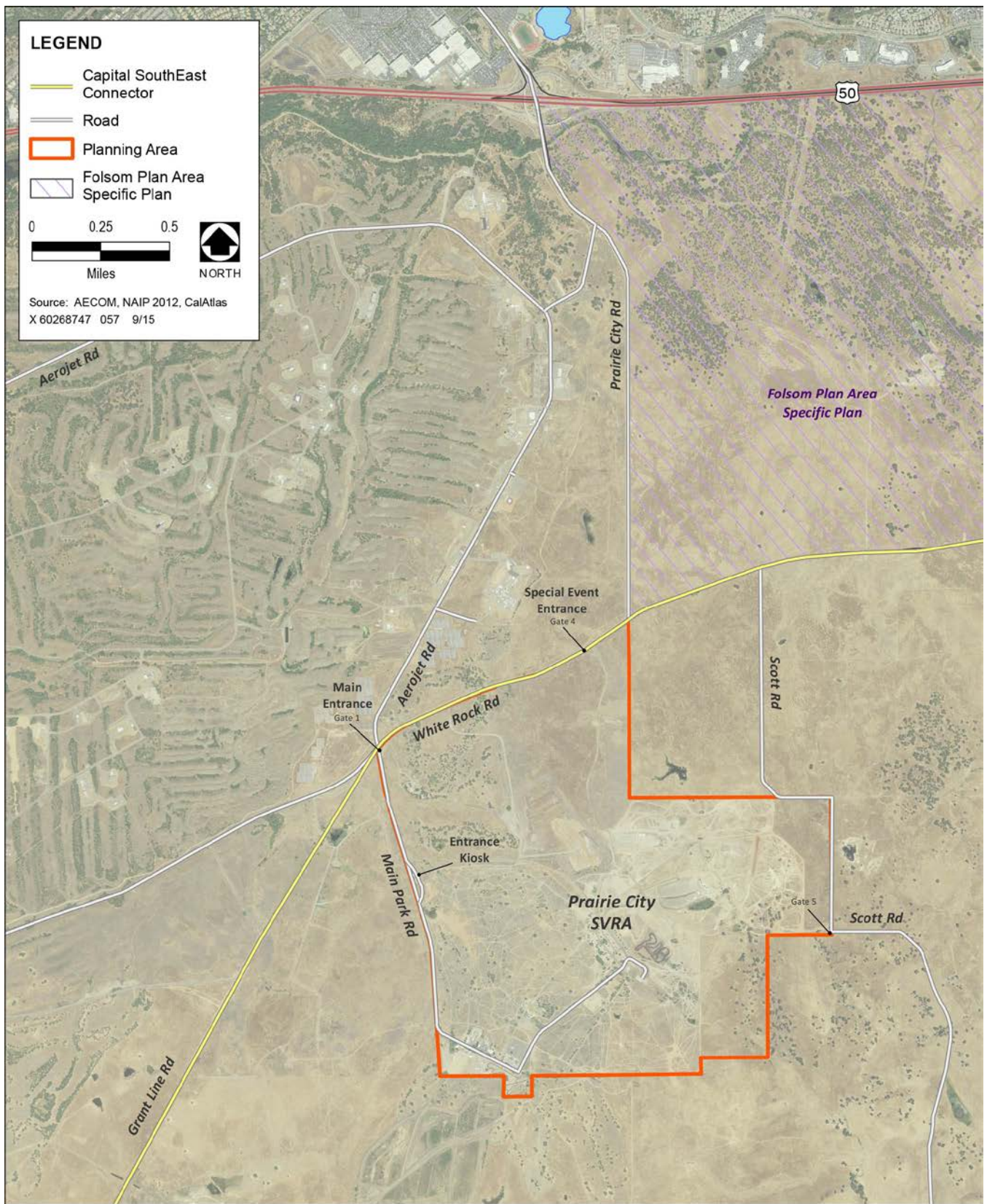


Figure 2-7. Prairie City SVRA Circulation and Access

## **CAPITAL SOUTHEAST CONNECTOR JOINT POWERS AUTHORITY**

In December 2006, the Cities of Elk Grove, Rancho Cordova, and Folsom and Sacramento and El Dorado Counties (the member jurisdictions) collaborated to form the Capital SouthEast Connector Joint Powers Authority to facilitate the implementation of the Capital SouthEast Connector Project (Connector) (Capital SouthEast Connector JPA 2012). The 34-mile Connector will connect Interstate 5 south of Elk Grove to U.S. 50 at the new Silva Valley Parkway interchange just east of El Dorado Hills. Directly north of Prairie City SVRA, a six-lane expressway has been approved on White Rock Road from Grant Line Road to the Sacramento County/El Dorado County line, with grade-separated interchanges at major cross streets where warranted. White Rock Road has already been improved to a four-lane expressway from Grant Line Road to Prairie City Road and a project is currently underway to extend the four-lane expressway to the county line. Interchanges and the additional two lanes (high-occupancy vehicle lanes) would be part of the project's second phase; a timeline for Phase 2 improvements has not been established (Capital SouthEast Connector JPA 2012). The Connector also includes a Class I bike path along its entire length as part of Phase 1 (Capital SouthEast Connector JPA 2015).

The FPASP was amended by the Folsom City Council in August 2014 to support implementation of the Connector.

### **2.2.3 FACILITIES**

#### **VISITOR FACILITIES**

Over its years of operations, Prairie City SVRA has accumulated a number of facilities that have been part of prior uses on the site. About 200 acres of hydraulic dredge tailing remnants from the 1850s placer mining operations provide a reminder of the historic use of the planning area during the Gold Rush era. Much later, in the 1960s, Aerojet purchased the southern portion of the property to develop a rocket testing facility. Although no real testing occurred there because of funding cuts to the federal space program, many of the existing facilities at the SVRA were built during that period, including:

- ▶ a potable water system consisting of a 500,000-gallon storage tank, a pump, and a distribution system;
- ▶ approximately 1.5 miles of asphalt concrete paved roads;
- ▶ an electrical distribution system, including poles and lines that parallel the paved roads;
- ▶ a 8,000-square-foot, dome-shaped building called the Moon Room, designed as a control center for the Aerojet rocket test project, that was built with thick reinforced concrete walls and two entries adjacent to one another;

- ▶ a concrete rocket test pad site and pit located at the end of the paved road in the center of the site; and
- ▶ a storage building, called the Crew Shack, that was built on the north side of the rocket test pad.

To enable use of these facilities, the Moon Room needs retrofitting measures to clear the lead-based paint and asbestos from its walls, characteristic of construction practices from the 1960s. The Crew Shack building has lead-based paint in need of remediation.

Sacramento County operated Prairie City SVRA between 1983 and 1988, and built the following facilities:

- ▶ the Prairie City Motocross Track in the eastern part of the SVRA, which hosts the Hangtown Motocross Classic race every May;
- ▶ a central staging area with restroom facilities and day use areas;
- ▶ two practice tracks to the east of the central staging area;
- ▶ an OHV track;
- ▶ a mud drag facility (no longer in operation); and
- ▶ a bicycle motocross (or BMX) track.

The OHMVR Division has overseen the operation of Prairie City SVRA since July 1988, and has added the Environmental Training Center, located north of the quarter midget track in the southwestern corner of the SVRA. This facility supports Prairie City SVRA’s outreach and education efforts and includes OHV training grounds and a classroom. The office and classroom building was constructed using energy-efficient design and is equipped with solar (photovoltaic) panels that provide the electrical power used at the Environmental Training Center.



Environmental Training Center.

In late 2012, Prairie City SVRA completed a multiyear project that expanded and improved the SVRA’s 4x4 area. Phase 1 of the project added three restrooms, shade trees, and picnic areas. During Phase 2, four of the existing 4x4 obstacles were improved and updated to include hillclimbs, mud drags, a cobble traverse, and a frame twister. Several new obstacles were constructed including the half-mile-long Mini



Rubicon, Prairie City Rock Crawl Pyramid, and Simulated Granite Hill Climbs (State Parks 2014a). Figure 2-6 shows the locations of Prairie City SVRA's existing facilities.

A complete list of visitor facilities includes multiple restrooms scattered throughout the SVRA, day use sites for picnicking and staging, and the following recreational facilities (State Parks 2013a):

- ▶ *Off-Highway Motorcycle/ATV Area*—There are many two-way trails throughout the off-highway motorcycle/ATV area. Most trails in the SVRA are beginner or intermediate level, with just a few more challenging trails.
- ▶ *Prairie City Motocross Track*—The track is just over a mile long, with challenging terrain and high jumps for expert-level motocross riders. The track is also home to the annual Hangtown Motocross Classic.
- ▶ *Practice Tracks*—A motocross practice track and ATV practice track are provided on separate courses with jumps and banked turns intended for intermediate-level to advanced riders.
- ▶ *Kids' Tracks*—The kids' tracks are limited to off-highway motorcycle and ATV riders ages 14 and younger. These facilities consist of a 70cc beginner kids' track and a 110cc intermediate kids' track.
- ▶ *Quarter Midget Track*—The quarter midget track is used by groups such as the American Quarter Midget Association for practices and competitive events for kids between the age of 5 and 16. The track is equipped with lights, allowing racing in the evening.
- ▶ *Go-Kart Track*—The go-kart track is a Grand Prix–style track operated by a concessionaire, All Star Karting. The track is available for practice or competitive events.
- ▶ *Mini MX Track*—The mini MX track is a short dirt oval TT/flat track and arena cross–style track combination. The track is operated by a concessionaire, Arena Cross TT and offers three track variations to accommodate Supermotard-type motorcycles: a flat track, oval with dirt jumps, and arena-style jumps with use of the oval.
- ▶ *4x4 Area and Obstacle Area*—The 4x4 and obstacle area is open to 4x4 vehicles of all kinds and features 10 different obstacles: Prospector Hill, Differential Dragger, Pipe Line, Big Bend, Panned Out, The Alamo, Sluice Box, Cat Box, Devil's Rock Pile, and Miner's Climb.
- ▶ *Environmental Training Center*—This facility consists of a classroom, two training ranges, and a 3-acre trail system. The Environmental Training Center was designed to teach safe and environmentally responsible off-highway recreation practices.
- ▶ *Concession Store and Rentals*—The Mud Mart concession provides riders with spare parts and accessories, apparel and safety gear, and snacks and beverages.



Picnicking and parking area at the Environmental Training Area.

## **ADMINISTRATION AND MAINTENANCE FACILITIES**

Prairie City SVRA typically operates during daylight hours—from 8 a.m. to sunset—and thus closes daily sometime between 5 p.m. and 8 p.m., depending on the month. The SVRA holds a limited number of nighttime special events, such as the Headlight Festival held annually in December. Existing administration and maintenance facilities include the main entrance station, ranger station, maintenance office and maintenance yard, Twin Cities District office, Prairie City SVRA Sector office, Moon Room, State Parks’ Northern Communications Center (NORCOM), shooting range, and the Environmental Training Center.

The maintenance yard consists of the main shop yard, which occupies 1.87 acres and includes a recycled-water wash rack, maintenance shop/office, and six Conex storage boxes, and a second yard across the street occupying 0.87 acre, where the warehouse is located. The maintenance staff uses a small office area in the shop as its primary work location and work breakroom/lunchroom.

The Twin Cities District office is a temporary, modular building in poor condition with associated high maintenance costs. It contains four enclosed offices and open floor space with staff cubicles. The district office also includes a large conference room, a partial kitchen, two restrooms, and a storage room for the copier and office supplies.

The Prairie City SVRA Sector office also is a temporary building in poor condition that was converted from a previous use and is inadequate for its current use. It contains a cubicle-style office space with one restroom and a storage area/partial kitchen. The ranger station is located at the entrance station, which does not provide sufficient space for both operations.

NORCOM is one of two State Parks communications centers to provide dispatching services and is located in the southwestern portion of the SVRA. Prairie City SVRA was chosen as the NORCOM site in the late 1990s because it provided a location that was easily accessible and located above the floodplain, and that included clear line-of-sight access to the California Public Safety Microwave Network. NORCOM meets the dispatching needs of State Parks peace officers (SPPOs), National Parks



peace officers, California Department of Fish and Wildlife (CDFW) peace officers, and other State Parks public safety employees within the 42-county NORCOM service area. Twelve State Parks districts, including the Twin Cities District, receive services from NORCOM.

SPPO firearms instructors assigned to the Prairie City Sector and Prairie City SVRA's supervising ranger are responsible for operation of the shooting range. The range is used primarily by SPPOs throughout the region for training, practice, and qualifying with duty firearms. On occasion, other law enforcement agencies are allowed to use the range on request and by appointment. The range is not open to the public, and for safety reasons, it is used only on Wednesdays when the SVRA is closed to the public. There are no established hours of operation, but the range is generally used between 6 a.m. and 10 p.m.

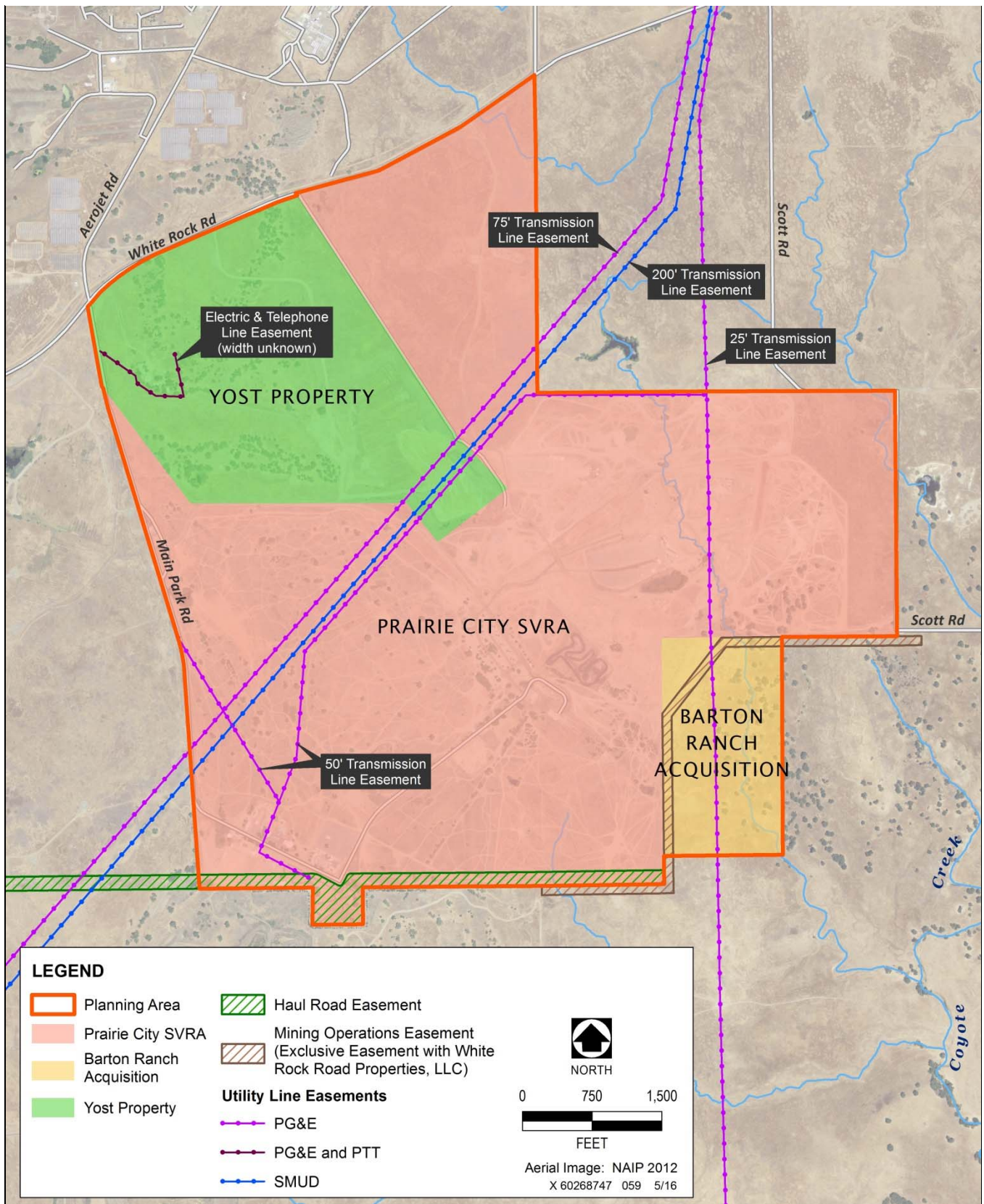
## **UTILITIES**

### **Easements**

Prairie City SVRA has various easements primarily for utility providers, such as Pacific Gas and Electric Company (PG&E) and Sacramento Municipal Utility District (SMUD), to allow transmission lines to run through the site and to maintain electric poles. In April 2014, State Parks purchased 67.95 acres adjacent to the southeastern corner of the SVRA from Barton-Mosher Sacramento Ranches, LP, and assumed an exclusive easement with White Rock Road Properties, LLC for conveyance of aggregate material from the Teichert Quarry mining site to its processing facility. The Barton Ranch property was acquired to manage erosion and sedimentation along the Coyote Creek drainage. The cost of this purchase was partially offset by selling a 21.68-acre haul road easement to the Barton Ranch along the southern boundary of the SVRA to support future mining operations on other Barton Ranch properties. This easement dissects the existing kart track and mini MX track, creating the need to relocate them to another site within the SVRA. Figure 2-8 shows the locations of the existing easements in the SVRA.

### **Electricity**

Electricity is supplied to Prairie City SVRA by SMUD. Two high-voltage transmission lines with lattice steel towers cross northeast to southwest in the western portion of the SVRA. The third line passes north to south over the eastern portion, crossing over the Prairie City Motocross Track and 4x4 areas. The on-site distribution system, which consists of a 12-kilovolt line, provides electrical power for the administration buildings, water pumping requirements, security lighting, and lighting for the dirt oval track and the quarter midget track.



Source: State Parks 2005a, adapted by AECOM 2014a

**Figure 2-8. Easements**

## Telecommunications

Telephone service is currently provided to Prairie City SVRA by AT&T. A cellular tower is located on the Yost property, occupying approximately 0.2 acre (California State Public Works Board 2004). Wi-Fi Internet service is provided via NORCOM and its accompanying tower. Cable television service is not available at the SVRA.

## Water Delivery, Wastewater Treatment, and Stormwater

An on-site well, approximately 286 feet deep, supplies water to Prairie City SVRA. Water is stored in a 500,000-gallon storage tank in the southwest portion of the SVRA near the maintenance office. Water is distributed from the tank to central points throughout the SVRA through 6-inch, 8-inch, and 14-inch water mains. Drinking fountains are supplied by 1.5-inch and 2-inch water lines.

No permanent sewer system exists at Prairie City SVRA. All wastewater at the SVRA is disposed of through septic tanks with leach lines that are permitted by Sacramento County, or through vault toilets, which are pumped out for off-site disposal. Prairie City SVRA currently contains both flush toilet facilities, and nonflush CXT<sup>®</sup> vault toilets (Table 2-1). The administrative offices contain the following bathroom facilities: a men’s and women’s restroom at NORCOM, a men’s and women’s restroom at the Prairie City SVRA Sector office, men’s and women’s restrooms at the Twin Cities District office, a restroom with a shower at the SVRA maintenance shop, a restroom and shower at the ranger station, and one restroom at the Environmental Training Center.

<b>Table 2-1. Summary of Toilets</b>	
<b>Flush Toilet Facilities</b>	<b>Nonflush CXT<sup>®</sup> Vault Toilets</b>
Two toilets at the arena cross tourist trophy (TT) track	Two toilets at the quarter midget parking lot
Four toilets at the quarter midget track	Two toilets at the kids’ tracks
Four toilets at the Environmental Training Center	Two toilets at the north end of the main staging area
Four toilets in the middle of the main staging area	One toilet at the 4x4 obstacle course
Two toilets at the north end of the main staging area	One toilet in the main staging area of the 4x4 area
Four toilets at the Prairie City Motocross Track area	One toilet in the center of the 4x4 area
Two toilets in the 4x4 obstacle area	One toilet at the upper summit area of the 4x4 area
Two toilets in the main staging area of the 4x4 area	
Source: Data provided by Prairie City SVRA and compiled by AECOM in 2014	

Stormwater runoff at Prairie City SVRA commonly drains as sheet flow into existing drainage channels and culverts, which empty to detention basins and either infiltrate or discharge to Coyote Creek. Several sediment basins and other water quality control best management practices (BMPs) are located throughout the SVRA to improve water quality and reduce sediment loads to Coyote Creek. BMPs

include armoring drainages with riprap and sandbags, and placing culverts that are designed to minimize erosion and other water quality impacts. Some of the sediment basins are located south of the Prairie City Motocross Track. These basins were developed to capture sediment coming off of the track and other exposed areas in the planning area.

## **Solid Waste**

Prairie City SVRA generates an estimated one-half pound of solid waste per visitor per day. Solid waste disposal is provided by Waste Management, which has a large network of recycling facilities, transfer stations, and landfills. The Kiefer Landfill and the North Area Recovery Station are used under special circumstances when large pieces of refuse need to be removed from the SVRA.

## **2.3 SIGNIFICANT RESOURCE VALUES**

### **2.3.1 PHYSICAL RESOURCES**

#### **2.3.1.1 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES**

##### **Geology**

##### ***Regional Geology***

Prairie City SVRA is located along the margin between the eastern edge of the Sacramento Valley and the western foothills of the Sierra Nevada. The Sierra Nevada trends north-northwest from Bakersfield to Lassen Peak, and is composed of northwest-trending belts of metamorphic, volcanic, and igneous rocks that have undergone intense deformation, faulting, and intrusion. Active faults that mark the eastern edge of the Sierra Nevada have resulted in upthrusting and tilting of the entire Sierra Nevada block in the last 5 million years—steeply on the eastern edge (adjacent to the Mono Basin), and gently along the western edge (where the SVRA is located). The gently rolling Sierra Nevada foothills are composed of metamorphosed sedimentary rocks that have been intruded by igneous rocks. The rock formations that make up the western edge of the Sierra Nevada block likely originally formed as a volcanic arc that was later accreted (added) to the western margin of the continent during the Jurassic period (Day 1992).

##### **Local Geology**

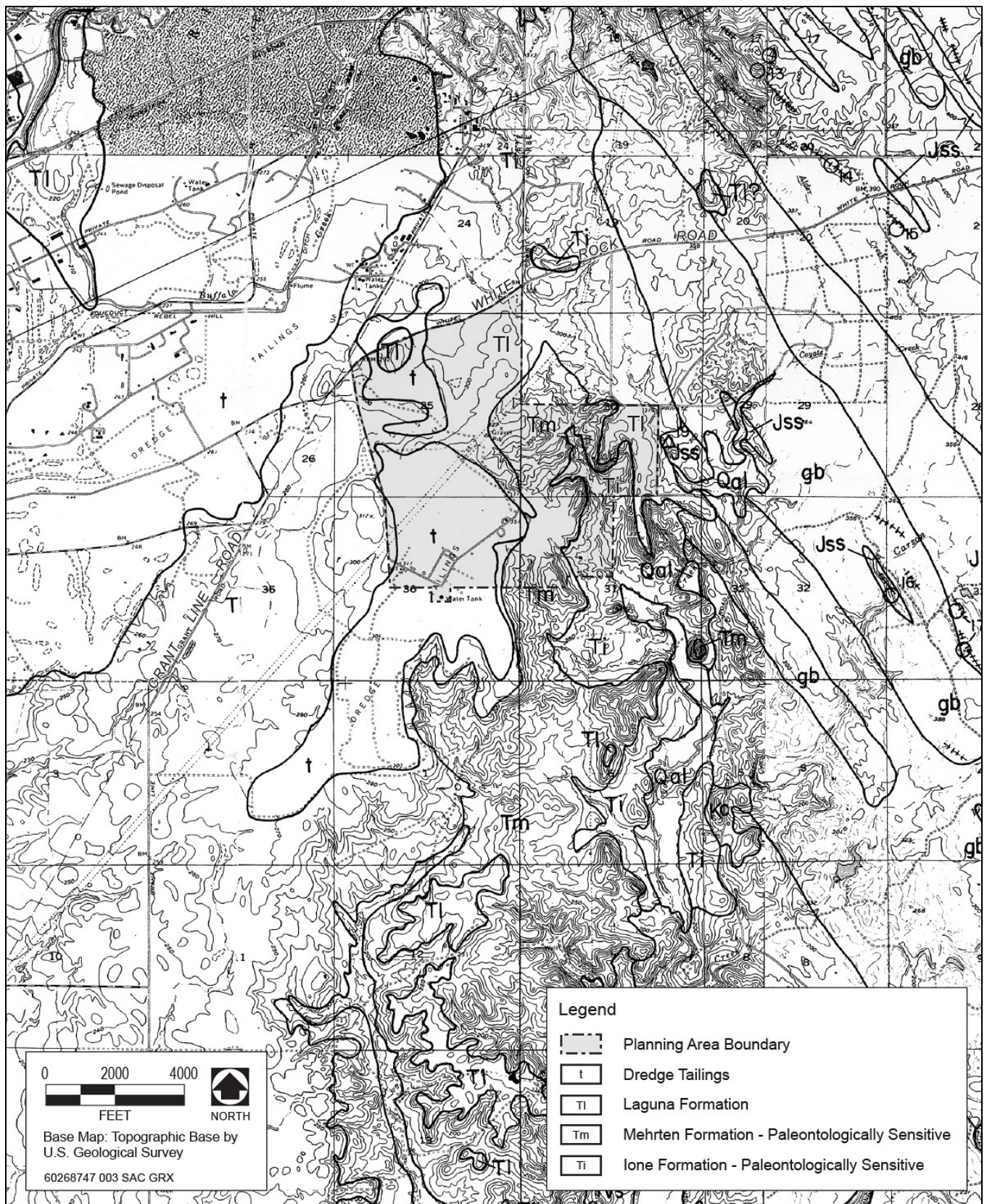
The planning area is located within the U.S. Geological Survey (USGS) Buffalo Creek 7.5-Minute Quadrangle. The northern portion of the planning area ranges from 280 to 300 feet above mean sea level. This area generally consists of gently rolling to nearly level topography. The topography in the eastern portion of the planning area is variable, with elevations ranging from 240 to 300 feet above mean sea level. Three intermittent streams flow southeasterly through the planning area into Coyote Creek, and a fourth intermittent stream runs northwesterly through the northeast corner of the SVRA and is a tributary to Buffalo Creek. The planning area also contains dredger mine tailings, which consist of low mounds (5–10 feet high) of cobbles, silt, and sand.



The planning area lies at the edge of the Western Sierra Metamorphic Belt, which contains primarily volcanic and sedimentary rocks that were added to the continental margin during the Jurassic period. These rocks are overlain by younger upper Cretaceous and Tertiary sedimentary rocks of the Central Valley. Figure 2-9 shows the geologic formations exposed at the surface in the planning area based on the Generalized Geology of the Folsom 15-Minute Quadrangle (Loyd 1984).

The planning area consists of the following geologic formations:

- ▶ *Dredge tailings* consist of piles of cobbles, silt, and sand from former gold dredge mining activities. In the project vicinity, these tailings likely were part of the Riverbank Formation, which formed an ancestral channel of the American River (Dupras 1999:35). The tailing piles in the planning area generally consist of low mounds ranging from 5 to 10 feet high.
- ▶ The *Laguna Formation*, which is of Pliocene age (approximately 5 million years Before Present [B.P.]), consists primarily of reddish to yellowish brown silt to sandy silt and clay with minor lenticular gravel beds, deposited on broad floodplains by meandering, slow-moving streams. These sedimentary deposits originate from granitic Sierra Nevada basement complex and were laid down before the Sierra Nevada's last major period of upthrust and tilting. South of the American River, this formation probably extends downward at a 45-degree angle, in essence forming a wedge above the underlying volcanic rocks, which thin toward the Sierra Nevada and thicken toward the axis of the valley. The average depth of the Laguna Formation in the eastern portion of the valley is likely less than 500 feet. Volcanic materials, approximately 250 feet deep, that form the basement rocks have been reported beneath the Laguna Formation south of Folsom in wells drilled for gold dredging operations (Olmsted and Davis 1961:82–87).
- ▶ The *Mehrten Formation* is of Pliocene-Miocene age (approximately 9 million years B.P.). It is a thick deposit consisting predominantly of lehar (volcanic mudflow) deposits with occasional beds of volcanic ash. The Mehrten Formation consists predominantly of weakly to strongly cemented, fine- to medium-grained andesitic sandstone. Occasionally there are lenticular deposits of weakly to strongly cemented, well-rounded, andesitic boulders, cobbles, and gravels in a fine- to medium-grained andesitic silty sand (volcanic ash) matrix (Helley and Harwood 1985).
- ▶ The *Ione Formation* occurs as a 200-mile-long series of isolated exposures along the western foothills of the Sierra Nevada, from Oroville south to Friant in Fresno County. The Ione was formed from fluvial, estuarine, and shallow marine deposits of Eocene age (approximately 35 to 55 million years B.P.). These deposits consist of quartzose sandstone, conglomerate, and claystone and are generally soft and deeply eroded (Helley and Harwood 1985). The Ione Formation contains beds of kaolinite clay that formed from weathering and chemical decomposition of Sierran granitic rocks (Dupras 1999:65–66).



Source: Loyd 1984; adapted by AECOM in 2014

**Figure 2-9. Geologic Formations in the Planning Area**



### **2.3.1.2 REGIONAL SEISMICITY AND FAULT ZONES**

Potential seismic hazards resulting from a nearby moderate to major earthquake generally can be classified as primary and secondary. The primary effect is fault ground rupture, also called surface faulting. Common secondary seismic hazards include ground shaking, liquefaction, and subsidence. Each of these potential hazards is discussed below.

#### **Fault Ground Rupture**

Surface rupture is an actual cracking or breaking of the ground along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. Surface ground rupture along faults is generally limited to a linear zone a few yards wide. The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (see Section 2.7.3, “Regulatory Influences,” below) was enacted to prohibit the location of structures designed for human occupancy across the traces of active faults, thereby reducing the risk for loss of life and property from an earthquake. The planning area is not located in an Alquist-Priolo Earthquake Fault Zone (CGS 2012). The nearest fault zoned under the Alquist-Priolo Act is the northern segment of the Cleveland Hills Fault located near Lake Oroville, more than 50 miles north of the planning area.

#### **Seismic Ground Shaking**

Ground shaking is the motion that occurs as energy is released during faulting. Depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion, ground shaking can damage buildings and other structures or can cause them to collapse. Other important factors to consider are the characteristics of the underlying soil and rock and, where structures exist, the building materials used and the workmanship of the structures.

#### ***Faults in the Project Vicinity***

The Foothills Fault System is the dominant structural feature of the western Sierra Nevada. The steeply dipping to vertical component faults that make up this system trend northwest through an area approximately 200 miles long and 30 miles wide, from Mormon Bar (east of Merced) in the south to Lake Almanor in the north. The East and West Branches of the Bear Mountains Fault Zone are two of the largest fault zones in the Foothills Fault System. Jennings (1994) indicates that the West Branch, Bear Mountains Fault Zone, which is located approximately 7 miles east of the planning area, shows no evidence of activity in the last 1.6 million years (i.e., Pre-Quaternary in age). However, Jennings (1994) does indicate that a portion of the East Branch, Bear Mountains Fault Zone near the community of Rescue (approximately 14 miles northeast of the planning area) shows evidence of displacement in the last 11,700–700,000 years (i.e., Pleistocene age). A detailed analysis prepared by Tierra Engineering Consultants in 1983 and summarized by Wahl et al. in 1989 indicated that the East Branch, Bear Mountains Fault Zone could generate a magnitude 6.0 to 6.5 earthquake with a return period of 400 years. However, the California Geological Survey (CGS) has not classified this fault as “active,”

and the slip rate of the Foothills Fault System is extremely low (0.05 millimeter per year), which is well below the planning threshold for major earthquakes (Wills et al. 2007).

With the exception of the Cleveland Hills Fault located near Lake Oroville, the western Sierra Nevada foothills have not been seismically active in the last 11,700 years (Holocene time) (Jennings 1994). Faults with known or estimated activity during the Holocene epoch are generally located in the San Francisco Bay Area to the west or the Lake Tahoe area to the east. Table 2-2 lists the region’s known active faults (those that have shown evidence of movement during the last 11,700 years), along with each fault’s approximate distance from the planning area, projected maximum moment magnitude, and slip rate.

<b>Table 2-2. Regional Faults with Evidence of Activity during Holocene Time</b>				
Fault Name	Approximate Distance from Planning Area (miles)	Regional Location	Maximum Moment Magnitude	Slip Rate (mm/yr)
East Branch, Bear Mountains Fault Zone	14	Sierra Nevada	6.5	NA
Dunnigan Hills	45	Western Sacramento Valley	6.5	NA
Cleveland Hills/Swain Ravine	50	Sierra Nevada foothills	6.5	0.05
West Tahoe/Dollar Point Fault Zone	45	Lake Tahoe	7.2	NA
North Tahoe/Incline Village Fault Zone	50	Lake Tahoe	7.0	0.2 to 1.0
Great Valley Fault Zone, Segment 4	60	Margin between Sacramento Valley and Coast Ranges	6.6	1.5
Great Valley Fault Zone, Segment 5	65	Margin between Sacramento Valley and Coast Ranges	6.5	1.5
Green Valley	65	Coast Ranges	6.2	5.0
Greenville Fault Zone (includes Clayton and Marsh Creek sections)	65	Coast Ranges	6.6	2.0
Concord	70	Coast Ranges	6.2	4.0
Notes: mm/yr = millimeters per year; NA = not available or not known				
Sources: Cao et al. 2003; Jennings 1994; Ichinose et al. 2000; Sawyer 1999; Sawyer and Haller 2000; Wills et al. 2007; Wahl et al. 1989; data compiled by AECOM in 2014				

The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, site soil conditions, and the characteristics of the source. Ground motions from seismic activity can be estimated by probabilistic method at specified hazard levels and by site-specific design calculations using a computer model. Engineers can use these estimates to design earthquake-resistant buildings. The CGS Probabilistic Seismic Hazards Assessment Model indicates a

minimum horizontal acceleration of 0.143g for alluvial conditions (where g is the percentage of gravity) in the planning area with a 10 percent probability of earthquake occurrence in a 50-year time frame (the “design basis earthquake”) (CGS 2008). Stated another way, these calculations indicate that there is a 1-in-10 probability that an earthquake will occur within 50 years that would result in a peak horizontal ground acceleration exceeding 0.14g.

### ***Liquefaction***

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. The factors that determine liquefaction potential are soil type, level and duration of seismic ground motions, type and consistency of soils, and depth to groundwater. Loose sands and peat deposits, as well as uncompacted fill and Holocene deposits, are more susceptible to liquefaction. Clayey silts, silty clays, clays deposited in freshwater environments, and deposits that are older than 11,700 years B.P. are more stable under the influence of seismic ground shaking.

Liquefaction poses a hazard to engineered structures such as bridges, roads, and buildings, and to underground utility pipelines. The loss of soil strength can cause bearing capacity to be insufficient to support foundation loads, can increase lateral pressure on retaining walls, and can result in slope instability.

The planning area is generally located in stable rock formations (with the exception of the dredge tailings), potential seismic sources are a relatively long distance away, and the groundwater table is at least 120 feet below the ground surface (Sacramento Central Groundwater Authority 2012). Therefore, it is unlikely that soils in the planning area would be subject to liquefaction in the event of an earthquake.

### ***Subsidence, Settlement, and Soil Bearing Capacity***

Both natural and human phenomena can induce subsidence of the land surface. Natural phenomena that can cause subsidence can result from tectonic deformations and seismically induced settlements; from consolidation, hydrocompaction, or rapid sedimentation; from oxidation or dewatering of organic-rich soils; and from subsurface cavities. Subsidence related to human activity can result from withdrawal of subsurface fluids or sediment. Pumping of water from subsurface water tables for residential, commercial, and agricultural uses causes more than 80 percent of the identified subsidence in the United States (Galloway et al. 1999).

Lateral spreading is the horizontal movement or spreading of soil toward an open face, such as a streambank, the open side of fill embankments, or the sides of levees. The potential for land failure from subsidence and lateral spreading is highest in areas where the groundwater table is high, where relatively soft and recent alluvial deposits exist, and where creek banks are relatively high. Soil bearing capacity is the ability of soil to support the loads applied to the ground; where the bearing capacity is too low to support proposed structures, subsidence and settlement may occur.

Based on a review of soil survey data from the U.S. Natural Resources Conservation Service (NRCS) (2013), the planning area is unlikely to be subject to hazards from seismically induced subsidence or settlement. The groundwater table is at least 120 feet below the surface of the planning area, and the soils in the planning area (aside from the dredge tailings) generally consist of older, well-cemented materials of adequate bearing strength.

However, a sediment basin intended to improve water quality may be constructed, using an earthen berm, in the Barton Ranch acquisition area near the tributary to Coyote Creek. Soils near the creek are softer and there are steep slopes in this area; therefore, lateral spreading could present a hazard in this portion of the planning area.

### **Seismic Seiches**

Earthquakes may affect open bodies of water by creating seismic sea waves (often called “tidal waves”) and seiches. Seismic sea waves are caused by abrupt ground movements (usually vertical) on the ocean floor in connection with a major earthquake. Because the planning area is far from the Pacific Ocean, seismic sea waves would not represent a hazard. A seiche is a sloshing of water in an enclosed or restricted water body, such as a basin, river, or lake that is caused by earthquake motion; the sloshing can occur for a few minutes or several hours. An 1868 earthquake along the Hayward Fault in the San Francisco Bay Area is known to have generated a seiche along the Sacramento River, but the affected area was located in the Sacramento–San Joaquin Delta. Because there are no sizeable water bodies in the vicinity, seiches would not occur in or near the planning area.

### **Slope Stability**

A landslide is the downhill movement of masses of earth material under the force of gravity. The factors contributing to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. Landslides typically involve the surface soil and an upper portion of the underlying bedrock. Movement may be very rapid, or so slow that a change of position can be noted only over a period of weeks or years. This slow change is known as “creep.” The size of a landslide can range from several square feet to several square miles.

The eastern portion of the planning area contains steep slopes; however, no landslides have been recorded in the planning area or vicinity. The area where water quality control features are proposed, in the southeast portion of the planning area, contains steep slopes that drain southeast toward the tributary of Coyote Creek. Proposed spray irrigation of collected stormwater could destabilize this slope.

#### **2.3.1.3 SOILS**

Figure 2-10 shows the locations of the various soil types present in the planning area. Table 2-3 summarizes the relevant general characteristics of these soils.



**Table 2-3. Planning Area Soil Characteristics**

Soil Map Unit Name	Surface Texture	Depth to Bedrock (inches)	Shrink-Swell Potential <sup>1</sup>	Permeability <sup>2</sup>	Water Erosion Hazard <sup>3</sup>	Wind Erodibility Group <sup>4</sup>	Drainage Class	Hydrologic Soil Group <sup>5</sup>	Off-Trail Erosion Hazard	Soil Suitability for Septic Systems	Limitations
Creviscreek sandy loam, 0 to 3 percent slopes	Sandy loam	57	Low	High	Moderate	3	Moderately well drained	B/D	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (shallow depth to saturated zone)
Hadselville-Pentz complex, 2 to 30 percent slopes	Fine sandy loam	7–16	Low	High	Moderate	3	Moderately well drained	D	Moderate (slope erodibility)	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (shallow depth to bedrock, steep slopes) <b>Embankments, Dikes, and Levees:</b> Very limited (thin soil layer, soil piping)
Mokelumne gravelly loam, 2 to 15 percent slopes	Gravelly loam	39–46	Moderate	Moderately high	Moderate	7	Well drained	D	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (steep slopes, shrink-swell potential) <b>Embankments, Dikes, and Levees:</b> Somewhat limited (thin soil layer, hard to pack)
Mokelumne-Pits, mine complex, 15 to 50 percent slopes	Gravelly loam	39–46	Moderate	Moderately high	Moderate	7	Well drained	D	Moderate (slope erodibility)	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (steep slopes, shrink-swell potential)
Pardee-Ranchoseco complex, 3 to 15 percent slopes	Gravelly loam	7–16	Low	Moderately high	Low	6	Well drained	D	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (shallow depth to bedrock, steep slopes)
Pentz-Lithic Xerorthents complex, 30 to 50 percent slopes	Fine sandy loam	16	Low	High	Moderate	3	Well drained	D	Severe (slope erodibility)	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (steep slopes, shallow depth to soft bedrock) <b>Embankments, Dikes, and Levees:</b> Very limited (steep slopes, shrink-swell potential)
Pits	Variable	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Red Bluff loam, 2 to 5 percent slopes	Loam	>70	Moderate	Moderately high	Moderate	6	Well drained	C	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Somewhat limited (shrink-swell potential)
Red Bluff–Redding complex, 0 to 5 percent slopes	Loam	>70	Moderate	Moderately high	Moderate	6	Well drained	C	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Somewhat limited (shrink-swell potential)
Red Bluff–Xerorthents, dredge tailings, complex, 2 to 50 percent slopes	Loam	>70	Moderate	Moderately high	NR	NR	Well drained	NR	NR	NR	NR
Redding gravelly loam, 0 to 8 percent slopes	Gravelly loam	>70	Moderate	Moderately high	Moderate	6	Moderately well drained	C	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Somewhat limited (shrink-swell potential)
Vleck gravelly loam, 2 to 15 percent slopes	Gravelly loam	50–53	Moderate	Moderately high	Moderate	6	Moderately well drained	D	Slight	Very limited	<b>Small Buildings and Shallow Excavations:</b> Very limited (steep slopes, shrink-swell potential)
Xerorthents, dredge tailings, 2 to 50 percent slopes	Fragmented material	NR	Low	Very high	NR	NR	Somewhat excessively drained	A	Severe	NR	NR

Notes: > = greater than; NR = not rated

Because the dredge tailings and pits have been disturbed and reworked, representative characteristics are not available and these soil types have not been rated

<sup>1</sup> Based on percentage of linear extensibility; shrink-swell potential ratings of “moderate” to “very high” can result in damage to buildings, roads, and underground utilities.

<sup>2</sup> Based on standard U.S. Natural Resources Conservation Service (NRCS) saturated hydraulic conductivity (Ksat) class limits; Ksat refers to the ease with which pores in a saturated soil transmit water.

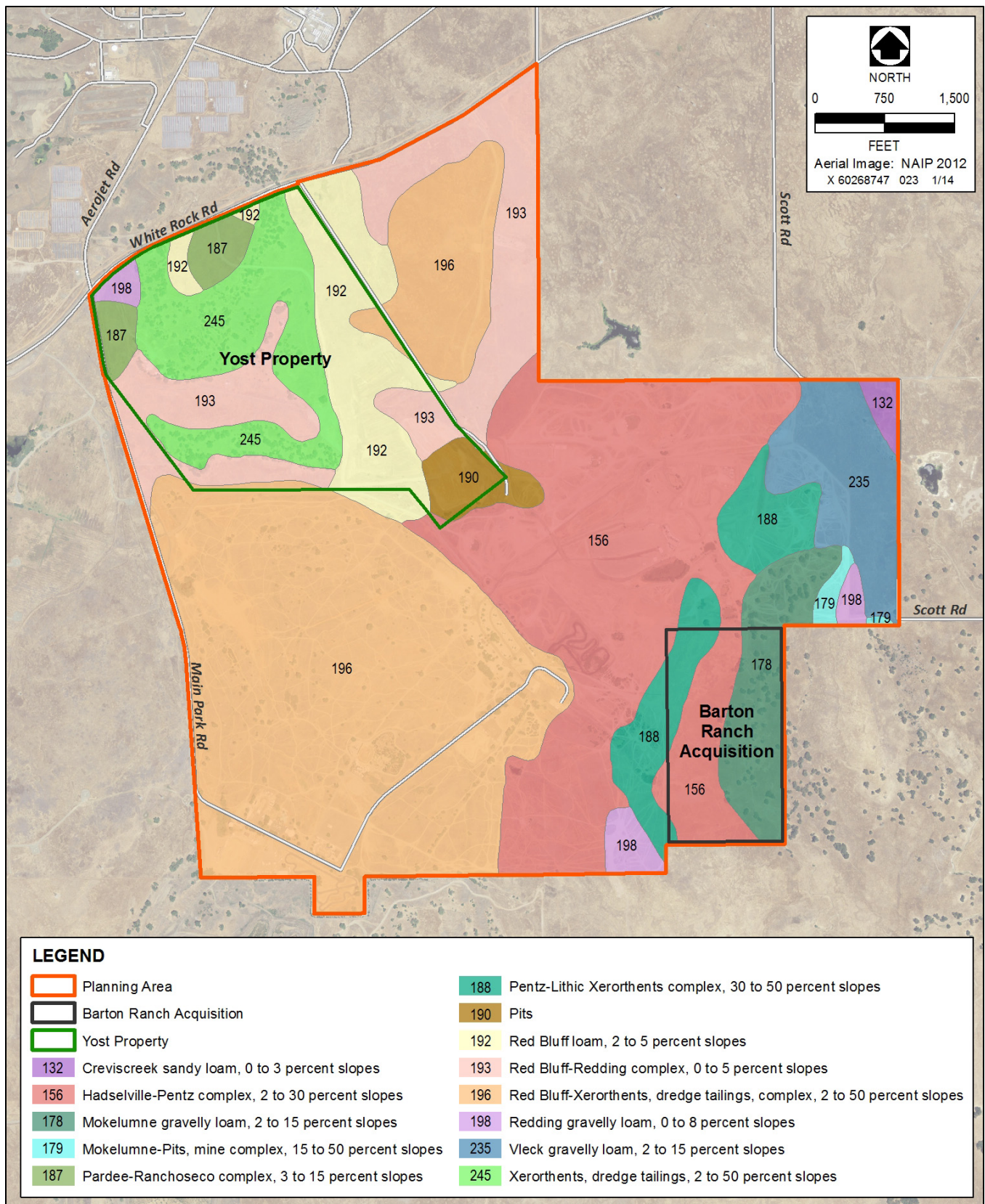
<sup>3</sup> Based on the NRCS erosion factor “Kw whole soil,” which is a measurement of relative soil susceptibility to sheet and rill erosion by water.

<sup>4</sup> The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

<sup>5</sup> Hydrologic soil groups are based on runoff characteristics: Group A = low runoff potential, Group B = low to moderate runoff potential, Group C = moderate to high runoff potential, Group D = high runoff potential.

Source: NRCS 2013

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Source: NRCS 2013

**Figure 2-10. Soil Types in the Planning Area**



## **Erosion**

Soil disruption and detachment resulting from the use of off-road vehicles accelerates water erosion. The surface particles lose their cohesion with underlying soils, and are more easily eroded from their natural site during rainfall events than under normal (undisturbed) conditions. As the bare-soil area increases, the erosive forces of water (e.g., raindrop impacts, runoff volumes, flow velocity) increase more quickly than they would normally if vegetation were present to reduce these forces. Disruption and detachment of particles and increases in bare soils also accelerate wind erosion. Dust formation is encouraged by vehicle use, which breaks particles into smaller fragments that are more susceptible to wind transport. Similarly, wind forces that normally are not strong enough to transport soil particles under less disturbed conditions have increased transport capabilities. As shown in Table 2-3, NRCS (2013) soil survey data indicate that several soil types in the planning area have a high susceptibility to wind erosion, and all are moderately susceptible to water erosion. Most soils in the planning area are in hydrologic group D, which indicates high runoff potential.

NRCS classifies the hazards of off-trail erosion at levels ranging from slight to very severe, based on soil properties that influence erodibility, vegetation establishment, and dust mobilization potential. The system assumes that the trails were not compacted or surfaced and that all vegetation was removed. It does not account for trail management and construction techniques that have been or may be imposed in the planning area. This hazard rating system is intended only to present the erodibility potential of the trails, and it should be interpreted cautiously because it represents a worst-case scenario. As shown in Table 2-3, NRCS (2013) has rated most soils in the planning area with either a slight to moderate off-trail erosion hazard. Only two soil types have been rated with a severe hazard.

## **Expansive Soils**

Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this effect, structural foundations may rise during the rainy season and fall during the dry season. If this expansive movement varies beneath different parts of a structure, the foundation may crack and portions of the structure may become distorted. Retaining walls and underground utilities may be damaged for the same reasons. Based on the information shown in Table 2-4, most soil types in the planning area have a moderate shrink-swell potential, meaning that the soils have moderately high clay content and thus are likely to undergo volume changes as the soil moisture content increases or decreases.

## **Soil Limitations for Septic Systems**

For a conventional septic system to function properly, soils must percolate (or “perc”) appropriately—that is, a certain volume of water must flow through the soil in a certain time period, as determined by a licensed civil or geotechnical engineer. Wastewater is “treated” as soil bacteria feed on the waste





<b>Table 2-4. California Geological Survey Mineral Land Classification System</b>		
<b>Classification</b>	<b>Standard Mineral Land Classification Descriptions</b>	<b>Description of MRZ Categories for Metallic and Industrial Minerals in Nonurban Areas</b>
MRZ-1	Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.	Areas where available geologic information indicates there is little likelihood for the presence of mineral resources.
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.	<i>MRZ-2a:</i> Areas underlain by demonstrated mineral reserves where geologic data indicate that significant measured or indicated resources are present. MRZ-2a areas contain discovered mineral deposits that represent either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information.
		<i>MRZ-2b:</i> Areas underlain by inferred mineral resources where geologic information indicates that significant inferred resources are present. MRZ-2b areas contain discovered deposits that either represent inferred reserves or are presently regarded as subeconomic.
MRZ-3	Areas containing mineral deposits, the significance of which cannot be evaluated from existing data.	<i>MRZ-3a:</i> Areas underlain by geologic settings within which undiscovered mineral resources similar to known deposits in the same producing district or region may be reasonably expected to exist (hypothetical resources). Land areas classified as MRZ-3a possess geologic characteristics that are favorable for the occurrence of specific mineral deposits.
		<i>MRZ-3b:</i> Areas that contain undiscovered mineral resources that occur either in known types of deposits in favorable geologic settings where mineral discoveries have not been made, or in types of deposits as yet unrecognized for their economic potential (speculative resources). Land areas classified as MRZ-3b are underlain by geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits.
MRZ-4	Areas where available data are inadequate for placement in any other mineral resource zone.	Areas where geologic information does not rule out either the presence or absence of mineral resources.
Note: MRZ = Mineral Resource Zone Source: Loyd 1984:12–17		

material, and in the process, break down the material into more basic elements that are dispersed into the lower layers of the soil horizon. If wastewater percolates through the soil too quickly, the bacteria will not have enough time to digest the material. On the other hand, if wastewater percolates through the soil too slowly, the bacteria are killed by the lack of oxygen. Most soils in the planning area consist of a

shallow layer of silt, sand, or clay that is underlain by bedrock. Based on a review of NRCS soil data (Table 2-3), the soils in the planning area are unsuitable for conventional septic systems.

### **Naturally Occurring Asbestos**

Asbestos is a term applied to several types of naturally occurring fibrous materials found in rock formations throughout California (i.e., naturally occurring asbestos [NOA]). Exposure and disturbance of rock and soil that contains asbestos can result in the release of fibers to the air and consequent exposure to the public. All types of asbestos are now considered hazardous and pose public health risks. Asbestos is commonly found in ultramafic rock, including serpentine. Two forms of asbestos are associated with serpentinite: chrysotile asbestos and tremolite/actinolite asbestos.

In 2004, after determining that NOA was present in the Folsom area, the Sacramento Metropolitan Air Quality Management District issued Advisory 04-05(2) and commissioned CGS to prepare Special Report 192, *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California* (Higgins and Clinkenbeard 2006). The map contained in Special Report 192 indicates that the planning area is located in the category “Areas Least Likely to Contain NOA.” These areas contain one or more of the following rock types: metamorphosed sedimentary rocks, granitic rocks, volcanic rocks, sedimentary rocks, unconsolidated alluvium, and dredge tailings associated with gold mining (including the Salt Springs Slate and the Ione, Mehrten, and Laguna Formations).

#### **2.3.1.4 MINERAL RESOURCES**

Under the Surface Mining and Reclamation Act (SMARA), the State Mining and Geology Board may designate certain mineral deposits as being regionally significant to satisfy future needs. The board’s decision to designate an area is based on a classification report prepared by CGS and on input from agencies and the public. The planning area lies within the designated Sacramento-Fairfield Production-Consumption Region for Portland cement concrete aggregate, which includes all designated lands in the marketing area of the active aggregate operations supplying the Sacramento-Fairfield urban center.

In compliance with SMARA, CGS has established the classification system shown in Table 2-4 to denote both the location and significance of key extractive resources.

Within weeks after gold was found at Sutter’s Mill on the South Fork American River in 1848, Mormon Island (now buried underneath Folsom Lake) was being mined. Subsequent gold discoveries and mining operations developed at Beal’s Bar, Rattlesnake Bar, Negro Bar, Whiskey Bar, and Prairie City. When the Natomas Water and Mining Company began supplying water to the area around Prairie City in 1853, miners began staking claims along the company’s canal. When those claims were exhausted, the Natomas Company (as it was later called) began dredging the nearby ancient American River deposits. Dredging operations took place in a portion of the planning area, as shown in Figure 2-9. The piles of cobbles deposited during dredging operations in the project vicinity have proved to be a valuable source

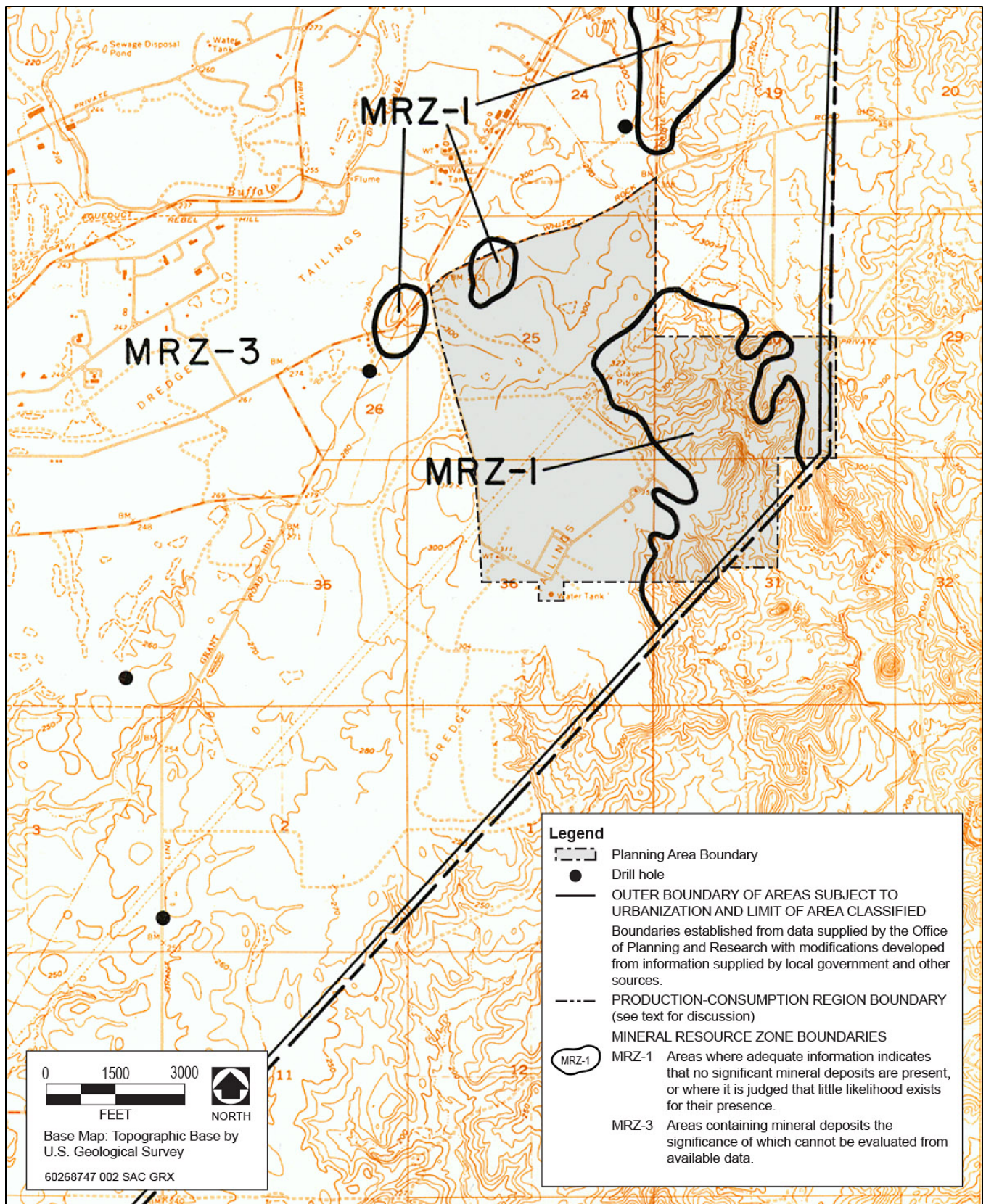


of sand and gravel. Sand and gravel mined in Sacramento County and in the vicinity of Rancho Cordova is used for construction. Construction aggregates are an important building material used in Portland cement concrete, asphalt concrete, plaster, and stucco, and as a road base material. In terms of volume and price, there is no economically feasible substitute for aggregate products in the construction industry.

As shown in Figure 2-11, Dupras (1999) classified the northern and western portions of the planning area as MRZ-3, and the eastern portion of the planning area as MRZ-1. A small area classified as MRZ-1 is also present adjacent to White Rock Road. The MRZ-1 classification is applied to areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. The MRZ-3 classification is applied to areas where the significance of mineral deposits cannot be evaluated from available data.

Portions of the 211-acre Yost property in the northwest corner of the planning area were dredged for placer gold before sand excavations occurred (Dupras 1999). Intermittent sand and aggregate mining has occurred on this site since 1958. The site was formerly owned by James Yost and operated by American River Aggregates. Teichert began leasing the property in 2001 and the lease continued when State Parks purchased the property from James Yost in 2004. In 2007, Teichert continued reclamation efforts that were initiated by the previous operator, and the lease expired in June 2012. At that time, Sacramento County issued a letter to the Office of Mine Reclamation stating that “the lead agency certifies that the final reclamation is complete, and in accordance with the approved reclamation plan.” Mining operations on the Yost property ceased in 2012 (State Parks 2012b).

As shown in Figure 2-9, a small outcrop of the Ione Formation is present in the central portion of the planning area. Some areas of the Ione Formation have been known to contain kaolin clay, which is formed from the weathering of aluminous minerals such as feldspar, with kaolinite as its principal constituent. Based on the presence of the Ione Formation, Loyd (1984:Plate 2) classified this portion of the planning area as MRZ-3a for clay, sand, and lignite. Kaolin is used as an anti-caking agent in processed foods and an additive to cosmetics, toiletries, and health products. It also is used as an “inert” carrier in some pesticides, and enhances the performance of some microbial products. In addition, pisolitic clay and clay for use in ceramic raw materials have been mined from the Ione Formation. One of the most important clay resource areas in California is located southeast of Rancho Murieta. Portions of the Ione Formation have also been known to produce commercial-grade specialty sand and lignite. Specialty sand is used for purposes other than as an ingredient for aggregate, ballast, or fill. Lignite is a carbonaceous material that is intermediate in grade between peat and subbituminous coal. The Ione Formation represents the only source of montan wax (an extraction product of lignite) in the United States. (Loyd 1984:19–22.)



Source: Dupras 1988

**Figure 2-11. Mineral Resources in the Planning Area**



### **2.3.1.5 PALEONTOLOGICAL RESOURCES**

#### **Professional Paleontological Standards**

The Society of Vertebrate Paleontology (SVP; 1995), a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen preparation, analysis, and curation. Most practicing professional paleontologists in the nation adhere to SVP's assessment, mitigation, and monitoring requirements, as specifically spelled out in its standard guidelines.

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, SVP (1995) established three categories of sensitivity for paleontological resources: high, low, and undetermined. Areas where fossils have been found previously are considered to have high sensitivity and high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas without any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys and mapping are performed to determine their sensitivity. After completing reconnaissance surveys, observing exposed cuts, and possibly conducting subsurface testing, a qualified paleontologist can determine whether the area should be categorized as having high or low sensitivity. In keeping with the significance criteria of SVP (1995), all vertebrate fossils are generally categorized as being of potentially significant scientific value.

#### **Paleontological Resource Inventory Methods**

A stratigraphic inventory and a record search were completed to develop a baseline paleontological resource inventory of the planning area and vicinity by rock unit and to assess the potential paleontological productivity of each rock unit.

Geologic maps and reports covering the geology of the planning area and vicinity were reviewed to determine the exposed rock units and to delineate their respective areal distributions in the planning area. Regional and local surficial geologic mapping and correlation of the various geologic units in the vicinity of the planning area has been provided at a scale of 1:48,000 by Loyd (1984) and at 1:250,000 by Wagner et al. (1987). The literature review was supplemented by an archival search conducted at the University of California Museum of Paleontology (UCMP) on January 14, 2014 (UCMP 2014).

#### **Criteria for Paleontological Resource Assessment**

The potential paleontological importance of the planning area can be assessed by identifying the paleontological importance of rock units that are exposed there. Because topographic maps can easily delineate the distribution of a rock unit, this method is conducive to determining the portions of the planning area that are of higher and lower sensitivity for paleontological resources.

An important rock unit is one that is rated high for potential paleontological productivity and is known to have produced unique, scientifically important fossils. The potential paleontological productivity rating of a rock unit exposed in the planning area refers to the abundance and densities of fossil specimens, previously recorded fossil sites, or both in exposures of the unit in and near the planning area. Exposures of a specific rock unit in the planning area are most likely to yield fossil remains representing particular species in quantities or densities similar to those previously recorded from the unit in and near the planning area.

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 type specimen (i.e., the individual from which a species or subspecies has been described);
- ▶ a member of a rare species;
- ▶ 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 the life history of individuals can be drawn;
- ▶ a skeletal element different from, or a specimen more complete than, those now available for its species; or
- ▶ a complete specimen (i.e., all or substantially all of the entire skeleton is present).

For example, identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare. 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. Marine invertebrates are generally common, well developed, and well documented. They generally are not considered unique paleontological resources.

The following tasks were completed to establish the paleontological importance of each rock unit exposed in or near the planning area:

- ▶ The potential paleontological productivity of each rock unit was assessed, based on the density of fossil remains previously documented within the rock unit.
- ▶ The potential of a rock unit exposed in the planning area to contain a unique paleontological resource was considered.



## Paleontological Resource Inventory and Assessment by Rock Unit

- ▶ *Dredge Tailings:* The dredge tailings in the planning area are composed of sand, silt, and cobbles originally derived from the Pliocene-age Laguna Formation. As discussed in further detail below, the Laguna Formation is not considered paleontologically sensitive. Furthermore, this formation was previously excavated and reworked in the planning area during mining activities, potentially up to three different times over the last 100 years, to depths of up to 80 feet. The mechanical nature of the dredging process would likely have destroyed any vertebrate fossils that may have been present before the mining activities began. Therefore, the dredge tailings are considered to be of low paleontological sensitivity.
- ▶ *Laguna Formation:* A search of published literature indicates only one reference to a Pliocene-age vertebrate fossil specimen from the Laguna Formation in Northern California: Stirton (1939) refers to a Pliocene-age fossil specimen of a horse tooth found in clayey silt, probably of the Laguna Formation although not definitely identified as such, in a well near the town of Galt, in Sacramento County. Results of the UCMP (2014) paleontological records search indicate no recorded fossil sites within the Laguna Formation. Therefore, this formation is considered to be of low paleontological sensitivity.
- ▶ *Mehrten Formation:* Vertebrate mammal and plant fossils have been reported from the Mehrten Formation throughout the Sierra Nevada foothills and the eastern margin of the Central Valley. The closest recorded vertebrate fossil locality within the Mehrten Formation (V-76050) is near Camanche Reservoir, approximately 23 miles south of the planning area, where a specimen of *Pliohippus* (horse) was recovered. Other vertebrate fossils have been recovered from the Mehrten Formation from more than 40 locations in Calaveras, San Joaquin, Stanislaus, Tuolumne, and Merced Counties (UCMP 2014). In addition, several specimens of plant fossils have been recovered locally from the Mehrten Formation in Granite Bay, Roseville, and Rocklin (Sierra College Natural History Museum 2011). Because of the large number of fossils that have been recovered from the Mehrten Formation, it is considered to be of high paleontological sensitivity.
- ▶ *Ione Formation:* Vertebrate mammal, plant, and invertebrate fossils have been reported from the Ione Formation throughout the Central Valley. The closest recorded vertebrate fossil locality to the planning area within the Ione Formation (V-6823 through V-6833) is located in Pittsburg, approximately 48 miles to the southwest. This locality yielded more than 20 specimens of cartilaginous fish (such as skates and rays), bony fish, birds, and cetacea (dolphins, porpoises, and whales). Numerous plant fossils have been recovered from the Ione Formation at locations closer to the planning area, including Ione (P-43), Iowa Hill (P-43, PA-84, PA-289, and PA-523), and Camanche Reservoir (P-332). Other vertebrate mammal, plant, and invertebrate fossils have been recovered from the Ione Formation from more than 300 locations in Nevada, Contra Costa, Placer, Amador, Butte, Alameda, Merced, Tuolumne, Sutter, Sierra, Plumas, Calaveras, Kern, and

Stanislaus Counties (UCMP 2014). Because of the large number of fossils that have been recovered from the Ione Formation, it is considered to be of high paleontological sensitivity.

### **2.3.1.6 TOPOGRAPHY AND DRAINAGE**

As mentioned previously, the planning area is located within the USGS Buffalo Creek 7.5-minute Quadrangle. The northern portion of the planning area ranges from 280 to 300 feet above mean sea level. This area is characterized by gently rolling to nearly level topography. The topography in the eastern portion of the planning area is variable, with elevations ranging from 240 to 300 feet above mean sea level.

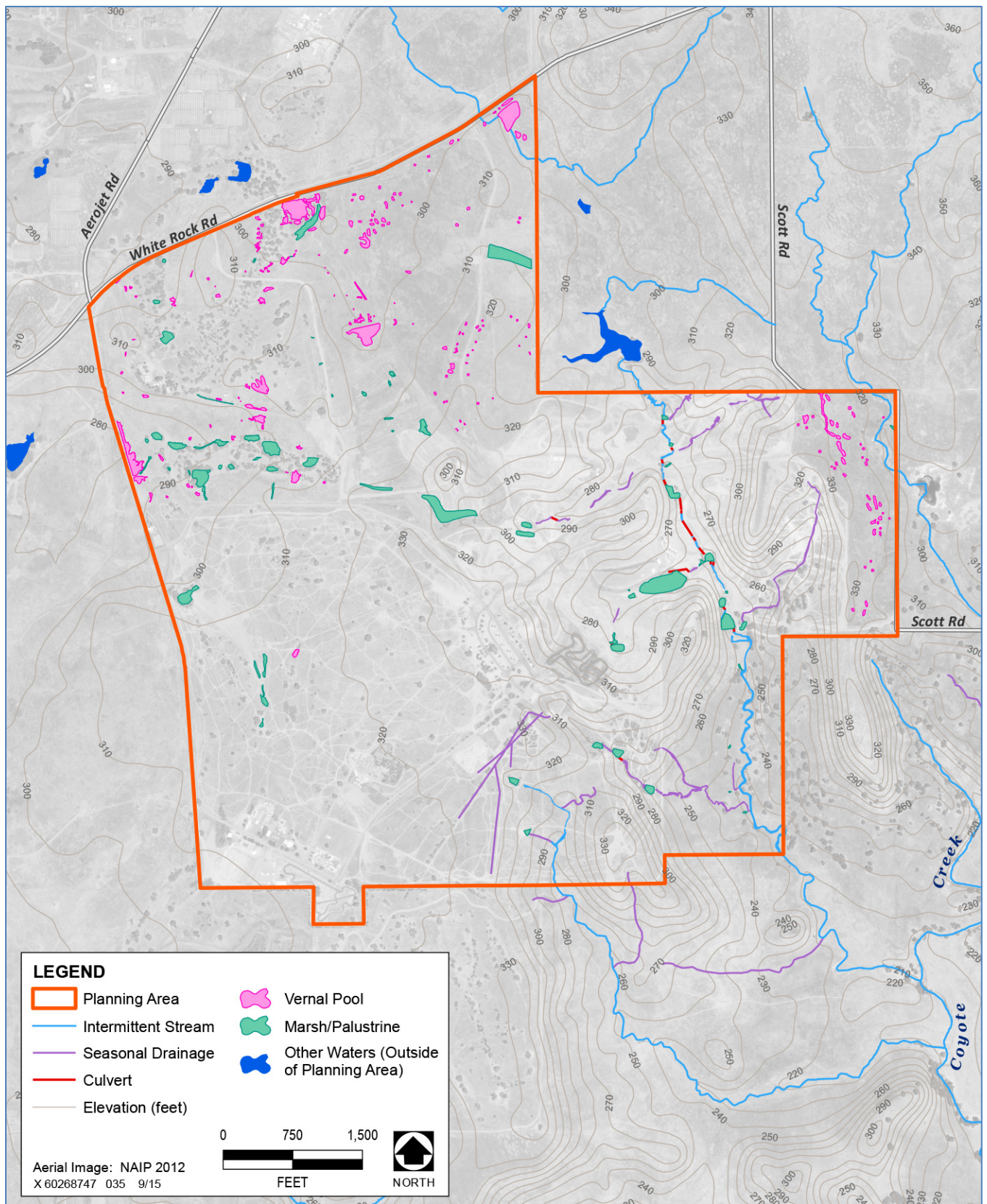
The planning area is within the 12-digit Hydrologic Unit Code watersheds of Upper American River, Upper Morrison Creek, and Carson Creek. Three intermittent streams flow southeasterly through the planning area into Coyote Creek (Figure 2-12). One traverses the easternmost portion of the SVRA at Scott Road, one traverses the eastern portion of the riding area and the Barton Ranch acquisition area, and the third originates in the south central portion of the riding area near the southern planning area boundary before flowing off-site. A fourth intermittent stream runs northwesterly through the northeast corner of the SVRA. This intermittent stream is a tributary to Buffalo Creek, which connects to the American River. Local surface water features in the planning area include seasonal drainages (swales, human-made trench cuts, and ephemeral drainages), ponds (identified as marsh/palustrine in Figure 2-12), and vernal pools. The on-site drainage features appear to intercept groundwater in several locations. In general, rolling hills are bisected by drainage swales feeding north-south-oriented tributaries flowing into Coyote Creek.

Coyote Creek is a perennial stream that originates in the bedrock hills east of Scott Road and receives runoff from a former Aerojet operations facility (Area 41). (See “Water Quality and Contaminant Transport” below for further description of Areas 39, 40, and 41 of the former Aerojet facility.) Coyote Creek generally trends southward east of the planning area after passing under Scott Road. Coyote Creek intercepts unconfined groundwater before discharging to Deer Creek. The lower portions of the intermittent tributaries may intercept unconfined groundwater before discharging into Coyote Creek to the far southeast of Area 39 of the former Aerojet operations facility and the SVRA. Farther south, Coyote Creek has eroded through the Ione Formation and is in contact with slate bedrock. No flow data are available regarding Coyote Creek or the on-site intermittent tributaries.

Coyote Creek flows into Carson Creek, which is tributary to Deer Creek, a tributary to the Cosumnes River southeast of the planning area. The eastern portion of the planning area drains into Deer Creek, and the southwest portion of the property eventually drains into Morrison Creek. The northern portion of the planning area drains to Buffalo Creek, a tributary to the American River.







Sources: Parus Consulting, adapted by AECOM in 2014; Sacramento County 2014b; USGS 2005, 2010

**Figure 2-12. Existing Water Features**

## Hydraulics

Floodplain designations are important hydraulic engineering considerations for construction of buildings, roads, and bridges. The planning area is not located within a Federal Emergency Management Agency (FEMA)–designated 100-year floodplain and is several miles from the 100-year floodplain for the American and Cosumnes Rivers. The creeks in the planning area are not deeply entrenched; therefore, the lower elevations along these waterways could experience minor flooding during storms of a 25-year or greater intensity.

## Groundwater

Prairie City SVRA is located in the Sacramento Valley Groundwater Basin, South American Subbasin (Number 5-21.65). The surface area covers approximately 248,000 acres (388 square miles). The subbasin is bounded on the east by the Sierra Nevada, on the west by the Sacramento River, on the north by the American River, and on the south by the Cosumnes and Mokelumne Rivers (DWR 2004). Most of the California Department of Water Resources' South American Subbasin is located within the Central Sacramento County Groundwater Basin (Central Basin). Intensive use of groundwater over the past 60 years has resulted in a general lowering of groundwater elevations in the Central Basin. Over time, isolated groundwater depressions have grown and coalesced into a single cone of depression that is centered in the southwestern portion of the Central Basin, approximately 17 miles southwest of the planning area. From 1995 to 2003, most groundwater levels in the Central Basin recovered to levels that were generally higher than those before the 1987–1992 drought; however, wells near Rancho Cordova appear to have recovered less than the other wells in the subbasin since 1995 (generally less than 10 feet) (DWR 2004). The Central Sacramento County Groundwater Forum determined the estimated long-term average annual sustainable yield of groundwater from the Central Basin to be 273,000 acre-feet per year (afy) (SCWA et al. 2006:ES-5). In 2006, groundwater extractions were estimated to be 250,000 afy.

Sampling conducted in the SVRA in May 2007 found that the depth to perched groundwater (which has the potential to discharge to surface water) ranged from approximately 9 to 75 feet below ground surface, and that the median depth was 35 feet below ground surface (Aerojet Rocketdyne Holdings Inc. 2013). The variable topography affects the depths to perched groundwater. Generally, the depths to perched groundwater are greatest along the hills and ridges and shallower closer to the drainages. During monthly measurements conducted between December 2005 and May 2006, the median change in water surface elevations of perched groundwater was approximately 1.5 feet. The greatest change in water levels of perched groundwater (3.8 feet) was measured near an ephemeral drainage. Perched groundwater appears mounded. Near the motocross practice track, the potentiometric<sup>1</sup> surface contours for perched groundwater indicate a northerly to northwesterly flow direction. Southeast of that area, the contours indicate a southeasterly flow direction.

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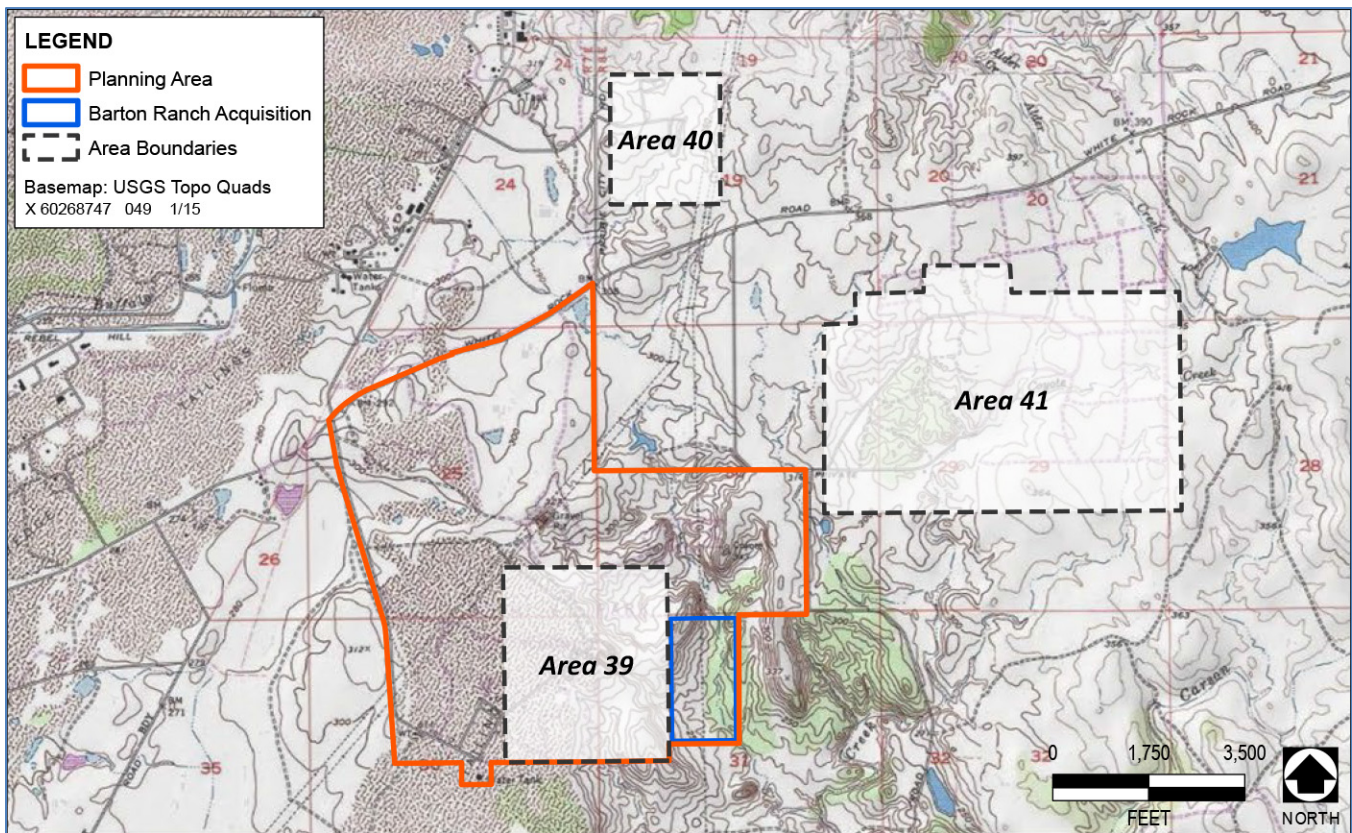
<sup>1</sup> A potentiometric surface is an imaginary surface that defines the level to which water in a confined aquifer would rise if the aquifer was completely pierced with wells. In an unconfined aquifer it is equivalent to the water table.



The first water-bearing zone occurs in 5- to 10-foot-thick sand lenses. In 2007, the depth to the top of this zone ranged from approximately 38 to 109 feet below ground surface. Generally, the depths to groundwater are greatest near ridges and shallower closer to the drainages. The May 2007 potentiometric surface map for the first water-bearing zone suggests a general south-southeast flow direction across Aerojet Area 39, which is located within the SVRA. An apparent deviation in the general flow field was noted around the upper detention pond; the apparent mounding in this vicinity may be consistent with increased localized recharge.

### Water Quality and Contaminant Transport

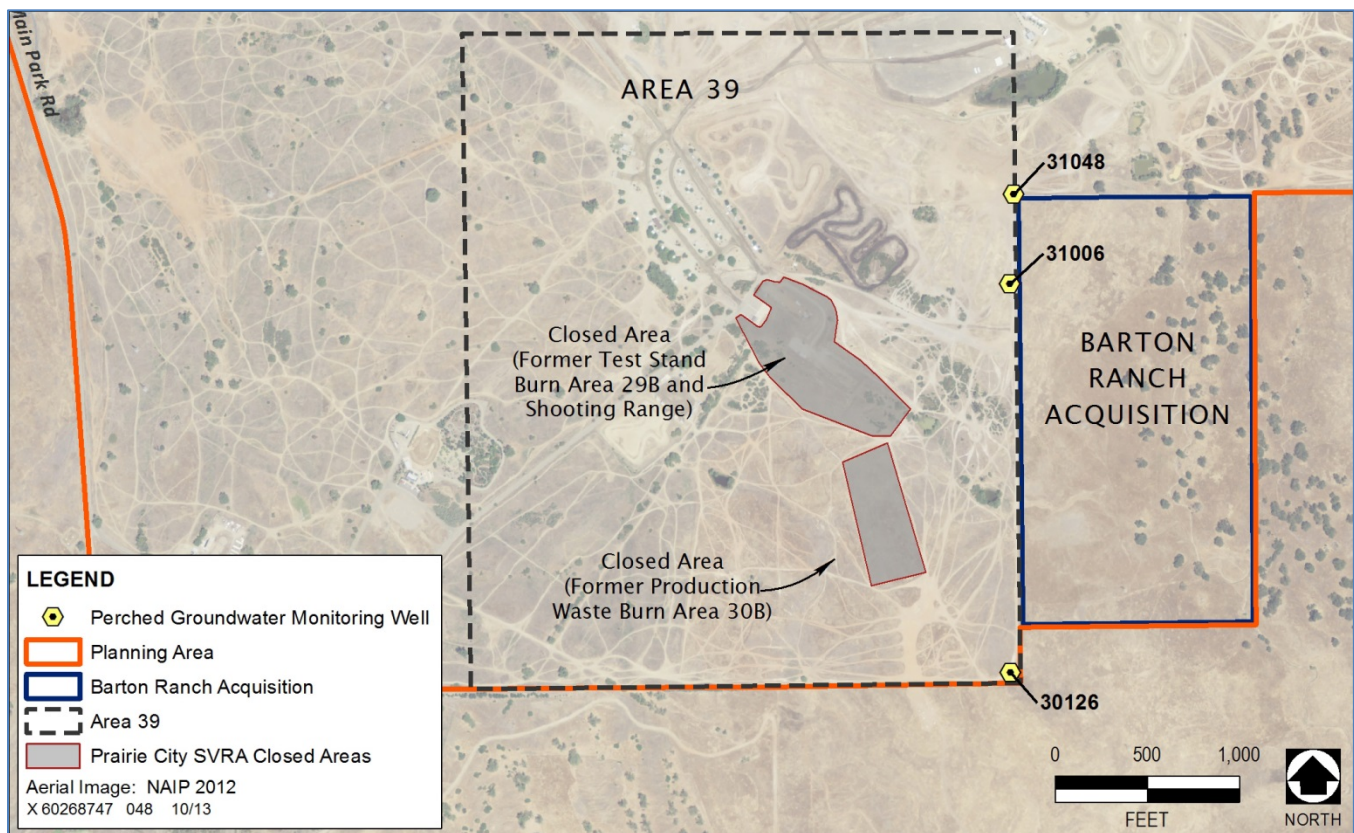
The southeast corner of the planning area, identified as “Area 39” in Figure 2-13, was formerly owned and operated by Aerojet as a rocket testing site. The site was used as a disposal area for generated hazardous wastes. Aerojet operated two chemical plants at its facility, which manufactured various herbicides, pesticides, and pharmaceutical-related compounds. Historical disposal methods included burning, landfilling, surface impoundment, and deep well injection. Several plumes of contaminated groundwater have been identified at the former Aerojet operations facility. The major contaminants found in the groundwater and vadose zone (the area between the land surface and the water table) consist of n-nitrosodimethylamine (i.e., NDMA), perchlorate, and trichloroethylene (TCE).



Source: Data compiled by AECOM in 2015

**Figure 2-13. Areas 39, 40, and 41 of the Aerojet Site**

The U.S. Environmental Protection Agency’s (EPA’s) Pacific Southwest Region (Region 9) updated its report *Overview Report for the Aerojet General Superfund Site* on March 17, 2014 (EPA 2015). The report noted that potential health risks include drinking contaminated groundwater or surface water, and coming in direct contact with or accidentally ingesting contaminated soils. Figure 2-13 shows the location of several areas in the vicinity of Prairie City SVRA that have been studied in detail. Source areas within Area 39 have been identified through aerial photography and historical documentation to identify potential sampling locations to assess human health and ecological risks associated with the property (Figure 2-14). Potential source areas have been extensively evaluated through groundwater, surface water, soil, and soil vapor sampling. Two source areas—29B, a former test stand burn area, and 30B, a former waste production burn area, both located within Area 39 in the planning area (Figure 2-14)—have been fenced off and access to these areas is prohibited. Source Area 29B was closed primarily as a result of lead contamination associated with the shooting range described above (see “Administration and Maintenance Facilities”) and Source Area 30B was closed primarily as a result of dioxins and furans found in soils. No hazardous wastes are known to exist in the SVRA except for Area 39 (Fennessy, pers. comm., 2014).



Source: Fennessy, pers. comm., 2014

**Figure 2-14. Area 39 of the Former Aerojet Operations Facility, Located within the Planning Area**

The Phase I Environmental Site Assessment prepared for the Barton Ranch acquisition area (State Parks 2012c) summarizes the results of a remedial investigation for Area 39 prepared by Environmental Resources Management (ERM) in October 2010. Laboratory analysis of surface water runoff from tributaries of Coyote Creek produced during the rainy season indicated low levels of nitrate in two sample locations within Prairie City SVRA. Concentration levels for nitrate in the surface water are lower than the maximum contaminant level of 45,000 micrograms per liter set by the California Department of Public Health (CDPH). The report also indicates that volatile organic compound impacts on perched groundwater appear to be limited to the eastern portion of Area 39, and that low levels of TCE were detected in groundwater samples collected from one of the three wells extending north to south adjacent to the western boundary of Barton Ranch (MW ID# 31048, 31006, and 31026) (Figure 2-14). ERM concluded that low levels of TCE in the central well are moving east in the perched aquifer toward Barton Ranch.

An additional investigation was completed by Aerojet (Aerojet Rocketdyne Holdings Inc. 2013) to further evaluate Area 39 and the surrounding area. The sampling results indicate that perchlorate was likely discharging to surface waters from two springs located to the south and southeast of the SVRA. State Parks coordinates directly with Aerojet on a regular basis to assure that areas of concern are managed properly. A feasibility study with remedial actions and monitoring suggestions based on proposed uses is expected to be completed in 2018.

Existing facilities are supported by an on-site well located in the southwest portion of the SVRA near the maintenance office. On July 14, 2014, NDMA was detected at 8.2 nanograms per liter (ng/L) in the well. Although there is not a maximum contaminant level for NDMA in drinking water, the State of California has published a notification level for NDMA of 10 ng/L. If a chemical concentration is greater than its notification level in drinking water that is provided to consumers, CDPH recommends that consumers be notified about the presence of the chemical, and about health concerns associated with exposure to it. The response level, or level at which CDPH recommends removing the source of potable supply, is 300 ng/L.

NDMA can be found in many items such as nitrite-cured meats (e.g., hot dogs), beer, and certain water supplies being chlorinated by using monochloramine. It is also found in the liquid rocket fuel Aerozine-50, and can be formed during the testing of liquid rocket engines. Aerojet has been investigating, extracting, and treating NDMA in groundwater near Prairie City SVRA since the early 1980s in an attempt to control the spread of NDMA in groundwater.

In 2012, EPA required an expansion of the groundwater extraction and treatment facility to extract and treat groundwater from the center of the plume where high concentrations of NDMA are present. During the expansion of the groundwater extraction and treatment facility, groundwater extraction had to be discontinued for several months to allow for construction and piping modifications. This work was completed between October 2013 and May 2014; however, the extended down time during construction may have allowed the NDMA plume to migrate south toward the Prairie City SVRA water supply well.

In mid-2014, Aerojet restarted the extraction wells near Prairie City SVRA and the groundwater flow direction (and the NDMA plume) was again directed toward the extraction wells.

Analysis conducted on April 27, 2015, concluded that the concentration of NDMA in the SVRA's potable water supply well is at 4.2 ng/L, which is a reduction from the first detection of 8.2 ng/L in July 2014 (Harper, pers. comm., 2015).

### ***Erosion and Sediment Transport Sources***

Several soil types in the planning area have a high susceptibility to wind erosion, and all are moderately susceptible to water erosion. Most of the soils in the planning area are in hydrologic group D, which indicates high runoff potential. Most of the soil types in the planning area have moderate shrink-swell potential, meaning that the soils have high clay content and are thus likely to undergo substantial volume changes as soil moisture content increases or decreases (NRCS 2013).

The planning area also contains dredger mine tailing to the northwest, which consist of low (5- to 10-foot-high) mounds of cobbles, silt, and sand. If designed improperly, roads, trails, and tracks can alter a watershed's natural drainage patterns through modified topography, removal of vegetation, and continued use of exposed soils that may cause water, wind, or mechanical erosion.

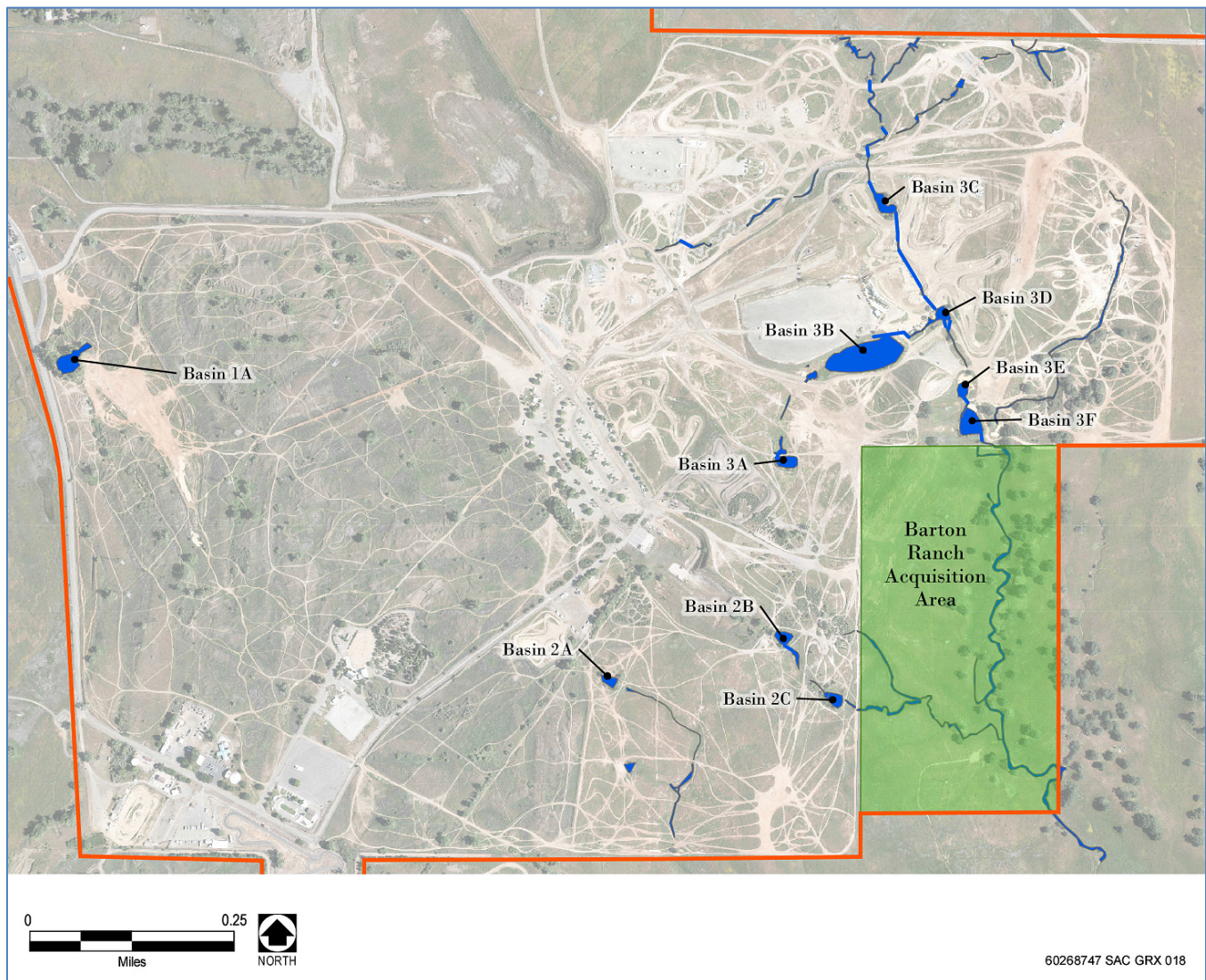
Compacted soil inhibits infiltration of precipitation, which in turn means that soil moisture available to vegetation is diminished; volumes and velocities of precipitation runoff can lead to accelerated soil erosion, causing the formation of rills and gullies and other surface changes. Soil compaction also may inhibit root growth among plants, in which case organic matter, litter, soil fertility, and vegetative cover are diminished, exacerbating the soil's susceptibility to erosion. Where biotic and chemical crusts or other soil stabilizers are disturbed or destroyed, soil erosion from water and wind may increase beyond rates found on undisturbed sites with similar soils and conditions; nutrient-cycling processes also are likely to be disrupted, potentially leading to declines in soil fertility.

Some of the most complex elements of trail design are where they intercept waterways or wetland areas. Improperly designed or maintained crossings can provide a direct path for soils, nutrients, and pathogenic organisms (e.g., Giardia), and can alter the patterns of surface water drainage. Intermittent streams are located within Prairie City SVRA, but most of the developed facilities are located on previously altered landscapes without direct connections to stream channels. Furthermore, BMPs as described below are the measures that minimize or eliminate the effects of soil erosion and sedimentation on stormwater, and the nonstormwater discharges of other possible pollutants. Effectiveness, applicability, limitations, installation protocols, and maintenance requirements for BMPs are essential to eliminate or manage stormwater discharges.



## Existing Erosion/Sediment Controls

Several sediment basins and other water quality control BMPs are located throughout Prairie City SVRA to improve water quality and reduce sediment loads to Coyote Creek (Figure 2-15). Stormwater from the planning area commonly flows in sheets into existing drainages, which convey the water to detention basins. Several sediment basins are located south of the Prairie City Motocross Track. These basins were developed to capture sediment coming off the track. However, the sediment load below the track warrants additional water quality control improvements for average and above-average storm events.



Source: State Parks, Adapted by AECOM 2015

**Figure 2-15. Detention Basin Locations**

State Parks acquired 68 acres from the Barton Ranch in 2014 to treat SVRA stormwater runoff, improve water quality, and incorporate water quality improvement facilities and stormwater control features. To treat runoff from the existing SVRA, State Parks proposes installing sediment basins and/or bioswales or

other stormwater control features such as sediment barriers, and/or a stormwater spray field within the Barton Ranch acquisition area. As specified in *Prairie City SVRA Barton Ranch Property Acquisition, Initial Study/Mitigated Negative Declaration*, up to 10 acres of the property would be used for water quality improvement facilities and would be designed to accommodate a 100-year storm event. An additional 5 acres of undisturbed land may be used as a spray field for collected stormwater (State Parks 2012a). Although not designed yet, the proposed basin and/or bioswale system would be designed to remove sediment and improve water quality so that discharges meet the regulatory agency requirements before leaving the site. A mining operations easement is also located on the Barton Ranch acquisition property (see Figure 2-8). The remaining areas of the Barton Ranch acquisition property would likely remain unchanged.

### **2.3.1.7 AIR QUALITY**

#### **Topography, Meteorology, and Climate**

The planning area is located in the southeastern portion of the Sacramento Valley Air Basin (SVAB) within the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SVAB is relatively flat, bordered by mountains to the east, west, and north. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin Delta, bringing with it pollutants from the San Francisco Bay Area.

The climate is characterized by hot, dry summers and cool winters. Periods of dense and persistent low-level fog that are most prevalent between storms are characteristic of SVAB winter weather. From May to October, the region's intense heat and sunlight lead to high ozone concentrations. Summer inversions are a strong, daily weather feature, and are among the key factors leading to higher summertime ozone concentrations. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not adequately disperse air pollutants.

Most precipitation in the area results from air masses that move in from the Pacific Ocean during the winter months. These storms usually move from the west or northwest. More than half the total annual precipitation falls during the winter rainy season (November–February), when the average winter temperature is a moderate 49 degrees Fahrenheit (°F). During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep coastal temperatures moderate.

Regional wind patterns affect air quality by moving pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. An inversion layer develops when a layer of warm air develops over cooler air close to the ground. Such temperature inversions hamper vertical dispersion by creating a ceiling over the area and trapping air pollutants near the ground. These inversions are present over the SVAB on summer mornings and afternoons. During summer's longer daylight hours, plentiful sunshine provides the





energy needed to fuel photochemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>), resulting in ozone formation.

In the winter, temperature inversions dominate during the night and early morning hours but frequently dissipate by afternoon. The greatest pollution problems during this time of year are from carbon monoxide (CO) and NO<sub>x</sub>. High CO concentrations occur on winter days with strong surface inversions and light winds. CO transport is extremely limited.

The local meteorology of the project area is represented by measurements recorded at the Folsom Climate Station, located approximately 6 miles north-northeast of the planning area. The normal annual precipitation, which occurs primarily from November through March, is approximately 24.17 inches (WRCC 2014a). Average January temperatures range from a minimum of 36.6°F to a maximum of 54.3°F. Average July temperatures range from a minimum of 59.9°F to a maximum of 97.0°F (WRCC 2014a). The local wind representation for the planning area is recorded at the Sacramento–Mather Airport station, approximately 8 miles to the west-southwest. The predominant wind direction and speed is from the south (WRCC 2014b) at approximately 6.0 miles per hour (mph) (WRCC 2014c).

### **Existing Air Quality—Criteria Air Pollutants**

The California Air Resources Board (ARB) and EPA focus on the following air pollutants as indicators of ambient air quality: ozone, CO, nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM<sub>10</sub>), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM<sub>2.5</sub>), and lead. These are the most prevalent air pollutants known to be harmful to human health and are commonly referred to as “criteria air pollutants.”

Health-based air quality standards have been established for these pollutants by ARB at the state level, known as California ambient air quality standards (CAAQS), and by EPA at the national level, known as national ambient air quality standards (NAAQS). These standards, which include a margin of safety, were established to protect the public from adverse health impacts resulting from exposure to air pollution. California also has established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. A brief description of each criteria air pollutant, including its source types and health effects, is provided below along with the most current ambient air quality monitoring station data for the planning area.

#### **Ozone**

Ozone is a photochemical oxidant—that is, a substance whose oxygen combines chemically with another substance in the presence of sunlight—and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of ROG and NO<sub>x</sub> in the presence of sunlight. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO<sub>x</sub> refers to a group of

gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. Consequently, high ozone levels tend to exist only while high ROG and NO<sub>x</sub> levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels decline rapidly. Because these reactions occur on a regional scale, ozone is a regional pollutant.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern.

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 ozone formation. As a result, summer is generally peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry.

Regional wind patterns affect air quality by moving pollutants downwind of pollution sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. An inversion layer develops when a layer of warm air traps cooler air close to the ground. Such temperature inversions hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground. During summer mornings and afternoons, these inversions are present over the SVAB. During summer's longer daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between reactive organic gases and NO<sub>x</sub>, which result in ozone formation.

Table 2-5 provides ambient air quality data from the Sacramento–Del Paso Manor monitoring station, the nearest air monitoring station to the planning area with available data. The latest data available, from 2010 through 2012, indicate that the nearby area has exceeded both the CAAQS for the 1-hour and 8-hour maximum ozone concentrations and the NAAQS for the 8-hour maximum ozone concentration.

Ozone exposure causes adverse health effects primarily in the respiratory system. Scientific evidence indicates that even relatively low levels of ozone can cause health effects. People with lung disease, children, older adults, and people who are active outdoors may be particularly sensitive to ozone. Children are at greatest risk when ozone levels are high because their lungs are still developing and are more likely to be outdoors when levels are high. There are many health problems related to ozone, such as chest pain, coughing, throat irritation. It can exacerbate bronchitis, emphysema, and asthma; reduce lung function; and inflame lung linings. Chronic exposure may permanently damage scar lung tissue (EPA 2012a).

## ***Carbon Monoxide***

CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. Motor vehicle exhaust and other nonroad engines (such as construction equipment and boats) make up the majority of all CO emissions nationwide. Higher CO levels generally occur in areas with heavy traffic congestion. In cities, virtually all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources, such as forest fires. The highest levels of CO in the outside air typically occur during the colder months, when inversion conditions become more frequent, trapping the air pollution near the ground beneath a layer of relatively warm air.

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, drastically reducing the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2012b).

## ***Particulate Matter***

Particulate matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. PM<sub>10</sub> is of particular concern because it is small enough to generally pass through the throat and nose and enter the lungs, and possibly the bloodstream. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Inhalable coarse particles, such as those found near roadways and dusty industries, are between 2.5 micrometers and 10 micrometers in diameter. Fine particles, such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller (PM<sub>2.5</sub>). These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries, and automobiles react in the air. Exposure to PM has been linked to health problems such as nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, respiratory irritation, and even premature death in people with heart or lung disease (EPA 2013a).

## ***Nitrogen Dioxide***

NO<sub>2</sub> is a one of a group of highly reactive gases known as NO<sub>x</sub>. EPA's NAAQS uses NO<sub>2</sub> as the indicator for the larger group of nitrogen oxides. NO<sub>2</sub> forms quickly from emissions from cars, trucks and buses, power plants, and off-road equipment. NO<sub>2</sub> is linked with a number of adverse effects on the respiratory system, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. NO<sub>2</sub> concentrations in vehicles and near roadways are considerably higher than those measured at monitors in the current network. Therefore, individuals who spend time on or near major roadways are at a much higher risk of short-term NO<sub>2</sub> exposures (EPA 2013b).

## **Sulfur Dioxide**

SO<sub>2</sub> is one of a group of highly reactive gases known as oxides of sulfur (SO<sub>x</sub>). The largest sources of SO<sub>2</sub> emissions are from fossil fuel combustion at power plants and other industrial facilities (EPA 2014). Smaller sources of SO<sub>2</sub> emissions include industrial processes and the burning of high-sulfur-containing fuels by locomotives, large ships, and nonroad equipment. Short-term SO<sub>2</sub> exposure causes adverse health effects and increased asthma symptoms. Studies show a link between short-term exposure and increased emergency room visits and hospital admissions for respiratory illnesses, particularly for asthmatics and children (EPA 2014).

## **Lead**

Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of EPA's regulatory efforts to remove lead from gasoline for on-road motor vehicles, lead emissions from the transportation sector declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. The major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline (EPA 2012c).

## **Monitoring Station Data**

The Sacramento–Del Paso Manor Monitoring Station is located approximately 11.5 miles west-northwest of the SVRA. Although there are variations in pollutant concentrations at each monitoring station, the Sacramento–Del Paso Manor monitoring station is considered representative of the air quality conditions in Sacramento County. The station monitors ozone, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Table 2-5 summarizes the exceedances of the NAAQS and CAAQS and the highest pollutant levels recorded at this station from 2010 through 2012.

<b>Table 2-5. Ambient Air Quality Summary for the Sacramento–Del Paso Manor Monitoring Station</b>			
Pollutant Standards	2010	2011	2012
<b>Carbon Monoxide</b>			
Maximum 8-hour concentration (ppm)	1.90	2.27	1.51
<b>Number of Days Standard Exceeded</b>			
NAAQS 8-hour ( $\geq 9$ ppm)	0	0	0
CAAQS 8-hour ( $\geq 9.0$ ppm)	0	0	0
<b>Nitrogen Dioxide</b>			
Maximum 1-hour concentration (ppm)	0.052	0.047	0.051
Annual average (ppm)	0.008	0.009	.0009

<b>Table 2-5. Ambient Air Quality Summary for the Sacramento–Del Paso Manor Monitoring Station</b>			
Pollutant Standards	2010	2011	2012
<b>Number of Days Standard Exceeded</b>			
NAAQS 1-hour	0	0	0
CAAQS 1-hour	0	0	0
<b>Ozone</b>			
Maximum 1-hour concentration (ppm)	0.105	0.110	0.112
Maximum 8-hour concentration (ppm)	0.093	0.089	0.096
<b>Number of Days Standard Exceeded</b>			
CAAQS 1-hour (>0.09 ppm)	6	1	6
CAAQS 8-hour (>0.070 ppm)	7	9	21
NAAQS 8-hour (>0.075 ppm)	5	3	12
<b>Particulate Matter (PM<sub>10</sub>)<sup>a</sup></b>			
National maximum 24-hour concentration (µg/m <sup>3</sup> )	44	62	41
State maximum 24-hour concentration (µg/m <sup>3</sup> )	44	66	43
National annual average concentration (µg/m <sup>3</sup> )	15.9	19.9	15.4
State annual average concentration (µg/m <sup>3</sup> )	16.3	20.7	15.8
<b>Number of Days Standard Exceeded</b>			
NAAQS 24-hour (>150 µg/m <sup>3</sup> )	0	0	0
CAAQS 24-hour (>50 µg/m <sup>3</sup> )	0	2	0
<b>Particulate Matter (PM<sub>2.5</sub>)<sup>a</sup></b>			
National maximum 24-hour concentration (µg/m <sup>3</sup> )	33.9	54.3	35.3
State maximum 24-hour concentration (µg/m <sup>3</sup> )	41.6	62.2	45.7
National annual average concentration (µg/m <sup>3</sup> )	8.7	10.4	9.1
State annual average concentration (µg/m <sup>3</sup> )	8.7	11.6	9.2
<b>Number of Days Standard Exceeded</b>			
NAAQS 24-hour (>35 µg/m <sup>3</sup> )	0	3	0
Notes: µg/m <sup>3</sup> = micrograms per cubic meter; CAAQS = California ambient air quality standard; NAAQS = national ambient air quality standard; PM <sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; PM <sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less			
<sup>a</sup> State and national statistics may differ for the following reasons: State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. State statistics are based on local conditions, while national statistics are based on standard conditions. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.			
Source: ARB 2015			

SMAQMD has jurisdiction over air quality conditions in Sacramento County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of SMAQMD involves preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations regarding air pollution sources, and issuing permits for stationary sources of air pollution. SMAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the federal Clean Air Act (CAA), CAA Amendments, and California Clean Air Act (CCAA).

With respect to the CAAQS (see the discussion of state air quality regulations and laws in Section 2.7.3, “Regulatory Influences”), SMAQMD is currently designated as a nonattainment area for ozone. SMAQMD is also a nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>. For all other pollutants, SMAQMD is an attainment or unclassified area. These three basic designation categories—“nonattainment,” “attainment,” and “unclassified”—are used to identify areas with air quality problems and thereby initiate planning efforts for improvement. The “unclassified” designation is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. With respect to the NAAQS, SMAQMD is designated as a severe nonattainment area for ozone, nonattainment under the national 24-hour standard for PM<sub>2.5</sub>, and as an attainment, unclassified, or attainment pending area for all other pollutants.

Many of the trails and riding areas in Prairie City SVRA have loose gravel, silt, and cobbles. When the loose soils are disturbed by OHV use during the dry months, fugitive dust (up to PM<sub>10</sub>) becomes airborne. The presence of geographic barriers and inversions resulting in a stable atmosphere cause PM to accumulate and achieve elevated concentrations, thus reducing visibility and increasing periods with potentially adverse health effects. With respect to the planning area, the periods of greatest concern for elevated PM<sub>10</sub> concentrations (the summer months, given the dry soil conditions) do not coincide with the periods of greatest OHV activity at Prairie City SVRA (the spring and fall). High average daily temperatures in the summer discourage the use of Prairie City SVRA. Peak SVRA use normally tends to be during the late spring and fall, when soils are not as dry and less likely to become airborne.

Existing use of OHVs at Prairie City SVRA creates exhaust emissions from fuel combustion. These emissions include gases known as ozone precursors (e.g., ROG and NO<sub>x</sub>), which, when exposed to sunlight, react with other gases in the atmosphere to form ozone. Therefore, during summertime when higher temperatures are sustained throughout the day, elevated ozone concentrations are typically observed throughout the state. Limiting ROG and NO<sub>x</sub> emissions is a primary goal of SMAQMD to minimize regional ozone generation



## **Existing Air Quality—Toxic Air Contaminants**

Concentrations of toxic air contaminants (TACs) or hazardous air pollutants are also used as indicators of ambient air quality conditions. TACs 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.

According to *The California Almanac of Emissions and Air Quality* (ARB 2013), most of the estimated health risk from TACs is attributed to relatively few compounds, the most dominant being particulate matter exhaust from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Diesel PM emissions in the Sacramento metropolitan area have decreased from 4 tons per day in 2000 to 2 tons per day in 2010, primarily as a result of reduced exhaust emissions from diesel mobile sources. The almanac also indicates that emissions from diesel mobile sources are projected to continue to decrease through 2035.

ARB uses the emissions inventory PM<sub>10</sub> database, ambient PM<sub>10</sub> monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, ARB has established a toxics monitoring network in California for other TACs, including benzene, formaldehyde, and toxic metals (e.g., arsenic, selenium, antimony) (ARB 2014a).

## **Existing Air Quality—Fugitive Dust and Cadmium**

In September 2011, a human health and ecological risk assessment (HHERA) was prepared for Prairie City SVRA. According to the sampling results from the 2011 HHERA, cadmium was found in soil samples at concentrations above its remedial investigation soil screening level. The HHERA included cadmium in the calculation of multi-pathway risk from soil, groundwater, and surface water; however, inhalation health risks (cancer and noncancer) were assessed without determining the composition of cadmium in the fugitive dust. EPA has classified cadmium as a probable human carcinogen.

In August 2015, AECOM conducted a conservative assessment of the health risks caused by inhalation of fugitive dust containing elemental cadmium that could be generated during activities at Prairie City SVRA. The assessment was conducted to determine whether SVRA users could experience a health hazard from inhaling cadmium in the fugitive dust (AECOM 2015).

To assess the potential cancer risk and chronic hazard quotient of cadmium in fugitive dust, dispersion modeling was performed to estimate the concentration of elemental cadmium within the boundaries of Area 39. The methodology involved characterizing sources and estimating emissions, identifying receptors, modeling air dispersion, assessing exposure, and obtaining meteorological data.

The results of the health risk analysis are summarized below.

- ▶ Maximum cancer risk from cadmium exposure in fugitive dust 0.99 in 1 million  
*Threshold of significance* 10 in 1 million
  
- ▶ Maximum chronic inhalation cumulative hazard index from cadmium 0.0077  
*Threshold of significance* 1.0

Based on AECOM’s preliminary analysis with conservative assumptions, the health impact from inhalation of cadmium-containing fugitive dust would not exceed the established thresholds for cancer risk and chronic health hazard set by the Office of Environmental Health hazard Assessment.

### **Existing Air Quality—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 of people to detect odors varies considerably and is quite subjective. Some individuals can smell minute quantities of specific substances; others may not have the same sensitivity but may be sensitive to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person (e.g., an odor from a fast food restaurant) 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, because of a phenomenon known as odor fatigue. A person can become desensitized to almost any odor and recognition occurs only with an alteration in the intensity. Among the industries and/or facilities typically associated with objectionable odors are wastewater treatment plants, landfills, composting facilities, petroleum refineries, chemical and fiberglass manufacturing plants, and food processing facilities.

#### **2.3.1.8 CLIMATE CHANGE**

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface, and a smaller portion is reflected back toward space. The absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but as lower frequency infrared radiation.

The frequencies at which physical objects emit radiation are proportional to their temperature. In other words, objects that are at high temperatures would emit higher frequency radiation than objects that are at lower temperatures. The earth has a much lower temperature than the sun; therefore, the earth emits radiation at a lower frequency (longer wavelength). Most solar radiation passes through GHGs;





however, infrared radiation is selectively absorbed by GHGs. As a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated compounds. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth’s climate, known as global climate change (IPCC 2007).

Climate change is a worldwide problem. GHGs are global pollutants, unlike criteria air pollutants and TACs (discussed in the description of air quality regulations and laws in Section 2.7.3, “Regulatory Influences”), 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). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe.

The exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed; however, more CO<sub>2</sub> is currently emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO<sub>2</sub> emissions in a year, approximately 54 percent is sequestered through ocean uptake, uptake by Northern Hemisphere forest regrowth, and other terrestrial sinks, whereas the remaining 46 percent of human-caused CO<sub>2</sub> emissions remains stored in the atmosphere (Seinfeld and Pandis 1998). At 78 percent of GHG emissions, fossil fuel combustion is the biggest source of GHG emissions in the U.S. since 1990 (EPA 2013c).

Natural resource management is changing as warming trends take place and scientists predict future warming. As a result of these trends, resource management focuses on reducing key environmental stressors on biological resources, providing hedges against resource losses from the impacts of climate change, and possible evolutionary responses. The precise quantity of GHGs that it takes to ultimately result in climate change is not known, although the quantity is enormous. No single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climates.

The use of OHVs at Prairie City SVRA creates exhaust emissions from fuel combustion to operate the OHVs and from vehicles driven various distances to reach the SVRA. These emissions include GHGs. Typically few OHVs have devices to control emissions; as a result, all gases generated from the combustion of fuel, including GHGs, are emitted to the atmosphere. Adding these GHGs (see Table 3.6-1 in DEIR Section 3.6, “Greenhouse Gas Emissions”) will add to the cumulative impacts on the earth’s changing climate.



## 2.3.2 BIOTIC RESOURCES

This section describes the vegetation communities and plant and animal life present or likely to occur at Prairie City SVRA.

The following information sources and studies were used to inform the existing conditions of biological resources known or expected to occur in the planning area:

- ▶ CDFW California Natural Diversity Database (CNDDDB) (2014)
- ▶ USFWS Endangered and Threatened Species Database (USFWS 2014)
- ▶ California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2015)
- ▶ Results of vegetation mapping for the planning area (originally conducted by Parus Consulting, adapted by AECOM 2014b)
- ▶ *Prairie City State Vehicular Recreation Area Biological Resources Assessment* (State Parks 2013b)
- ▶ *A Summary of Monitoring Wildlife at Carnegie SVRA and Prairie City SVRA (2003–2009)* (State Parks 2012d)
- ▶ Global positioning system (GPS) survey of wetlands on the Yost property, conducted by AECOM biologists in 2013
- ▶ Wetland delineations of the planning area and subsequent verification by the U.S. Army Corps of Engineers (USACE) (2004, 2008)
- ▶ Site tour, meetings, and correspondence with representatives of the Central Valley Regional Water Quality Control Board (RWQCB) during General Plan formulation
- ▶ Habitat Monitoring System (HMS) reports for Prairie City SVRA (State Parks 1998, n.d.[a] through n.d.[h], and 2005b) and unpublished HMS data from surveys conducted from 2005 through 2014

The Wildlife Habitat Protection Program (WHPP) is a detailed wildlife and habitat inventory and monitoring plan developed for each SVRA unit, including Prairie City SVRA. As part of the WHPP, State Park environmental scientists and volunteers conduct surveys for wildlife species, including amphibians, reptiles, vernal pool invertebrates, and small mammals, in different years. Bird surveys are conducted twice annually in spring and winter. Vegetation sampling is completed periodically along transects within selected vegetation communities. Beginning in 1993, 21 baseline vegetation monitoring stations were established to cover all of the vegetation types present in the planning area. All plant species encountered during vegetation monitoring and incidental observations are recorded



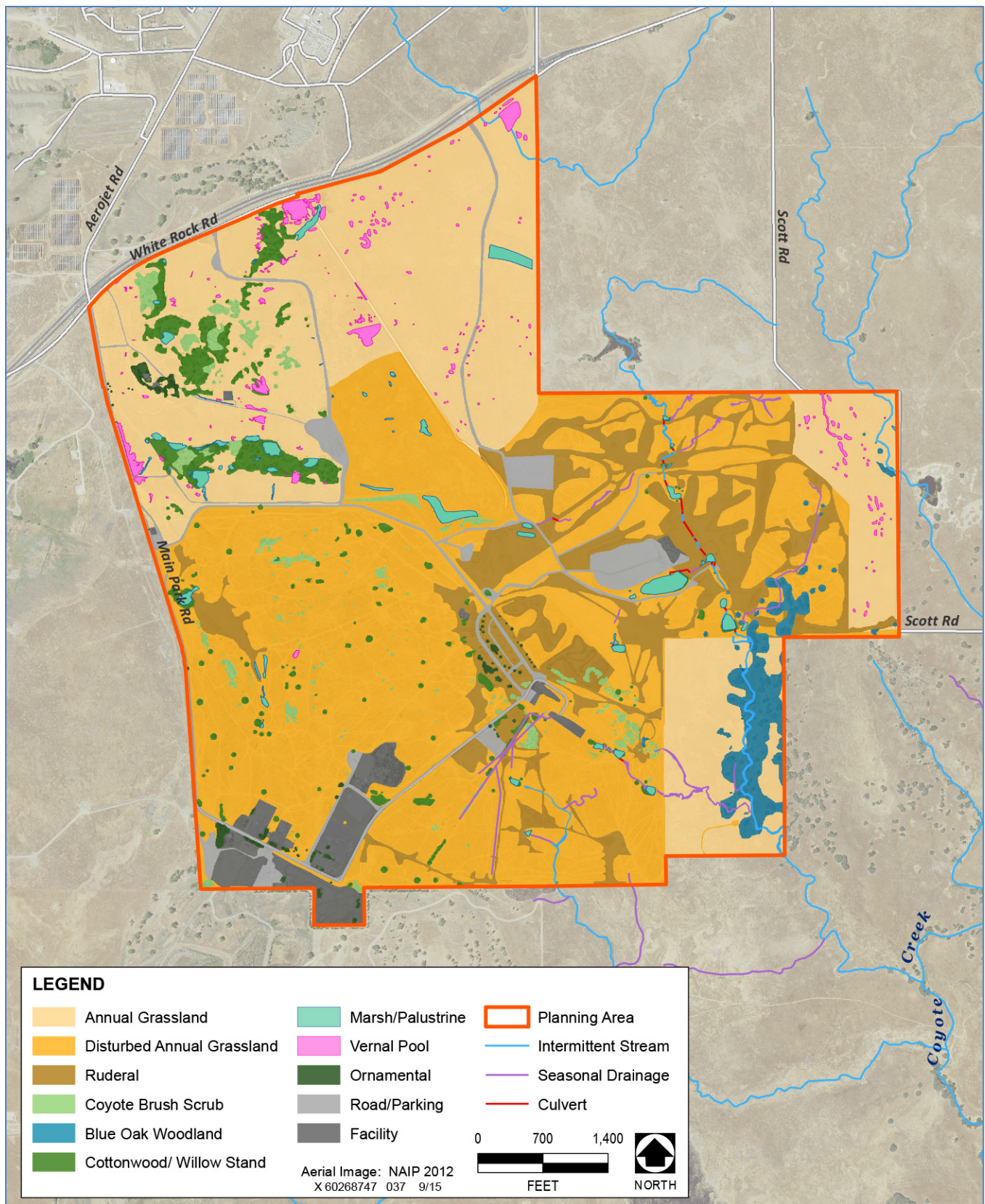
on a master species list maintained by State Parks for the planning area. Vegetation sampling was conducted in the vernal pool communities in 2009, 2011, and 2014. The HMS reports give a thorough baseline inventory of the units, analysis of species diversity, and recommended future monitoring procedures and strategies. State Parks conducts annual monitoring and reporting of its SVRAs. The HMS was originally designed and implemented in the 1990s and updated in 2009 based on an independent review by the University of California, Davis.

### 2.3.2.1 VEGETATION

The planning area is located at the boundary between the Sacramento Valley and Sierra Nevada Foothills geographic subregions, both of which are contained within the larger California Floristic Province (Baldwin et al. 2012). Nine vegetation communities are present in the planning area (Table 2-6) and are described below. Their location and extent in the planning area are shown in Figure 2-16. Vegetation mapping in the planning area was originally conducted by Parus Consulting in support of the planning effort. Subsequently, AECOM biologists surveyed additional areas, conducting a GPS survey of wetlands on the Yost property, and digitized wetlands for the Barton Ranch acquisition area using 2012 aerial imagery from the National Agriculture Imagery Program. Vegetation nomenclature follows the classification system of the *Manual of California Vegetation* (MCV) (Sawyer et al. 2009) to the degree feasible, but modifications are applied to account for site-specific variability as necessary. Because of the fragmented and disturbed nature of the vegetation in the current riding area, some of the vegetation assemblages found there do not fit into the MCV classification system. In the case of other categories recognized here, such as vernal pools, several MCV types could be identified in the category based on the exact species composition in any given pool or specific gradient in a given pool. Table 2-6 includes a crosswalk to corresponding MCV community types.

Name	MCV Types	Acres
Annual grassland	Annual brome grasslands, wild oats grasslands	345
Coyote brush scrub	Coyote brush scrub	17
Blue oak woodland	Blue oak woodland	23
Cottonwood/willow stand	Fremont cottonwood forest, red willow thickets, sandbar willow thickets	33
Developed/ornamental	NA	86
Disturbed annual grassland	Annual brome grasslands, wild oats grasslands, upland mustards, yellow star-thistle fields	463
Ruderal	Upland mustards, yellow star-thistle fields	127
Marsh/palustrine	NA	12
Vernal pool	Fremont’s goldfields-downingia vernal pools, pale spike rush marshes	9

Note: MCV = *Manual of California Vegetation*; NA = not applicable  
 Source: Parus Consulting, adapted by AECOM 2014b



Source: Parus Consulting, adapted by AECOM 2014b

**Figure 2-16. Vegetation Map**



## Annual Grassland and Disturbed Annual Grassland

The majority of the planning area (approximately 808 acres) is characterized by annual grassland vegetation that has been separated into two categories based on relative disturbance level. An area of approximately 345 acres is classified as annual grassland and an additional 463-acre area is classified as disturbed annual grassland. Annual grassland is located in areas where OHV use is currently prohibited and disturbance is relatively low compared to the areas currently used by OHVs. OHV use is prohibited in the northern area of the SVRA on the Yost property, in the ecological reserve area, and on 42 acres along the



Annual grassland at Prairie City SVRA.

eastern boundary of the SVRA. An area of 35 acres within those 42 acres has been designated as a buffer zone for Scott Road. The Circulation Element of the *Sacramento County General Plan of 2005–2030* identifies Scott Road between White Rock Road and Latrobe Road as especially scenic and warranting scenic corridor protection by Sacramento County (Sacramento County Community Planning & Development Department 2014:33; Lenzie and Singh, pers. comms., 2015). These annual grassland areas contain a mixture of native and nonnative forbs and nonnative annual grass species along with scattered areas of vernal pools, which are described in more detail below. Annual grassland areas are characterized by nonnative grasses such as Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), bromes (*Bromus diandrus*, *B. hordeaceus*), Medusahead (*Elymus caput-medusae*), quaking grass (*Briza maxima*), little rattlesnake grass (*B. minor*), oats (*Avena barbata*, *A. fatua*), nonnative forbs such as filaree (*Erodium botrys*) and turkey mullein (*Croton setigerus*), and native wildflowers such as frying pan poppy (*Eschscholzia lobbii*), white meadowfoam (*Limnanthes alba*), and valley tassels (*Castilleja attenuata*).

The 463 acres of Prairie City SVRA classified as disturbed annual grassland contain generally the same species as the undisturbed annual grassland but generally have lower vegetative cover overall and lower cover of native wildflowers. These areas also contain a higher percentage of weedy forbs such as black mustard (*Brassica nigra*), yellow star thistle (*Centaurea solstitialis*), and filaree (*Erodium* spp.). Areas of disturbed annual grassland are crisscrossed by OHV trails, but are less affected by OHV use than the heavily disturbed areas classified as ruderal and described below.



White meadowfoam (*Limnanthes alba*) flowers.

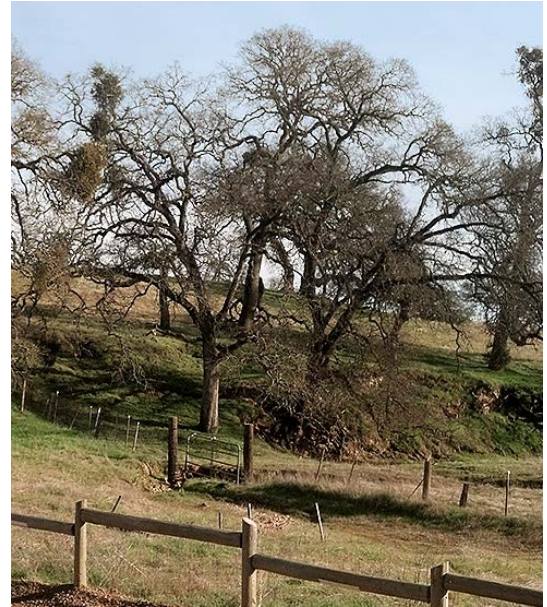


## Coyote Brush Scrub

Approximately 17 acres of Prairie City SVRA are classified as coyote brush scrub. This scrub habitat is located in patches throughout the SVRA. Coyote brush scrub is found in upland locations on open slopes and terraces. Coyote bush (*Baccharis pilularis*) is the predominant species in this vegetation community. Other scrub-like plants in the community include elderberry (*Sambucus nigra* ssp. *caerulea*), poison oak (*Toxicodendron diversilobum*), California coffeeberry (*Frangula californica*), and small slow-growing trees like interior live oaks (*Quercus wislizeni*). The coyote brush scrub is characterized by an understory of annual native and nonnative grasses as described for the disturbed annual grassland vegetation classification.

## Blue Oak Woodland

Approximately 23 acres of Prairie City SVRA consists of blue oak woodlands. Blue oak woodlands are dominated by blue oak (*Quercus douglasii*) mixed with other oak species such as interior live oak and valley oak (*Q. lobata*). Gray pine (*Pinus sabiniana*) is often present as well. These areas are located almost exclusively in the southeast portion of the SVRA. Additional patches of blue oak woodland within Prairie City SVRA are highly fragmented and isolated and therefore were not mapped separately, but included in the surrounding vegetation types.



Blue oak woodland.

## Cottonwood/Willow Stand

The most abundant tree-dominated community at Prairie City SVRA is cottonwood/willow stands, which total approximately 33 acres. This community is scattered throughout the SVRA, especially in low-lying areas created by previous dredging operations, along marsh banks, and within the Yost property in the northern portion of the SVRA. The canopy of the cottonwood/willow stand vegetation community consists of co-dominant native tree species such as Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*) and willows (*Salix* spp.). Some of these stands may represent vestiges of riparian corridors. The understory consists of species described for the disturbed annual grassland and marsh/palustrine vegetation classifications.



Cottonwood/willow stand at Prairie City SVRA.

### **Developed/Ornamental**

Developed areas and areas characterized by ornamental vegetation at Prairie City SVRA total approximately 86 acres. The “developed” classification applies to facilities, roads, and parking lots with either paved or gravel surfaces. If vegetation exists in these areas, it consists of nonnative grasses and forbs and lacks a consistent vegetative community structure. The “ornamental” vegetation classification includes stands of California native and nonnative trees that appear to have been planted for shade, visual barriers, environmental training, and aesthetics. These areas are scattered throughout Prairie City SVRA, although they are located primarily around the developed and ruderal vegetation communities. Some of the ornamental species present include coast redwood (*Sequoia sempervirens*), Chinese pistachio (*Pistacia chinensis*), Oregon ash (*Fraxinus latifolia*), and pine (*Pinus* sp.).

### **Ruderal**

Ruderal vegetation at Prairie City SVRA is concentrated primarily around parking areas and facilities in the southern and eastern areas of the SVRA, where vegetation has been removed and/or OHV use appears to be heaviest. The ruderal classification in combination with these areas devoid of vegetation totals approximately 127 acres. The altered condition of these lands affords abundant opportunities for the growth of nonnative vegetation; it greatly reduces the ability to sustain native and rare plants and a wide diversity of wildlife. However, species that are considered tolerant of human activities or are known as primary successor species may be common in these areas. Vegetative species found in these areas include black mustard, prickly lettuce (*Lactuca serriola*), thistles (*Carduus pycnocephalus*, *Centaurea solstitialis*, *Cirsium* sp., *Silybum marianum*), and wild radish (*Raphanus sativus*).

### **Marsh/Palustrine**

The marsh/palustrine vegetation community at Prairie City SVRA is associated with permanent and relatively permanent water features interspersed within the cottonwood/willow stands and the annual grassland communities described above. Characteristic plant species include blackberry (*Rubus armeniacus*), cattail (*Typha* sp.), and rushes (*Juncus* sp.). These species dominate the banks and

shallows of permanent and relatively permanent water features at Prairie City SVRA. Many of these marsh habitats are located in depressions or pits in the landscape that are a result of placer dredge mining activities. In total, approximately 12 acres of marsh/palustrine habitat exist within the SVRA.



Vernal pools at Prairie City SVRA.

### **Vernal Pool**

A formal wetland delineation of the areas identified as vernal pools was not performed in support of this planning process; however, State Parks previously mapped vernal pools in the ecological reserve area and the buffer zone along the eastern edge of the SVRA in 1994 and 1996. AECOM mapped vernal pools on the Yost property in 2013. Vernal pools in the southeastern Sacramento Valley are classified as northern hardpan vernal pools. Vernal pools occur within the undisturbed annual grassland in the northern portion of the SVRA and in the eastern portion of Prairie City SVRA. Both areas had numerous pools retaining water at the time of the vegetation mapping effort conducted by Parus. Northern hardpan vernal pools are defined as pools that fill after winter rains in settings of impeded water over areas with hardpans (Sawyer and Keeler-Wolf 1995). Vernal pools are supported by direct precipitation and surface runoff. They pond during the wet season and typically become dry by late spring. Vernal pools are typically characterized by a high percentage of native plant species, many of which are endemic (restricted) to vernal pools. Typical species found in these vernal pools include Fremont’s goldfields (*Lasthenia fremontii*), downingia (*Downingia* spp.), annual hairgrass (*Deschampsia danthonioides*), pale spikerush (*Eleocharis macrostachya*), stipitate popcorn flower (*Plagiobothrys stipitatus*), and vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*).

#### **2.3.2.2 COMMON WILDLIFE**

The planning area supports a variety of common and special-status wildlife species within the habitats described above. This section describes some of the species commonly observed in the planning area by habitat.





### **Wildlife Associated with Annual Grassland**

Species observed or likely to be found in the annual grassland habitat include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*), California kingsnake (*Lampropeltis getula californiae*), savanna sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), killdeer (*Charadrius vociferus*), coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus columbianus*), California ground squirrel (*Otospermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), bobcat (*Lynx rufus*), California meadow vole (*Microtus californicus*), house mouse (*Mus musculus*), and muskrat (*Ondatra zibethicus*) (State Parks n.d.[a], n.d.[c], n.d.[h], 1991, 2013b).



Mallards in marsh/palustrine area.

### **Wildlife Associated with Coyote Brush Scrub**

White-crowned sparrow (*Zonotrichia leucophrys*), western meadowlark, house finch (*Haemorhous mexicanus*), red-winged blackbird (*Agelaius phoeniceus*), and California meadow vole and deer mouse (*Peromyscus maniculatus*) are commonly observed wildlife in the coyote brush scrub (State Parks n.d.[g], n.d.[h]).

### **Wildlife Associated with Oak Woodland**

Oak woodland provides essential nest site and cover for many species such as western fence lizard, pacific treefrog (*Pseudacris regilla*), acorn woodpecker (*Melanerpes formicivorus*), and western scrub jay (*Aphelocoma californica*) (State Parks 1991).

### **Wildlife Associated with Cottonwood/Willow**

Common wildlife species associated with cottonwood/willow stands include black phoebe (*Sayornis nigricans*), red-winged blackbird, and spotted towhee (*Pipilo maculatus*) (State Parks 2013b).

### **Wildlife Associated with Marsh/Palustrine**

Western toad (*Bufo boreas*) and Sierran treefrog (*Pseudacris sierra*) are common species found in the marsh/palustrine habitat.

### **Wildlife Associated with Vernal Pools**

Vernal pools also support a variety of aquatic invertebrates during the winter and spring rainy season, including California linderiella (*Linderiella occidentalis*), vernal pool fairy shrimp (*Branchinecta*



*lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*), as well as amphibians such as western toad and Sierran treefrog.

### **Wildlife Associated with Ruderal Habitats**

Ruderal and developed areas contain little or no value for wildlife. Some commonly observed birds include European starling (*Sturnus vulgaris*) and Brewer's blackbird (*Euphagus cyanocephalus*) (State Parks n.d.[g]).

### **2.3.2.3 SPECIAL-STATUS PLANT AND WILDLIFE SPECIES**

Special-status species are generally defined as those species that are listed under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA), or that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. Special-status plant and wildlife species with potential to occur in the planning area are described below.

#### **Special-Status Plants**

Focused surveys for special-status plant species have not been conducted for the entire planning area; however, plant species data are collected along transects and in relevés during periodic vegetation monitoring as part of the HMS. In addition, protocol-level special-status plant surveys have been conducted in vernal pool habitats in the areas where riding does not occur. The survey efforts emphasized special-status species and their associated habitats (State Parks 2013b). One special-status plant, legenere (*Legenere limosa*), was found the large vernal pool in the northeast corner of the planning area during spring monitoring in 2015. No other special-status plant species were identified during previous vegetation sampling efforts or special-status plant surveys conducted in the vernal pool areas.

Based on searches of the CNDDDB, the CNPS Electronic Inventory of Rare and Endangered Plants of California, and the Sacramento USFWS Office Species Lists, and on consideration of the habitats present and the location of the planning area relative to the species' known distribution ranges, 10 special-status plant species have the potential to occur in the planning area (CNDDDB 2014; CNPS 2015; USFWS 2014) (Table 2-7). The CNDDDB and CNPS databases were queried using the USGS 7.5-minute quadrangle in which the planning area is located (Buffalo Creek) and the eight surrounding quadrangles as search criteria. Several additional special-status plant species that are known to occur in the nine-quadrangle search area have no potential to occur in the planning area because they are restricted to particular soil types (e.g., serpentinite or gabbroic) or other habitat types (e.g., chaparral) that are not present, or because they have a very limited distribution range that does not include the planning area.



Table 2-7. Special-Status Plant Species with the Potential to Occur at Prairie City SVRA					
Common Name	Scientific Name	Status <sup>1</sup>	General Habitat	Microhabitat	Potential to Occur <sup>2</sup>
Brandegee's clarkia	<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	CRPR 4.2	Chaparral, cismontane woodland.	Often in road cuts; 75–885 m.	Could occur. The CNDDDB reports an occurrence within 2 miles of the planning area. Limited woodland habitat exists within the planning area.
Dwarf downingia	<i>Downingia pusilla</i>	CRPR 2B.2	Valley and foothill grassland (mesic sites), vernal pools.	Vernal lake and pool margins with a variety of associates; in several types of vernal pools; 1–485 m.	Could occur. The CNDDDB reports an occurrence within 1.5 miles of the planning area. Suitable habitat exists within the planning area.
Tuolumne button-celery	<i>Eryngium pinnatisectum</i>	CRPR 1B.2	Mesic sites within cismontane woodland and lower montane coniferous forests.	Vernal pools, swales, and seasonal streams on volcanic soils; 70–950 m.	Could occur. Vernal pools on site are marginally suitable for this species.
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	CE	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 5–2,400 m.	Could occur. The CNDDDB reports an occurrence within 0.5 miles of the planning area. Suitable habitat exists within the planning area.
Ahart's dwarf rush	<i>Juncus leiospermus</i> var. <i>ahartii</i>	CRPR 1B.2	Vernal pools.	Generally on the edges of vernal pools; often seen on previous year's gopher mounds; 30–100 m.	Could occur. Suitable habitat exists within the planning area.
Legenere	<i>Legenere limosa</i>	CRPR 1B.1	Vernal pools; many occurrences are extirpated.	In beds of vernal pools. Prefers deeper and wetter vernal pools; 1–880 m.	Known to occur. Species observed in the spring of 2015 in a large vernal pool in the northeast corner of the planning area (State Parks 2015a).
Pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	CRPR 1B.1	Vernal pools, valley and foothill grassland.	Clay soils within nonnative grassland; 20–330 m.	Could occur. The CNDDDB reports an occurrence within 4 miles of the planning area. Suitable habitat exists within the planning area.
Slender Orcutt grass	<i>Orcuttia tenuis</i>	FT, CE	Vernal pools.	Often in gravelly beds of vernal pools; 30–1,735 m.	Could occur. The CNDDDB reports an occurrence within 4 miles of the planning area. Suitable habitat exists within the planning area.
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	FE, CE	Vernal pools.	Vernal pools; 30–100 m.	Could occur. The CNDDDB reports an occurrence within 2 miles of the planning area. Suitable habitat exists within the planning area.
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	FE, CE	Valley and foothill grassland, cismontane woodland.	Shallow, well-drained, medium-textured soils, predominantly on the northern slopes of mima mounds, but also near vernal pools; 15–150 m.	Unlikely to occur. Suitable microhabitat is not present and the planning area is outside of this species' current known range, which is limited to the central Sierra Nevada foothills and eastern San Joaquin Valley (Madera, Fresno, and Stanislaus Counties). No CNDDDB occurrences are recorded in Sacramento County. A herbarium specimen was collected of this species from the vicinity of 55th and H Streets in Sacramento in 1956. This occurrence has been extirpated and no subsequent occurrences have been documented in Sacramento County.
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	CRPR 1B.2	Marshes and swamps.	In standing or slow-moving freshwater ponds, marshes, and ditches; 0–610 m.	Could occur. The CNDDDB reports an occurrence within 2 miles of the planning area. Suitable habitat exists within the planning area.

Notes: CNDDDB = California Natural Diversity Database; CRPR = California Rare Plant Rank; m = meters; SVRA = State Vehicular Recreation Area. Status definitions listed below.

<sup>1</sup> **Status**  
**Federal**  
FE = Listed as endangered under the federal Endangered Species Act (ESA)  
FT = Listed as threatened under the ESA  
**State**  
CE = Listed as endangered under the California Endangered Species Act (CESA)  
CT = Listed as threatened under the CESA  
**CRPR definitions:**  
1B.1: Rare, threatened, or endangered in California and elsewhere, and seriously endangered in California  
1B.2: Rare, threatened, or endangered in California and elsewhere, and fairly endangered in California  
2B.2: Rare, threatened, or endangered in California but more common elsewhere, and fairly endangered in California  
**California Department of Fish and Wildlife (CDFW)**  
CSC = California species of special concern  
Sources: CDFW 2014; CNPS 2015; State Parks 2013b; USFWS 2014; Witham 2006; data compiled by AECOM in 2013.

Table 2-8. Special-Status Wildlife Species Known from or with Potential to Occur in the Vicinity of Prairie City SVRA						
Common Name	Scientific Name	Status <sup>1</sup>	General Habitat	Microhabitat	Potential to Occur <sup>2</sup>	
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT	Occurs only in the Central Valley of California, in association with blue elderberry.	Prefers to lay eggs in elderberries 2–8 inches in diameter.	Could occur. The CNDDDB reports an occurrence within 2.5 miles of the planning area and elderberry shrubs are present in the planning area. Possible exit holes have been observed on elderberry shrubs on-site.	
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools.	Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Known to occur. Species first observed during surveys conducted in the 1990s (Jones & Stokes 1994; Brittan 1996; both cited in State Parks n.d.[g]). Species also observed during an informal survey in March 2014 (State Parks 2014b).	
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.	Pools commonly found in grass bottomed swales of unplowed grasslands; some pools are mud-bottomed and highly turbid.	Known to occur. Species observed during surveys conducted in the 1990s (Jones & Stokes 1994; Brittan 1996; both cited in State Parks n.d.[g]).	
Cooper's hawk	<i>Accipiter cooperii</i>	WL (nesting)	Woodland, chiefly of open, interrupted, or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	Known to occur. Suitable nesting habitat exists within the planning area. Species observed at numerous locations throughout the planning area during both breeding and nonbreeding seasons, but no nesting pairs have been observed (State Parks n.d.[d], n.d.[e], n.d.[h], 2014c).	
Tricolored blackbird	<i>Agelaius tricolor</i>	CT (nesting colony)	Forages in agricultural lands and grasslands; nests in marshes and riparian scrub. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or thistles. Requires open water; protected nesting substrate, such as flooded, spiny, or thorny vegetation; and foraging area with insect prey within a few kilometers of the colony.	Known to occur. Suitable nesting habitat exists in marsh/palustrine habitat within the planning area. Species has been observed 106 times throughout the planning area during spring bird count surveys since 2010, but breeding has not been documented in the planning area (State Parks n.d.[h]).	
Grasshopper sparrow	<i>Ammodramus savannarum</i>	CSC (nesting)	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting.	Known to occur. Suitable nesting habitat exists within the planning area. Species observed at Deer Creek Hills (State Parks n.d.[f]). Could nest in the planning area.	
Golden eagle	<i>Aquila chrysaetos</i>	FP, WL (nesting and wintering)	Rolling foothills, mountain areas, sage-juniper flats, and deserts.	Cliff-walled canyons provide nesting habitat in most parts of range; large trees in open areas.	Known to occur. Suitable foraging habitat exists and this species was observed within the planning area, presumably foraging (State Parks n.d.[d]). Unlikely to nest in the planning area.	
Burrowing owl	<i>Athene cunicularia</i>	CSC (burrow sites and some wintering sites)	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Known to occur. Suitable burrow habitat exists within the planning area. Individual observed during the winter months near a pile of rocks at the south end of the four-wheel-drive area, presumably wintering (State Parks n.d.[e]).	
Swainson's hawk	<i>Buteo swainsoni</i>	CT (nesting)	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannas, and agricultural areas.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Known to occur. Suitable nesting and foraging habitat exists within the planning area and there have been 56 observations of this species in the planning area between 2010 and 2014. Nesting pair has been observed in the riding area (State Parks n.d.[h]). Two confirmed nests observed on the Yost property and near the Prairie City Motocross Track during spring 2014 (State Parks 2014c). Two confirmed nests observed on the Yost property and one confirmed nest observed within the OHV riding area near the western boundary of the SVRA (State Parks 2015b, 2015c, 2015d).	

Table 2-7. Special-Status Plant Species with the Potential to Occur at Prairie City SVRA						
Common Name	Scientific Name	Status <sup>1</sup>	General Habitat	Microhabitat	Potential to Occur <sup>2</sup>	
Northern harrier	<i>Circus cyaneus</i>	CSC (nesting)	Nests and forages in a variety of open habitats including grasslands, meadows, and marshes, from salt grass in desert sinks to mountain springs.	Nests on ground, mostly in patches of dense, tall vegetation, often at marsh edges.	Known to occur. Suitable nesting habitat exists within the planning area. Species was observed within the planning area 9 times during the breeding season and 37 times during the nonbreeding season since 2010 (State Parks n.d.[e], n.d.[h]).	
Olive-sided flycatcher	<i>Contopus cooperi</i>	CSC (nesting)	Nests in mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine forests.	Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes, or other open terrain.	Unlikely to nest. The planning area does not contain the species' preferred breeding habitat and is outside of species' known breeding range. Species observed passing through the planning area to its breeding grounds in the Sierra Nevada during the 2003 surveys (State Parks n.d.[d]).	
Yellow warbler	<i>Dendroica petechia brewsteri</i>	CSC (nesting)	Riparian plant associations; prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging.	Also nests in montane shrubbery in open conifer forests.	Unlikely to nest. The planning area is outside of the species' current known breeding range. Species has been observed passing through the planning area during migration (State Parks n.d.[d]).	
White-tailed kite	<i>Elanus leucurus</i>	FP (nesting)	Rolling foothills and valley margins with scattered trees and river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, marshes, and agricultural fields for foraging close to (within 0.5 mile of) dense-topped trees for nesting and perching. Nests in isolated trees or trees at edges of groves, woodlands, or riparian zones.	Known to occur. Suitable nesting habitat exists within the planning area. Species observed foraging within the planning area (State Parks n.d.[d]).	
Willow flycatcher	<i>Empidonax traillii</i>	CE (nesting)	Extensive thickets of low, dense willows on edges of wet meadows, ponds, or backwaters.	Nests in dense willow thickets; perches on low, exposed branches; 2,000–8,000 feet elevation.	Unlikely to nest. The planning area does not contain the species' preferred breeding habitat and is outside of the species' known breeding range. Observed during migration (State Parks n.d.[d]).	
California horned lark	<i>Eremophila alpestris actia</i>	WL	Grasslands and other open habitats with low, sparse vegetation.	Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. Nests on the ground in grass-lined, cup-shaped nests built in depressions on the ground in open habitat.	Known to occur. Species has been observed 86 times within the planning area since 2010, including 36 observations during the breeding season, but no nests have been documented (State Parks n.d.[e], n.d.[h]). Observations of flocks on the road and associated ruderal habitat near the staging area.	
Merlin	<i>Falco columbarius</i>	WL (wintering)	Seacoast, tidal estuaries, open woodlands, savannas, edges of grasslands and deserts, farms, and ranches.	Requires dense clumps of trees or windbreaks close to bodies of water for cover. Favors coastlines, lakeshores, wetlands. Does not breed in California.	Known to occur. Species observed during winter point count surveys in 2012 and 2013 (State Parks 2014b).	
Bald eagle	<i>Haliaeetus leucocephalus</i>	D, E (nesting and wintering)	Primarily found on ocean shore, lake margins, and large rivers.	Most nests are within 1 mile of large, fish-bearing waters. Nests are in large, old-growth trees or snags or dominant live tree with open branches, especially ponderosa pine. Often roosts communally in winter.	Unlikely to occur. There are no foraging habitats or suitable nesting sites on or immediately adjacent to the planning area. This species has been detected flying over the planning area twice during bird point count surveys; once in winter and once in spring. Known to nest at Folsom Lake on Anderson Island. There is a wintering territory at Bass Lake in El Dorado Hills.	
Loggerhead shrike	<i>Lanius ludovicianus</i>	CSC (nesting)	Open areas such as desert, grasslands, and savanna.	Nests in thick foliage in trees or tall shrubs. Forages from trees, fence posts, utility poles and other perches in grassland, shrubland, and open woodland habitats.	Known to occur. Species observed within the planning area 8 times, including 2 observations during the breeding season (State Parks 2012d). Could nest in the planning area.	
Double-crested cormorant	<i>Phalacrocorax auritus</i>	WL (nesting colony)	Colonial nester on coastal cliffs, on offshore islands, and along lake margins in the interior of the state.	Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Unlikely to nest. No suitable nesting habitat is present. The CNDDDB reports an occurrence within 3 miles of the planning area. Flyovers were detected during SVRA habitat monitoring surveys in 2006 and 2008 and during bird point count surveys in spring 2014 and winter 2015.	

Table 2-7. Special-Status Plant Species with the Potential to Occur at Prairie City SVRA					
Common Name	Scientific Name	Status <sup>1</sup>	General Habitat	Microhabitat	Potential to Occur <sup>2</sup>
California tiger salamander	<i>Ambystoma californiense</i>	FT, CT	Endemic to annual grasslands and valley-foothill habitats in California.	Adults spend most of their time in subterranean refugia, particularly in ground squirrel burrows. Seasonal ponds or vernal pools are required for breeding.	Unlikely to occur. Suitable aquatic breeding habitat and upland refugia are present, but the planning area is outside of the current known range of distribution for this species. Extensive studies in the project region have failed to detect this species north of the Cosumnes River (USFWS 2004).
California red-legged frog	<i>Rana draytonii</i>	FT	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Requires 11–20 weeks of permanent water for larval development; must have access to aestivation habitat.	Unlikely to occur. Suitable habitat exists within the planning area, but there are no known populations in the project vicinity and this species is considered extirpated from the Central Valley (USFWS 2002). Species not detected during field surveys or habitat monitoring.
Western spadefoot	<i>Spea hammondi</i>	CSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Almost entirely terrestrial, but vernal pools are essential for breeding and egg-laying. Needs burrows for refuge, where adults remain for the majority of each year.	Could occur. The CNDDDB reports an occurrence within 2 miles of the planning area. Species not detected during focused field surveys (Jones & Stokes 1994, cited in State Parks n.d.[c]).
Western pond turtle	<i>Emys marmorata</i>	CSC	Associated with permanent or nearly permanent water in a wide variety of habitats.	Requires basking sites. Nest sites may be found up to 0.5 kilometer from water.	Could occur. The CNDDDB reports several occurrences within 2–3 miles of the planning area. Species not detected during field surveys or habitat monitoring.
Giant garter snake	<i>Thamnophis gigas</i>	FT, CT	Endemic to the Sacramento and San Joaquin Valleys.	Inhabits freshwater marshes, ponds, low-gradient streams, and agricultural wetlands. Requires permanent water, emergent vegetation, and suitable upland habitat for basking and cover.	Unlikely to occur. The planning area is located north of the Cosumnes River and east of Grant Line Road, which is outside of the current known range of this species per the <i>Giant Garter Snake 5-Year Review</i> (USFWS 2012).
Pallid bat	<i>Antrozous pallidus</i>	CSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts in rock crevices, oak hollows, bridges, or buildings. Roosts must provide protection from high temperatures and be relatively free from disturbance.	Could occur. Potentially suitable roosting habitat is present in mature oak trees and in structural nooks, such as attics and eaves of buildings; however, this species is very sensitive to disturbances at roost sites, so it is unlikely to roost in riding areas.
American badger	<i>Taxidea taxus</i>	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils, and open, uncultivated ground; preys on burrowing rodents; digs burrows.	Could occur. The CNDDDB reports an occurrence within 2 miles of the planning area. Little suitable habitat exists within the planning area given the level of OHV disturbance. Species not detected during field surveys or habitat monitoring.
<p>Notes: CNDDDB = California Natural Diversity Database; SVRA = State Vehicular Recreation Area. Status definitions listed below.</p> <p><sup>1</sup> <b>Status</b></p> <p><b>Federal</b></p> <p>FE = Listed as endangered under the federal Endangered Species Act (ESA)</p> <p>FT = Listed as threatened under the ESA</p> <p><b>State</b></p> <p>CE = Listed as endangered under the California Endangered Species Act (CESA)</p> <p>CT = Listed as threatened under CESA</p> <p><b>California Department of Fish and Wildlife (CDFW)</b></p> <p>CSC = California species of special concern</p> <p>WL = Watch list</p> <p>FP = Fully protected</p> <p>Sources: CDFW 2014; State Parks 2013b; USFWS 2014; data compiled by AECOM in 2013.</p>					

## Special-Status Wildlife

Habitat monitoring has been conducted in the planning area over several years, recording observations of birds, reptiles, amphibians, and mammals on plots established throughout Prairie City SVRA (State Parks n.d.[d], n.d.[e], n.d.[f], n.d.[g], n.d.[h]). Focused surveys have been conducted for vernal pool crustaceans and western spadefoot (LSA 2003; State Parks n.d.[e]; Jones & Stokes 1994 and Brittan 1996, both cited in State Parks n.d.[g]). In addition, searches were conducted of the CNDDDB and the Sacramento USFWS Office's Species Lists (CDFW 2014; USFWS 2014) for the Buffalo Creek and eight surrounding USGS 7.5-minute quadrangles. The results show that 21 special-status wildlife species have been observed or have the potential to occur in the planning area, based on the habitats present at Prairie City SVRA and the location of the planning area relative to the species' known ranges of distribution (Table 2-8).

### 2.3.2.4 EXOTIC PLANTS AND WILDLIFE

Exotic plant and wildlife species are those that have been introduced through human activities, either incidentally or deliberately. Most exotic or nonnative species are not invasive, and do not adversely affect natural plant and animal communities. Nevertheless, the presence of some exotic plant species has resulted in the conversion of native habitats to vegetation types dominated by nonnative vegetation. Introduced wildlife (such as feral cats and dogs) can compete with and negatively affect native wildlife. Invasive birds including the brown-headed cowbird (*Molothrus ater*) and the European starling have been recorded at Prairie City SVRA (State Parks n.d.[g], n.d.[h]). Brown-headed cowbirds and European starlings are moderately to extremely abundant at the SVRA, especially in the spring; they prefer the cottonwood/willow stands and blue oak woodlands (State Parks n.d.[g]). The abundance of brown-headed cowbirds and European starlings in the planning area prevents many of the native birds from breeding successfully (State Parks n.d.[g]). European starlings compete for nest cavities with native birds such as oak titmouse (*Baeolophus inornatus*) and Nuttall's woodpecker (*Picoides nuttallii*), and their high productivity can slow progress for native cavity-nesting birds (Cabe 1993, cited in State Parks n.d.[g]). The brown-headed cowbird is a nest parasite and has helped cause the local decline or extirpation of several species of California natives, such as least Bell's vireo (*Vireo bellii*), song sparrow, willow flycatcher, and yellow warbler (Lowther 1993, cited in State Parks n.d.[g]).

American bullfrog (*Lithobates catesbeianus*), an amphibian native to the United States but invasive in California, also has been observed at Prairie City SVRA (State Parks 2013b; California Herps 2013). In California, the American bullfrog has probably been responsible for population declines of many native animal species, including some species of frogs, turtles, and snakes, by either outcompeting or preying upon them (California Herps 2013).

### 2.3.2.5 SENSITIVE HABITATS

Sensitive habitats are those that are of special concern to resource agencies or are afforded specific consideration through the California Environmental Quality Act (CEQA), Section 1602 of the California

Fish and Game Code, Section 404 of the Clean Water Act (CWA), and the state’s Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), as discussed in Section 2.7.3, “Regulatory Influences.” Sensitive habitats may be of special concern to these agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

### **Special-Status Natural Communities**

CDFW maintains a list of plant communities that are native to California. On that list, CDFW identifies special-status natural communities, defined as communities that are of limited distribution statewide or in a county or region and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitat. Special-status natural communities are ranked by CDFW from S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable.

CDFW’s rankings of natural community rarity follow the *NatureServe Conservation Status Assessments: Methodology for Assigning Ranks* (Faber-Langendoen et al. 2012), in which all alliances are listed with a global (G) and state (S) rank, where G1 is critically imperiled, G2 is imperiled, G3 is vulnerable, G4 is apparently secure, and G5 is secure. Known occurrences of special-status natural communities are included in the CNDDDB; however, no new occurrences have been added to the CNDDDB since the mid-1990s.

Vegetation types in the planning area that correspond to special-status natural communities recognized by CDFW consist of cottonwood/willow stands (Fremont cottonwood–willow forest), which are ranked G4, S3, and vernal pools (*Lasthenia fremontii* associations), which are ranked G3, S3.

Two special-status natural communities were reported in the CNDDDB (CDFW 2014) within 5 miles of Prairie City SVRA: northern hardpan vernal pools and valley needlegrass grassland. Of these two, northern hardpan vernal pools have been documented within the boundaries of the planning area.

### **Waters of the United States**

Wetlands and other waters mapped in the planning area, including vernal pools, marsh/palustrine habitat, and the four intermittent streams tributary to Coyote Creek and Buffalo Creek, are potential waters of the United States subject to U.S. Army Corps of Engineers (USACE) jurisdiction under Section 404 of the federal CWA. Therefore, they qualify as sensitive habitats. Four intermittent stream segments traverse the planning area and connect to other waters of the United States outside of the planning area. Several seasonal drainages tributary to the four main intermittent streams are also present. Before any fill material may be placed into waters of the United States, the project applicant must apply for a CWA Section 404 permit from USACE.





State Parks mapped vernal pools in the ecological reserve area and buffer zone portions of the SVRA in 1994 and 1996. In October 2008, a wetland delineation was conducted according to USACE methodology on 716 acres of Prairie City SVRA, which excluded the Yost property and ecological reserve area to the north, but included the Barton Ranch property (then proposed for acquisition), totaling 68 acres. USACE concurred in its official determination that 7.44 acres of the area were waters of the United States (USACE 2008, cited in State Parks 2013b). This jurisdictional determination (JD) expired in October 2013. A JD documents the presence or absence of jurisdictional waters (e.g., waters of the United States subject to the CWA or navigable waters of the United States subject to Section 404 of the CWA) in an identified area. A JD is completed by USACE when requested by an affected party. USACE provides a letter and a copy of the JD to the person requesting the JD when asked. The letter from USACE states that the JD is valid for 5 years from the date of the letter, unless new information warrants revision of the JD before the expiration date; or unless USACE has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit more frequent reverification. When the JD expires, the applicant should resubmit the JD document for verification.

During the reconnaissance-level field survey conducted in support of this planning process in 2013, AECOM biologists mapped vernal pools on the Yost property, verified the location and extent of previously identified jurisdictional waters, and recorded new potentially jurisdictional water features in the remainder of the SVRA (State Parks 2013b). These features consist of isolated wetlands, vernal pools, ponds and marshes, and stream channels. Informal wetland delineation methods consisted of a visual assessment of two of the three wetland parameters (hydrophytic vegetation and wetland hydrology; the third parameter, hydric soils, was not assessed) specified in the USACE Wetland Delineation Manual (Environmental Laboratory 1987, cited in State Parks 2013b).

## **Other Sensitive Habitats**

### ***Oak Woodland***

Although blue oak woodland is not included on CDFW's list of special-status natural communities, the importance of protecting oak woodlands is recognized through the passage of the Oak Woodlands Conservation Act and CEQA Section 21083.4. In addition, blue oak–valley oak woodland associations are designated as a special-status natural community type and valley oak is a component of the blue oak woodland community in the planning area.

### ***Elderberry***

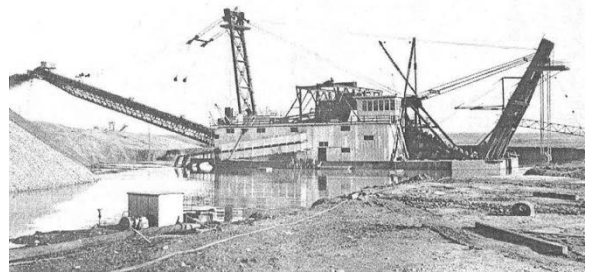
Another sensitive (micro) habitat is the elderberry shrub, the host plant of valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), which is located throughout the SVRA.

### 2.3.3 CULTURAL RESOURCES

This section is based on information presented in the *Cultural Resources Inventory of the Prairie City SVRA* report prepared by Associate State Archaeologists Alicia C. Perez and Kelly Long (State Parks 2010), and in *Cultural Resources Analysis for Prairie City State Vehicle Recreation Area* prepared by AECOM Historian Patricia Ambacher (AECOM 2014c).

The complete cultural resources inventory and evaluation conducted for Prairie City SVRA in 2010 confirmed the previously recorded resources within the SVRA. Of the 11 archaeological and architectural sites identified, four reflect prehistoric land use and the other seven are the result of various historic-era occupations. These historic-era resources are described below in more detail and associated with one of the following themes or subcontexts:

- ▶ Capital Dredging Company mining operations, 1927–1952;
- ▶ Aerojet’s M-1 Rocket Engine Program for the National Aeronautics and Space Administration (NASA), 1962–1972; or
- ▶ PG&E transmission line, 1940s.



Capital Dredging Co., Dredge #4. Built by Yuba, 1937.

As described in *Cultural Resources Analysis for Prairie City State Vehicle Recreation Area*, resources were evaluated for potential eligibility for inclusion in the California Register of Historical Resources (CRHR), but none of the resources was recommended as eligible for inclusion (AECOM 2014c).

#### 2.3.3.1 ARCHAEOLOGICAL RESOURCES

##### **Bedrock Milling Features (Temporary Number 04232012)**

This is a prehistoric site that is located in the Barton Ranch acquisition area and consists of three milling station features, situated at the eastern edge of an open prairie that transitions into a creek. Large oak trees are located sparsely along the creek drainage and the eastern reaches of the bench. However, no cultural constituents were found in association with the oak trees. Because of dense grasses and forbs, ground visibility is poor. Much of the bedrock is covered in reddish-brown soil, and there appears to be seasonal soil buildup covering the site. Additional milling features may be buried beneath the sediment. This area was most likely a food processing area because no significant midden or artifacts were present. The site has not been evaluated for inclusion in the CRHR. The General Plan identifies this location as a Stormwater Management Use Area.

### **Isolate (P-34-1599)**

P-34-1599 was not relocated during the cultural resource inventory of Prairie City SVRA that was conducted on May 12, 2009. The isolate was originally recorded in 1989 by Eleanor Derr, and consisted of three pieces of nondiagnostic, flaked stone with no other cultural artifacts (Derr 1989). The flaked stone was partially buried in the ground in an area of exposed dirt, possibly on an off-road trail. An attempt to relocate the resource was part of the cultural resource inventory for Prairie City SVRA that was conducted in 2009 by Perez & Long; however, the isolate could not be relocated.

### **Isolate (P-34-1600)**

P-34-1600 was originally recorded in 1989 by Eleanor Derr. The resource was described as “one basalt flake” located “on an east-facing slope just south of a sand and gravel pit.” An attempt to relocate the resource was part of the cultural resource inventory for Prairie City SVRA that was conducted in 2009 by Perez & Long; however, the isolate could not be relocated.

### **Isolate (P-34-1601)**

P-34-1601 was relocated during the cultural resource inventory of Prairie City SVRA that was conducted on May 12, 2009. This isolate was recorded in 1989 by Eleanor Derr. The isolate was described as an exposed ochre (limonite and hematite) deposit in the western bank of a small tributary of Coyote Creek. The present deposit is yellow and is affected by the seasonal flow of the drainage as it cuts a curve into the bank. No evidence of quarrying by prehistoric groups was observed; therefore, the site is most likely not cultural.

## **2.3.3.2 ARCHITECTURAL RESOURCES**

Four architectural resources—Test Stand K-1 (Aerojet liquid hydrogen test pit), the Test Zone K control room (Moon Room), a water tank, and an electrical transmission line—were inventoried and evaluated in 2013. The control room, water tank, and test stand were constructed at the same time for Aerojet’s M-1 Rocket Engine Program for NASA and are functionally related. A summary description and evaluation of each resource follows.

### **Test Stand K-1 (Aerojet Liquid Hydrogen Test Pit) (P-34-1602)**

The Test Stand K-1 site is a rectangular, earthen pit approximately 430 feet long and 100 feet wide. The pit is approximately 100 feet deep at its lowest point and has two cut embankments on the east and west sides. At the northwest end of the pit is a concrete foundation with benches, picnic tables, a ramada, and restrooms. Above the pit is a concrete pad that once held a building and metal tracks. The site is surrounded by dirt tracks used for recreational purposes (AECOM 2014b:6).

Test Stand K-1 (P-34-1602) was first recorded in the 1989 cultural resources survey of Prairie City SVRA. The site was recorded again in May 2009. The building was evaluated in 2014 during

preparation of the Prairie City SVRA General Plan and EIR because it had not been previously evaluated. This evaluation concluded that the Test Stand K-1 site does not meet the criteria for the National Register of Historic Places (NRHP), the CRHR, or California State Landmarks (AECOM 2014b:8–9). In summary, the Test Stand K-1 site is not historically or architecturally significant, is not considered a historical resource for the purposes of CEQA, and is not recommended for inclusion in the State Historic Preservation Officer’s (SHPO’s) master list.

### **Test Zone K Control Room (Moon Room) (P-34-1603)**

A portion of the concrete building is arched with a rounded façade accented by smooth concrete panels. The remaining part of the building is dome shaped without fenestration. Modern-era buildings located nearby were constructed as part of the SVRA (AECOM 2014b:5). The Test Zone K control room (P-34-1603), commonly referred to as the Moon Room, was recorded in 1989. The resource was inventoried and evaluated for the 2010 cultural resource inventory of Prairie City SVRA. The 2010 evaluation gave the Moon Room an NRHP status code of 7N1 (“Needs to be reevaluated—may become eligible for the National Register [NR] with restoration or when meets other specific conditions”). The building was reevaluated in 2014 during preparation of the Prairie City SVRA General Plan and EIR because of the NRHP status code. This evaluation concluded that the Test Zone K control room does not meet the criteria for the NRHP, the CRHR, or California State Landmarks because of a lack of historical and architectural significance. It also is not considered a historical resource for the purposes of CEQA (AECOM 2014b:6–7).

### **Water Tank (P-34-1604)**

The steel water tank is approximately 40 feet tall and sits on a concrete foundation. A metal railing is located on top of the tank and a ladder is attached to it. Half of the water tank is painted with a sign of a dirt bike rider and the State Parks logo. The sign reads “Welcome to Prairie City. Prepare for Liftoff. Come out and play.” The tank is surrounded by cyclone fencing, a modern-era building, and an arena cross dirt track (AECOM 2014b:6).

The water tank (P-34-1604) was inventoried and evaluated in 2010 for the cultural resource inventory of Prairie City SVRA. The 2010 evaluation gave the water tank an NRHP status code of 4D2. Since 2003, however, that status code has not been valid. The correct status code should be 7N1 (“Needs to be reevaluated—may become eligible for NR with restoration or when other meets other specific conditions”). The building was reevaluated in 2014 during preparation of the Prairie City SVRA General Plan and EIR. The structure was also reevaluated based on the NRHP status code. This evaluation concluded that the water tank does not meet the criteria for the NRHP, the CRHR, or California State Landmarks because of a lack of historical and architectural significance. It also is not considered a historical resource for the purposes of CEQA (AECOM 2014b:7–8).



### **Gold Hill–Bellota–Lockeford 115kV Line (P-34-1295)**

This historic site consists of a 0.4-mile segment of a PG&E transmission line extending from Halsey Junction to the Newark Substation. The segment located within the Barton Ranch acquisition area is composed of three metal towers (numbers 241 through 243) along the west side of an unnamed seasonal drainage that flows into Coyote Creek. Based on the update prepared by L. Westwood and S. Pappas on October 25, 2011, and on information gathered from PG&E and historic topographic maps (1944), the line was constructed in the early 1940s, concurrent with the construction of the Newark Substation in 1942 and its 115-kilovolt (kV) infrastructure. The line is now named the Gold Hill–Bellota–Lockeford 115kV line. According to maintenance logs on file with PG&E, the line was upgraded in conjunction with construction of the Gold Hill Substation in 1963, and again in 1975 and 1983. As a result of the modifications over the years, the Gold Hill–Bellota–Lockeford 115kV line no longer exhibits the feel or characteristics of a historic transmission line; therefore, the line is not considered a historical resource for the purposes of CEQA.

### **2.3.3.3 OTHER FEATURES AND ARCHAEOLOGICAL SITES**

#### **Historic Refuse Deposit (P-34-2149)**

This historic-era site consists of a refuse deposit measuring approximately 2 feet by 1.5 feet and is located in an area with dredge tailings south of White Rock Road. The constituents consist of multiple tin canisters, bottles (whole and shards), and ceramic fragments. This unevaluated deposit was dated between 1893 and 1964, and is most likely associated with operations of the Capital Dredging Company.

#### **Concrete Pad (P-34-492, CA-SAC-165H)**

This resource consists of a concrete pad, measuring approximately 35 by 20 feet that may be associated with Aerojet-related activities. The original documentation mentions the presence of wire and cut nails, fragmented window glass, and corrugated metal. However, none of these associated constituents were observed when State Parks archaeologists revisited the site in 2009.

#### **Capital Dredging Company Tailings (CA-SAC-308H)**

This historic-era site is associated with mining operations performed by the Capital Dredging Company from 1927 to 1952. The site consists of densely concentrated large bucket-line dredge tailings and dredge ponds, which are divided into Locus 1 and Locus 2. These loci also include historic-era trash piles, metal objects, piping, cement slabs, rock retaining walls, telephone poles, and barbed wire and other fence-related debris. These features are likely related to Capital Dredging Company operations. Additional features identified within the site boundary, including a plastic pipe valve, air vent, timber fragments and debris, and a very deep hole, may be associated with the Aerojet-related activities that took place throughout portions of the present-day Prairie City SVRA (State Parks 2010:Appendix B:1).

These mining features and associated artifacts have not been assessed for NRHP/CRHR eligibility or significance.

#### **2.3.3.4 ETHNOGRAPHIC SETTING**

Ethnographically, Prairie City SVRA is situated at the intersection of the Nisenan (sometimes referred to as the Southern Maidu) and Plains Miwok prehistoric spheres of influence. The Nisenan belong to the Penutian linguistic family and the Plains Miwok are Hokan speakers. A brief review of the ethnographic literature for each group follows. This discussion is provided to help assess the prehistoric land use and archaeological sites found in the vicinity of the SVRA and that are the static remains of past activity. As noted by Binford (1980), although archaeological data alone have the potential to help reconstruct patterns of former dynamic cultural systems through critical analysis, it is when the use of ethnographic data can be applied to the archaeological data that the archaeologist has the best chance to accurately recreate past cultural adaptations (Binford 1980:5).

##### **Nisenan**

Kroeber (1925) recognized three Nisenan dialects—Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. The southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that although the foothill Nisenan distrusted the valley peoples, the relationship between the Nisenan and the Hokan-speaking Washoe to the east was primarily friendly. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe.

In the Nisenan territory, several political divisions, constituting tribelets, each had their own respective headmen who lived in the larger villages. However, which of these larger population centers wielded more influence than others is not known, although they were all located in the foothill areas. In general, more substantial and permanent Nisenan villages were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. The Hill Nisenan, located near Placerville, formed one such tribelet with strong affiliations with groups along the ridges and lower drainages of the American River (Wilson and Towne 1978:387). According to Kroeber (1925:831), the larger villages could have had populations in excess of 500 individuals, although small settlements consisting of 15–25 people and extended families were more common.

Several village sites are depicted by Wilson and Towne (1978:Figure 1) along the South Fork American River from east of Placerville to a point near the town of Folsom. These are the villages of ‘*Tumeli, Koloma, Chapa, Ekelepakan, and Yukulu*’, and an additional six villages, *Chitokpakan, Wapumni, Kutba, Komyan, Opok, and Miminik*, were located north of the Cosumnes River in the vicinity of the present-day Prairie City SVRA.



Dance houses for political and ceremonial functions were located at major village sites and were semi-subterranean structures that were excavated to a depth of 3–4 feet and constructed with large beams and two to four main support posts (Beals 1933:344). Other structures built in the village sites included sweathouses and cone-shaped dwellings constructed of a framework with a covering of bark slabs, brush, and animal skins. Smaller brush structures or sun shades for outdoor summer work were also present and most village sites had bedrock mortars located within or very near the habitation areas.

Like most valley and foothill groups, the Nisenan used a wide variety of floral and faunal food sources. The primary staple food was acorn, and gathering expeditions to oak groves were organized seasonally, with hunting, fishing, and the gathering of other vegetal foodstuffs occurring throughout the year. The seasonal harvests were often based on communal property and important social behaviors were intricately related to these harvests. Various roots, nuts, wild onion, wild sweet potato, and many varieties of grasses, berries, and fruits were also gathered at various times. Many of these foodstuffs were processed and stored for winter use, although fresh fruits such as various berries, wild plums, grapes, and other native fruits were consumed while they were fresh. Studies indicate that Native Americans deliberately burned the meadows to increase forage and improve the habitat, clear the areas around habitations, kill insects, improve wild seed crops, and facilitate travel and hunting. These study results are consistent with the results of work conducted elsewhere by Anderson (1990, 1991, 1993) and Anderson and Nabhan (1991).

The acquisition of faunal species was accomplished through techniques and implements including the bow and arrow, game drives, and decoys. Nets, traps, rodent hooks, and fire were all put to use in hunting small game. Fish could be caught with nets, gorges, hooks, and harpoons. One technique apparently involved using soaproot and turkey mullein to poison the water so fish could be gathered easily. Freshwater clams and mussels were also gathered in the larger water courses, such as the lower American River. Other aquatic food sources available to native populations in the western portion of the project area would have included fish such as salmon and sturgeon, which would have been netted or caught with the aid of weirs.

The reluctance of traditional Nisenan to disclose sensitive resource locations, combined with the virtual decimation of their culture in the 19th century, make Nisenan spiritual beliefs and practices difficult to discuss in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu cult as an adaptation to the Ghost Dance religion. Cult membership was restricted to those initiated in its spirit and deity-impersonating rites. The Kuksu cult, however, was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important (Wilson and Towne 1978).

## Eastern Miwok

The eastern Miwok, and more specifically the Plains Miwok, historically occupied the lower Sacramento River Valley from just north of the Cosumnes River south, including the lower San Joaquin River drainage consisting of the western ends of the Mokelumne River and Jackson Creek. This area is roughly bounded by Sacramento on the north and Stockton to the south. The northern boundary may not have been as firm as indicated in the ethnographic literature, because archaeological evidence along the Cosumnes River suggests that the Nisenan may have displaced the Miwok in this region during the late Phase II (Grady 1967; Deis 1996).

Although the Plains Miwok shared a common language and cultural background, they consisted of a number of separate and politically independent nations or tribelets. Each tribelet consisted of various permanently inhabited and seasonally occupied locales, with control of the natural resources contained within a bounded area (Levy 1978:398).

Subsistence targeted a broad spectrum of flora and faunal resources. Of the plant species, the valley oak was the most valued, with buckeye, laurel, and hazelnut also used. Wild oats and balsam root, several species of edible roots, and greens such as wild pea and miners lettuce, berries, and a number of different mushroom varieties were consumed. Tule elk and pronghorn antelope were the most important faunal species. Various species of rabbit were hunted in the summer. Waterfowl and fish, especially salmon, were extremely important food sources for the Plains Miwok (Levy 1978:403).

## Historic and Contemporary Eras

In general, Native American lifeways remained stable for centuries until the early to middle decades of the 19th century, when Euroamerican contact with the Nisenan began with infrequent excursions by Spanish missionaries and explorers and travel through the Sacramento–San Joaquin Valley by Hudson’s Bay Company trappers in the early 1800s. With the coming of Russian trappers and Spanish missionaries, cultural patterns began to be disrupted as social structures were stressed. Several names of Native Americans appear in the *Book of Baptisms* of Mission San Jose in 1811, indicating that raids by the Spanish resulted in the acquisition of native peoples. Apparently, tribelets became united and allied with Yokuts groups to the south in an attempt to resist incursion by the Mexican military. Further, the malaria epidemic of 1833 decimated valley and foothill populations, killing an estimated 75 percent of the tribesmen (Cook 1955). In addition, the influx of Europeans during the Gold Rush era reduced the population further, introducing disease and violent confrontations with the miners.

Despite these obstacles, Miwok and Nisenan peoples survived the 19th century. In 1917 land was placed in trust for the Auburn Band of Maidu and Miwok Indians by the United States near the city of Auburn. The Shingle Springs Band of Miwok Indians was formally organized under the Articles of Association and obtained federal recognition in 1976, but it was not until 1994 that the newly reorganized United Auburn Indian Community was granted federal recognition. Both tribes have sought and continue to





honor and protect their cultural heritage to benefit future generations (United Auburn Community 2015; Shingle Springs Band of Miwok Indians 2015).

### **2.3.3.5 PREHISTORIC SETTING**

Archaeological data gathered over the past century have shown that humans have inhabited present-day California for at least the past 10,000–12,000 years. In part because of the state’s varied topography and climate, technological adaptations to these disparate conditions vary greatly from region to region and over long periods of time. To a certain degree, however, Native American technological and subsistence systems and land use patterns appear to have possessed similar general elements during various periods of prehistory. Although evolving environmental conditions can account for many technological changes over time, the effects of the intergroup exchange of material and nonmaterial cultural elements was almost certainly an important factor affecting cultural development and variability throughout California.

The basic aspects of these broad temporal and cultural periods are outlined below. The following summary is based in large part on the work of David Fredrickson (1973).

#### **Paleo-Indian Period**

The *Paleo-Indian Period* (10,000–6000 B.C.) saw the first clearly demonstrated entry and spread of humans into California. Known sites are situated along shores of pluvial lakes and typically exhibit implements that were likely used in hunting.

Traditionally, Paleo-Indian subsistence and land use has been tied to the hunting of Pleistocene megafauna. However, little archaeological evidence exists to support the notion that Paleo-Indian lifeways were consistently tied to the pursuit of species such as mammoth, mastodon, or bison. A developed milling tool technology may also exist during this period and has been noted at some sites.

The social units are thought to have been small and highly mobile. They did not depend heavily on exchange of resources, and exchange activities occurred on an ad hoc, individual basis. Artifacts characteristic of this period include distinctive fluted projectile points (which likely served as all-purpose tools as well) and flaked crescent-shaped implements. These and other stone tools are frequently produced from lithic materials exotic to the areas in which they are found archaeologically, indicating that their makers may have traveled great distances.

#### **Lower Archaic Period**

The beginning of the *Lower Archaic Period* (6000–3000 B.C.) coincides with a middle Holocene climatic change. Generally drier conditions prevailed, causing a reduction in the size and number of pluvial lakes that appear to have been so important in earlier land use patterns. Subsistence appears to have focused on consuming plant foods over faunal resources, and settlement appears to have been

semi-sedentary. Such changes in settlement and subsistence patterns may be related, at least in part, to the ongoing climatic changes during this time.

Most stone tools were manufactured of local materials, and patterns of material exchange remained on an ad hoc basis. Distinctive artifact types from the Lower Archaic Period include large projectile points of varying morphology. Milling slabs and grinding stones are frequently encountered on sites.

### **Middle Archaic Period**

The *Middle Archaic Period* (3000–1000 B.C.) begins at the end of the mid-Holocene. Climatic conditions were similar to those of the present day. The material cultural changes noted in the archaeological record likely occurred at least in part as a response to shifting environmental factors. The economic base became more diversified and acorn-processing technology first appeared. Hunting remained an important source of food, although there was clearly a shift in emphasis toward floral resources.

During the Middle Archaic Period, groups transitioned from a nomadic lifestyle to permanent camps or villages, and there was a general population growth and expansion onto more varied parts of the landscape. Little evidence is present for the development of regularized exchange relations. Characteristic artifacts from this period include the bowl mortar and pestle, which first appears in the archaeological record during this time, and the continued use of large projectile points.

### **Upper Archaic Period**

The growth of sociopolitical complexity marks the *Upper Archaic Period* (1000 B.C.–500 A.D.). The development of status distinctions based on material wealth is well documented. Group-oriented religions emerged and may represent the origins of the Kuksu<sup>2</sup> religious system at the end of the period. There is greater complexity of exchange systems with evidence of regular, sustained exchanges between groups. Shell beads gained in significance as possible indicators of personal status and as important trade items.

The Upper Archaic Period retains the large projectile points found in earlier periods, but in different styles. In addition, the bowl mortar and pestle replaced the milling stone and hand-stone throughout most regions of California.

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<sup>2</sup> Kuksu, also called the Kuksu Cult, was a religion in Northern California practiced by members of several Indigenous peoples of California before and during contact with the arriving European settlers. The religious belief system was held by several tribes in Central California and Northern California, from the Sacramento Valley west to the Pacific Ocean. The practice of Kuksu religion included elaborate narrative ceremonial dances and specific regalia. The men of the tribe practiced rituals to ensure good health, bountiful harvests, hunts, fertility, and good weather. Ceremonies included an annual mourning ceremony, rites of passage, and intervention with the spirit world. A male secret society met in underground dance rooms and danced in disguises at the public dances.



## Emergent Period

Several technological and social changes distinguish the *Emergent Period* (500–1800 A.D.). The bow and arrow were introduced, ultimately replacing the dart and atlatl, which were employed at least as early as the Lower Archaic Period. Territorial boundaries between groups became well established and settlement patterns were highly sedentary. Distinctions in an individual’s social status could increasingly be linked to acquired wealth. Exchange of goods between groups became more regularized with more resources, including raw materials, entering into the exchange networks.

During the latter portion of this period (1500–1800 A.D.), exchange relations became highly regularized and sophisticated. The clamshell disk bead developed into a monetary unit for exchange, and increasing quantities of goods moved greater distances. Specialists within groups retained an ability to govern various aspects of the production and exchange of these shell beads. It was during the latter years of this period that large-scale European settlement began to greatly affect traditional Native lifeways.

Euro-American contact with the native cultures began with infrequent excursions by Spanish explorers and Hudson’s Bay Company trappers traveling through the Sacramento and San Joaquin Valleys in the early 1800s. In general, indigenous lifeways remained stable for centuries until the early to middle decades of the 19th century. With the coming of Russian trappers and Spanish missionaries, cultural patterns began to be disrupted as social structures within and among groups were stressed. An estimated 75 percent of the Valley Nisenan population died in the malaria epidemic of 1833. With the influx of Europeans during the Gold Rush era, the population was further reduced as a result of disease and violent relations with the miners that forced them into marginal environments. However, today the Nisenan and Miwok are reinvesting in their traditional culture; through newfound political, economic, and social influence, they now constitute a growing and thriving native community in California.

### 2.3.3.6 HISTORIC-ERA SETTING

The Gold Rush–era town of Prairie City was located near Alder Creek, approximately 2 miles south of Folsom at Willow Springs, on the road to Michigan Bar and north of the present-day Prairie City SVRA. In the summer of 1853, the Natoma Water and Mining Company constructed a canal (the Natoma Ditch) to Prairie City, and a network of flumes and ditches crisscrossed the region. Although the remains of earlier placer mining operations are not present, Prairie City SVRA displays the remains of bucket-line dredging operations of the Capital Dredging Company, which operated from 1927 to 1952 in the western portion of the present-day SVRA (State Parks 2010:14, 17). The area was used primarily for cattle ranching after 1952, when the Capital Dredging Company ceased operations.



Dredge tailings on the Yost property.



In December 1950, Aerojet purchased 7,200 acres of land in Sacramento County, including the area currently occupied by Prairie City SVRA. The site was selected because historic-era dredging had made the area unsuitable for housing or other commercial development. In 1962, Aerojet began developing the M-1 Rocket Engine Program for NASA. Construction began on the Test Zone K complex; the original plans required four test stands and a two-position control room. By the end of 1964, Aerojet had completed construction of a water tower; initial roads; the control room (commonly referred to as the “Moon Room”); the first test stand, which included a service building and metal rails used for sliding test equipment; a test pit (commonly referred to as “Area 39”) northeast of the Moon Room; and other supporting infrastructure needed for Test Zone K.



The Moon Room.

In February 1965, the project received a stop work order. However, the Moon Room had been basically completed by this time, and despite the stop work order, the decision was made to complete the painting and the installation of trim hardware and lighting fixtures on the building. The parking lot surrounding the Moon Room was also paved. Between 1970 and 1972, the Test Stand K-1 test pit (Area 39) was used as a burn area for chemical wastes generated by Aerojet (Figure 2-14). All but the Moon Room and water tower have been dismantled and the areas where concrete foundations remain have been fenced to protect SVRA users (State Parks 2010:27–28; AECOM 2014c:4–5).



Test Stand K-1 (Aerojet Liquid Hydrogen Test Pit), now used as a shooting range.

In 1972, Aerojet sold 435 acres of its Sacramento property to Roy and Mary McGill, who established a cycle park. Sacramento County purchased the park in 1975, using funds from the OHMVR Cooperative Grants and Agreements program, and purchased an additional 401 acres in 1976. In 1988, the 836-acre park came under the ownership of the OHMVR Division. Currently, Prairie City SVRA occupies approximately 1,115 acres, of which 644 acres contain designated OHV recreation for motorcycle, ATV, four-wheel-drive, and dune buggy enthusiasts (State Parks 2010:28).

### 2.3.4 AESTHETIC RESOURCES

The features of Prairie City SVRA include the existing SVRA facilities, open grassland, and rolling hills. Views within Prairie City SVRA include stands of blue oaks in the eastern section of the SVRA



and large cottonwood trees located in the western section. Figure 2-17 illustrates the location of the viewpoints for the SVRA photos in Figure 2-18.

Scott Road, which parallels the eastern boundary of the SVRA, has been identified by Sacramento County as a scenic corridor from White Rock Road to Latrobe Road (Sacramento County Community Planning & Development Department 2014; Lenzie and Singh, pers. comms., 2015). Designated scenic roads are protected by zoning and by sign control on adjacent properties. Portions of the existing OHV area are visible from an east-west segment of Scott Road (Figure 2-18). A 35-acre buffer area containing a stand of blue oaks is located within the SVRA adjacent to Scott Road. This buffer protects views and scenic quality along Scott Road and no vehicular activity is permitted within the buffer zone. There are no state-designated scenic highways in the vicinity of the SVRA (Caltrans 2013).

The SVRA's ecological reserve area is visible by motorists on White Rock Road, which is the northern boundary of Prairie City SVRA. The OHV riding area is not visible from White Rock Road. Motorists on the main entrance road to the SVRA from White Rock Road have views of dredge tailings and rolling topography to the west and large cottonwoods within the SVRA (Figure 2-18).

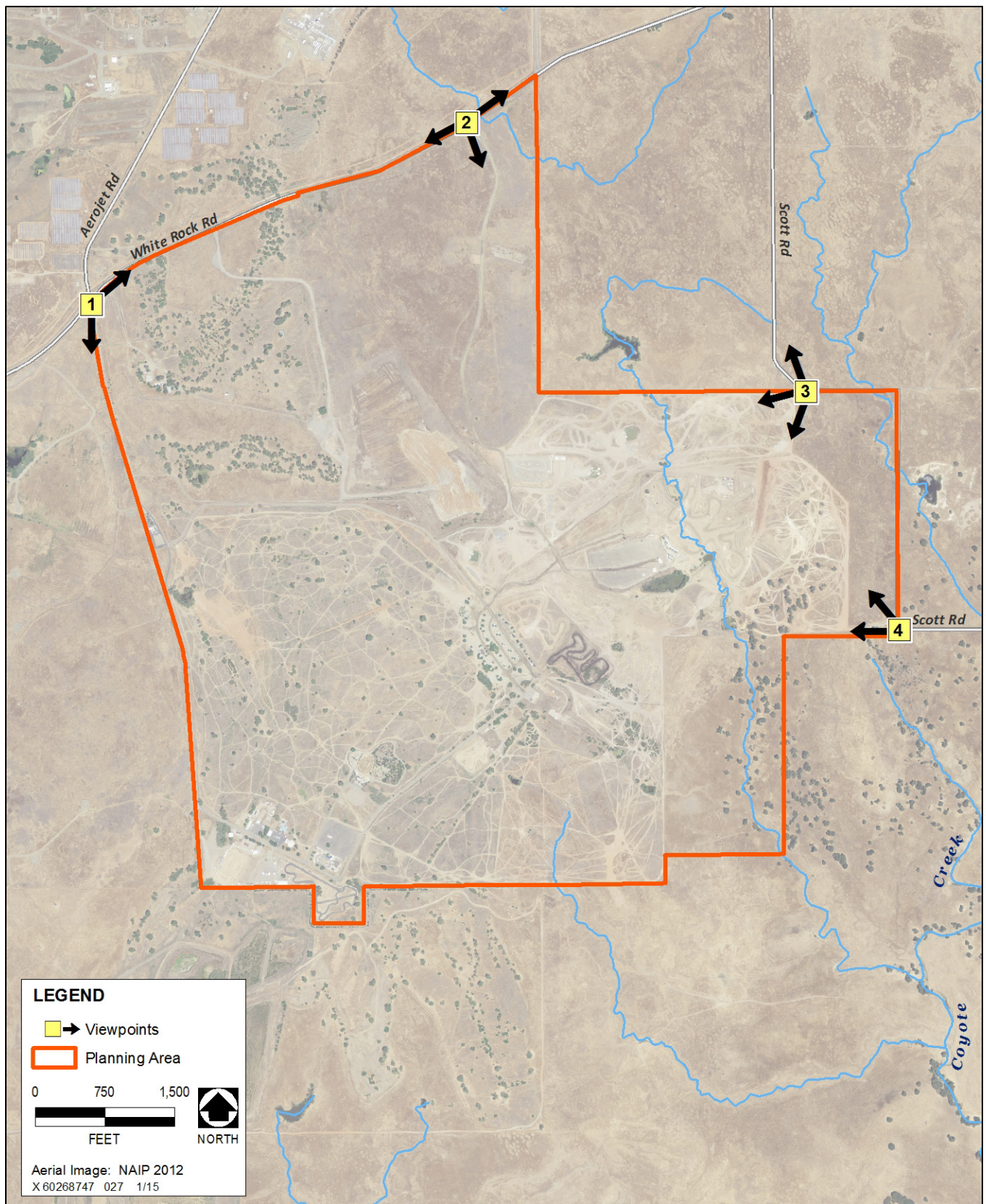
#### **2.3.4.1 AREA SURROUNDING PRAIRIE CITY SVRA**

The topography of the area directly surrounding the SVRA is relatively flat. The dominant features are open grassland interspersed with stands of trees, aggregate mining to the north and southwest, mine tailings, and an Aerojet industrial building north of White Rock Road. The terrain exhibits small undulations associated with the vernal pool features within the grasslands. There are small hills southeast of the SVRA.

#### **2.3.4.2 PRAIRIE CITY SVRA VIEWSHED**

Views of Prairie City SVRA are primarily from the entrance road along the western boundary, White Rock Road to the north, and Scott Road from the east. From the west side, the viewshed incorporates the SVRA in the foreground and middle ground and the high-voltage transmission lines in the background. From White Rock Road to the north, the viewshed incorporates the scattered trees and grasslands in the foreground, the SVRA in the middle ground, and high-voltage transmission lines in the distance. From Scott Road, the viewshed includes grasslands in the foreground, the SVRA in the middle ground, and a tree line and high-voltage power line in the background.

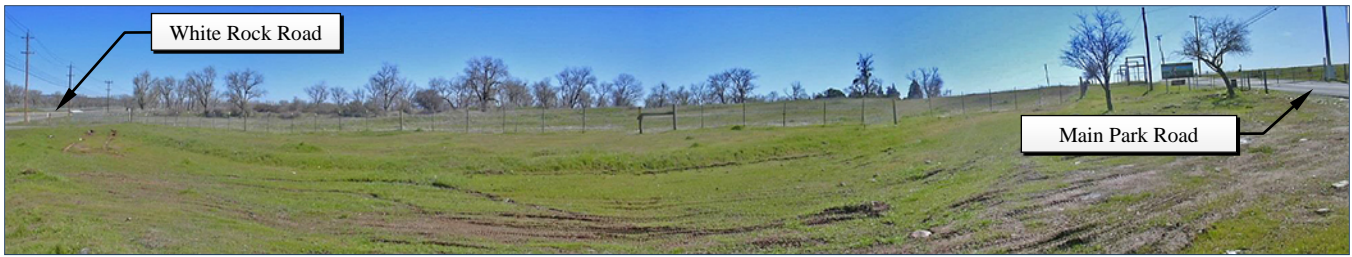
The views of and across the SVRA are considered to be of low to moderate quality, based on the visual resource evaluation methodology developed by the Federal Highway Administration, which uses the concepts of vividness, unity, and intactness to assign visual quality to scenic resources (FHWA 1988). Visual resources in the middle ground and background, consisting of oak woodlands and grasslands, are of moderate value; however, the area used for riding activities in the SVRA dominates the foreground and detracts from these higher quality background views.



Source: Data compiled by AECOM in 2014

**Figure 2-17. Representative Viewpoints**





**Viewpoint 1: View to the south**



**Viewpoint 2: View to the southeast**



**Viewpoint 2: View to the south and west**



**Viewpoint 3: View to the southwest and west**

**Figure 2-18. Representative Photographs**



**Viewpoint 3: View to the northwest and west**



**Viewpoint 4: View to the west and northwest**

Source: Photographs provided by A. D. Hinshaw Associates in 2013; data compiled by AECOM in 2014

**Figure 2-18 (continued). Representative Photographs**

**2.3.4.3 VISUAL SENSITIVITY**

Viewer sensitivity or concern is based on the visibility of resources in the landscape, viewer proximity to the visual resource, elevation of the viewer relative to the visual resource, frequency and duration of views, numbers of viewers, and types and expectations of individuals and viewer groups.

Viewing groups with high sensitivity to visual change are generally those who experience a view for a long period of time, such as residents or recreationists engaged in nature appreciation, hiking, or camping, and who have a high degree of concern about the visual resource. Viewers passing along the roadway or participating in motorized sports generally have a lower level of sensitivity to visual changes because their focus is on the roadway, terrain, and other vehicles as they maneuver and avoid obstacles.

The primary viewing groups of Prairie City SVRA would be travelers passing by on Scott Road and White Rock Road and visitors to the site taking part in activities related to OHVs. Those passing by on Scott Road and White Rock Road include people traveling to other destinations and people traveling the Scott Road for the area’s scenic quality. Travelers to other destinations are considered less sensitive viewers because they would be focused on driving and watching the roadway. However, travelers who are focused on the landscape along the Scott Road would be considered sensitive viewers. SVRA



visitors engaged in OHV use are considered to be a less sensitive viewing group, because the focus of their attention would be on other riders, the terrain, and obstacles. Additionally, because of the disturbed nature of the site, most viewers likely do not have high expectations regarding visual resources there.

## 2.3.5 SOUND

### 2.3.5.1 ACOUSTIC FUNDAMENTALS

#### Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may change the type of sounds and noise levels at a receptor. The presence of a large object (e.g., barrier, topographic feature, and intervening building façade) between a noise source and a receptor can provide significant attenuation of noise levels at the receptor. The “shielding” or reduction of noise levels provided by a barrier depends primarily on the size of the barrier, the location of the barrier relative to the source and receptors, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods and human-made features such as buildings and walls may serve as noise barriers.

#### Applicable Acoustical Terminology

The acoustical terms defined below apply to implementation of the Prairie City SVRA General Plan and are listed here for reference. These issues are important when addressing sound propagation and noise exposure in such an expansive planning area with such varied terrain as that of Prairie City SVRA.

- ▶ **Decibels (dB)** are the measure of sound pressure level. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 micro-Pascals ( $\mu\text{Pa}$ ) to 100,000,000  $\mu\text{Pa}$ . 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 level in terms of dB. A-weighted decibels (dBA) are commonly used to describe environmental sound pressure levels. A strong correlation exists 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 General Plan are in terms of A-weighting.
- ▶ **Equivalent sound level ( $L_{\text{eq}}$ )** represents an average of the sound energy occurring over a specified time period. In effect, the  $L_{\text{eq}}$  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 used by the California Department of Transportation and Federal Highway Administration.

- ▶ **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 added to A-weighted sound levels occurring during nighttime hours (10 p.m.–7 a.m.). The  $L_{dn}$  often is 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 penalty of 10 dB or 5 dB, respectively, added to A-weighted sound levels occurring during the nighttime hours (10 p.m.–7 a.m.) or the evening hours (7–10 p.m.). The CNEL is usually within 1 dB of the  $L_{dn}$ , and for all intents and purposes, the two are interchangeable. Because it is easier to compute and more commonly used, the  $L_{dn}$  is used as the long-term noise measure in this General Plan.
- ▶ **Maximum sound level ( $L_{max}$ )** is the highest instantaneous sound level measured during a specified period.

### Human Response to Changes in Noise Levels

Because dB are measured on a logarithmic scale, doubling sound energy results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually differ from what is measured.

Under controlled conditions in a laboratory setting, the trained, healthy human ear is able to discern 1-dBA changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency range (1,000–8,000 Hertz). In typical noisy environments, changes in noise of 1–2 dBA are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dBA in typical noisy environments. Furthermore, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dBA increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy that would result in a 3-dBA increase in sound pressure level would generally be perceived as barely detectable.

### Noise-Sensitive Land Uses near Prairie City SVRA

Land to the east, south, and west of Prairie City SVRA is privately owned, undeveloped agricultural land used primarily for cattle grazing and resource land used for mining and aggregate production.

Mining and aggregate processing operations occur at the Grantline Rock Plant and Teichert Quarry, adjacent to the planning area to the east, south, and southwest. To the north, the SVRA is bordered by White Rock Road. Lands in the area north of White Rock Road include a 211-acre in-holding used for



aggregate extraction. Aerojet owns approximately 8,000 acres of industrial land north of White Rock Road, including the White Rock solar farm located directly north of the SVRA. Three State Parks on-site caretaker housing units, owned by the OHMVR Division, are located approximately 1,000 feet southeast of the Aerojet Road/White Rock Road intersection, and seven offices are located in the western portion of the SVRA. No other residences are located within 1.5 miles of the SVRA.

### **Existing Ambient Noise Levels at Prairie City SVRA and in the Vicinity**

Local traffic and OHV operations within Prairie City SVRA are the dominant sources of noise in the area. To quantify the existing ambient noise levels, AECOM measured continuous ambient noise levels at the SVRA and in the vicinity during three separate time periods: from 4 p.m. Friday, April 5, 2013, to 5 p.m. Monday, April 8, 2013; from 3 p.m. Wednesday, May 15, 2013, to 2 p.m. Tuesday, May 21, 2013; and from 4 p.m. Friday, September 5, 2014, to 3 p.m. Monday, September 8, 2014.

The noise measurements conducted in May 2013 coincided with the annual Hangtown Motocross Classic—Prairie City SVRA’s largest special event with an estimated attendance of 25,000–30,000. Measurements<sup>3</sup> were completed at four locations (Figure 2-19). Ambient sound levels were measured at these locations to quantify existing ambient noise levels during quieter weekday times and assumed noisier weekend times, when more OHV activity generally occurs. The results of the weekend measurements are intended to be representative of the typical noise environment during recreational OHV activity. The results of the ambient noise level measurements are shown in Table 2-9 and summarized below.

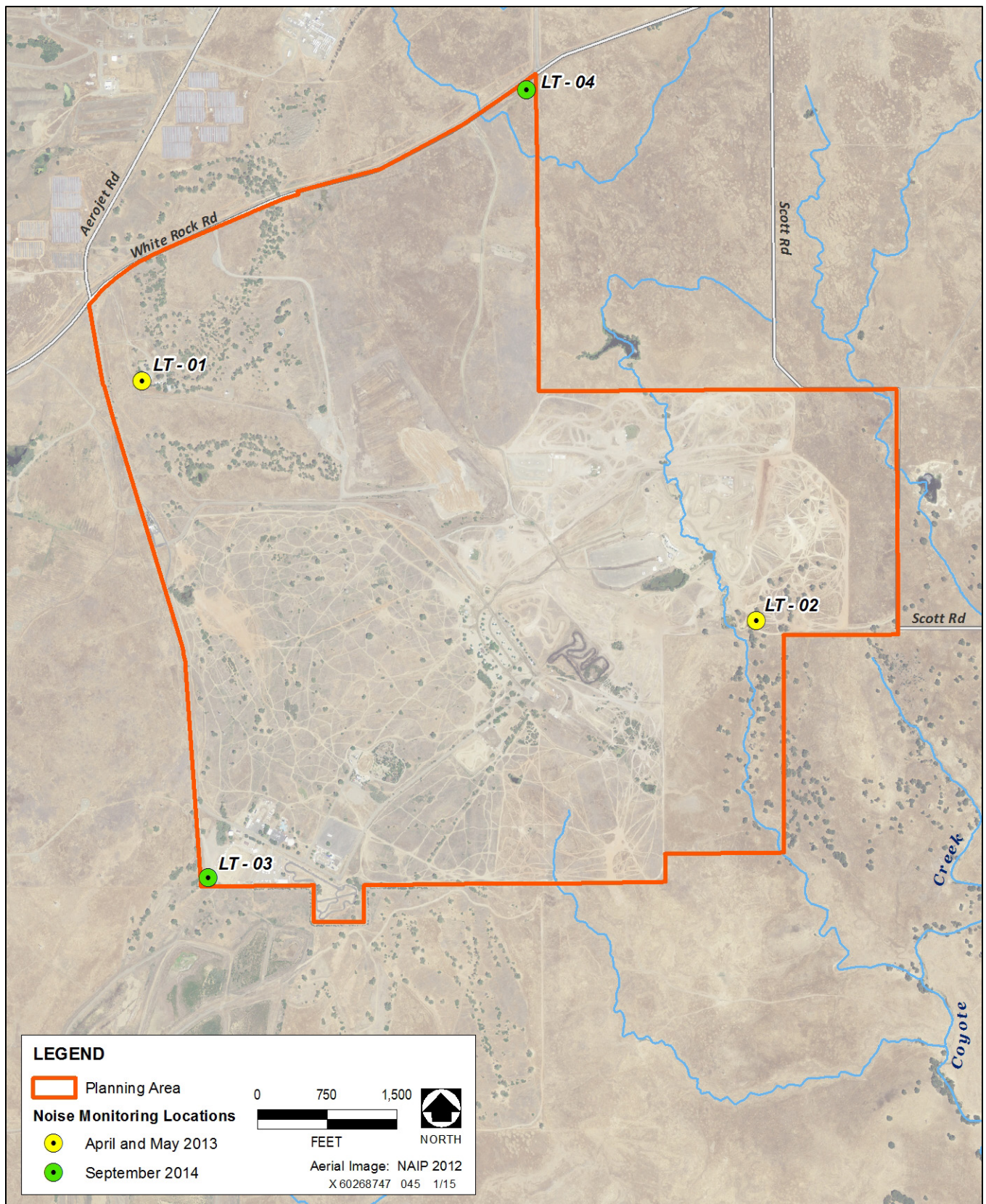
Atmospheric conditions were observed during long-term noise level measurements. Wind speeds typically ranged from 3 to 12 mph. Temperatures ranged from 32°F to 63°F, with humidity of approximately 40–70 percent. These atmospheric conditions were verified using historical data from the Weather Underground website ([www.wunderground.com](http://www.wunderground.com)).

### **Measurement Location 1**

Location 1 (i.e., LT-01) in Figure 2-19 (see also Table 2-9) represents the northwest portion of the planning area within the Yost property, southeast of the Aerojet Road/White Rock Road intersection. Existing State Park caretaker housing units are the only uses that are present in this immediate area. Both natural sounds (e.g., birds, light wind) and human-made sounds (vehicular traffic as well as OHVs on nearby trails) characterize the noise environment at this location. Table 2-9 summarizes noise levels measured at this location in April and May 2013. Measurements conducted in May represent the noisiest

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<sup>3</sup> All measurements were conducted using Larson-Davis Laboratories Model 820 and 824 precision integrating sound-level meters, which had been calibrated using a Larson-Davis Laboratories Model CA200 acoustical calibrator. The measurement equipment used meets the applicable criteria established by the American National Standards Institute 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 wind screens. The sound-level meters were programmed to record hourly sound levels in terms of the  $L_{eq}$ ,  $L_{max}$ , and other statistical descriptors.



Source: Data compiled by AECOM in 2014

**Figure 2-19. Noise Measurement Locations**



<b>Table 2-9. Summary of Noise Measurements</b>					
Location of Noise Level Measurement	Time of the Week	Date and Time		Hourly L <sub>eq</sub> , dBA	
		From	To	Day	Night
				8 a.m.–6 p.m.	7 p.m.–7 a.m.
				Avg. (Min–Max)	Avg. (Min–Max)
<b>Typical Conditions (first round of measurements, April 5–8, 2013)</b>					
<b>Location 1:</b> Northwest section of Prairie City SVRA, south of White Rock Road, behind SVRA residential properties.	Weekend	4:00 p.m. on Friday, April 5, 2013	3:00 p.m. on Saturday, April 6, 2013	59	41
	Weekend	4:00 p.m. on Saturday, April 6, 2013	3:00 p.m. on Sunday, April 7, 2013	60	40
	Weekday	4:00 p.m. on Sunday, April 7, 2013	3:00 p.m. on Monday, April 8, 2013	58	44
<b>Location 2:</b> Southeastern boundary of Prairie City SVRA, west of Scott Road.	Weekend	5:00 p.m. on Friday, April 5, 2013	4:00 p.m. on Saturday, April 6, 2013	49	47
	Weekend	5:00 p.m. on Saturday, April 6, 2013	4:00 p.m. on Sunday, April 7, 2013	52	48
	Weekday	5:00 p.m. on Sunday, April 7, 2013	4:00 p.m. on Monday, April 8, 2013	67	56
<b>Hangtown Motocross Classic (second round of measurements, May 15–21, 2013)</b>					
<b>Location 1:</b> Northwest section of Prairie City SVRA, south of White Rock Road, behind SVRA residential properties.	Weekday	3:00 p.m. on Wednesday, May 15, 2013	2:00 p.m. on Thursday, May 16, 2013	65	61)
	Weekday	3:00 p.m. on Thursday, May 16, 2013	2:00 p.m. on Friday, May 17, 2013	67	59
	Weekend	3:00 p.m. on Friday, May 17, 2013	2:00 p.m. on Saturday, May 18, 2013	69)	42
	Weekend	3:00 p.m. on Saturday, May 18, 2013	2:00 p.m. on Sunday, May 19, 2013	63	40
	Weekday	3:00 p.m. on Sunday, May 19, 2013	2:00 p.m. on Monday, May 20, 2013	47	39
	Weekday	3:00 p.m. on Monday, May 20, 2013	2:00 p.m. on Tuesday, May 21, 2013	45)	43
<b>Location 2:</b> Southeastern boundary of Prairie City SVRA, west of Scott Road.	Weekday	3:00 p.m. on Wednesday, May 15, 2013	2:00 p.m. on Thursday, May 16, 2013	64	50
	Weekday	3:00 p.m. on Thursday, May 16, 2013	2:00 p.m. on Friday, May 17, 2013	49	48
	Weekend	3:00 p.m. on Friday, May 17, 2013	2:00 p.m. on Saturday, May 18, 2013	49	48
	Weekend	3:00 p.m. on Saturday, May 18, 2013	2:00 p.m. on Sunday, May 19, 2013	51	49
	Weekday	3:00 p.m. on Sunday, May 19, 2013	2:00 p.m. on Monday, May 20, 2013	48	50
	Weekday	3:00 p.m. on Monday, May 20, 2013	2:00 p.m. on Tuesday, May 21, 2013	48	50
<b>4x4 Track during the Nor Cal Rock Racing (third round of measurements, September 5–8, 2014)</b>					
<b>Location 3:</b> Southwestern corner of Prairie City SVRA.	Weekend	4:14 p.m. on Friday, September 5, 2014	3:14 p.m. on Saturday, September 6, 2014	57	47
	Weekend	4:14 p.m. on Saturday, September 6, 2014	3:14 p.m. on Sunday, September 7, 2014	49	37
	Weekday	4:14 p.m. on Sunday, September 7, 2014	3:14 p.m. on Monday, September 8, 2014	40	37
<b>Location 4:</b> Northeastern corner of Prairie City SVRA by White Rock Road/Prairie City Road intersection.	Weekend	4:35 p.m. on Friday, September 5, 2014	3:35 p.m. on Saturday, September 6, 2014	60	55
	Weekend	4:35 p.m. on Saturday, September 6, 2014	3:35 p.m. on Sunday, September 7, 2014	59	57
	Weekday	4:35 p.m. on Sunday, September 7, 2014	3:35 p.m. on Monday, September 8, 2014	58	55
Notes: dBA = A-weighted decibels; L <sub>eq</sub> = equivalent sound level (average of the sound energy occurring over a specified time period); L <sub>max</sub> = maximum sound level (highest instantaneous sound level measured during a specified period); SVRA = State Vehicular Recreation Area					
Source: Data compiled by AECOM in 2013 and 2014					

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activities occurring at the SVRA, including the annual Hangtown Motocross Classic that began on Thursday, May 16, and continued through the weekend. During what normally would be considered a relatively quiet, calm period (7 p.m.–7 a.m.), measured ambient sound levels were in the range of 29–72 dBA hourly  $L_{eq}$ , with an average hourly noise level of 61 dBA  $L_{eq}$  (Table 2-9). Measured noise levels corresponding to typical hours of maximum OHV use (8 a.m.–6 p.m.) ranged from 36 to 72 dBA hourly  $L_{eq}$ , with an average hourly noise level of 69 dBA  $L_{eq}$ .

### **Measurement Location 2**

Location 2 (i.e., LT-02) in Figure 2-19 (see also Table 2-9) represents the southeast portion of the planning area near the Barton Ranch acquisition area. No existing noise-sensitive land uses are present in this area. Nature sounds (e.g., birds, light wind) and human-made sounds (e.g., OHV activity in nearby riding areas) characterize the noise environment at this location. Measurements conducted in May 2013 represent the noisiest activities occurring at Prairie City SVRA, including the annual Hangtown Motocross Classic that began on Thursday, May 16, and continued through the weekend. State Parks would also host a Hare Scramble event at Prairie City SRVA yearly in August during nighttime hours (potentially 8 p.m. to 12 a.m.). Hare scramble is a form of off-road motorcycle racing during which the riders complete multiple laps around a marked course through wooded or other rugged natural terrain. Potential racing tracks for Hare Scramble event would be close to Location 2. According to the 2013 Annual Report of the American Motorcyclist Association, noise levels from a Hare Scramble event would be 92 dBA to 100 dBA at 20 inches (AMA 2013), which is similar to that of motocross races assuming an average noise level of 96 dBA at 20 inches for Hare Scramble event. Therefore, this measurement location would represent a Hare Scramble event that would occur in August and during the hours of 8 p.m. to 12 a.m. During what normally would be considered a relatively quiet, calm period (7 p.m.–7 a.m.), measured ambient sound levels were in the range of 38–54 dBA hourly  $L_{eq}$ , with an average hourly noise level of 50 dBA  $L_{eq}$  (Table 2-9). Measured noise levels during the weekend, corresponding to typical hours of maximum OHV use (8 a.m.–6 p.m.), ranged from 41 to 74 dBA hourly  $L_{eq}$ , with an average hourly noise level of 64 dBA  $L_{eq}$ .

### **Measurement Location 3**

Location 3 (i.e., LT-03) in Figure 2-19 (see also Table 2-9) represents the southwest portion of the planning area near the locations of new developments that are planned. No existing noise-sensitive land uses are present in this area. Nature sounds (e.g., birds, light wind) and human-made sounds (e.g., OHV activity on nearby trails) characterize the noise environment at this location. Measurements were conducted in September 2014 during the noisiest activities that occur in the SVRA, including the 4x4 track use for the Nor Cal Rock Racing on Saturday, September 6. During what normally would be considered a relatively quiet, calm period (7 p.m.–7 a.m.), measured ambient sound levels were in the range of 29–41 dBA hourly  $L_{eq}$ , with an average hourly noise level of 37 dBA  $L_{eq}$  (Table 2-9). Measured sound levels during the weekend, corresponding to typical hours of maximum OHV use (8 a.m.–6 p.m.), ranged from 37 to 55 dBA hourly  $L_{eq}$ , with an average hourly noise level of 49 dBA  $L_{eq}$ .

## Measurement Location 4

Location 4 (i.e., LT-04) in Figure 2-19 (see also Table 2-9) represents the northeast portion of the planning area adjacent to the intersection of White Rock Road and Prairie City Road near the locations of new developments that are planned. No existing noise-sensitive land uses are present in this area. Nature sounds (e.g., birds, light wind) and human-made sounds (e.g., OHV activity on nearby trails) characterize the noise environment at this location. Measurements were conducted in September 2014 during the noisiest activities that occur in the SVRA, including the 4x4 track use for the Nor Cal Rock Racing on Saturday, September 6. During what normally would be considered a relatively quiet, calm period (7 p.m.–7 a.m.), measured ambient sound levels were in the range of 47–65 dBA hourly  $L_{eq}$ , with an average hourly noise level of 57 dBA  $L_{eq}$  (Table 2-9). Measured sound levels during the weekend, corresponding to typical hours of maximum OHV use (8 a.m.–6 p.m.), ranged from 55 to 62 dBA hourly  $L_{eq}$ , with an average hourly noise level of 60 dBA  $L_{eq}$ .

## 2.4 OPERATIONS AND MAINTENANCE

### 2.4.1 FACILITY MANAGEMENT

Prairie City SVRA and OHVMR Division staff members maintain facilities at the SVRA. The SVRA is closed on Wednesdays for maintenance. When weather permits, tracks are groomed once a week throughout the year. Grooming requires the use of a D-5K CAT dozer and a 5230A 4x4 case wheel tractor with a 12-foot disc and drag bar. The 4x4 areas are smoothed out after special events and approximately once a year in the springtime after the major rains to make the areas passable for staff and SVRA visitors. A 3,800-gallon water truck waters tracks on Wednesday, Thursday, and Friday each week. The motocross practice track and ATV practice track consume approximately five loads on each track per day. On Saturdays and Sundays, the mini track (70cc or less) and kids' track (110cc or less) are also watered. Therefore, weekend watering requires approximately 15 loads per day to water all four tracks. Irrigation and dust suppression alone require approximately 28,000 gallons of water per day. In 2013, the SVRA used approximately 23,134,702 gallons of water, and in 2014 water usage was reduced by 37 percent to 14,507,632. Water is supplied by one on-site well located in the southwest portion of the SVRA near the maintenance office, approximately 286 feet deep, in which all clean drinking water for the SVRA is treated and held in a 500,000-gallon clear tank.

In response to the state's drought conditions, the SVRA has implemented multiple water conservation measures that will reduce its future water usage (State Parks 2013c). These measures comply with the following orders and proclamations issued by Governor Edmund G. Brown Jr.:

- ▶ Governor's Executive Order (EO) B-18-12 (April 25, 2012), which requires state agencies to reduce water use by 10 percent by 2015 and 20 percent by 2020 as measured against a 2010 baseline (Office of the Governor 2012);





- ▶ the Proclamation of a State of Emergency (January 17, 2014) and Proclamations of Continued State of Emergency (April 25 and December 22, 2014); and
- ▶ Governor’s EO B-29-15 (April 1, 2015), which imposes restrictions to achieve 25 percent reduction in potable water usage through February 28, 2016 (Office of the Governor 2015).

To help comply with conservation mandates, the water trucks use magnesium chloride–based (salt) dust control products (e.g., Dust-Off<sup>®</sup>) to suppress dust. They stay on the ground and remain effective year round until the winter rains, when they dissolve.

Throughout the year, approximately 3,000 tons of Class 2 sand, 1,500 tons of topsoil, and 2,000 yards of rice hulls are applied to tracks to hold moisture and produce traction for the riders. The soil amendments are spread by a D-5K CAT dozer, 5230A 4x4 case wheel tractor, and 4x4 950G CAT loader, and once dispersed, are watered by a 3,800-gallon 6x6 water truck.

A water truck also applies approximately 50 gallons of a liquid material called LIQUID TRACTION<sup>®</sup> to tracks at the SVRA to hold the moisture in the dirt longer, thus reducing the need to use water for dust control. Approximately 50 gallons of LIQUID TRACTION<sup>®</sup> are mixed with 5 gallons of water each time, and the mixture is used throughout the year.

## **STAFFING**

Prairie City SVRA is supported by 30 staff from the Twin Cities District office and the Prairie City Sector office. On average, approximately six to 10 staff members at a time are on-site on weekends, while 14–20 are on-site on weekdays.

The sector superintendent manages core program areas and occupies office space in the Prairie City SVRA Sector office. Two environmental scientists tasked with resource management and environmental compliance and a management services technician who provides administrative support also occupy the sector office. The district superintendent, the administrative officer, two management service technicians, a staff services analyst, an office assistant, and a parks and recreation specialist who assists with planning and special-event functions occupy the Twin Cities District office. In addition to providing support for Prairie City SVRA, the Twin Cities District office and the Prairie City SVRA Sector office support Carnegie SVRA and Clay Pit SVRA.

The maintenance chief operates from the maintenance office, overseeing the SVRA’s facilities and groundskeeping operations and supervising two heavy-equipment operators, three maintenance workers of various classifications, and seasonal maintenance aides. A State Park interpreter responsible for OHV outreach and education works out of the Environmental Training Center. The supervising SPPO, supported by three other SPPOs, manages public safety and visitor services and occupies the ranger station at the entrance station. Seasonal staffs include visitor services park aides, maintenance aides, and a park interpretive specialist. The visitor services park aides operate the entrance station, collecting fees

and providing information to incoming visitors. The maintenance aides perform the day-to-day maintenance duties such as cleaning restrooms, collecting trash, and assisting the permanent maintenance staff with projects. The park interpretive specialist assists the State Park interpreter with interpretation programs and OHV safety classes.

## **2.4.2 PUBLIC SAFETY**

SPPOs patrol Prairie City SVRA during operating hours. Emergency services can be contacted by calling 911, and radio communications are available to emergency responders at the site. Emergency calls are routed through the CHP or State Parks' NORCOM and are dispatched to CHP officers or to SPPOs from the Twin Cities District office located on-site.

During the annual springtime Hangtown Motocross Classic event, the Sacramento County Sheriff's Department assists SPPOs in managing traffic congestion. The local CHP office is notified of the event and possible traffic increases on U.S. 50 from event spectators.

### **EMERGENCY SERVICES**

#### **Fire Protection**

State Parks provides on-site fire protection equipment consisting of a 4,000-gallon water truck, one bulldozer, and seven 6-inch fire hydrants. Additional fire protection services to Prairie City SVRA are provided by the Sacramento Metropolitan Fire District (SMFD) and the California Department of Forestry and Fire Protection (CAL FIRE). SMFD Station 63 at 12395 Folsom Boulevard, Rancho Cordova, would be the first responder to fires at the SVRA and Station 66 at 3180 Kilgore Road, Rancho Cordova, would be the second responder. Emergency response times from Station 63 and Station 66 to Prairie City SVRA are approximately 10 minutes and 13 minutes, respectively (Keskeys, pers. comm., 2013).

SMFD Station 63 provides medical aid at Prairie City SVRA. This station is staffed with a paramedic unit. Emergency response time from Station 63 to the SVRA is approximately 10 minutes. On-site SPPOs are trained in emergency responder medical aid and typically serve as first responders to medical emergencies. Medical equipment kept on-site in law enforcement vehicles includes oxygen, trauma kits, and equipment to assess the extent of injuries, such as blood pressure gauges and stethoscopes.

CAL FIRE provides wildland fire protection at Prairie City SVRA (Mackwood, pers. comm., 2013). The El Dorado Station near Placerville is CAL FIRE's primary station for the SVRA. Emergency response time is estimated at 25 minutes. Prairie City SVRA and CAL FIRE have worked together on numerous projects such as boundary fencing and revegetation projects. In 2013, SVRA personnel worked with CAL FIRE to conduct a controlled burn in the Ecological Reserve Area. Spark arrester provisions established by the California Public Resources Code (PRC) (OHV Program Provisions) are enforced.



These regulations specify that all motorcycles and ATVs operated on forest-, brush-, or grass-covered public lands must have U.S. Forest Service–approved or equivalent spark arresters.

Prairie City SVRA’s Wildfire Management Plan identifies SVRA staff responsibility for all activities related to wildland fires, and informs fire control agency staff of ownership, control features, and sensitive park resources and policy. The SVRA has a large proliferation of OHV trails that tend to provide a fuel break<sup>4</sup> in the grassland. A fuel break is maintained annually around the three residences located within the SVRA. Roadways that border the SVRA to the north (Grant Line Road), east (Scott Road), and west (main entrance road) would also likely act as firebreaks (State Parks 2011).<sup>5</sup>

### **Medical Aid**

The SPPOs who patrol the planning area are trained in emergency medical treatment and can coordinate an ambulance response if necessary. Emergency transportation for first aid and rescue operations is provided by local ambulance services. During events, ambulance service is provided by the promoter of the event as required by SVRA rules. Medical services are provided by private physicians and private medical facilities, including Mercy Hospital of Folsom. Life-flight service is available when necessary.

### **Emergency Access/Egress**

Regional emergency access to Prairie City SVRA is provided via U.S. 50, while direct access is provided via Prairie City Road and White Rock Road. The main entrance (Gate 1) is 1 mile west of the White Rock Road/Prairie City Road intersection. A special-event entrance (Gate 4) can also provide emergency access from White Rock Road just west of the intersection with Prairie City Road. However, recent improvements along White Rock Road limit the ability of vehicles to turn west from this exit. Secondary access (Gate 5) is provided from Scott Road at the southeast corner of the Prairie City Motocross Track. Prairie City SVRA is dominated by open terrain that is accessible by law enforcement vehicles and most emergency response vehicles.

## **2.5 INTERPRETATION AND EDUCATION**

### **2.5.1 EXISTING INTERPRETATION AND EDUCATION**

Through hands-on interactive programs, booths at special events, community outreach, and safety programs, Prairie City SVRA’s interpretive team teaches visitors about responsible OHV use, safety, rider ethics, and awareness and protection of the SVRA’s natural and cultural resources.

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<sup>4</sup> A fuel break is a wide strip or block of land on which the native vegetation has been modified so that fires burning into it can be more readily extinguished. It may or may not have control lines constructed in it before fire occurrence.

<sup>5</sup> A firebreak is a natural or constructed barrier used to stop or check fires, or to provide a control line from which to work. A firebreak differs from a fuel break in that fuel has been removed rather than modified.

The on-site Environmental Training Center was designed to teach safe and environmentally responsible OHV recreation practices. The facility consists of a classroom, office, locker room, level dirt riding arena, and 3-acre trail system. The level dirt riding arena is used by certified professional trainers to train new riders in proper riding techniques. The trail system is designed to mimic natural riding conditions and is landscaped with California native plants from six different California ecosystems: desert, chaparral, oak woodland, conifer forest, sand dunes, and a riparian zone. Plaques along the trail system identify names of the various native plants. The trail system emphasizes the importance of staying on the trails and staying in control, so that new riders learn to minimize their impact on the environment. In addition, the trail system helps State Parks staff practice proper trail maintenance techniques, such as erosion control and proper trail alignment. Classes are provided on basic safety techniques, skill development, and safe vehicle operation in the various environmental regions for ATV, motocross, and recreational OHVs.



OHV trails in the Environmental Training Center area.

Prairie City SVRA holds activities and programs focused on natural resource conservation. In April, the SVRA hosts an annual vernal pool tour, providing SVRA visitors an opportunity to view seasonally ponded wetlands that provide habitat for specially adapted plants and animals, including several species listed under the CESA and federal ESA.

Prairie City SVRA also hosts the California Police Activities League's Off-Highway Program. Operated in cooperation with State Parks, the Police Activities League's Off-Highway Program teaches youth ages 12–17 how to ride ATVs and motorcycles on OHV trails in a safe and supervised environment. The OHMVR Division maintains vehicles and equipment for the program.

Visitor Appreciation Day brings together visitors, OHV dealers, and nonprofit clubs and organizations to experience the many recreational opportunities that the SVRA has to offer. Visitors can access the SVRA for free, take OHV dealer demo rides, participate in educational activities, learn safe recreational practices, and observe demonstrations.

Tread Lightly!, a national nonprofit organization, operating in partnership with the OHMVR Division, Axial, and Jeep, have teamed up to put together a hands-on program in which participants are challenged to operate remote control vehicles through a course while following the Tread Lightly! principles. These principles include staying on designated roads, avoiding sensitive areas, properly disposing of waste, avoiding the spread of invasive species, and repairing degraded areas.

The OHMVR Division uses wildlife discovery kits at outreach programs and events to get the public thinking about natural resource preservation. Interpreters use wildlife discovery cards, taxidermied

animals, pelts, cast tracks, and replica scat to engage visitors and provide them with hands-on opportunities to learn about wildlife that inhabit the SVRA.

At large special events, such as the annual Hangtown Motocross Classic, AMP Dodge Amateur MX National, Nor Cal Rock Racing, Valley Off Road Racing Association races, and cross country races, an outreach booth is available that provides information about the event with a focus on safety and sustainability. The safety component includes rider training, proper safety equipment, and responsible riding practices. The sustainability component includes staying on the trail, keeping noise levels low, avoiding wet areas, and following the rules. In May 2014, during the 45th annual Hangtown Motocross Classic, Prairie City SVRA and OHVMR Division interpretive staff members manned a booth that drew more than 2,600 visitors during the 2-day event.

In October 2012, the OHMVR Division launched the ATV Simulator Education Program. The safety simulator is a mechanical device that hydraulically replicates the angular movements of an ATV traveling uphill and downhill, traversing hills left and right, and cornering. An off-highway motorcycle and snowmobile can also be mounted on the safety simulator. The safety simulator is featured at special events throughout the year.

In addition to the ATV simulator, visitors participate in several other hands-on activities, like the Gear Up! game and RIDE SAFE computer program, that reinforce safety and responsible riding practices. The Gear Up! stamping game is a fast-paced activity to teach about OHV riding gear. The game consists of a sheet with eight safety gear riddles and a set of eight self-inking rubber stamps. Youth start with the Gear Up! stamping game before putting on a helmet, goggles, and gloves to ride the ATV safety simulator. The safety-themed computer game, RIDE SAFE, is installed on two portable kiosks; one kiosk is a desktop version for wheelchair accessibility and the other is freestanding. The OHMVR Division features the interactive computer kiosk games to support outreach goals. The touch screen game teaches safe and environmentally responsible OHV recreation practices. All written content is presented visually and accompanied by narration. The target ages for the learning content are 7–11 years; however, people of all ages play the game.

## **NONPERSONAL INTERPRETATION**

Nonpersonal interpretation and education at Prairie City SVRA consists of social media (i.e., Facebook), interpretive panels, and brochures. Brochures available to visitors include SVRA maps, safety training information, California Adventure guides, State Park camping guides, and Tread Lightly! brochures and activity books. Prairie City SVRA's Facebook page enables SVRA staff to inform users of current conditions, recreational opportunities, and special events, and provides a tool for visitors to communicate with SVRA staff. Information is posted approximately one to two times per week and reaches more than 700 users.

Four interpretive panels are stationed throughout the SVRA:

- ▶ The *Dredge Panel*, located south of the ranger station, provides visitor information about the SVRA's dredge tailings from the 1850s placer mining operations.
- ▶ The *Moon Room Panel*, located just outside of the Moon Room, provides visitor information on the history and purpose of the Moon Room that was built for the Aerojet rocket test project in the 1960s.
- ▶ The *Hangtown Panel*, located east of the Hangtown Motocross Track, provides visitor information about the annual Hangtown Motocross Classic event and other races.
- ▶ The *Acorn Panel*, located between the Hangtown Motocross Track and the motorcycle and ATV area, provides an overview of how Native Americans harvested acorns from the oak trees for food and trade.

### **INTERPRETIVE COLLECTIONS**

The following interpretive materials are currently available at Prairie City SVRA:

- ▶ Taxidermied specimens include a bobcat, rough-legged hawk, black-crowned night heron, sharp-shinned hawk, and Swainson's hawk.
- ▶ Historic photos of the SVRA are archived by State Parks Photo Archives. Contemporary photos are stored on servers.

### **PAST INTERPRETIVE PLANNING**

The "Interpretive Element" chapter of the *Prairie City State Vehicular Recreation Area Master Plan* describes the park's primary and secondary interpretive topics and sets the interpretive direction for the unit (State Parks 1991:56–59). Interpretive services focused on OHV recreation, safety, and interpreting cultural and natural resources. Interpretive activities included:

#### **Facilities and Programs:**

1. ATV Junior Ranger Program
2. Safety display center
3. Brochures and maps of the recreational resources within the park
4. School group presentations
5. Informative signage throughout the park



## Special Considerations:

1. Vernal pools
2. Oak grove
3. Wildlife
4. History, particularly gold mining and aerospace

### 2.5.2 LOCAL, REGIONAL, AND STATEWIDE CONTEXT

Few OHV recreation areas are located within 90 miles of Prairie City SVRA. For this reason, information regarding OHV use and environmental responsibility is an important component of education at this SVRA. Although there are special cultural and natural resources at Prairie City SVRA and in the planning area in general, other very similar areas also provide interpretation and education about these topics. For instance, vernal pools found within the SVRA can also be experienced at Mather Regional Park approximately 6 miles southwest of the park. Sacramento County Regional Parks manages this park for public access.

### 2.5.3 SUPPORT FOR INTERPRETATION AND EDUCATION

Prairie City SVRA's interpretive team also strives to develop partnerships with other public, private, and nonprofit organizations, which often lead to collaborative events and interpretive programs. Volunteers also support SVRA interpretation and education.



Hangtown Motocross Classic outreach booth.

## 2.6 SVRA SUPPORT

### 2.6.1 VOLUNTEERS AND SUPPORTING GROUPS

Volunteers are an important component to the operation of Prairie City SVRA. Volunteers provide assistance during special events at the SVRA and help out with landscaping and restoration projects. State Parks recruits volunteers through word of mouth, Facebook, and the California Employment Development Department, and by contacting those who express an interest.

Several supporting groups and the services they provide to Prairie City SVRA are listed below.

- ▶ *Capital City Mountain Goat Four Wheel Drive Club* provides volunteer labor for four-wheel-drive safety.
- ▶ *Dirt Diggers North Motorcycle Club* promotes and provides concessions for the annual Hangtown Motocross Classic.

- ▶ *Polka Dots Motorcycle Club* provides event support, SVRA cleanup, and maintenance.
- ▶ *Prairie City Improvement Group* is a stakeholder group that meets every 30–60 days with representatives from different user groups. This group provides input on projects at Prairie City SVRA, such as the 4x4 obstacle course completed in 2012, and on operations, such as track watering schedules, track grooming practices, impacts of environmental projects, or mandates on riding opportunities.

## **2.7 PLANNING INFLUENCES**

### **2.7.1 SYSTEMWIDE PLANNING**

A variety of factors need to be considered when making planning decisions for an SVRA. To understand land use, resource, and facility issues in a larger context, planning for an SVRA must consider issues that cross regional, local, and SVRA boundaries. Therefore, the OHMVR Division addresses SVRA planning issues from a perspective that includes the entire State Parks system. In addition, other federal and state agencies may be responsible for providing oversight for resources present in SVRAs. The following systemwide directives are relevant to the planning effort for Prairie City SVRA:

- ▶ State Parks mission statement
- ▶ State Parks vision
- ▶ OHMVR Division mission statement
- ▶ OHMVR Division Strategic Plan
- ▶ State Parks Strategic Initiatives
- ▶ State Parks Accessibility Guidelines
- ▶ California Statewide Motorized Trail System
- ▶ California Public Resources Code
- ▶ OHMVR Act
- ▶ *2008 Soil Conservation Standard and Guidelines* (Soil Standard)
- ▶ *OHV BMP Manual for Erosion and Sediment Control* (OHV BMP Manual)
- ▶ OHMVR Commission
- ▶ OHMVR Division Resource Management Protocols
- ▶ Declaration of Purpose, Prairie City SVRA

#### **STATE PARKS 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.





## STATE PARKS VISION

California State Parks will strive for a future in which Californians are healthier in mind, body, and spirit through discovering, enjoying, and learning about California’s extraordinary parklands and diverse heritages. California State Parks makes these treasured natural and cultural resources and wide-ranging recreational opportunities available to all. Californians protect and expand this State Parks legacy for future generations.

## OFF-HIGHWAY MOTOR VEHICLE RECREATION DIVISION MISSION STATEMENT

The mission of the OHMVR Division is to provide leadership statewide in the area of 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 by 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.

## OFF-HIGHWAY MOTOR VEHICLE RECREATION DIVISION STRATEGIC PLAN

The *California State Parks Off-Highway Motor Vehicle Recreation Division Strategic Plan* (State Parks 2009a) guides the OHMVR Division on a strategic approach for administering SVRAs and a statewide financial assistance program that provides OHV-related activities. It reaffirms a commitment to protecting California’s unique natural areas by providing for well-managed OHV recreation. The plan seeks to actively engage the public to achieve its goals through multiple approaches, including providing transparency in program management and enabling children to connect with the natural environment. The plan provides a road map for the OHMVR Division based on four strategic themes and five guiding principles. Based on these strategic themes and guiding principles, the OHMVR Division Strategic Plan adopts a framework of six goals for the OHMVR Program to meet its legislative mandates.

### Strategic Themes

- ▶ *Emphasize the Basics*—Maintaining existing OHV areas in good condition and preventing environmental damage are central to the success of the OHMVR Program.
- ▶ *The Greening of OHV Recreation*—New technologies are becoming available that present opportunities for OHV recreation to be managed in ways that significantly reduce impacts on the environment.
- ▶ *Improving Technology*—New vehicles now available are far more capable than those sold in the past. The OHMVR Program must respond to these improvements in technology by providing facilities appropriate for more capable vehicles.

- ▶ *The New Gateway*—The OHMVR Program will take advantage of the opportunity presented by the presence of large numbers of young people and nontraditional user groups in OHV recreation areas by providing educational programs that teach appreciation of nature and the outdoors.

## **Guiding Principles**

- ▶ *Sustainability*—We must manage lands and resources in such a way that they will be available for the enjoyment of many generations of Californians to come.
- ▶ *Transparency in Decision Making*—Restoring public trust in the administration of the OHMVR Program depends upon people understanding the reasons behind decisions made by program managers.
- ▶ *Working with Partners and Volunteers*—Meeting OHMVR Program goals is far too complex an undertaking to attempt without the assistance of numerous related agencies, and participation from individuals and volunteer organizations.
- ▶ *Considering the Needs and Concerns of Stakeholders*—The OHMVR Program will only be relevant to the degree to which it responds to the needs and concerns of those who are most invested in the success of the OHMVR Program.
- ▶ *Sound Data for Management Decision Making*—In an era of diminishing opportunities, there is little room for mistakes. Commitment of resources and management actions must be based on the best available information to ensure success.

## **Goals**

- ▶ *Goal 1—Sustain Existing Opportunity*: Protect, preserve, and enhance existing OHV opportunities in a manner that ensures well-managed, interesting, and high-quality experiences, and address the environmental impacts that may be associated with those activities.
- ▶ *Goal 2—Increase OHV Opportunity*: Add new OHV opportunities where appropriate and needed to replace loss of existing opportunities and respond to changing and future demand.
- ▶ *Goal 3—Staff Development*: Enhance the abilities of program managers and staff dedicated to the development, management, and implementation of the OHMVR Program.
- ▶ *Goal 4—Develop an Informed and Educated Community*: Achieve a highly informed and educated community associated with OHV recreational activities, dedicated to safe and lawful OHV operation and responsible environmental stewardship.



- ▶ *Goal 5—Cooperative Relationships:* Establish and maintain productive relationships between individuals, organizations, industry, and government agencies to cooperatively identify problems and develop and implement solutions to advance the Mission and Goals of the OHMVR Program.
- ▶ *Goal 6—Informed Decision Making:* Improve the quality, quantity, and accessibility of information needed to support sound decision making, transparency of administration, and communication with the interrelated groups interested in, and associated with, the OHMVR Program.

## **STATE PARKS STRATEGIC INITIATIVES**

State Parks Strategic Initiatives are the implementation strategy for the Strategic Vision of State Parks, the image of the future of the State Parks system (State Parks 2001). Each initiative has its own implementation plan and outcome. The strategic initiatives have been crafted to correspond with State Parks’ philosophy to preserve, protect, and interpret California’s natural, cultural, and recreational resources. The Strategic Initiatives include:

- ▶ increasing diversity and leadership,
- ▶ using technology,
- ▶ creating an urban connection,
- ▶ developing a new image,
- ▶ focusing on cultural resources, and
- ▶ expanding recreational opportunities.

## **STATE PARKS ACCESSIBILITY GUIDELINES**

The *California State Parks Accessibility Guidelines* “are intended to convey to State Parks staff general information regarding accessibility standards and recommendations for complying with laws and regulations related to accessibility” (State Parks 2009b). The guidelines provide practical ways to allow people of all abilities to access and use programs and facilities while maintaining the quality of experience that people come to a State Park to enjoy. The guidelines include recommendations and regulations for complying with the standards for accessibility.

## **CALIFORNIA STATEWIDE MOTORIZED TRAIL SYSTEM**

PRC Section 5090.44 provides for the designation of corridors in California as Statewide Motorized Trails, corridors designated and maintained for recreational travel by OHVs. Portions of a California Statewide Motorized Trail may include lands designated and maintained as trailheads. No designated trail corridors are envisioned to be located near Prairie City SVRA.

## **CALIFORNIA PUBLIC RESOURCES CODE**

PRC Sections 5019.50 through 5019.80, “Classification of the State Parks System,” provide guidelines for designating a State Park and guiding principles for park improvements. The PRC classifies different

types of State Parks units and provides guidelines for park upkeep and improvements. In PRC Sections 5090.01 through 5090.70, the OHMVR Act of 2003 provides more detailed planning guidance specific to SVRAs. It is also used as a general guide to plan appropriate improvements. Section 5090.35(a) states:

The protection of public safety, the appropriate utilization of lands, and the conservation of land resources are of the highest priority in the management of the state vehicular recreation areas; and, accordingly, the division shall promptly repair and continuously maintain areas and trails, anticipate and prevent accelerated and unnatural erosion, and restore lands damaged by erosion to the extent possible.

PRC Section 5090.43(a) states:

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.

### **OFF-HIGHWAY MOTOR VEHICLE RECREATION ACT**

The OHMVR Act (PRC Section 5090.01 et seq.) was adopted in 1982 and most recently updated in 2003. The OHMVR Act provides funds to the OHMVR Division for planning, acquiring, developing, operating, conserving, and maintaining OHV recreation. Per Section 5090.43, SVRAs are to be established on lands with quality recreational opportunities for OHVs, and developed, managed, and operated for the purpose of making the fullest public use of these opportunities. Development and operation of these lands must follow Section 5090.35 of the OHMVR Act, requiring the OHMVR Division to monitor wildlife and vegetation to determine whether habitat protection programs are being met, as well as to develop and implement soils conservation standards to minimize adverse impacts caused by erosion. The OHMVR Division is also required to monitor and protect cultural and archeological resources within the SVRA and take appropriate measures to restore and repair any damage to such resources.

### **SOIL CONSERVATION STANDARD AND GUIDELINES**

The Soil Standard (State Parks 2008) requires that the OHMVR Division manage OHV recreation facilities to meet the following standard:

OHV recreation facilities shall be managed for sustainable long-term prescribed use without generating soil loss that exceeds restorability, and without causing erosion or



sedimentation which significantly affects resource values beyond the facilities. Management of OHV facilities shall occur in accordance with Public Resources Code, Sections 5090.2, 5090.35, and 5090.53.

The Soil Standard's guidelines provide tools and techniques that may be used to meet this standard. Other tools and techniques that are more applicable to specific facility conditions and organizational protocols also may be used for compliance as appropriate.

The Soil Standard provides guidance for conserving soil in parks managed by the OHMVR Division. It includes measures to maintain trails to a standard that allows for feasible restoration by natural resource managers. The Soil Standard applies to OHV areas funded by the California OHV Trust Fund, including all SVRAs. In the context of the Soil Standard and the PRC, "restoration" means restoring land to the contours, the plant communities, and the plant covers comparable to those on surrounding lands, or to those that existed before OHV use. The Soil Standard also provides measures to help anticipate and prevent accelerated and unnatural erosion and guide trail maintenance and repair.

#### **OFF-HIGHWAY VEHICLE BEST MANAGEMENT PRACTICES MANUAL FOR EROSION AND SEDIMENT CONTROL**

The OHV BMP Manual (State Parks 2007) provides guidance on selecting, implementing, and maintaining BMPs for OHV-type facilities and construction activities. BMPs detailed in the manual include 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.

#### **OFF-HIGHWAY MOTOR VEHICLE RECREATION COMMISSION**

The duties and responsibilities of the OHMVR Commission are advisory in nature, in line with those of the California State Park and Recreation Commission. Nine commissioners are appointed to represent a broad range of groups: OHV recreation enthusiasts, biological or soil scientists, rural landowners, law enforcement, environmental protection organizations, and nonmotorized recreation interests. The commission reviews plans for new and expanded vehicle recreation areas that have applied for grant funds, reviews and comments on the strategic plans and general plans developed by the OHMVR Division, receives public comment on the plans, and reports to the Governor and various legislative committees.

#### **OFF-HIGHWAY MOTOR VEHICLE RECREATION RESOURCE MANAGEMENT PROTOCOLS**

The HMS (plans prepared by the OHMVR Division) and the WHPP (mandated by PRC Section 5090.35) are a major part of each SVRA's resource monitoring and evaluation program. The HMS emphasizes a broad range of scientifically accepted techniques and measures that are appropriate for the unique habitats found in each SVRA. This monitoring system provides information about protocols for

baseline studies, focused studies, monitoring, and surveys. SVRA resource managers use the system to aid in 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 (“adapt”) as warranted by new monitoring information. Environmental scientists for each SVRA conduct and oversee the monitoring based on the HMS and other monitoring protocols. Biological resource assessments conducted at Prairie City SVRA have been compiled according to the guidelines set forth by this system.

## **PRAIRIE CITY SVRA DECLARATION OF PURPOSE**

The Declaration of Purpose is the broadest statement of management goals designed to fulfill the vision for a State Park unit and provides direction for the development of the General Plan. It is required by PRC Section 5002.2(b) and describes a unit’s primary resource values, significance, opportunities, and value to the State Parks System.

Prairie City SVRA’s original Declaration of Purpose was approved in July 1991:

Chapter 1027 of the Statutes of 1987, the “Off-highway Motor Vehicle Recreation Act of 1988”, amended the Public Resources Code. Section 5090.02 of the P.R.C. states that:

- (a) The Legislature finds that off-highway motor vehicles are enjoying an ever-increasing popularity in California and that the indiscriminate and uncontrolled use of those vehicles may have a deleterious impact on the environment, wildlife habitats, native wildlife and native flora.
- (b) The Legislature hereby declares that effectively managed areas and adequate facilities for the use of off-highway vehicles and conservation and enforcement are essential for ecologically balanced recreation.
- (c) Accordingly, it is the intent of the Legislature that:
  - (1) Existing off-highway motor vehicle recreational areas, facilities, and opportunities be expanded and be managed in a manner consistent with this chapter, in particular, to maintain sustained long-term use.
  - (2) New off-highway motor vehicle recreational areas, facilities and opportunities be provided and managed pursuant to this chapter in a manner that will sustain long-term use.
  - (3) When areas or trails or portions thereof cannot be maintained to appropriate standards for sustained long-term use, they shall be closed to use and repaired,



to prevent accelerated erosion. Those areas shall remain closed until they can be managed within the soil loss standard or shall be closed and rehabilitated.

- (4) Prompt and effective implementation of the Off-Highway Motor Vehicle Recreation Program by the Division of Off-Highway Motor Vehicle Recreation shall have an equal priority among other programs in the department.
- (5) Off-Highway motor vehicle recreation [shall] be managed in accordance with this chapter through financial assistance to local government and joint undertakings with agencies of the United States.

The unit's primary purpose is to provide controlled OHV recreation opportunities to those in Sacramento, Placer, El Dorado, San Joaquin, Yolo, Solano, and adjoining counties. To address, in a specific way, the general ecological concerns raised in paragraphs (a) and (b), above, such use should be planned and controlled to preserve and protect on-site resource values. Prime resources at the unit include northern hardpan vernal pools (a CDFG [now CDFW] sensitive habitat), oak woodland, frontage to a designated scenic corridor (Scott Rd.), certain historic and (potential prehistoric) cultural resources, and potential habitat for the valley elderberry longhorn beetle (listed as threatened by the USFWS).

## **2.7.2 REGIONAL PLANNING**

As a state agency, State Parks is not subject to city, county, or regional plans. However, the Prairie City SVRA General Plan does refer to the Circulation Element of the *Sacramento County General Plan of 2005–2030*.

The Circulation Element provides the framework for Sacramento County decisions concerning the countywide transportation system, which includes various transportation modes and related facilities (Sacramento County Community Planning & Development Department 2014). This element contains an objective and policies regarding scenic corridors. Scott Road adjacent to the eastern boundary of the SVRA is identified in the Circulation Element of the *Sacramento County General Plan of 2005–2030* as an especially scenic road that warrants scenic corridor protection.

## **2.7.3 REGULATORY INFLUENCES**

Regulatory influences should be understood so that regulatory issues can be anticipated and incorporated during the planning for Prairie City SVRA. Regulatory programs pertinent to the SVRA are described below, separated by topic and then grouped by level of government (federal, state, regional, or local).

### **2.7.3.1 NATURAL RESOURCES REGULATIONS**

#### **Federal Regulations and Laws**

##### ***Federal Endangered Species Act***

Species listed under the federal ESA could be present in or near the planning area. USFWS has authority over projects that may result in the “take” of a species listed as threatened or endangered under the ESA. Section 9 of the ESA defines take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Federal regulations define take further to include habitat modification or degradation that would be expected to result in death or injury to listed wildlife. If a project would result in the “take” of a federally listed species, then either an incidental take permit under ESA Section 10(a) or a federal interagency consultation under ESA Section 7 is required before the take may occur. Typically the project proponent must minimize and compensate for take as a condition of such a permit.

##### ***Migratory Bird Treaty Act***

The Migratory Bird Treaty Act, first enacted in 1918, implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international protection of migratory birds. The Migratory Bird Treaty Act authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act makes it unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (U.S. Code Title 16, Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the Migratory Bird Treaty Act includes several hundred species and includes nearly all native birds.

##### ***Clean Water Act Section 404***

EPA is the lead federal agency responsible for water quality management. The CWA is the primary federal law that governs and authorizes water-quality control activities by EPA and the states.

CWA Section 404 requires a project proponent to obtain a permit from USACE before engaging in any activity that involves discharging dredged or fill material into waters of the United States, including wetlands. The relevant terms are generally defined as follows:

- ▶ *Fill material*: Any material that replaces a portion of a water of the United States with dry land or changes the bottom elevation of a portion of a water of the United States.
- ▶ *Waters of the United States*: Navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters; and many wetlands.





- ▶ *Wetlands*: Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Jurisdictional wetlands must meet three criteria: hydrophytic vegetation, hydric soil, and wetland hydrology. They must be adjacent to traditional navigable waters, must directly abut relatively permanent waters, or must have a significant nexus with a traditional navigable water.

Before USACE can issue a permit under CWA Section 404, it must determine that the project complies with the CWA Section 404(b)(1) guidelines. The Section 404(b)(1) guidelines (Title 40, Section 230.10[a] of the Code of Federal Regulations [40 CFR 230.10(a)]) include the following specific requirement:

[N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. ...

To comply with this provision, the applicant must evaluate opportunities that would result in a less adverse impact on the aquatic ecosystem.

In 2008, USACE and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by USACE. These regulations establish a preference for using mitigation banks to reduce some of the risks and uncertainties associated with compensatory mitigation.

## **State Regulations and Laws**

### ***California Endangered Species Act***

The CESA directs state agencies to decline approval of projects that would jeopardize the continued existence of an endangered or threatened species, or would result in the destruction or adverse modification of habitat essential to a species' continued existence. The CESA also states that reasonable and prudent alternatives must be developed by CDFW together with the project proponent and any state lead agency. These reasonable and prudent alternatives must be consistent with conserving the species while maintaining the project purpose to the greatest extent possible. The CESA defines "take" of a species as an activity that would directly or indirectly kill an individual of a species. Unlike the federal ESA's definition, the CESA's definition of take does not include "harm" or "harass." As a result, the threshold for take may be higher under the CESA than under the ESA because the CESA does not necessarily consider habitat modification to be take.

CESA Sections 2081(b) and 2081(c) allow CDFW to issue an incidental take permit for a state-listed threatened or endangered species only if certain criteria are met. Specifically, the take must be incidental

to an otherwise lawful activity; the impacts of the authorized take must have been minimized and fully mitigated; and issuance of the permit must not jeopardize the continued existence of a state-listed species.

CDFW maintains a list of species considered threatened and endangered under the CESA. In addition, CDFW maintains lists of candidate species and species of special concern. Candidate species are those species under review for addition to the list of either threatened or endangered species. “Species of special concern” status applies to animals that are not listed under the federal ESA or CESA, but that nonetheless are declining at a rate that could result in listing; it also applies to animals that have historically occurred in low numbers, for which known threats to their persistence currently exist. The designation is intended to result in special consideration for these animals during environmental review.

### ***California Fish and Game Code***

#### **Fully Protected Species**

Sections 3511, 4700, 5050, and 5515 strictly prohibit the incidental or deliberate take of fully protected species. CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock; therefore, avoidance measures may be required to avoid take of fully protected species.

#### **Protection of Bird Nests**

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy raptors (e.g., hawks, owls, eagles, falcons), including their nests or eggs.

#### **Lake and Streambed Alteration**

Under Section 1602, rivers, streams, and lakes in California are subject to regulation by CDFW. CDFW regulates diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake. As defined by CDFW, a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life.

### ***Porter-Cologne Water Quality Control Act and Section 401 of the Clean Water Act***

Under Section 401 of the federal CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state’s water quality standards and criteria. In California, the State Water Resources Control Board (SWRCB) has delegated the authority to grant water quality certification to the nine regional water quality control boards. The planning area is under the jurisdiction of the Central Valley RWQCB.

Each of the nine RWQCBs must also prepare and periodically update a basin plan in accordance with the Porter-Cologne Act. Each basin plan sets forth water quality standards for surface water and



groundwater and actions to control nonpoint and point sources of pollution. These actions seek to achieve and maintain the basin plan standards. Basin plans offer an opportunity to protect waterways and wetlands by establishing water quality objectives.

The RWQCB's jurisdiction includes federally protected waters under CWA Section 401 and state-protected waters under the Porter-Cologne Act. A "water of the state" is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 if they meet the definition of waters of the state. The RWQCB typically requires the project proponents to mitigate impacts on waters and wetlands to ensure no net loss of functions and values.

### ***California Department of Fish and Wildlife/California Native Plant Society Species Designations***

CNPS is a statewide nonprofit organization that seeks to increase understanding of California's native flora and to preserve this rich resource for future generations. CDFW and CNPS assign rare-plant ranks through the collaborative efforts of the Rare Plant Status Review Group, composed of more than 300 botanical experts from government, academia, nongovernment organizations, and the private sector and managed jointly by CDFW and CNPS.

California native plants meeting the rarity or endangerment criteria are assigned a ranking under the California Rare Plant Rank (CRPR) system. These plants were formerly referred to as CNPS listed species; however, in March 2010 CDFW (then known as the California Department of Fish and Game) adopted the name "California Rare Plant Rank" for the rarity and endangerment categories. The reason for this change was to eliminate the false impression that these assignments are the exclusive work of CNPS and that CNPS has had undue influence over the regulatory process.

CRPR 1 and 2 species generally qualify as endangered, rare, or threatened within the definition of the CEQA Guidelines (Title 14, Section 15380 of the California Code of Regulations [14 CCR Section 15380]). In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

## **2.7.3.2 HYDROLOGY AND WATER QUALITY REGULATIONS**

### **Federal Regulations and Laws**

#### ***Federal Clean Water Act***

EPA is the lead federal agency responsible for managing water quality and implementing regulations adopted under the Clean Water Act of 1972. The CWA is the primary federal law authorizing EPA and individual states to implement activities controlling water quality and governs such activities. The various CWA elements that address water quality and are applicable to the Prairie City SVRA General Plan are discussed below. USACE administers wetland protection elements under Section 404 of the

CWA, including permits for the discharge of dredged and/or fill material into waters of the United States.

### ***Water Quality Criteria and Standards***

CWA Section 303 requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: designated beneficial uses of the water body in question, and criteria that protect the designated uses.

Section 304(a) requires EPA to publish advisory water quality criteria reflecting the latest scientific knowledge on the kind and extent of health and welfare effects expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

Water quality regulations are published in CFR Title 40. EPA has delegated authority to the State of California to implement most programs authorized or adopted for CWA compliance through the Porter-Cologne Act, described below.

### ***National Pollutant Discharge Elimination System Permit Program***

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. In California, the nine RWQCBs implement the NPDES permit system. A discharge from a point source is unlawful unless the discharge complies with an NPDES permit. “Point-source” pollution is discharged from a distinct, identifiable source, such as a pipe or ditch, while “nonpoint-source” pollution occurs when runoff washes off a wide land area, such as a plowed field or city street. NPDES permits generally identify limits on allowable concentrations or mass emissions of pollutants contained in discharges; prohibit discharges not specifically allowed by the permit; and describe actions that dischargers must take, such as conducting industrial pretreatment, preventing pollution, and self-monitor activities.

EPA maintains regulations that establish NPDES permit requirements for municipal and industrial stormwater discharges. An NPDES permit for general construction activity is required for projects that would disturb 1 acre or more. The NPDES General Permit for Small Municipal Separate Storm Sewer Systems, referred to as the “MS4 General Permit,” requires small municipal areas of fewer than 100,000 persons to develop stormwater management programs.

### ***Antidegradation Policy***

The federal antidegradation policy, established in 1968, is designed to protect existing uses, water quality, and national water resources. The federal policy directs states to adopt statewide policies that include the following primary provisions:

- ▶ Existing instream uses and the water quality necessary to protect those uses shall be maintained and protected.



- ▶ Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development.
- ▶ Where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

### ***Federal Emergency Management Agency***

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. FEMA establishes the design standard for flood protection covered by the Flood Insurance Rate Maps. The minimum level of flood protection for new development is the 1-in-100 (1 percent) annual exceedance probability (the 100-year flood event). As developments are proposed and constructed, FEMA also issues revisions to Flood Insurance Rate Maps, such as Conditional Letters of Map Revision and Letters of Map Revision, through the local agencies that work with the National Flood Insurance Program.

### **State Regulations and Laws**

In California, the SWRCB has broad authority over water quality control issues for the state. The SWRCB develops statewide policy on water quality and exercises the powers delegated to the state by the federal government under the CWA. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The Central Valley RWQCB is responsible for the regional area in which Prairie City SVRA is located.

### ***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Act is California's statutory authority for the protection of water quality. This law requires the state to adopt water quality policies, plans, and objectives that protect the state's waters. The Porter-Cologne Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update basin plans, regional water quality control plans that also are required by the CWA. Basin plans establish beneficial uses, water quality objectives (or "criteria" under the CWA), and implementation programs for each of the nine regions in California.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities by filing reports of waste discharge. The SWRCB and RWQCBs are authorized to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also may issue waivers to reports of waste discharge and/or WDRs for broad

categories of “low threat” discharge activities that have minimal potential to adversely affect water quality when implemented according to prescribed terms and conditions.

### ***California Toxics Rule and Policy for Implementation of Toxics Standards***

The California Toxics Rule (CTR) was issued in 2000 in response to requirements of EPA’s National Toxics Rule. The CTR establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds that have been identified as priority pollutants. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are subject to CWA Section 303(c). The CTR includes criteria for the protection of aquatic life and human health. Human health criteria (water- and organism-based) apply to all waters with a beneficial use designation of Municipal and Domestic Water Supply, as indicated in the basin plans.

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, also known as the State Implementation Plan, was adopted by the SWRCB in 2000 and amended in 2005. The State Implementation Plan establishes provisions for:

- ▶ translating CTR criteria, National Toxics Rule criteria, and basin plan water quality objectives for toxic pollutants into effluent limits for NPDES permits;
- ▶ determining whether effluent levels are in compliance with those limits;
- ▶ monitoring for 2,3,7,8-TCDD (dioxin) and its toxic equivalents;
- ▶ controlling chronic (long-term) toxicity;
- ▶ initiating development of site-specific water quality objectives; and
- ▶ granting exceptions for effluent compliance.

The goal of the State Implementation Plan is to establish a standardized statewide approach to the permitting of discharges of toxic effluent to inland surface waters, enclosed bays, and estuaries.

### ***NPDES Permit System and Waste Discharge Requirements for Construction***

The SWRCB and Central Valley RWQCB have adopted specific NPDES permits for activities that have the potential to discharge wastes to waters of the state. The SWRCB’s statewide stormwater general permit for construction activity (Order 2009-0009-DWQ) is applicable to all land-disturbing construction activities that would disturb 1 acre or more. The Central Valley RWQCB’s general NPDES permit for construction dewatering activity (Order 5-00-175) authorizes direct discharges to surface waters up to 250,000 gallons per day for no more than a 4-month period each year.



To receive an NPDES permit, the discharger must submit a notice of intent to discharge to the Central Valley RWQCB and implement a storm water pollution prevention plan (SWPPP) that includes BMPs to minimize discharges. As mentioned above, the Central Valley RWQCB may issue site-specific WDRs or waivers to WDRs for certain waste discharges to land or waters of the state. Central Valley RWQCB Resolution R5-2003-0008 identifies activities subject to waivers of reports of waste discharge and/or WDRs, including minor dredging activities and construction dewatering activities that discharge to land.

Clearing, grading, stockpiling, and excavation are subject to the general construction activity permit. Dischargers must eliminate or reduce nonstormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider using permanent postconstruction BMPs that would remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

In addition, in response to a court decision, the Central Valley RWQCB adopted Resolution 2001-046, which requires that water quality be sampled to determine the presence of visible and nonvisible contaminants in discharges from construction activities. Water quality sampling must occur if the activity could result in the discharge of turbidity or sediment to a water body that is listed as impaired under Section 303(d) because of sediment or siltation, or if a nonvisible contaminant is released. Sampling and analysis is required when such pollutants are or should be known to be present and could contact runoff. NPDES permits require implementation of design and operational BMPs to reduce the level of contaminant runoff. Types of BMPs include source controls, treatment controls, and site planning measures.

Discharges subject to the SWRCB NPDES general permit for construction activity are subject to development and implementation of a SWPPP. The SWPPP shows a site map, describes construction activities, and identifies the BMPs that would be employed to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, and cement) that could contaminate nearby water resources.

SWRCB's Final California 2010 Integrated Report lists Carson Creek, Deer Creek, and the Cosumnes River as impaired water bodies (SWRCB 2010). These three water bodies located near Prairie City SVRA are listed as Total Daily Maximum Load (TMDL) Requirement Status 5A. (A Category 5 water body segment is a segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants listed for the segment. TMDL Requirement Status A is defined as "TMDL still required" [i.e., not addressed by an EPA-approved TMDL or by an action other than a TMDL].) The Final California 2010 Integrated Report lists the following impairments for these water bodies:

- ▶ Carson Creek (from WWTP [Wastewater Treatment Plant] to Deer Creek) is listed as impaired for aluminum and manganese. The TMDLs for these pollutants are expected to be completed in 2019 and 2021, respectively.
- ▶ Deer Creek (Sacramento County) is listed as impaired for iron. The TMDL is expected to be completed in 2019.
- ▶ The Upper Cosumnes River (above Michigan Bar) is impaired for invasive species (redestye bass and green sunfish). The estimated TMDL completion date is 2019.

The Lower Cosumnes River (below Michigan Bar; partly in Delta Waterways, eastern portion) is listed as impaired for *Escherichia coli* (E. coli), sediment toxicity, and invasive species (redestye bass and green sunfish). The TMDLs for these impairments are expected to be completed between 2019 and 2021.

The Central Valley RWQCB applies the “tributary rule” listed in the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) and assigns to these creeks the beneficial uses designated for the nearest downstream location. In this instance, beneficial uses for the Sacramento and Cosumnes Rivers apply.

The Central Valley RWQCB also regulates waste discharges in undesignated streams so that downstream water quality conditions and beneficial uses are not degraded. Therefore, these creeks are subject to regulation for the existing designated uses in their receiving water bodies, which consist of:

- ▶ municipal and domestic water supply,
- ▶ agricultural supply,
- ▶ industrial supply and hydropower generation,
- ▶ contact and noncontact recreation,
- ▶ warm and cold freshwater migration and spawning habitat, and
- ▶ wildlife habitat.

### ***Central Valley Basin Plan***

Both the federal CWA and the Porter-Cologne Act mandate basin plans. The Basin Plan issued by the Central Valley RWQCB (2011) sets forth water quality standards for the surface waters and groundwater of the region. Those 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. Generally, narrative criteria require that water quality not be degraded as a result of increases in pollutant loads that adversely affect a water body’s designated beneficial uses.

### ***Central Sacramento County Groundwater Management Plan***

The *Central Sacramento County Groundwater Management Plan* was completed in 2006 by Central Sacramento County Groundwater Basin stakeholders, in coordination with the Sacramento County





Water Agency. The plan established a framework for maintaining a sustainable groundwater resource for the various users overlying the basin in Sacramento County between the American and Cosumnes Rivers (SCWA et al. 2006:ES-1). The *Central Sacramento County Groundwater Management Plan* assists overlying water users in maintaining a safe, sustainable, and high-quality groundwater resource.

### ***Off-Highway Motor Vehicle Recreation Act***

The OHMVR Act (PRC Section 5090.01 et seq.) was adopted in 1982 and most recently updated in 2003. The OHMVR Act provides funds to the OHMVR Division for planning, acquiring, developing, operating, conserving, and maintaining OHV recreation. Per Section 5090.43, SVRAs are to be established on lands with quality recreational opportunities for OHVs, and developed, managed, and operated for the purpose of making the fullest public use of these opportunities. Development and operation of these lands must follow Section 5090.35 of the OHMVR Act, requiring the OHMVR Division to monitor wildlife and vegetation to determine whether habitat protection programs are being met, as well as to develop and implement soils conservation standards to minimize adverse impacts caused by erosion. The OHMVR Division is also required to monitor and protect cultural and archeological resources within the SVRA and take appropriate measures to restore and repair any damage to such resources.

### ***OHMVR Division Soil Conservation Standard and Guidelines***

The OHMVR Division issued its updated Soil Standard in 2008 in response to Assembly Bill (AB) 2666. The 2008 standard and supporting guidelines are intended to ensure that resources are managed and maintained appropriately in areas of OHV use. The Soil Standard states that “Off-highway vehicle (OHV) recreation facilities shall be managed for sustainable long-term prescribed use without generating soil loss that exceeds restorability, and without causing erosion or sedimentation which significantly affects resource values beyond the facilities” (State Parks 2008:1).

The guidelines in the Soil Standard provide tools and techniques that may be used to meet the 2008 standard. The guidelines were developed with input from representatives from State Parks’ OHVMR Division, the California Department of Conservation/CAL FIRE, the U.S. Bureau of Land Management, the U.S. Forest Service, NRCS, and USGS. Through a series of public workshops, input was also obtained from representatives of approximately 30 other governmental organizations, OHV recreation groups, OHV industry consultants, and environmental communities.

The guidelines are broadly written to provide the flexibility needed to allow their application to all OHV sites statewide. Because the Soil Standard serves as resource management guidance for OHV use on prescribed trails and roads, on multiple-use roads, and in open-riding areas, each land manager is responsible for determining the recreational activity that may be causing any specific resource damage and initiating the appropriate action.

### **2.7.3.3 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES REGULATIONS**

#### **State Regulations and Laws**

##### ***Off-Highway Motor Vehicle Recreation Act***

See description under “Hydrology and Water Quality Regulations,” above.

##### ***California Public Resources Code Section 5090.35***

The PRC requires management and protection of soil resources specific to SVRAs. Section 5090.35(a) states:

The protection of public safety, the appropriate utilization of lands, and the conservation of land resources are of the highest priority in the management of the state vehicular recreation areas; and, accordingly, the division shall promptly repair and continuously maintain areas and trails, anticipate and prevent accelerated and unnatural erosion, and restore lands damaged by erosion to the extent possible.

##### ***California Public Resources Code Section 5097.5***

Unauthorized collection of fossils on land under state ownership or jurisdiction is considered a misdemeanor, punishable by fine and/or imprisonment. PRC Section 5097.5 states:

A person shall not 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, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

##### ***Off-Highway Motor Vehicle Recreation Division Soil Conservation Standard and Guidelines***

See description under “Hydrology and Water Quality Regulations,” above.

##### ***Best Management Practices Manual for Erosion and Sediment Control***

The OHV BMP Manual (State Parks 2007) provides guidance on selecting, implementing, and maintaining BMPs for OHV-type facilities and construction activities. BMPs detailed in the manual address 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.



## ***National Pollutant Discharge Elimination System and Storm Water Pollution Prevention Plans***

As discussed in detail in the “Hydrology and Water Quality Regulations” section above, the SWRCB and Central Valley RWQCB have adopted specific NPDES permits for activities that have the potential to discharge wastes (including sediment) to waters of the state. The SWRCB’s statewide stormwater general permit for construction activity (Order 2009-0009-DWQ) is applicable to all land-disturbing construction activities that would disturb 1 acre or more. Compliance with the NPDES permit requires the discharger to submit a notice of intent to discharge to the Central Valley RWQCB and implement a SWPPP that includes BMPs to minimize water quality degradation during construction activities.

### **2.7.3.4 AIR QUALITY REGULATIONS**

#### **Federal Regulations and Laws**

EPA is charged with implementing national air quality programs. EPA’s air quality mandates are drawn primarily from the federal Clean Air Act. Enacted in 1970, the CAA required EPA to establish primary and secondary national ambient air quality standards. The CAA also required each state to prepare an air quality control plan, referred to as a State Implementation Plan (SIP).

The U.S. Congress’s most recent major amendments to the CAA were made in 1990. The CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. EPA reviews all SIPs to determine whether they conform to the mandates of the CAA Amendments and whether implementing them will achieve air quality goals.

#### **State Regulations and Laws**

##### ***California Air Resources Board***

ARB coordinates and oversees state and local air pollution control programs in California and implements the California Clean Air Act. Adopted in 1988, the CCAA required ARB to establish the California ambient air quality standards. In most cases, the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health-effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires local air districts to endeavor to achieve and maintain the CAAQS by the earliest practical date. Air districts should particularly focus on reducing emissions from transportation and areawide emission sources. The CCAA provides districts with the authority to regulate indirect sources.

Among ARB’s other responsibilities are overseeing local air districts’ compliance with California and federal laws; approving local air quality plans; submitting SIPs to EPA; monitoring air quality;

determining and updating area designations and maps; and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

ARB and local air pollution control districts are developing plans to meet new national air quality standards for ozone and PM<sub>2.5</sub>. California's adopted 2007 State Strategy was submitted to EPA as a revision to the SIP in November 2007 (ARB 2012).

### ***California Off-Highway Vehicle Regulations***

Regulations for California OHVs control emissions from mobile sources (including evaporative emissions) by ensuring that all OHVs operating in California meet emissions standards. In January 1994, ARB adopted emission-control regulations for dirt bikes and ATVs, requiring that all dirt bikes and ATVs sold in California, model year 1998 and later, be certified by ARB's On-Road Light-Duty Certification Section. In 1998, ARB revised the OHV regulations to allow riders to use noncompliant dirt bikes and ATVs not meeting the new emissions standards during certain periods of the year—mainly fall, winter, and spring months when ozone levels are low. These noncompliant dirt bikes and ATVs are currently allowed in Prairie City SVRA from October 1 through April 30 of each year. Noncompliant vehicles are issued a red registration sticker from the California Department of Motor Vehicles. Certified compliant vehicles and all model-year-2002 and newer OHVs are issued a green registration sticker, which allows operation of these vehicles in any designated use area at any time during the year.

ARB approved evaporative emission standards for OHVs that went into effect in 2008. These standards allowed changes to the use seasons for OHVs with red sticker registration, based on new air basin data. They also added three vehicle types subject to OHV regulations: off-road utility vehicles, off-road sport vehicles, and sand cars (e.g., dune buggies, sand rails). Throughout 2013 and 2014, ARB held public workshops to better understand the OHV usage and associated emissions. In particular, ARB is interested in understanding how exhaust and evaporative emissions from OHVs can be reduced (ARB 2014b).

ARB's Enforcement Program is responsible for preventing the illegal sale and use of nonconforming or non-California-certified vehicles, engines, and emissions-related parts in California.

### **Regional Regulations and Ordinances**

As described previously in the "Air Quality" discussion in Section 2.3.1, "Physical Resources," SMAQMD is the local air district with jurisdiction over activities at Prairie City SVRA. SMAQMD attains and maintains air quality conditions in Sacramento County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of SMAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. SMAQMD also inspects



stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA and amendments thereof, and the CCAA.

SMAQMD's *Guide to Air Quality Assessment in Sacramento County* is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. A new version of the guide was released in December 2009, and individual sections and chapters have been revised since then. The latest update was to Chapters 1, 2, 4, 6, 8 and 9 in November 2014 (SMAQMD 2014) to reflect the adoption of GHG thresholds, attainment status changes for particulate matter, and new guidance for operational air quality mitigation plans. SMAQMD recommends that lead agencies use the December 2009 CEQA guide beginning January 1, 2010, for projects that have not released a draft environmental document for public review on or before that date. The 2009 guide contains the following applicable components:

- ▶ criteria and thresholds for determining whether a project may have a significant adverse air quality impact;
- ▶ specific procedures and modeling protocols for quantifying and analyzing air quality impacts;
- ▶ methods available to mitigate air quality impacts; and
- ▶ information for use in air quality assessments and environmental impact reports that will be updated frequently, such as air quality data, regulatory setting, climate, and topography.

Among the SMAQMD rules applicable to activities pertaining to Prairie City SVRA are the following rules:

- ▶ *Rule 201: General Permit Requirements.* Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD before equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or ARB portable equipment registration (SMAQMD 2006).
- ▶ *Rule 402: Nuisance.* A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property. (California Health and Safety Code, Section 41700) (SMAQMD 1977a).

- ▶ *Rule 403: Fugitive Dust.* A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emissions originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation (SMAQMD 1977b).

### **Toxic Air Contaminant Regulations**

Air quality regulations also focus on TACs, or in federal terminology, hazardous air pollutants. In general, for TACs that may cause cancer, no concentration exists that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected. This contrasts with the criteria air pollutants, for which acceptable levels of exposure can be determined and ambient standards have been established. EPA and ARB regulate TACs through statutes and regulations that generally require using the maximum available control technology or best available control technology for toxics to limit emissions. These statutes and regulations, in conjunction with rules set forth by SMAQMD, establish the regulatory framework for TACs.

### ***Federal Regulations and Laws***

Title III of the CAA requires EPA to issue national emissions standards for hazardous air pollutants for certain categories of sources that emit one or more pollutants identified as hazardous air pollutants/TACs. Emission standards may differ between “major sources” and “area sources” of TACs. Major sources are defined as stationary sources with the potential to emit more than 10 tons per year of any TAC or more than 25 tons per year of any combination of TACs; all other sources are considered area sources. This also requires the issuance of Maximum Available Control Technology standards for each listed source category according to a prescribed schedule (EPA 2013a).

The CAA Amendments required EPA to issue vehicle or fuel standards containing reasonable requirements to control TAC emissions, applying at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 of the CAA required the use of reformulated gasolines in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions, including TAC emissions.

### ***State Regulations and Laws***

In California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), also known as the “Hot Spots” Information and Assessment Act (AB 2588). AB 1807 sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA’s list of hazardous air pollutants as TACs. Most recently, diesel PM was added to ARB’s list of TACs.



Once a TAC is identified, ARB adopts an airborne toxics control measure for sources that emit that TAC. If there is a safe threshold at which there is no toxic effect from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology to minimize emissions.

The Hot Spots Act requires existing facilities that emit toxic substances above a specified level to prepare a toxic-emissions inventory, as well as a health risk assessment if emissions are significant. The facilities must also notify the public of significant risk levels and prepare and implement risk reduction measures.

ARB has adopted diesel-exhaust control measures and stringent emission standards for various on-road mobile sources of emissions. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, diesel PM) declined substantially over the last decade. Such emissions will be reduced further in California through a progression of regulatory measures (e.g., low-emission vehicle/clean fuels and Phase II reformulated gasoline regulations) and control technologies. ARB's Diesel Risk Reduction Plan aims to reduce concentrations of diesel PM by 85 percent in 2020 from the estimated year-2000 level. As emissions are reduced, risks associated with exposure to the emissions likely will also decline. Emissions from heavy-duty diesel equipment associated with implementation of the General Plan would be required to comply with the rules outlined above (ARB 2000).

ARB's *Air Quality and Land Use Handbook: A Community Health Perspective* provides guidance on land-use compatibility with TAC sources (ARB 2011). The handbook's contents do not constitute a law or adopted policy. They do, however, offer recommendations for the siting of sensitive receptors (such as proposed residences) near uses associated with TACs to help limit the exposure of children and other sensitive populations to TACs. Uses associated with TACs include freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities. The handbook can be used to assess the amount of exposure that would result from implementing a project.

### ***Regional Plans, Rules, and Regulations***

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. Under SMAQMD Rule 202, "New Source Review," all sources that could emit TACs must obtain permits from the district. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source review standards and air toxics control measures. SMAQMD limits emissions and public exposure to TACs through a number of programs. The district prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

Implementation of the Prairie City SVRA General Plan is not expected to introduce any new stationary permitted sources of TACs. However, any trenching or digging to modify or redesign OHV tracks

within the SVRA may generate TAC emissions, and implementing the General Plan could introduce a nonpermitted source of TACs (high-volume OHV activity). Based on Google Earth imagery, the closest nearby receptors appear to be Carson Creek Junior/Senior High School, approximately 2.77 miles south-southwest of the SVRA's fence line, and Folsom High School, approximately the same distance to the north. Because sensitive receptors are located relatively far away and the likelihood that the SVRA would produce TAC emissions is low, TAC exposure would be less than significant.

## **Odor Regulations**

### ***Federal and State Regulations and Laws***

There are no federal or state regulations related to odors. Odors are typically considered a local air quality problem. The regional regulatory framework for odors is discussed below.

### ***Regional Plans, Rules, and Regulations***

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments, such as SMAQMD. SMAQMD's Regulation 402, "Nuisance," includes provisions for controlling odors. In addition, Chapter 7 of SMAQMD's *Guide to Air Quality Assessment in Sacramento County* provides guidance along with tools and methodologies to help determine whether a project may generate significant odor impacts. This chapter of the SMAQMD guide also provides odor screening distances for various land uses and technology-based, design-based, and planning-based measures for mitigating odor impacts (SMAQMD 2014).

## **2.7.3.5 GREENHOUSE GAS EMISSIONS REGULATIONS**

### **Federal Regulations and Laws**

#### ***Supreme Court Ruling on California Clean Air Act Waiver***

EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007, that CO<sub>2</sub> is an air pollutant as defined in the CAA, and that EPA has the authority to regulate emissions of GHGs. However, no federal regulations or policies regarding GHG emissions are applicable to the General Plan. See the discussion of AB 1493 under "State Plans, Regulations, and Laws," below, for further information about the CCAA waiver.





## ***Energy and Independence and Security Act of 2007 and Corporate Average Fuel Economy Standards***

The Energy Independence and Security Act of 2007 (EISA) amended the Energy Policy and Conservation Act<sup>6</sup> to further reduce fuel consumption and expand production of renewable fuels (DOE 2013). The EISA mandated that the National Highway Traffic Safety Administration set corporate average fuel economy (CAFE) standards for each model year of passenger cars at the maximum feasible level. This statutory mandate also eliminated the old default CAFE standard of 27.5 miles per gallon. The EISA required that CAFE standards for model years 2011–2020 be set high enough to achieve the goal of an industrywide average CAFE standard of 35 miles per gallon for passenger cars and light-duty trucks.

At the request of President Barack Obama, the rulemaking for this goal was divided into two parts. The first part included CAFE standards for model year 2011 to meet the statutory deadline (March 30, 2009). The second part of the rulemaking, applicable to model year 2012 and subsequent years, set the maximum CAFE standards feasible under the limits of the Energy Policy and Conservation Act and EISA. In April 2010, the National Highway Traffic Safety Administration and EPA issued a Final Rule that established national standards for model year 2012–2016 passenger cars and light trucks. In addition, in August 2012, the same agencies issued another Final Rulemaking for model years 2017–2025 (EPA 2013a).

## ***Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Federal Clean Air Act***

On December 7, 2009, EPA adopted its *Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases*, known as the Endangerment Finding, under the CAA. The Endangerment Finding is based on CAA Section 202(a), which states that the EPA Administrator should regulate and develop standards for “emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”

The rule addresses CAA Section 202(a) in two distinct findings. The first addresses whether the concentrations of the six key GHGs (CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the health and welfare of current and future generations. The second addresses whether the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs, and thus to the threat of climate change.

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<sup>6</sup> The Energy Policy and Conservation Act was established in 1975 to respond to the 1973 oil crisis. The main purpose of this act is to increase domestic energy production and supply, decrease energy demand, and increase energy efficiency. The Energy Policy and Conservation Act primarily resulted in a domestic petroleum reserve used to respond to energy emergencies and disruptions in energy supply.

The EPA Administrator found that atmospheric concentrations of GHGs endanger public health and welfare within the meaning of Section 202(a) of the CAA. The Administrator also found that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare.

## **State Regulations and Laws**

### ***Assembly Bill 1493***

In 2002, then-Governor Gray Davis signed AB 1493. AB 1493 required that ARB develop and adopt by January 1, 2005, regulations that would achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations that added GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to 13 CCR Sections 1900 and 1961 and adoption of Section 1961.1 imposed new requirements on automobile manufacturers, beginning with model year 2009. The manufacturers were required to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicles with a gross vehicle weight rating less than 10,000 pounds:

- ▶ For passenger cars and light-duty trucks with a loaded vehicle weight of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009.
- ▶ For light-duty trucks with a loaded vehicle weight of 3,751 pounds to a gross vehicle weight of 8,500 pounds, and for medium-duty passenger vehicles, the regulations called for GHG emissions to be reduced by approximately 24 percent between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961, as amended by AB 1493 and 13 CCR 1961.1. (The case became *Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*) The automakers’ suit, filed in the U.S. District Court for the Eastern District of California, contended that California’s implementation of regulations that would effectively regulate vehicle fuel economy violated various federal laws, regulations, and policies.

On December 12, 2007, the court rejected the automakers’ claim. The court found that if California were to receive appropriate authorization from EPA (the last remaining factor in enforcing the standard), then these regulations would be consistent with and have the force of federal law. This authorization to implement more stringent standards in California was requested in the form of a CAA Section 209(b)



waiver in 2005. EPA failed to grant California authorization to implement the standards, and then-Governor Arnold Schwarzenegger and then-Attorney General Edmund G. Brown Jr. filed suit against EPA for the delay. In December 2007, then-EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions," and the emissions reductions that would be achieved through the EISA as the reasons for the denial (Office of the White House 2009).

The State of California filed suit against EPA for its decision to deny the CAA waiver. The Obama Administration directed EPA to reexamine its position denying California's CAA waiver and opposing regulation of GHG emissions. California received the waiver on June 30, 2009.

### ***Executive Order S-3-05***

Governor's EO S-3-05, signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, exacerbate California's air quality problems, and potentially cause a rise in sea level. To combat those concerns, the executive order established targets for total GHG emissions. Specifically, emissions were to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The executive order directed the Secretary of the California Environmental Protection Agency to coordinate a multiagency effort to reduce GHG emissions to the target levels. The Secretary also must submit biannual reports to the Governor and State Legislature describing progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat these impacts. To comply with Governor's EO S-3-05, the Secretary of the California Environmental Protection Agency created the California Climate Action Team, consisting of members of various state agencies and commissions. The climate action team's first report, released in March 2006, proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, and state incentive and regulatory programs.

### ***Assembly Bill 32, the California Global Warming Solutions Act of 2006***

In September 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. Under AB 32, statewide GHG emissions must be reduced to 1990 levels by 2020. This reduction will be accomplished through a statewide cap on GHG emissions (i.e., cap-and-trade program) that was phased in starting January 1, 2012, with an enforceable compliance obligation beginning with 2013 GHG emissions.

AB 32 directs ARB to effectively implement the cap by developing and implementing regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in

response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

ARB is required to update its *Climate Change Scoping Plan* (Scoping Plan) at least once every 5 years to evaluate progress and develop future inventories that may guide this process. (See “Assembly Bill 32, Climate Change Scoping Plan,” below.) ARB approved the *First Update to the Climate Change Scoping Plan: Building on the Framework* (Scoping Plan Update) in May 2014 (ARB 2014c). The Scoping Plan Update includes a status of the 2008 Scoping Plan measures and other state, federal, and local efforts to reduce GHG emissions in California from 2008 to 2013 with respect to the 2020 GHG reduction target. The Scoping Plan Update determined that the state is on schedule to achieve the 2020 target; however, an accelerated reduction in GHG emissions is required to achieve the 2050 reduction target.

### **Senate Bill 1368**

Senate Bill (SB) 1368, the companion bill of AB 32, was signed by Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission to establish a GHG performance standard for base-load generation from investor-owned utilities by February 1, 2007. The California Energy Commission was required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emission rate from base-load generation by a combined-cycle natural gas-fired plant. The legislation further required that all electricity provided to California, including imported electricity, be generated by plants that meet the standards set by the California Public Utilities Commission and California Energy Commission.

### **Executive Order S-1-07**

Governor’s EO S-1-07, signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at more than 40 percent of statewide emissions. It established a goal to reduce the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. This order also directed ARB to determine whether it could adopt this Low Carbon Fuel Standard as a discrete early-action measure after meeting the mandates in AB 32. ARB adopted the Low Carbon Fuel Standard on April 23, 2009.



### ***Senate Bill 97***

SB 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research to prepare, develop, and transmit to the California Natural Resources Agency by July 1, 2009, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA. The California Natural Resources Agency adopted those guidelines on December 30, 2009, and the guidelines became effective March 18, 2010.

### ***Senate Bill 375***

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 required metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy or alternative planning strategy prescribing land use allocation in that MPO's regional transportation plan. ARB, in consultation with the MPOs, would provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. (These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets.)

SB 375 also charged ARB with reviewing each MPO's sustainable communities strategy or alternative planning strategy for consistency with its assigned targets. If an MPO did not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This legislation also extended the minimum time period for the regional-housing-needs allocation cycle from 5 years to 8 years for local governments located within an MPO meeting certain requirements. City or county land use policies (including general plans) need not be consistent with the regional transportation plan and associated sustainable communities strategy or alternative planning strategy. However, new provisions of CEQA incentivize qualified projects, categorized as "transit priority projects," that are consistent with an approved sustainable communities strategy or alternative planning strategy.

### ***Assembly Bill 32, Climate Change Scoping Plan***

On December 11, 2008, ARB adopted its Scoping Plan, which functions as a road map of ARB's plans to achieve the statewide GHG reductions required by AB 32 through subsequently enacted regulations (ARB 2008). The plan contains the main strategies that California will implement to reduce carbon dioxide equivalent (CO<sub>2</sub>e) emissions by 169 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT CO<sub>2</sub>e under a business-as-usual scenario. (This is a reduction of 42 MMT CO<sub>2</sub>e, or almost 10 percent, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.)

The Scoping Plan also breaks down the amount of GHG emissions reductions that ARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the state to achieve the largest reductions in GHG emissions by implementing the following measures and standards:

- ▶ improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO<sub>2</sub>e),
- ▶ the Low Carbon Fuel Standard (15.0 MMT CO<sub>2</sub>e),
- ▶ energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO<sub>2</sub>e), and
- ▶ a renewable portfolio standard for electricity production (21.3 MMT CO<sub>2</sub>e).

In addition, with respect to the proposed expansion of Prairie City SVRA, the Scoping Plan cites the need for future efficiency strategies and low-carbon fuels for off-road vehicles; however, no defined GHG reductions or strategies were developed for these actions (ARB 2008).

### ***Addressing Climate Change at the Project Level: California Attorney General's Office***

In January 2010, the California Attorney General's Office released a document (*Addressing Climate Change at the Project Level*) to assist local agencies in addressing climate change and sustainability at the project level under CEQA (California Attorney General's Office 2010). The document provides examples of various measures that may reduce climate change impacts at the individual project level. As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees).

### **Regional and Local Regulations and Ordinances**

#### ***Sacramento Metropolitan Air Quality Management District***

SMAQMD has provided guidance for the climate change impacts of projects in Sacramento County that are subject to the provisions of CEQA. In its *Guide to Air Quality Assessment in Sacramento County*, SMAQMD suggests that GHG emissions are best analyzed at the program level. SMAQMD recommends that lead agencies address both a project's climate change impacts and the project's ability to adapt to potential climate change impacts, such as sea level rise and droughts. Lead agencies should also determine whether the associated GHG emissions will be responsible for making a cumulatively considerable contribution to climate change (SMAQMD 2014).

SMAQMD has released a discussion document outlining potential approaches to determining the significance of GHG emissions impacts of projects in Sacramento County. As of the writing of this General Plan, however, the district has not approved any particular approach.



### **2.7.3.6 CULTURAL RESOURCES REGULATIONS**

Cultural resources in California are subject to a variety of federal and state laws and regulations. This section briefly describes the laws and regulations that apply to cultural resources at Prairie City SVRA.

#### **Federal Regulations and Laws**

Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations (36 CFR 800, as amended in 1999) requires federal agencies to consider the effects of their actions, or those they fund or permit, on properties that may be eligible for listing or are listed in the National Register of Historic Places.

The NRHP is a register of districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. The regulations provided in 36 CFR 60.4 describe the criteria used to evaluate cultural resources for inclusion in the NRHP. Cultural resources can be significant on the national, state, or local level. As stated in 36 CFR 60.4, properties may be listed in the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- (a) are associated with events that have made a significant contribution to the broad patterns of our history;
- (b) are associated with the lives of persons significant in our past;
- (c) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) have yielded, or may be likely to yield, information important in prehistory or history.

To determine whether an undertaking could affect historic properties, cultural resources (including archaeological, historical, and architectural properties) must be identified, inventoried, and evaluated for listing in the NRHP. Although compliance with Section 106 is the responsibility of the lead federal agency, the work necessary to comply can be undertaken by others. The Section 106 review process involves a four-step procedure:

- (1) Initiate the Section 106 process by establishing the undertaking, developing a plan for public involvement, and identifying other consulting parties.
- (2) Identify historic properties by determining the scope of efforts, identifying cultural resources, and evaluating their eligibility for inclusion in the NRHP.

- (3) Assess adverse effects by applying the criteria of adverse effect on historic properties (resources that are eligible for inclusion in the NRHP).
- (4) Resolve adverse effects by consulting with the SHPO and other consulting agencies, including the Advisory Council on Historic Preservation if necessary, to develop an agreement that addresses the treatment of historic properties.

If implementation of the General Plan requires a CWA Section 404 permit from USACE or any other federal permit, or if any federal funding is used to implement certain aspects of the general plan, compliance with Section 106 is also required.

### **State Regulations and Laws**

CEQA offers directives regarding impacts on historical resources and unique archaeological resources. CEQA states generally that if implementing a project would result in significant environmental impacts, then public agencies should determine whether implementing feasible mitigation measures or feasible alternatives can substantially lessen or avoid such impacts.

Only significant cultural resources (e.g., “historical resources” and “unique archaeological resources”) need to be addressed. The CEQA Guidelines define a “historical resource” as, among other things, “a resource listed or eligible for listing on the California Register of Historical Resources” (CEQA Guidelines, Section 15064.5[a][1]; see also PRC Sections 5024.1 and 21084.1). A historical resource may be eligible for inclusion in the CRHR, as determined by the California Historical Resources Commission or the lead agency, if the resource meets any of the following criteria:

- (1) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; or
- (2) is associated with the lives of persons important in our past; or
- (3) 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
- (4) has yielded, or may be likely to yield, information important in prehistory or history.

In addition, a resource is presumed to constitute a “historical resource” if it is included in a “local register of historical resources” unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (CEQA Guidelines, Section 15064.5[a][2]). The CEQA Guidelines require consideration of unique archaeological sites (Section 15064.5). (See also PRC Section 21083.2.)

A “unique archaeological resource” is defined in PRC Section 21083.2 as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource:





- (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- (2) has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site does not meet the criteria for inclusion in the CRHR but does meet the definition of a unique archaeological resource as outlined in PRC Section 21083.2, it is entitled to special protection or attention under CEQA. Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a “unique archaeological resource”).

Section 15064.5(e) of the CEQA Guidelines requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. CEQA Guidelines Section 15064.5(d) directs the lead agency to consult with the appropriate Native Americans as identified by the Native American Heritage Commission and directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

### **California 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.

#### ***Section 7050.5***

Section 7050.5 of the Health and Safety Code includes the following requirements:

- ▶ It is a misdemeanor to knowingly mutilate or disinter, wantonly disturb, or willfully remove human remains, whether the remains are in a dedicated cemetery or elsewhere.
- ▶ If human remains are discovered outside of a dedicated cemetery, the site and nearby areas potentially overlying adjacent remains may not be excavated or disturbed further until the county coroner has:
  - found that the remains are not subject to legal provisions governing investigation of the circumstances, manner, and cause of the death; and

- made recommendations to the person responsible for excavation (or a representative) about how to dispose of the remains.

The coroner must make a determination within 2 working days after being notified of the discovery or recognition of the human remains.

- ▶ If the remains are not subject to the coroner's authority, but the coroner believes or has reason to believe that the human remains are those of a Native American, the coroner must contact the NAHC by telephone within 24 hours.

### ***Section 7051***

Under Health and Safety Code Section 7051, anyone who unlawfully removes human remains from their place of interment (or deposit while awaiting interment or cremation) without written permission and with intent to sell or dissect the remains is punishable by imprisonment in state prison. Section 7052 also notes that the willing mutilation, disinterment, or removal of known human remains from a place of interment is a felony.

### ***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 publicly funded agencies and museums in California to voluntarily disclose and return such remains and cultural items. The policy provides for mechanisms to aid Native American tribes, including those that are not federally recognized, in filing repatriation claims and obtaining responses to those claims.

### **California Public Resources Code Section 5024**

The SHPO maintains a master list of all state-owned inventoried structures that have been determined eligible for listing in the NRHP or registered as California State Landmarks. The master list also identifies state-owned historical resources that are listed in the NRHP or registered as California State Landmarks.

The project proponent for any project that could affect state-owned historical resources listed in or potentially eligible for listing in the NRHP, or registered as or potentially eligible for registration as a California State Landmark, must submit information about that project to the SHPO for review and comment.



## **California Public Resources Code Section 5097**

PRC Section 5097 states that archaeological resources that are not historical resources may be “unique archaeological resources” as defined in PRC Section 21083.2, which 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 represent 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 (the California Native American Historic Resource Protection Act) establish the NAHC and its responsibilities with respect to Native American resources, and require state and local agencies to 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 must identify 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.

## **Governor’s Executive Order W-26-92**

Governor’s EO W-26-92, issued by Governor Pete Wilson on April 8, 1992, requires the preservation and wise use of California’s cultural and historic resources. This executive order requires state agencies to carry out CEQA, the California Historical Building Code, and the state’s historic resources preservation laws by recognizing, and to the extent prudent and feasible, preserving and maintaining the state’s significant heritage resources. In accordance with these statutes, Governor’s EO W-26-92 directs each state agency to:

- ▶ administer the cultural and historic properties under its control in a spirit of stewardship and trusteeship for future generations;
- ▶ 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;

- ▶ ensure that the protection of significant heritage resources are given full consideration in all of its land use and capital outlay decisions; and
- ▶ institute procedures in consultation with the State Office of Historic Preservation to ensure that state plans and programs contribute to the preservation and enhancement of significant non-state-owned heritage resources.

### **Native American Consultation**

Several state laws and regulations are applicable to Native American consultation:

- ▶ *Governor's EO B-10-11*, issued by Governor Edmund G. Brown Jr. in September 2011, affirms that the State of California recognizes the inherent right of California's Native American tribes to exercise sovereign authority over their members and territory. The executive order requires every state agency and department subject to the governor's control to encourage communication and consultation with California Native American tribes.
- ▶ *Government Code Section 65352.3* (SB 18) requires local governments to consult with California Native American tribes identified by the NAHC before adopting or amending a general plan, or when designating land as open space, to protect Native American cultural resources. This consultation must take place on a government-to-government level.
- ▶ *State Parks Departmental Notice 2007-05* sets forth State Parks' policy for consultation with Native California Indians regarding activities that affect matters relating to their heritage, sacred sites, and cultural traditions. General plans are included in the list of potential activities.
- ▶ The *Native American Consultation Policy and Implementation Procedures* identify nine areas of activity for which consultation between local Native California Indian groups and State Parks is required:
  1. Acquisition of properties where cultural sites are present
  2. Development of a general plan and/or management plans
  3. Planning, design, and implementation of capital outlay projects
  4. Issues of concern identified by the tribes
  5. Plant and mineral gathering by Native people
  6. Access to Native California Indian ceremonial sites
  7. Archaeological permitting
  8. Mitigation of vandalism and development of protective measures at Native American sites
  9. Use of the Native voice in presenting the story of Native California Indian people in park units



### 2.7.3.7 NOISE REGULATIONS

#### Federal Regulations and Laws

EPA’s Office of Noise Abatement and Control was established to coordinate federal noise control activities. This EPA office subsequently enforced 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. Table 2-10 summarizes EPA’s guidelines for noise levels considered safe for community exposure. To prevent hearing loss over the lifetime of a receptor, the yearly average  $L_{eq}$  should not exceed 70 dBA. To minimize interference and annoyance, noise levels should not exceed 55 dBA  $L_{dn}$  at outdoor activity areas and 45 dBA  $L_{dn}$  within residential structures.

Table 2-10. Summary of Noise Level Standards Recommended by the U.S. Environmental Protection Agency		
Effect	Level	Area
Hearing loss	$L_{eq(24)} \leq 70$ dBA	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dBA	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.
	$L_{eq(24)} \leq 55$ dBA	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{dn} \leq 45$ dBA	Indoor residential areas.
	$L_{eq(24)} \leq 45$ dBA	Other indoor areas with human activities such as schools, etc.
Notes: dB = decibels; $L_{dn}$ = day-night average sound level; $L_{eq(24)}$ = equivalent noise level (the sound energy averaged over a 24-hour period)		
Source: EPA 1974:3		

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 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 (OPR 2003). Generally, residential uses are considered normally acceptable in areas where exterior noise levels do not exceed 60 dBA 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 California Vehicle Code specifies limits on noise produced by OHVs: Section 38370 states that OHVs cannot produce a maximum noise level exceeding 96 dBA at 50 feet for vehicles manufactured in 1986 or later, while OHVs manufactured before 1986 cannot produce a maximum noise level exceeding 101 dBA at 50 feet.

### **2.7.3.8 TRANSPORTATION AND TRAFFIC REGULATIONS**

#### **Federal Plans, Policies, Regulations, and Laws**

No federal plans, policies, regulations, or laws related to transportation and traffic are applicable to the planning area.

#### ***State Plans, Policies, Regulations, and Laws***

The standards for California Department of Transportation (Caltrans) facilities in the study area are detailed in the *Highway 50 Corridor System Management Plan* (Caltrans 2009). The 20-year concept level of service for mainline U.S. 50 in the vicinity of Prairie City SVRA is LOS F, because improvements necessary to improve the LOS to E are not feasible given environmental, right-of-way, financial, and other constraints (Caltrans 2009). Caltrans District 3 attempts to provide LOS D operations at interchange ramp intersections where feasible. Thus, this threshold has been used for this analysis at the intersections of the Prairie City Road interchange ramps with U.S. 50.

#### ***Local Plans, Policies, Regulations, and Ordinances***

##### **Sacramento County**

Sacramento County's *Traffic Impact Analysis Guidelines* identify LOS E as acceptable for urban areas and LOS D as acceptable for rural areas. Urban areas are the areas located within the Urban Service Boundary as shown in the Land Use Element of the *Sacramento County General Plan of 2005–2030*. White Rock Road is inside the Urban Service Boundary west of Prairie City Road but outside the Urban Service Boundary east of Prairie City Road. Therefore, Sacramento County's LOS E standard for urban areas has been used for this analysis at the intersections of White Rock Road with Grant Line Road and with Prairie City SVRA access roads located in unincorporated Sacramento County.

Sacramento County's Bicycle Master Plan (Sacramento County 2011) identifies planned bicycle facilities on two roads adjacent to Prairie City SVRA. A Class II bike path was identified for White Rock Road, and the bike path was constructed in 2014 as part of the White Rock Road streetscape improvements. A Class II bike path is also planned for Scott Road. The Grant Line-White Rock Trail, a Class I bike path, is planned along White Rock Road.



Sacramento County completed its Pedestrian Master Plan in 2007 with the goal to optimize the pedestrian experience, to provide safe and usable pedestrian facilities for all pedestrians, and to assure compliance with all federal, state, and local regulations and standards (Sacramento County 2007).

#### City of Folsom

For roadways located within the City of Folsom's existing boundaries north of U.S. 50, LOS C is considered the minimum acceptable operating condition. For roadways south of U.S. 50, LOS D conditions can be considered acceptable if improvements required to meet LOS C exceed the City of Folsom's normally accepted maximum improvements. The City of Folsom's LOS D standard has been used for this analysis at Prairie City Road and the Prairie City Road/White Rock Road intersection.

#### Level of Service Standards

Circulation systems are typically evaluated by comparing the system's capacity and the existing and projected levels of traffic volumes. The operating conditions experienced by motorists are described in terms of LOS. Level of service is a qualitative measure that reflects several factors: speed and travel time, traffic interruptions, freedom to maneuver, and driving comfort and convenience. Levels of service are designated on a scale from LOS A to LOS F, with LOS A representing the best performance and LOS F the worst. Capacity analyses and LOS are separated into evaluation of both intersections and roadway segments.

For intersection-based capacity analyses, different analysis methodologies are used depending upon whether an intersection is controlled by a traffic signal or side-street stop signs. For signalized intersections, different jurisdictions use different methodologies. Sacramento County uses an updated version of the methodology from the Transportation Research Board's Circular 212 (*Interim Materials on Highway Capacity*). The City of Folsom and Caltrans use the methodology from the *Highway Capacity Manual, 2000*.

#### **Level of Service at Signalized Intersections**

As specified in Sacramento County's *Traffic Impact Analysis Guidelines* (Sacramento County 2004), the LOS methodology used to analyze signalized intersections is as presented in the Transportation Research Board's Circular 212, as amended by Sacramento County. At signalized intersections, the overall LOS for intersections is based on the V/C ratio. Table 2-11 presents the characteristics associated with the various levels of service.

The characteristics associated with LOS for the highway capacity analysis methodology are presented in Table 2-12 and define LOS in terms of average delay per vehicle.

<b>Table 2-11. Level of Service Criteria, Signalized Intersections—Circular 212 Method</b>			
Level of Service	Sum of Critical Lane Volumes by Signal Phasing (vehicles/critical lane/hour)		
	Two-Phase	Three-Phase	Four-Phase or More
A	0–990	0–930	0–900
B	991–1,155	931–1,085	901–1,050
C	1,156–1,320	1,086–1,240	1,051–1,200
D	1,321–1,485	1,241–1,395	1,201–1,350
E	1,486–1,650	1,396–1,550	1,351–1,500
F	>1,650	>1550	>1,500

Sources: Transportation Research Board 1980; Sacramento County 2004

<b>Table 2-12. Level of Service Criteria, Signalized Intersections—Highway Capacity Manual Method</b>	
Level of Service	Delay Per Vehicle (seconds)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Source: Transportation Research Board 2000

**Level of Service at Unsignalized Intersections**

As specified in Sacramento County’s *Traffic Impact Analysis Guidelines*, the LOS methodology used to analyze unsignalized intersections (i.e., intersections controlled by side-street stop signs) is as presented in the *Highway Capacity Manual*. For unsignalized intersections, the *Highway Capacity Manual* method calculates the weighted average total delay for each approach and for the intersection as a whole. The analysis considers gap acceptance and average delay of motorists on minor streets and in turn lanes to establish LOS. Table 2-13 presents the ranges of vehicle delay associated with each level of service for unsignalized intersections.

**Level of Service on Roadway Segments**

Sacramento County’s *Traffic Impact Analysis Guidelines* present LOS thresholds for roadway segments based on daily traffic volumes. These thresholds make use of facility classifications that are based on the facility type and number of lanes on the roadway. Table 2-14 presents the daily traffic volume LOS thresholds and the criteria used to classify roadway segments.





Level of Service	Average Control Delay in Seconds per Vehicle	Description of Delay
A	0–10	Little or no delay.
B	> 10–15	Short traffic delay.
C	> 15–25	Average traffic delay.
D	> 25–35	Long traffic delay.
E	> 35–50	Very long traffic delay.
F	> 50	Extreme delays potentially affecting other traffic movements in the intersection.

Source: Transportation Research Board 2000

Facility Type	# of Lanes	Maximum Daily Volume by Service Level				
		A	B	C	D	E
Residential	2	600	1,200	2,000	3,000	4,500
Residential Collector with Frontage	2	1,600	3,200	4,800	6,400	8,000
Residential Collector without Frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, Two-Lane Highway	2	2,400	4,800	7,900	13,500	22,900
Rural, Two-Lane Road, 24–36 feet of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, Two-Lane Road, 24–36 feet of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000
Rural, Two-Lane Road, substandard, no shoulders	2	1,300	2,600	4,300	6,800	11,000

Notes:  
Facility type definitions:  
- *Arterial, Low Access Control*: 4+ stops per mile, frequent driveways, speeds of 25–35 mph  
- *Arterial, Moderate Access Control*: Two to four stops per mile, limited driveways, speeds of 35–45 mph  
- *Arterial, High Access Control*: One to two stops per mile, no driveways, speeds of 45–55 mph

Source: Sacramento County 2004

## Signal Warrant Procedures

Traffic signal warrants are a series of standards that provide guidelines for determining whether installing a traffic signal at an intersection is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign–controlled minor streets where the minor street experiences significant delay. If one or more signal warrants are met, signalizing the intersection may be appropriate.

However, a signal should typically be installed only if warrants are met. Installing a signal increases delay on the previously uncontrolled major street and may increase the intersection’s overall vehicle delay. Adding a traffic signal may also increase the likelihood of certain types of accidents. Therefore, if traffic signals are installed at locations that do not meet warrants, the detriment of increased accidents and overall delay may be greater than the benefit to traffic operating conditions at the minor-street approach experiencing the greatest delays.

Even if the peak-hour warrant is met, a more detailed signal warrant study is typically employed before a signal is installed. The more detailed study should consider volumes during the 8 highest hours of the day, volumes during the highest 4 hours of the day, pedestrian traffic, and accident histories. Typically, most agencies initiate this type of expanded signal warrant analysis to confirm that signalization of a subject intersection is the most appropriate control measure.

### **2.7.3.9 PUBLIC SERVICES REGULATIONS**

#### **Federal Plans, Policies, Regulations, and Laws**

No federal regulations are applicable to public services and utilities associated with implementing the Prairie City SVRA General Plan.

#### **State Plans, Policies, Regulations, and Laws**

##### ***California Integrated Waste Management Act***

The California Integrated Waste Management Act of 1989 created the California Integrated Waste Management Board, now known as the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle is the agency designated to oversee, manage, and track the 92 million tons of waste that are generated in California each year. CalRecycle provides grants and loans to help cities, counties, businesses, and organizations meet the state’s waste reduction, reuse, and recycling goals. CalRecycle promotes a sustainable environment in which these resources are not wasted, but can be reused or recycled. In addition to many programs and incentives, CalRecycle promotes the use of new technologies to divert resources away from landfills.



## **2013 California Green Buildings Standards Code**

The standards included in the 2013 California Green Building Standards Code (CALGreen Code) (Title 24, Part 11 of the California Code of Regulations) became effective on January 1, 2014. The CALGreen Code was developed to enhance building design and construction and encourage the use of sustainable construction practices in several categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (California Building Standards Commission 2013:Section 101.2).

## **California Occupational Safety and Health Administration**

In accordance with Title 8, Section 1270, “Fire Prevention,” and Section 6773, “Fire Protection and Fire Equipment,” of the California Code of Regulations, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines for handling 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 and emergency medical 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.

## **California Health and Safety Code**

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which regulates building standards (as established in the California Building Standards Code), fire protection and notification systems, fire protection devices (e.g., extinguishers, smoke alarms), and fire suppression training.

## **Spark Arrester Regulations**

PRC Section 4442 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 Plans, Policies, Regulations, and Ordinances**

### ***Sacramento County Emergency Operations Plan***

Sacramento County has an emergency operations plan that addresses the county's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Sacramento County, including acts of terrorism (Sacramento County 2012). The plan includes planned operational functions and overall responsibilities of the Sacramento County departments during an emergency situation.

### ***Sacramento County Wastewater Disposal Standards***

Sacramento County regulates septic systems that serve the needs of an individual user (e.g., single residence, office building). Sacramento County's on-site wastewater ordinance (Chapter 6.32 of Title 6 of the Sacramento County Code) regulates and establishes standards for design, construction, installation, operation, maintenance, monitoring, replacement, alteration, enlargement, repair, and abandonment of on-site wastewater treatment, conveyance, and dispersal systems. The ordinance also ensures compliance with applicable standards, laws, and guidelines as adopted, and/or modified by the SWRCB or the Central Valley RWQCB. The ordinance requires completing a site evaluation as part of obtaining an on-site wastewater system construction permit. It also examines factors affecting the design of on-site wastewater systems: ground slope, soil textural characteristics, effective soil depth, horizontal setbacks, and available area for 100 percent system replacement. Because no statewide septic regulations apply, the OHMVR Division of State Parks will comply with Sacramento County's on-site wastewater ordinance for planning purposes at Prairie City SVRA.

## **2.7.3.10 VISUAL RESOURCES REGULATIONS**

### **Federal and State Regulations and Laws**

No federal or state plans, policies, regulations, or laws apply to visual resources at Prairie City SVRA.

### **Local Regulations and Ordinances**

Because Prairie City SVRA is owned by the State of California, it is not subject to compliance with Sacramento County policies or ordinances. However, it is the intent of the OHMVR Division to develop the acquisition areas and continue to operate the existing 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, and the local visual resource regulations of Sacramento County are described here for informational purposes.

The relevant objectives and policies from the *Sacramento County General Plan of 2005–2030* (Sacramento County Community Planning & Development Department 2014) related to visual resources are to strengthen the provisions of scenic corridor regulations so as to further protect the aesthetic values



of the county's freeways and scenic corridors (Circulation Element, County Roads Proposed for Scenic Corridor Protection).

## **2.7.4 TRENDS AND PROJECTIONS**

### **2.7.4.1 RECREATION TRENDS**

Federal research on OHV use indicates that the number of OHV recreationists has been growing nationwide and a larger proportion of people under age 30 are participating in OHV activities. The typical OHV recreationist is white, male, and under 50 years old (Cordell et al. 2008).

About 19 percent of people 16 and older nationwide participate in some type of OHV activity. In California, the percentage of the population is slightly lower, around 18 percent. In the Pacific Region of the United States (Alaska, California, Hawaii, Oregon, and Washington), about 31 percent of American Indians, 23 percent of whites, 16 percent of blacks, 11 percent of Asians, and 14 percent of Hispanics participate in OHV activities. American Indians have the highest participation rate among racial and ethnic groups in the Pacific Region and nationwide. Hispanics nationwide participated at more than twice the rate in 2007 (26 percent) than in 1999 (13 percent), while participation rates by both white and black Americans did not change substantially.

Rates of participation in OHV activities increase as family income increases. In the Pacific region, those with family incomes of \$25,000 or less have a 12 percent participation rate while those with family incomes greater than \$150,000 have a 27 percent participation rate. Even though its participation rate is not the highest (19 percent), the group of people making \$25,000 to \$49,999 has the most participants in the Pacific region (1.5 million). Those with some college or a high school diploma have the highest participation rates (22 percent and 21 percent, respectively), and participation rates drop to 13 percent for those with a postgraduate degree (Cordell et al. 2008).

### **2.7.4.2 REGIONAL DEMOGRAPHICS**

According to the U.S. Census Bureau, Sacramento County has a population of more than 1.4 million people. The two cities closest to Prairie City SVRA, Folsom and Rancho Cordova, have populations of approximately 72,000 and 65,000, respectively. Sacramento County grew by 16 percent between 2000 and 2010, while Folsom grew by almost 40 percent. Because Rancho Cordova did not incorporate as a city until 2003, 2000 population data for that city are not available (Table 2-15). The California Department of Finance (DOF) has projected that Sacramento County will continue to grow at high rates for the next 30 years.

As shown in Table 2-16, Sacramento County is predominantly white and Hispanic (U.S. Census Bureau 2010). As described previously, Hispanic participation rates in OHV recreation have increased. According to the DOF, the Hispanic population in Sacramento County is projected to increase by 76.6 percent by 2040 (Table 2-17).

City/County	2000	2010	2040	% Increase (2000–2010)	% Increase (2010–2040)
Folsom	51,884	72,203	NA	39.2%	NA
Rancho Cordova (city incorporated in 2003)	NA	64,776	NA	NA	NA
Sacramento County	1,223,499	1,418,788	1,912,838	16%	34.8%

Note: NA = not available. DOF does not provide growth data at the city level.  
Sources: U.S. Census Bureau 2000, 2010; DOF 2014

Race/Ethnicity	Sacramento County	%
Not Hispanic or Latino:	1,112,592	78.4%
White	687,166	61.7%
Black or African American	139,949	12.6%
American Indian and Alaska Native	7,875	0.7%
Asian	198,944	17.9%
Native Hawaiian and Other Pacific Islander	13,099	1.2%
Other/Two or More Races	65,559	5.9%
Hispanic or Latino	306,196	21.6%
<b>Total</b>	<b>1,418,788</b>	<b>100.0%</b>

Sources: U.S. Census Bureau 2000, 2010

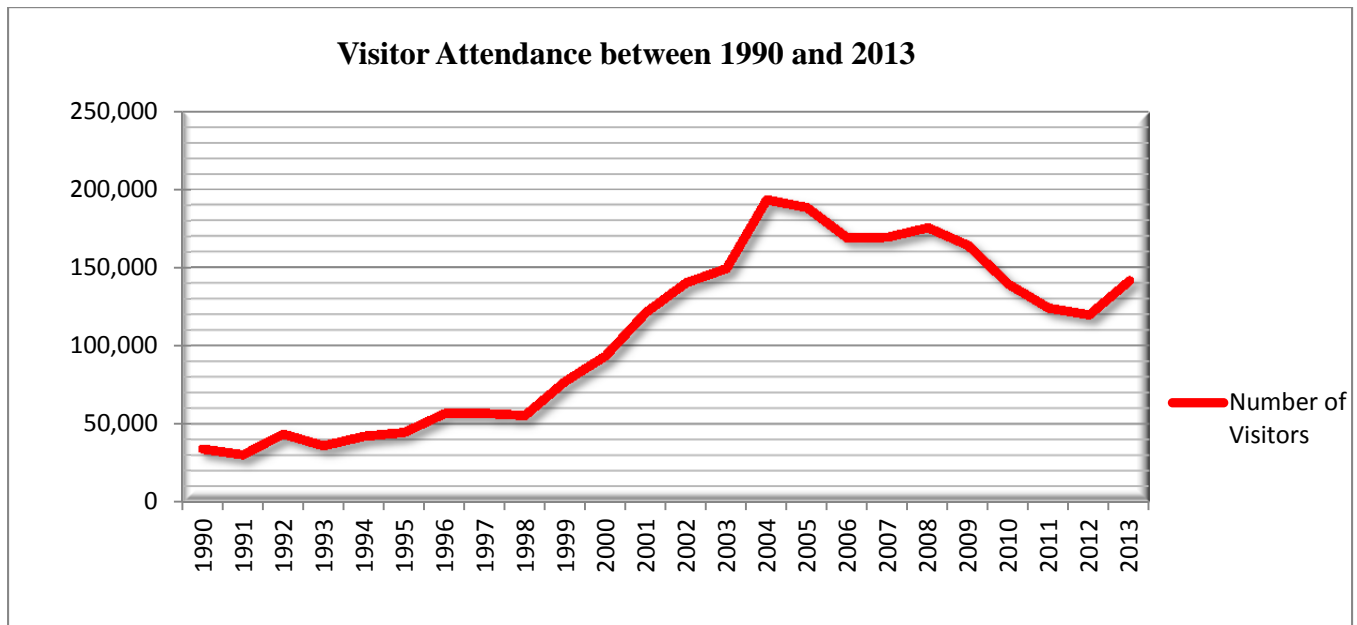
Race/Ethnicity	Sacramento County	%
Not Hispanic or Latino:	1,371,984	<b>71.7%</b>
White	664,393	48.4%
Black or African American	176,178	12.8%
American Indian and Alaska Native	7,647	0.6%
Asian	372,108	27.1%
Native Hawaiian and Other Pacific Islander	25,711	1.9%
Other/Two or More Races	125,947	9.2%
Hispanic or Latino	540,854	<b>28.3%</b>
<b>Total</b>	<b>1,912,838</b>	<b>100.0%</b>

Source: DOF 2014



### 2.7.4.3 PRAIRIE CITY SVRA VISITATION

Over the 24-year period from January 1990 to December 2013, Prairie City SVRA hosted an average of 107,009 recreational and special-event visitors each year. Attendance grew steadily, peaking in 2004 (193,330), and then declined steadily after 2005 (State Parks 2012e; Figure 2-20). The decrease could have been caused in part by the 2008 recession and the resulting decrease in disposable household incomes. Visitor attendance in 2013 consisted of 65,004 recreational visitors and 76,697 special-event visitors, for a total of 141,701 visitors (State Parks 2014d). (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.)

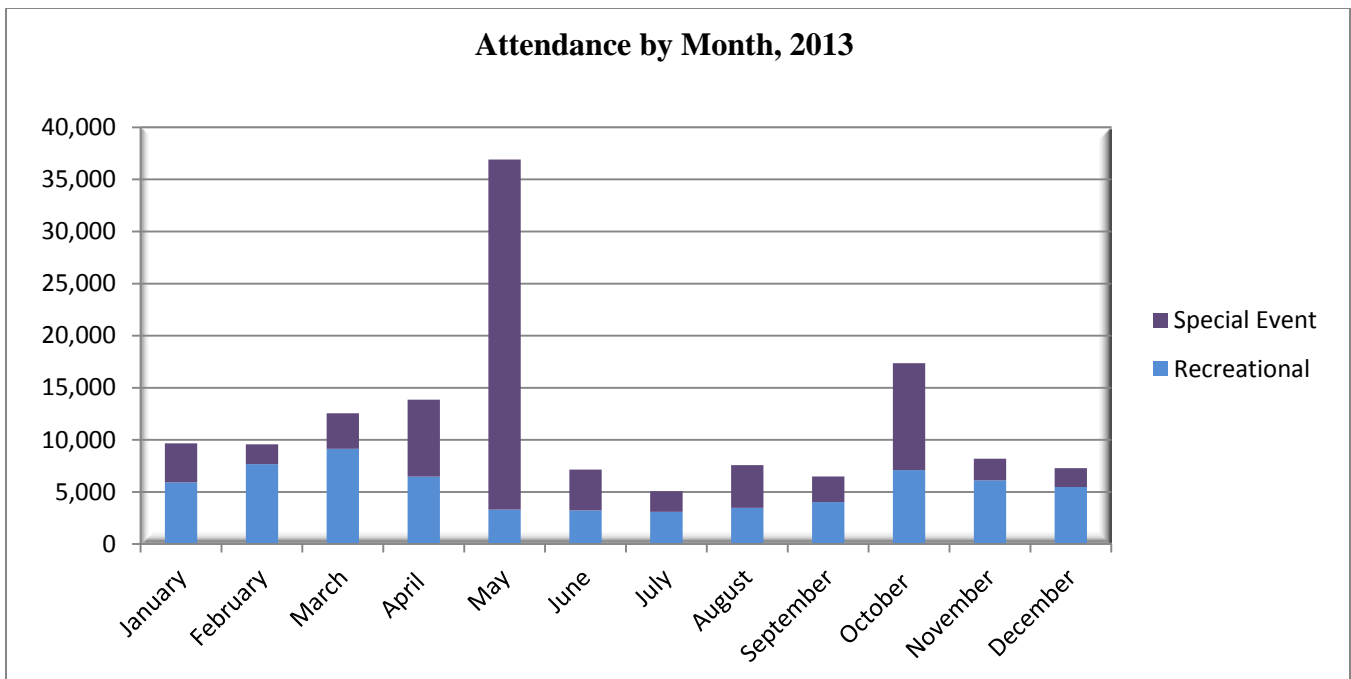


Sources: State Parks 2012e, 2014d; data compiled by AECOM in 2014

**Figure 2-20. Attendance at Prairie City SVRA over Time**

During 2013, most visits to Prairie City SVRA occurred from October through May, which is also the time period when operation of red-sticker vehicles is allowed at the SVRA (October through April) and two of the largest special events are held (Figure 2-21). The annual Hangtown Motocross Classic is held in May and the annual Visitor Appreciation Day is held in October. In 2013, 11,693 more visitors attended special events than came to Prairie City SVRA for personal recreational use.

As described in Chapter 1, “Introduction,” the planning team conducted an online survey of visitors. The median distance that visitors travel from home to Prairie City SVRA is 13 miles, but the SVRA also attracts visitors from around the state and across the country. Most visitors over 18 are between the ages of 36 and 55. If visitors bring children, the children are most often between the ages of 10 and 17. Close to 60 percent of visitors said they bring children with them regularly (State Parks 2013d).



Source: State Parks 2014d; data compiled by AECOM in 2014

**Figure 2-21. Attendance at Prairie City SVRA by Month in 2013**

According to the online survey, the main attractions of Prairie City SVRA are off-highway motorcycle riding and mountain biking. The most popular reasons that survey respondents visit the SVRA are to mountain bike, attend a race or other special event, and ride off-highway motorcycles. Almost all respondents have previously attended races or special events at Prairie City SVRA. The races/special events with the greatest attendance are the Hangtown Motocross Classic and the Prairie City Mountain Bike Race Series.

### 2.7.5 FUTURE OPPORTUNITIES

As described previously, most visitors come to Prairie City SVRA to ride off-highway motorcycles and mountain bikes, and to attend special events such as the Hangtown Motocross Classic, AMP Dodge Amateur MX National, Nor Cal Rock Racing, Valley Off Road Racing Association races, and Prairie City Mountain Bike Race Series. Prairie City SVRA recreational opportunities include terrain, trails, and tracks for off-highway motorcycles, ATVs, 4x4s, recreational OHVs, karts, and quarter midgets. Mountain bike enthusiasts can use the SVRA on Wednesday evenings during the spring and fall when the SVRA is closed for maintenance. Prairie City SVRA visitors who responded to a survey in support of the preparation of the General Plan expressed strong interest in adding and improving riding areas, improving tracks, special-event and spectator facilities, and adding amenities such as overnight camping facilities. The Yost property offers opportunities for increased OHV recreation.

Cultural, biological, and physical resources are present within Prairie City SVRA. The Barton Ranch acquisition area will help address water quality issues in the Coyote Creek subwatershed. Prairie City





SVRA is also home to the Environmental Training Center and offers programs to teach awareness and protection of the SVRA's natural and cultural resources. The presence of Prairie City SVRA's natural and cultural resources, such as vernal pools, mining operation remnants, and the Moon Room, offers opportunities to educate visitors about the resources and requires State Parks to carefully consider how to manage these resources in unison with providing OHV recreation.

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## 3 ISSUES AND ANALYSIS

### 3.1 INTRODUCTION

This chapter details the planning assumptions and key issues that were identified during the planning process. These assumptions and issues are addressed in Chapter 4 of this General Plan. Key issues were identified through research on existing conditions, public outreach efforts, agency input, and discussions with State Parks' Off-Highway Motor Vehicle Recreation (OHMVR) Division staff.

### 3.2 PLANNING ASSUMPTIONS

The planning assumptions listed below are based on OHMVR Division policy, core program initiatives, statewide planning issues, and current federal and state laws. These assumptions provide the planning context and parameters for addressing planning issues for Prairie City State Vehicular Recreation Area (SVRA).

- ▶ Maintain and increase, where appropriate, the level of off-highway vehicle (OHV) recreation and other recreational opportunities.
- ▶ Manage Prairie City SVRA in a manner that encourages SVRA visitors to engage in responsible and sustainable OHV recreation.
- ▶ Promote sustainable OHV recreation and other recreational opportunities that conserve and protect natural and cultural resources.
- ▶ Manage and protect rare, threatened, and endangered species and sensitive wildlife habitats, as required by federal and state laws.
- ▶ Consider the issues and concerns of adjacent landowners and SVRA stakeholders during the planning and implementation process.
- ▶ Seek input from local, regional, and statewide interests.
- ▶ Coordinate with agencies and regional and local partners on issues such as air quality, water supply, water quality, and public services and utilities.
- ▶ Coordinate with agencies and regional partners to manage the watersheds.
- ▶ Manage the SVRA's cultural resources as required by federal and state laws.
- ▶ Consult with California Native American Tribes and tribal communities and reach a mutually respectful understanding of the long-term need for protection and treatment of heritage sites, objects,

or human remains; determine what level and type of consultation will be required during subsequent planning, design, and implementation projects.

### **3.3 ISSUES AND ANALYSIS**

#### **3.3.1 EXISTING FACILITY DESIGNATIONS**

Prairie City SVRA’s current use area designations and naming conventions, as shown in the map of existing facilities (Figure 2-6), do not accurately or sufficiently reflect the management intent for the individual use areas, nor do they provide a clear rationale for why certain areas are not currently available for OHV recreation. Therefore, some users have expressed frustration about not being able to use portions of the SVRA for OHV recreation. Areas not presently open to OHV recreation are currently labeled as “Closed Area,” “Yost Property,” “Ecological Reserve Area,” and “Buffer Zone.” The closed areas also include the recently purchased Barton Ranch acquisition, which is not identified on the map of existing facilities. Specific use areas and naming conventions should be developed to more accurately communicate the intended management of these areas based on the following factors: geographic relationships, resource values, ecological parameters, management goals, types and intensities of land use, visitor use and experience, and desired outcomes for staff and visitors.

#### **3.3.2 SITE ACCESS**

The main entrance to Prairie City SVRA (Gate 1) is located off White Rock Road, 1 mile west of Prairie City Road. In early 2014, Sacramento County completed a project that converted White Rock Road from a two-lane road to a four-lane road with two lanes in each direction. The road widening caused the eastbound lanes at the intersection of the main entrance road (Main Park Road) to be located directly adjacent to a utility pole, thereby obstructing views and making right turns into the SVRA and left turns onto White Rock Road difficult. A landscaped median was also constructed that prohibits crossing the median for left turns in and out of the special-event entrance (Gate 4). Subsequently, vehicles can only make a right turn in and a right turn out of Gate 4. Westbound vehicles attempting to enter the special-event entrance must either enter the SVRA at the main park entrance road or complete a U-turn at the main park entrance road to enter at the special-event entrance.

Access to Prairie City SVRA from White Rock Road will likely require changes in the future because of access limitations associated with the Capital SouthEast Connector (Connector). The approved Connector is a planned 34-mile connector between Interstate 5 south of Elk Grove and U.S. Highway 50 (U.S. 50) just east of El Dorado Hills. Directly north of Prairie City SVRA, a six-lane expressway has been approved on White Rock Road from Grant Line Road to the Sacramento County/El Dorado County line, with grade-separated interchanges at major cross streets where warranted. The Connector also includes a Class I bike path along its entire length.



In addition, as a separate future project, Sacramento County and the Connector Joint Powers Authority will realign Scott Road to connect to the Connector Expressway at Prairie City Road (the existing intersection of White Rock Road and Scott Road will be removed).

As a result of the recent and planned roadway improvements, the main SVRA entrance will require additional improvements and may need to be relocated at some point in the future. The special-event entrance will likely require relocation and circulation improvements to accommodate future regional improvements, offer better opportunities for traffic control and accessibility, and accommodate special events and heavy traffic. Something to explore in the future would be aligning an entrance to the SVRA with the future Scott Road realignment, which would then create a direct entrance from Prairie City Road to the east side of the SVRA.

### **3.3.3 CIRCULATION**

Prairie City SVRA has a limited quantity of formal roads or trails to direct internal vehicle and OHV circulation within the existing SVRA riding areas, between the existing SVRA and the recently acquired Yost property and Barton Ranch acquisition, and between the potential facilities described in the General Plan. OHV recreationists can unexpectedly cross each other's paths, resulting in dangerous situations. OHV recreation also presents challenges to revegetation efforts and restoration of natural habitat. In addition, the resource management agencies have expressed concern regarding undefined stream crossings and potential wetland losses. The General Plan establishes use areas within the SVRA, and the trails system and open recreation areas would be clearly marked on SVRA maps and enforced in the field.

### **3.3.4 RECREATIONAL OPPORTUNITIES**

Prairie City SVRA has been used for OHV recreation since the early 1970s. Although the first recreationists to ride in the area were primarily motorcycle riders, today the SVRA offers a variety of recreational opportunities that include terrain, trails, and tracks for motorcycles, all-terrain vehicles, 4x4s, recreational OHVs, karts, and quarter midgets. The SVRA is also used by mountain bikers on the days it is closed to OHV recreation. State Parks has received many suggestions for new recreation opportunities at Prairie City SVRA. These suggestions have called for both additional or modified trails for OHV recreation, and additional nonmotorized recreation such as camping.

The General Plan explores relocating existing facilities to better serve users and staff; adding new facilities that improve SVRA operations and offer more recreation opportunities for a range of OHV enthusiasts with a broad range of riding skills; and providing new recreational opportunities for currently underserved potential visitors.

### **3.3.5 SPECIAL EVENTS**

Prairie City SVRA hosts numerous special events throughout the year that attract a large number of visitors. In 2013 approximately 77,000 visitors attended special events at the SVRA, 11,693 more people than visited the SVRA for personal recreational use. The Hangtown Motocross Classic is the largest special event, attracting approximately 25,000 spectators annually. Other large annual events include Nor Cal Rock Racing, the AMP Dodge Amateur MX National, Valley Off Road Racing Association races, and cross country races.

Prairie City SVRA visitor attendance has been increasing in recent years, and the SVRA continues to garner vendor interest in hosting events. Special events need to be well managed to accommodate the large number of visitors and vehicles and the increased parking demand. It will be important to enhance spectator facilities and to manage the high volume of traffic generated by special events; both of these issues are addressed in the General Plan.

### **3.3.6 INTERPRETATION AND EDUCATION**

Those who participated in the General Plan process provided multiple comments relating to interpretation and education. Participants who responded to a question regarding interest in education opportunities selected OHV riding skills as their greatest preference. Other topics, such as environmental awareness, geology, history, wildlife, and nature, all solicited approximately the same level of interest. However, all potential programs solicited at least moderate interest. The majority of participants who responded to questions regarding the potential use of the vernal pool areas along White Rock and Scott Roads were more interested in expanding interpretation and educational opportunities provided for these areas than in keeping them closed to the public. Comments were also received requesting that OHV recreation not be reduced to accommodate additional opportunities for interpretation and education.

The SVRA contains interesting biological resources: stands of native blue oak trees, vernal pools, and grassland. Several historic and prehistoric sites are present in the SVRA, including milling stations, dredge tailings, and buildings constructed by Aerojet in the 1960s. The existing Environmental Training Center has the capacity to host additional programs and educational events, and the visitor center proposed in the General Plan would further support the SVRA's outreach and education efforts. These resources provide a great opportunity to interpret the resources and educate visitors.

### **3.3.7 ADMINISTRATIVE AND RECREATION FACILITIES**

Prairie City's SVRA's on-site administrative and maintenance facilities for park management include the main entrance station, ranger station, maintenance office and maintenance yard, Twin Cities District office, Prairie City Sector office, Northern Communications Center, shooting range, and Environmental



Training Center. Some of these facilities are in poor condition and are not located in ideal locations, and additional facilities are needed.

The Prairie City SVRA Sector office is a temporary building in poor condition. The building was converted from a previous use and is inadequate for its current use. This facility will be rehabilitated or reconstructed at a nearby location. The Twin Cities District office is also a temporary building in poor condition with associated high maintenance costs. Relocating this facility to a new building near the main SVRA entrance would facilitate better access for the public, division and headquarters staff, and support services. The building that currently serves as a main entrance station and ranger station is too small for both operations. Relocating the ranger station to the current district office location would provide sufficient space for ranger station operations and locate the station more centrally in the SVRA.

### **3.3.8 LAND USE, DEVELOPMENT, AND EASEMENTS**

Prairie City SVRA is located in unincorporated Sacramento County near the cities of Folsom and Rancho Cordova. The City of Folsom recently approved the *Folsom Plan Area Specific Plan*, which is located adjacent to the SVRA and includes 10,210 new residential units and more than 5 million square feet of commercial development (City of Folsom 2011, 2014). The City of Rancho Cordova has a planning area of almost 62,000 acres, approximately three times the size of the incorporated city. Once these planning areas are developed, new residents will likely seek recreational opportunities at Prairie City SVRA. There is also potential for conflicts between future residents and the inherently noisy environment of an existing SVRA during daily operations and special events. Traffic generated by special events also could affect surrounding areas once they are more developed. The SVRA is an existing facility and its current and future use are part of the local existing conditions.

Prairie City SVRA has various easements on the site primarily for utility providers, such as Pacific Gas and Electric Company, Sacramento Municipal Utility District, and Sacramento County, to allow transmission lines to run through the site and to maintain electric poles. In addition, a haul road easement for mining operations is located along the southern boundary of the SVRA. As a result of the haul road easement, the kart track and mini MX track need to be relocated.

### **3.3.9 STORMWATER MANAGEMENT/WATER QUALITY**

Several sediment basins and other water quality control best management practices are located throughout Prairie City SVRA to improve water quality and reduce sediment loading to Coyote Creek. Stormwater from the planning area commonly sheet flows into existing drainages, which convey the water to detention basins. Sediment basins are located south of the Prairie City Motocross Track to capture sediment coming off the track. However, the sediment load below the track warrants additional water quality control improvements for average and above-average storm events. Property was acquired from the Barton Ranch in 2014, and is proposed to be used for water quality improvement facilities and designed to accommodate a 100-year storm event. To treat runoff from the SVRA and improve water

quality, sediment basins and/or biofiltration swales (bioswales) or other stormwater control features are proposed for this area.

### **3.3.10 SOIL CONSERVATION**

Soil conservation is a priority at Prairie City SVRA. The *2008 Soil Conservation Standard and Guidelines* (State Parks 2008) require proponents of all projects funded by the OHV Trust Fund to complete assessment, maintenance, and monitoring activities. These activities are undertaken so that all OHV facilities are managed for their sustainable prescribed use without causing the loss of soil that cannot be restored, and without causing erosion or sedimentation that significantly affects resource values.

Several soil types in the SVRA have a high susceptibility to wind erosion, and all are moderately susceptible to water erosion. Approximately 19 percent of the land surface in the planning area features little to no vegetative cover as a result of development of Prairie City SVRA (Parus Consulting, adapted by AECOM 2014). As a result, these areas can contribute substantially to erosion and sediment mobilization. Staff are engaging in assessment, maintenance, and monitoring activities consistent with the *2008 Soil Conservation Standard and Guidelines*.

### **3.3.11 BIOLOGICAL RESOURCES**

Prairie City SVRA contains habitat for several special-status species. In addition, multiple special-status species and locally unique species have been found on or near the SVRA property. Part of the mission of State Parks is to conserve and protect natural resources. Preparation of the General Plan included habitat mapping, extensive review of relevant databases and planning and policy documents, and consultation with resource agencies. The locations of known habitat and special-status species were considered in the development of the use areas designated in the General Plan. Prairie City SVRA's environmental scientists also regularly consult with the regulatory agencies regarding ongoing management and future planned projects.

Vernal pools are present at the SVRA and are known to support vernal pool tadpole shrimp and vernal pool fairy shrimp, which are federally listed as threatened or endangered. Because of these species' federal listing status, their presence on-site may require specific management actions in some areas known to support the species. Specifically, areas located along White Rock and Scott Roads are proposed as vernal pool management areas. These areas would be managed accordingly and would not be open to OHV recreation use, in accordance with the U.S. Fish and Wildlife Service programmatic biological opinion for vernal pool crustaceans (USFWS 1996).

There are also numerous elderberry shrubs within Prairie City SVRA. Elderberry shrubs with branches greater than 1 inch in diameter are considered potential habitat for the valley elderberry longhorn beetle, an invertebrate federally listed as threatened.





### **3.3.12 CULTURAL RESOURCES**

Prairie City SVRA has been inventoried for the presence of prehistoric and historic-era resources of potential significance. The archaeological inventory concluded that the SVRA does not contain any cultural resources that would cause constraints to SVRA management and use.

A Native American consultation meeting was conducted on July 30, 2013, and included a site visit with three Native American groups. During the meeting, the Native American representatives expressed the desire for access to the park to gather plant resources and for incorporating native plants of value to the Native American community into restoration efforts.

The planning area contains structures built by Aerojet in the 1960s in support of the M-1 Rocket Engine Program for the National Aeronautics and Space Administration (NASA). Several structures were constructed, including the Moon Room, a dome-shaped building designed to act as the control center for rocket testing. However, NASA abandoned the program shortly after these structures were built, and the structures were never used for their intended purpose. Because the structures were 50 years old, State Parks conducted a built-environment survey of the structures in 2010 and in again in 2013. The structures were evaluated in 2014. The evaluation concluded that the structures did not appear meet the criteria for the National Register of Historic Places, California Register of Historical Resources, or California State Landmarks. The State Historic Preservation Officer will review the findings of the evaluation and provide her conclusion. These facilities may provide an opportunity for interpretation and education.

### **3.3.13 AESTHETIC RESOURCES**

Prairie City SVRA maintains a 35-acre buffer area in the eastern portion of the SVRA that protects the scenic quality of the area and views from Scott Road, a Sacramento County–designated scenic road (Sacramento County Community Planning & Development Department 2014; Lenzie and Singh, pers. comms., 2015). Opportunities may exist to provide pedestrian access on defined trails in the buffer area, or to make the area part of an interpretive program.

The work performed by State Parks environmental scientists to assess, maintain, and restore resource management areas in the existing SVRA positively affects the SVRA’s aesthetics. State Parks will assess the impacts of future uses on the aesthetics of the SVRA.

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## 4 THE PLAN

This General Plan establishes the long-range purpose and vision for Prairie City State Vehicular Recreation Area (SVRA). Specific use areas (Figure 4-1) described in this plan clarify the management intent for and desired visitor experiences in these areas. The preferred concept, represented as potential facilities (Figure 4-2) and described in this General Plan, broadly depict the types and conceptual locations of facilities that are anticipated to be constructed at the SVRA over the long term. The use areas and potential facilities were developed based on site constraints (e.g., existing environmental resources and property easements) and input from the public, stakeholders, regulatory agencies, and SVRA staff.

The goals and guidelines in this General Plan provide guidance on how to achieve the purpose, vision, and management intent for the SVRA. The goals and guidelines were developed to address known planning issues while providing a foundation for resource protection, development, operation and management, and interpretation of the SVRA. The goals and guidelines also provide a framework for subsequent planning and development for the concepts included in this General Plan.

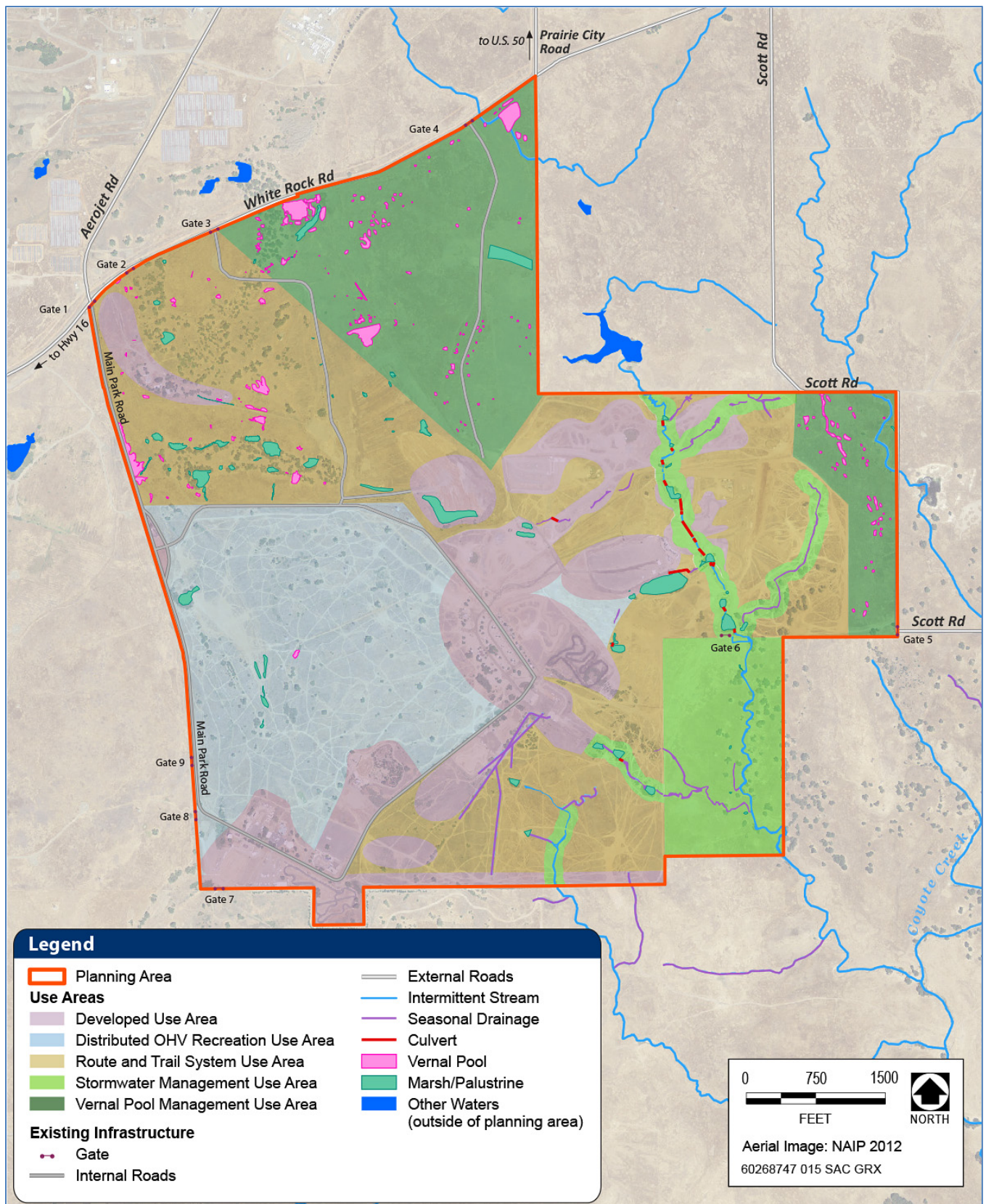
The term “facilities” is used in this General Plan to refer to anything that is part of the built environment. This term includes all facilities envisioned in the General Plan, including trails and distributed riding areas, a visitor center, a ranger station, an overnight camping area, the kart track, the dirt oval track (currently known as the mini MX track), enhanced spectator facilities, improved circulation, the Twin Cities District Office, and a multiuse special-events area.

### 4.1 PURPOSE AND VISION

#### 4.1.1 DECLARATION OF PURPOSE

The Declaration of Purpose describes the purpose of Prairie City SVRA and is the broadest statement of management goals designed to fulfill the vision of the SVRA. A Declaration of Purpose is required by California Public Resources Code (PRC) Section 5002.2(b). The Declaration of Purpose for Prairie City SVRA was adopted as part of the Prairie City SVRA Master Plan in July 1991 and was updated during this General Plan process:

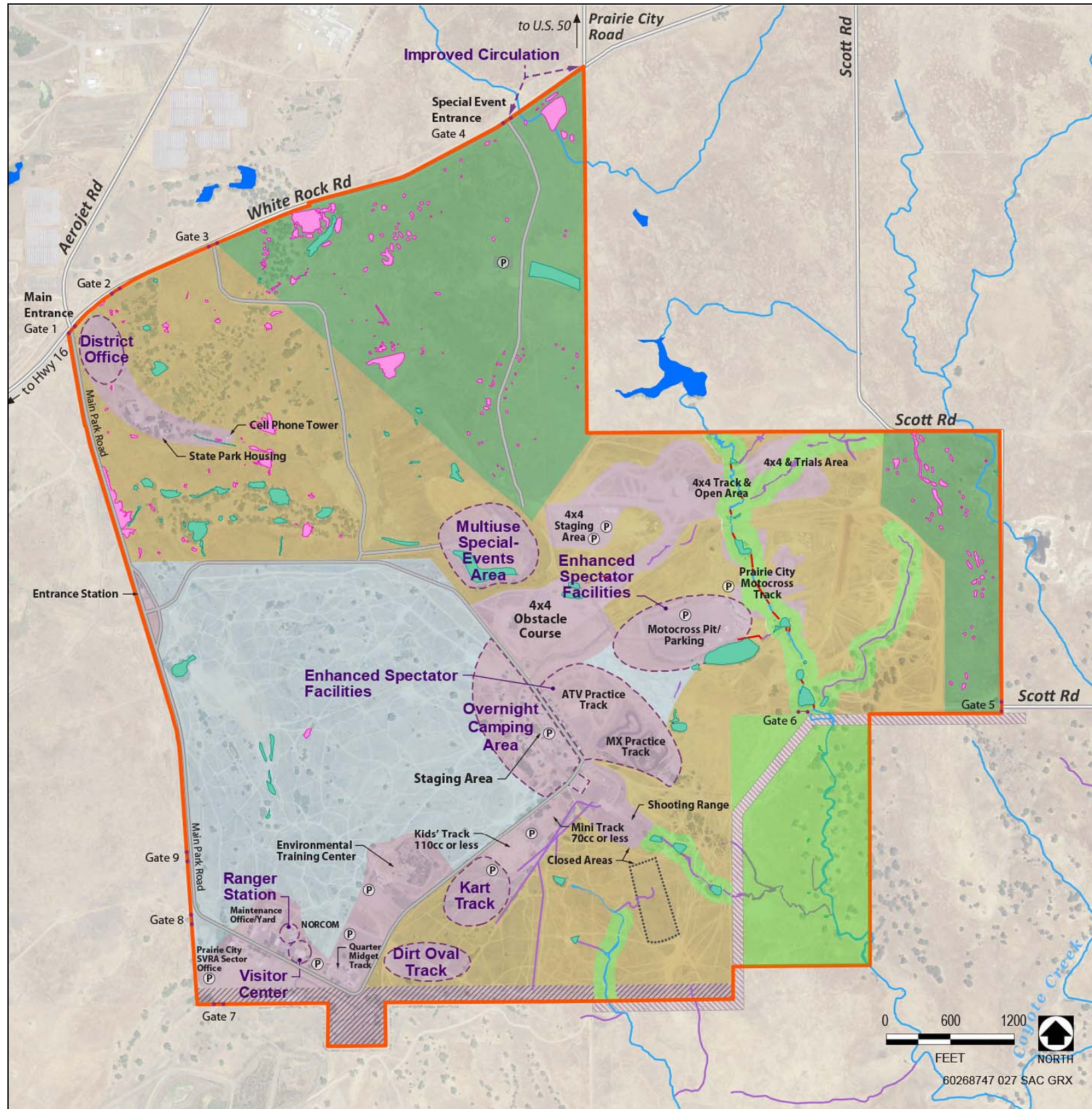
The purpose of Prairie City State Vehicular Recreation Area is to offer high-quality off-highway vehicle (OHV) and other recreational opportunities, and to provide OHV and special event venues, while protecting and interpreting on-site natural resources.



Source: Data provided by State Parks in 2012 and adapted by AECOM in 2014

**Figure 4-1. Use Areas**





### Potential Facilities

- Visitor Center
- Ranger Station (relocated)
- Overnight Camping Area
- Kart Track (relocated)
- Dirt Oval Track (relocated)
- Enhanced Spectator Facilities
- Improved Circulation
- District Office (relocated)
- Multiuse Special-Events Area

### Existing Facilities

- Main Entrance (Gate 1)
- Special Event Entrance (Gate 4)
- Prairie City SVRA Sector Office
- Entrance Kiosk
- State Park Housing
- Cell Phone Tower
- Maintenance Office and Maintenance Yard
- Northern Communication Center (NORCOM)
- Shooting Range
- Environmental Training Center
- Staging Area
- Quarter Midget Track
- Kids' Tracks 110cc or less
- Mini Track 70cc or less
- Motocross Pit/Parking
- Prairie City Motocross Track
- ATV Practice Track
- MX Practice Track
- 4x4 Staging Area
- 4x4 Obstacle Course
- 4x4 Track and Open Area
- 4x4 and Trials Area

### Legend

- Planning Area
- Potential Facilities (Conceptual Location)
- Use Areas
  - Developed Use Area
  - Distributed OHV Recreation Use Area
  - Route and Trail System Use Area
  - Stormwater Management Use Area
  - Vernal Pool Management Use Area
- Existing Infrastructure
  - Parking
  - Gate
  - Closed Area
  - Haul Road Easement
  - Exclusive Easement with White Rock Road Properties, LLC
  - Internal Roads
  - External Roads
  - Intermittent Stream
  - Seasonal Drainage
  - Culvert
  - Vernal Pool
  - Marsh/Palustrine
  - Other Waters (Outside of Planning Area)

Source: Data provided by State Parks 2012 and adapted by AECOM in 2014

Figure 4-2. Potential Facilities

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## **4.1.2 SVRA VISION**

The vision for Prairie City SVRA describes the SVRA in future years, when the Off-Highway Motor Vehicle Recreation (OHMVR) Division of State Parks has achieved its General Plan objectives. The following vision was developed for Prairie City SVRA during this General Plan process:

Prairie City State Vehicular Recreation Area (SVRA) will provide high-quality off-highway vehicle (OHV) recreation and other recreational opportunities, while protecting natural and cultural resources. Prairie City SVRA will develop and maintain a family-oriented model of an urban OHV recreation area that is flexible, responsive, and provides a high level of quality customer service. Opportunities will be provided for family and community outreach through environmental awareness, environmental stewardship, and safety training programs at this multiuse OHV recreation area.

## **4.2 UNIT CLASSIFICATION**

Prairie City SVRA was added to the State Park system as an SVRA in 1990. The site was operated as a private motorcycle park from 1972 until 1975, before State Parks purchased it using OHV Trust Funds. Legislative action (Chapter 1210, Statutes of 1988) authorized State Parks to plan, acquire, and develop the site for OHV use. In November 2004, State Parks purchased another 211 acres in the northern portion of the SVRA, known as the Yost property. In 2014, 68 acres in the southeast corner of the property was acquired from the Barton Ranch. The purpose of these acquisitions was to provide additional OHV recreation opportunities, to prevent development of incompatible land uses, and to help manage water quality at the SVRA. These areas were classified as SVRA lands and added to Prairie City SVRA at the time of purchase.

## **4.3 LAND USE MANAGEMENT**

### **4.3.1 USE AREAS**

Prairie City SVRA includes five use areas (Figure 4-1), each with different characteristics, activities or allowable uses, and resources and related management mandates. State Parks will manage natural and cultural resources in the use areas to protect the resources' 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 apply to all use areas. Table 4-1 provides the definition, approximate size, allowable uses, and area-specific resource management prescriptions or considerations for each use area. A brief description of these use areas is also included below.

#### **4.3.1.1 DEVELOPED USE AREA**

This area of approximately 219 acres accommodates the more intense recreational and administrative uses and includes the existing and future built facilities. The potential new facilities anticipated for this

use area include a visitor center, an overnight camping area, enhanced spectator facilities, improved circulation, and a multiuse special-events area. Potential facilities relocated from their current locations include a ranger station, Twin Cities District office, kart track, and dirt oval track (currently known as the mini MX track) (Figure 4-2).

#### **4.3.1.2 DISTRIBUTED OFF-HIGHWAY VEHICLE RECREATION USE AREA**

This area provides approximately 217 acres of distributed OHV recreation that is not confined to routes and trails. Visitors would continue to be able to enjoy distributed OHV recreation and connect with practice tracks and the route and trail system use area.

#### **4.3.1.3 ROUTE AND TRAIL SYSTEM USE AREA**

This area allows for approximately 353 acres of OHV recreation on identified routes and trails of varying difficulty for skills development and technical riding. Additional routes and trails would be established on the Yost property, which was not previously open to OHV recreation.

#### **4.3.1.4 STORMWATER MANAGEMENT USE AREA**

This area provides approximately 113 acres for stormwater runoff treatment and water quality improvement. Most of this use area comprises the Barton Ranch property, which was purchased in 2014 to help manage water quality.

#### **4.3.1.5 VERNAL POOL MANAGEMENT USE AREA**

This area of approximately 213 acres includes a high concentration of vernal pools, which often provide habitat for specially adapted plants and animals, including several species listed under the California and federal Endangered Species Acts. This area would not be open to OHV recreation, but would provide opportunities for access to nonmotorized recreation like picnicking, wildlife viewing, and guided vernal pool interpretative hikes.


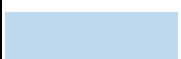



### **4.3.2 POTENTIAL FACILITIES**

The map of the preferred concept, showing potential facilities (Figure 4-2), and the following discussion describe the long-range vision for Prairie City SVRA and show examples of the types and conceptual locations of facilities anticipated to be constructed in the SVRA in the long term. The potential facilities require specific project plans and may require additional California Environmental Quality Act (CEQA) analysis and project-specific permits before construction. Future conditions and demands will determine the actual locations and facilities built within the SVRA. These new facilities will be an important part of achieving the purpose of the SVRA to offer high-quality OHV and other recreational opportunities, and to provide OHV and special-event venues, while protecting and interpreting resources.





**Table 4-1. Use Areas**

Color on Map	Use Areas	Definition	Approximate Size	Allowable Uses	Resource Management
	Developed Use Area	An area that accommodates the more intense recreational and administrative uses and includes existing and future built facilities. This area provides vehicle access, structured recreation, and visitor services and supports operational needs.	219 acres	Facilities suitable in the developed use area include SVRA entrances; SVRA infrastructure such as internal circulation improvements; administrative and maintenance offices and facilities; concessions; developed OHV recreation facilities such as tracks, 4x4, and ATV areas; special events and spectator areas; overnight camping and staging areas with accompanying facilities such as parking, restrooms, and picnic areas; and educational facilities such as the Environmental Training Center, visitor center, and interpretive displays. Visitors will be able to access facilities in the developed use area via roadways that may be constructed between the SVRA entrance and the various developed use facilities. OHV routes and trails may be created throughout this use area.	The stormwater management use area bisects portions of the developed use area. These areas will be managed according to water quality and soil loss management requirements.
	Distributed OHV Recreation Use Area	An area where OHV recreation is not confined to identified routes and trails. Vegetation is protected in the distributed OHV recreation use area in accordance with CVC Division 16.5.	217 acres	OHV recreation allowable in these areas includes tight turns, roll and flow, and skills practice trails. There may be small concentrated areas within distributed riding areas that provide opportunities such as limited hillclimbing/descents or high banking. Visitors will continue to be able to enjoy distributed OHV recreation and connect with practice tracks and the route and trail system use area. During special events, this area may also be used for spectator parking.	Portions of the distributed OHV recreation use area may be closed permanently or temporarily for restoration, conservation, or protection of natural and cultural resources. Distributed OHV recreation areas will be clearly delineated and posted to limit visitors from riding off trail in adjacent route and trail system areas. The specific types of OHVs allowable in the distributed OHV recreation area will be posted.
	Route and Trail System Use Area	An area where OHV recreation is allowed only on identified routes and trails.	353 acres	This area allows OHV trails of varying difficulty for skills development and technical riding. New routes and trails will be established on the Yost property, which was not previously open to OHV recreation. Trails in the other areas of the SVRA have been established already, but some new linkages may be needed. The trails could be adaptively modified over time to improve visitor experiences. Examples of trails and experiences that could be found in these areas include limited hillclimbs/descents, terrain parks or trials trails for off-highway motorcycles, rocky trail sections, tight turns, roll and flow, and skills practice trails. During special events, this area may also be used for spectator parking.	Trails should be designed, constructed, and managed to avoid known sensitive resources and limit soil erosion. Permanent or temporary closures for restoration, conservation, or protection of natural or cultural resources may be implemented in this area. Use areas with this classification will be clearly delineated, the types of OHVs allowable on the various trails and sections of the SVRA will be specified, and wayfinding and directional signage will be posted.
	Stormwater Management Use Area	An area used to treat SVRA stormwater runoff, improve water quality, and incorporate water quality improvement facilities and stormwater control features.	113 acres	This area allows stormwater protection features and facilities. Facilities could include a sediment basin, biofiltration swale (bioswale) or other stormwater control features such as sediment barriers, and/or a stormwater spray field. The allowable uses are subject to the terms of State Parks' exclusive easement with White Rock Road Properties, LLC. This exclusive easement located within the Barton Ranch acquisition area is for the construction and operation of a conveyor belt system, access road, and associated utilities needed to convey aggregate material from the Teichert Quarry mining site to its processing facility. Portions of the stormwater management use area that bisect other use areas may allow limited OHV recreation while instituting stormwater management measures to prevent water quality degradation and soil loss.	This area will be managed according to the most current applicable water quality management prescriptions to improve water quality so that discharges meet regulatory agency requirements. A vegetative buffer will be maintained along drainage corridors with properly sited and constructed approaches and crossings to prevent erosion and protect water quality.
	Vernal Pool Management Use Area	An area with a high concentration of vernal pools, which are seasonally ponded wetlands that occur on soils with a restrictive hardpan or claypan layer. Vernal pools are typically characterized by a unique set of plant species and often provide habitat for specially adapted plants and animals, including several species listed under the California and federal Endangered Species Acts. Vernal pools are protected by federal law under the Clean Water Act and many vernal pool plant associations are considered sensitive natural communities by CDFW.	213 acres	This area will not be open to OHV recreation, but will provide opportunities for access to nonmotorized recreation like picnicking, wildlife viewing, and guided vernal pool interpretive hikes. Roads and trails may cross this area to facilitate egress/ingress between and connectivity with other use 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 resources present.	This area will be managed according to guidance in the U.S. Fish and Wildlife Service's programmatic biological opinion for vernal pool crustaceans (USFWS 1996) or subsequently issued guidance.

Notes: ATV = all-terrain vehicle; CDFW = California Department of Fish and Wildlife; CVC = California Vehicle Code; 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 2014

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#### **4.3.2.1 VISITOR CENTER**

Prairie City SVRA and the surrounding communities have a rich history, with early Native American inhabitants, Gold Rush–era mining operations, cattle ranching, Aerojet’s M-1 Rocket Engine Program, and the establishment of OHV recreation use at the SVRA. The Moon Room (see General Plan Section 2.2.3, “Facilities”) is envisioned as the future home of the SVRA visitor center, providing opportunities for interpretation and educational programs (Figure 4-2). As defined by the State Parks’ *Interpretation Planning Workbook* (State Parks 2013), a visitor center (often called an interpretive center) is a staffed facility that helps visitors transition from their cars or other modes of transportation to the natural, cultural, or recreational environment of a park. A visitor center may contain exhibits, visitor facilities such as restrooms and information desks, and interpretive facilities. It may offer a variety of in-depth interpretive media—formal exhibits, historic setting vignettes, and audio-visual facilities—to inspire visitors to explore, learn about, and protect the area’s resources (*Department Operations Manual*, Policy 0905.4.1 [State Parks 2010]).

#### **4.3.2.2 RANGER STATION**

The ranger station would be relocated from its current location at the entrance station to the current location of the Twin Cities District office in the southwestern portion of the SVRA (Figure 4-2). This move would ensure sufficient space for ranger station operations while locating the station more centrally in the SVRA. The ranger station provides critical emergency services, public safety, and visitor services functions. Emergency calls are routed from the Northern Communications Center (NORCOM) (see General Plan Section 2.2.3, “Facilities”) to the ranger station, so operating the ranger station close to NORCOM would increase efficiency and coordination.

#### **4.3.2.3 OVERNIGHT CAMPING AREA**

The overnight camping facilities would be located in and around the existing staging area at the center of the SVRA (Figure 4-2). The staging area is equipped with utilities and infrastructure, and currently provides amenities that could be made available to campers including parking, shaded picnic sites, restrooms, drinking water, barbecue grills, and fire pits. The Mud Mart concession store, also located in the staging area, provides riders with spare parts and accessories, apparel and safety gear, and snacks and beverages.

#### **4.3.2.4 KART TRACK AND DIRT OVAL TRACK**

The kart track and dirt oval track (currently known as the mini MX track) would be relocated to accommodate the haul road easement for mining operations located along the southern boundary of the SVRA. The new location for the kart track would be approximately 1,600 feet northeast of its current location, and the dirt oval track would be approximately 1,850 northeast of its current location (Figure 4-2). This track predated the state’s acquisition of the property and is operated by a concessionaire.

#### **4.3.2.5 ENHANCED SPECTATOR FACILITIES**

Prairie City SVRA attracted almost 141,701 visitors in 2013. More than half of those visitors attended a special event. Enhanced spectator facilities for the all-terrain vehicle (ATV) practice track, the motocross practice track, and the Prairie City Motocross Track would accommodate the growing number of visitors to special events. These tracks would continue to serve as popular destinations for day-use recreation and to host a variety of special events. Enhancing these spectator facilities would allow visitors to continue to have a safe, comfortable, and enjoyable viewing experience. These facilities may include grandstands and viewing areas, track safety improvements, and pedestrian accessibility improvements. The enhanced spectator facilities may also include parking-related improvements to accommodate the large size and number of special events held at the SVRA.

#### **4.3.2.6 IMPROVED CIRCULATION**

Streetscape improvements completed by Sacramento County in early 2014 along White Rock Road included construction of a median, thus prohibiting crossing the median for left turns in and out of the special-event entrance (Gate 4). As a result of these improvements, vehicles can only make a right turn in and a right turn out of Gate 4. The approved Capital SouthEast Connector (Connector) is a planned 34-mile connector between Interstate 5 south of Elk Grove and U.S. Highway 50 just east of El Dorado Hills. In addition, as a separate future project, Sacramento County and the Connector Joint Powers Authority (Connector JPA) may realign Scott Road to connect with the Connector Expressway at Prairie City Road (the existing intersection of White Rock Road and Scott Road would be removed). Access to Prairie City SVRA from White Rock Road will likely require changes in the future because of access limitations associated with the Connector. Special-event circulation would be improved using another existing entrance gate, or by coordinating with Sacramento County and the Connector JPA to construct roadway improvements that enhance Gate 4 access or provide an alternate special-event entrance. The main SVRA entrance requires improvements and may need to be relocated to align an entrance to the SVRA with the future Scott Road realignment, which would then create a direct entrance from Prairie City Road to the east side of the SVRA.

#### **4.3.2.7 DISTRICT OFFICE**

Relocating the Twin Cities District Office from its current location in the southwestern section of the SVRA to a new building in the northwest corner of the SVRA (Figure 4-2) near the existing main SVRA entrance (Gate 1) would facilitate better access for the public, division and headquarters staff, and support services.

#### **4.3.2.8 MULTIUSE SPECIAL-EVENTS AREA**

A new multiuse special-events area would be located in a formerly mined area on the Yost property, which State Parks acquired in 2004 to expand the SVRA. Mining operations ceased and reclamation efforts were complete in 2012. This new facility would allow the SVRA to host an increased number of



special events throughout the year that would accommodate a variety of OHVs and event types. The multiuse special-events area facilities may include event areas, spectator areas, concession areas, parking and staging areas, and an OHV track around the perimeter of the events area.

## 4.4 GOALS AND GUIDELINES

The goals and guidelines in this section apply to all Prairie City SVRA use areas. Where specific resource management is warranted for a particular use area, the applicable management strategies are outlined in Table 4-1. The 1991 Prairie City SVRA Master Plan’s land use goals and resource management policies provided a foundation for the goals and guidelines of this General Plan. Substantial additions and changes were made to reflect changed conditions, new acquisitions, and specific topics warranting additional management, as defined by the planning process, current knowledge or resources present, and the current regulatory environment.

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
- ▶ 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 this General Plan.

### 4.4.1 VISITOR EXPERIENCE AND OPPORTUNITIES (VEO)

**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:** Provide a variety of OHV activities that visitors will engage in, including off-highway motorcycles, trials bikes, ATVs, side-by-side utility vehicles, 4x4s, 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 1.3:** Stay current on regional demographics and trends in OHV equipment, technologies, designs, and visitor interests.
- ▶ **VEO Guideline 1.4:** Plan for and accommodate nonvehicular uses (e.g. mountain biking, hiking, wildlife viewing, and picnicking) in areas attractive for such use and at times and in locations that do not 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 OHV 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 Guideline 2.3:** Develop a designed trail system/trail tread that can receive regular grooming and that will offer challenges desired by the SVRA visitors. Coordinate with SVRA visitors on trail design.

**VEO Goal 3: Enhance individual-, family-, and community-centered recreational opportunities.**

- ▶ **VEO Guideline 3.1:** Develop programs and recreational opportunities to meet changing visitor needs and expectations. These could include social gathering opportunities, special events for children and adults new to OHV recreation, events planned to celebrate important culture and history, and events that emphasize safety and responsible OHV recreation.

## **4.4.2 PHYSICAL RESOURCE MANAGEMENT**

### **4.4.2.1 WETLANDS, WATER QUALITY, AND WATER SUPPLY (WATER)**

**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:** Attain no net loss of wetlands functions and values at the SVRA. If impacts on jurisdictional features cannot be fully avoided during CEQA analysis:



- 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 Regional Water Quality Control Board (RWQCB), 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 areas or stream corridors and within waters of the United States or the state. 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. Culverts or bridge crossings shall be considered in highly erosive areas. 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.
- ▶ **Water Guideline 2.2:** Implement best management practices (BMPs) in operating the SVRA, consistent with the most current water quality management prescriptions. 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 all water quality control measures required under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit before, during, and after the construction of facilities proposed and envisioned in this General Plan. Develop a storm water pollution prevention plan (SWPPP), 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 2.4:** Incorporate permanent water quality control features, as appropriate when developing detailed plans for facilities proposed and envisioned in this General Plan. As appropriate to designs, incorporate information from the OHV BMP Manual and the OHMVR *2008 Soil Conservation Standard and Guidelines* (Soil Standard) (or subsequent amendments), and the Aerojet Feasibility Report for Area 39, which is expected to be completed in 2018 and will contain prescriptive measures designed to help reduce contaminant transport in groundwater. Select water quality control features suitable to site conditions at Prairie City SVRA and consistent with state-of-the-art science on water quality management. Avoid direct discharge to receiving water bodies.
- ▶ **Water Guideline 2.5:** Improve areas that have experienced substantial erosion from surface water runoff, as determined by annual inspections, to reduce erosion and sedimentation. Implement rehabilitation concepts for these features, as appropriate.
- ▶ **Water Guideline 2.6:** 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 2.7:** 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.

**Water Goal 3: Manage the SVRA to conserve water resources while maintaining a quality OHV recreational experience.**

- ▶ **Water Guideline 3.1:** 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 3.2:** Manage facilities to accommodate periods of drought or low water supply. Minimize the use of water for dust control unless recycled or grey water, and continue to use alternative dust suppression methods, as necessary.
- ▶ **Water Guideline 3.3:** 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. These measures are in accordance with Executive Order B-18-12 issued by Governor Edmund G. Brown Jr. on April 25, 2012, with the Proclamation of a State of Emergency signed on January 17, 2014. The Proclamations of Continued State of Emergency signed on April 25, 2014, and December 22, 2014, and Executive Order B-29-15 issued on April 1, 2015, impose restrictions to achieve a 25 percent reduction in potable water usage through February 28, 2016.





#### 4.4.2.2 SOILS

**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 Prairie City SVRA facilities to meet the current OHMVR Division Soil Conservation Standard or subsequent amendments or replacement documents.
- ▶ **Soils Guideline 1.2:** Consider soil resources related recommendations presented in the Area 39 Feasibility Study that is anticipated to be completed by Aerojet in 2018.
- ▶ **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.

#### 4.4.2.3 GEOLOGY (GEO) AND PALEONTOLOGICAL RESOURCES

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

- ▶ **Geo Guideline 1.1:** Drainage facilities shall be designed by a California-registered civil engineer, and a geotechnical engineer shall be retained to review construction of drainage facilities, to minimize potential safety hazards or downstream damage associated with failure of earthen or concrete barriers from slope instability.
- ▶ **Geo Guideline 1.2:** Avoid constructing restroom facilities that require soil percolation of wastewater. All new restrooms should 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.

**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 all SVRA staff. regarding procedures to be followed if paleontological resources are discovered during a project, or if SVRA visitors find a paleontological resource (as specified in Geo Guideline 2.2). Update State Parks peace officers (SPPOs) on current laws related to paleontological resource protection and inform them about areas most likely to contain the unique paleontological resources that would be most susceptible to looting, vandalism, or damage.
- ▶ **Geo Guideline 2.2:** If paleontological resources are discovered inadvertently during construction activities, cease construction activities within 100 feet 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 1996) 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.

### 4.4.3 NATURAL RESOURCES

#### 4.4.3.1 NATURAL RESOURCE MANAGEMENT (NRM)

**NRM Goal 1: Manage the 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:** Conduct site-specific surveys/mapping of sensitive biological resources (such as special-status species and sensitive habitats) before planning new visitor-serving or operations facilities, or expanding or relocating existing ones. Consider the location and extent of these resources during the planning and design process. Design the route and trail system in the northern portion of the planning area to avoid vernal pools. Avoid affecting sensitive biological resources during planning, design, and construction. Utilize fencing and other methods to exclude public access in the vernal pool management use areas and other 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. Identify and implement measures to offset impacts in consultation with a qualified biologist and the appropriate resource agencies (e.g., CDFW, USFWS, USACE, and the Central Valley RWQCB), depending on the listing or protection status of the resource.
- ▶ **NRM Guideline 1.4:** Continue to implement the OHMVR Division's Habitat Monitoring System (HMS) consistent with State Park 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. Use the HMS as a tool 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 abundance, and comparisons between riding and nonriding areas. When completed, incorporate use of the HMS data management system to accumulate, standardize, and analyze records of plants, animals, and habitats in the planning area and guide adaptive management.



- ▶ **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. Determine the size of the buffers based on site-specific conditions and the habitat requirements of the species that may use the habitat and buffers, in communication with appropriate trustee and responsible agencies, such as CDFW, USACE, and USFWS. Where high-quality habitats being avoided are close to each other, size the buffers to provide connectivity between the habitats.

**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 (NRM Guideline 1.4) and monitoring for soil conservation (Soils Guideline 1.1) to allow natural regenerative processes to occur.
- ▶ **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 in areas that contain natural habitats that will not be subject to repeated disturbance; 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; or other management techniques proven beneficial to the maintenance of healthy natural ecosystems.
- ▶ **NRM Guideline 2.4:** Apply state-of-the-art science, as defined at the time of implementation, and ecological knowledge to the management of natural communities and associated habitat functions at the SVRA, particularly in the vernal pool management use area. Management strategies shall take current science and results from ongoing management and research into consideration. OHMVR Division environmental scientists shall conduct research and coordinate studies with research at other SVRAs, as appropriate.

#### 4.4.3.2 PLANTS

**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 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. A qualified botanist familiar with the flora of Sacramento County shall conduct the surveys. 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 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, including ground disturbance, trail construction, facility construction, or public access, on occurrences of special-status plants if any are found during project implementation.
- ▶ **Plant Guideline 1.3:** 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 1.4:** 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 1.5:** Prohibit removal of native trees unless the health of the tree warrants removal. Trees that must be removed to accommodate the siting of facilities will be replaced elsewhere in the SVRA. At both new and existing facilities, avoid root compaction and physical damage to native trees. Conduct restoration and enhancement of native oak woodland at the Barton Ranch acquisition area.



#### 4.4.3.3 WILDLIFE

**Wildlife Goal 1: Manage the SVRA for a balance of uses that maintain a quality OHV recreation experience while allowing protection of 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 to look for potential signs of active use by American badger, including dens, and signs of active use by burrowing owls. If signs are detected during monitoring, consider active management strategies to encourage and preserve use of the site by these species. Such strategies include placing facilities at a distance of 100 feet or greater, as determined appropriate based on consultation with or guidance from CDFW, from any active burrowing owl or American badger dens.
- ▶ **Wildlife Guideline 1.2:** Avoid siting new facilities within 250 feet of pools known or later identified to support vernal pool fairy shrimp, vernal pool tadpole shrimp, western pond turtle, or western spadefoot.
- ▶ **Wildlife Guideline 1.3:** Avoid siting facilities within 100 feet of elderberry shrub locations. 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 within the SVRA.
- ▶ **Wildlife Guideline 1.4:** Avoid known breeding locations of all special-status species known to occur in the planning area during the placement of new facilities.
- ▶ **Wildlife Guideline 1.5:** 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 construction activities are planned during the breeding season of common and special-status birds (February 1 through August 15). If breeding birds are documented, establish appropriate buffer zones around the occupied nests to protect the birds until the young have fledged.
- ▶ **Wildlife Guideline 1.6:** Ensure that a qualified wildlife biologist conducts focused surveys for Swainson's hawk nests within 14 days before the start of construction activities if planned during the Swainson's hawk nesting season (March 1 through August 31). Surveys will be conducted in habitat with potentially suitable nest trees occurring within the project site and within one-quarter mile of the boundaries of the project site. If an active Swainson's hawk nest is detected during the preconstruction surveys, OHMVR Division staff or its designated representative shall notify CDFW and establish a one-quarter-mile-minimum protective buffer around the nest. No construction activities with potential to disturb nesting Swainson's hawks will occur within the one-quarter-mile protective buffer until the nest is no longer active or until the qualified biologist, in consultation with CDFW, determines that the proposed construction activities pose no risk of nest abandonment or other disruptions to nesting activities.

- ▶ **Wildlife Guideline 1.7:** Develop and implement appropriate measures to avoid or compensate for potential direct and indirect impacts of project-specific activities on special-status amphibians and reptiles in upland habitats if construction activities are planned within suitable upland habitat for special-status amphibians or reptiles (western pond turtle or western spadefoot) and within the known maximum upland dispersal distance of those species from known breeding habitat. Before the start of construction, implement any protection or mitigation measures agreed upon during consultation with the wildlife agencies.

#### 4.4.4 CULTURAL RESOURCES MANAGEMENT (CR)

##### CR Goal 1: Preserve and protect cultural resources.

- ▶ **CR Guideline 1.1:** In accordance with PRC Section 5024, before beginning any project or construction at or near a resource that could disturb the integrity of the resource, determine the historical significance of known cultural resources that have been identified through inventory and documentation on file at the North Central Information Center. Obtain a Determination of Eligibility from the State Historic Preservation Officer for listing the resource in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). If the resource is determined to be eligible for NRHP/CRHR listing, consult with an OHMVR Division archaeologist or other qualified cultural resource professional to develop and implement protection measures consistent with Section 106 of the National Historic Preservation Act, the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and CEQA. These measures could include but would not necessarily be restricted to project planning designed to avoid the resource, archival research, additional in-field documentation, or interpretive signage. If the resource is determined not to be eligible for NRHP/CRHR listing, then no further investigations or protection measures are necessary.
- ▶ **CR Guideline 1.2:** Design the activities to avoid or minimize impacts on the identified resources if significant cultural resources are discovered in or adjacent to areas that would be affected by planned or proposed activities. If cultural resources are discovered inadvertently during construction activities, cease construction activities at and near the location of the find and consult an OHMVR Division archaeologist or other qualified cultural resource professional to determine the potential significance of the find in accordance with NRHP/CRHR criteria. If the find is determined to be significant, develop and implement mitigation measures in consultation with the archaeologist or cultural resource professional consistent with Section 106 of the National Historic Preservation Act, the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and CEQA. Mitigation measures could include but would not necessarily be restricted to redesign to avoid the resource, archival research, additional in-field documentation, interpretive signage, or subsurface archaeological testing. If the discovery is determined not to be eligible for NRHP/CRHR listing, then no further investigation or mitigation of adverse effects is necessary.



- ▶ **CR Guideline 1.3:** Maintain appropriate confidentiality of all cultural resources in conformance with Government Code Section 6254.10, “Information Maintained by Department of Parks and Recreation.” This applies to archaeological site information maintained by State Parks, the State Historical Resources Commission, or the State Lands Commission.
- ▶ **CR Guideline 1.4:** Temporarily halt all work at the discovery location and areas adjacent to the find in the event that human remains are discovered during project activities. 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 Prairie City SVRA 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 1.5:** Issue collecting permits that allow Native Americans requesting access into the SVRA for the purpose of gathering plant resources. Issuance of these permits allows State Parks to track the type and amount of material collected. Incorporate native plants of value to the Native American community and appropriate to the native plant habitats found on-site into restoration efforts.

## 4.4.5 INTERPRETATION AND EDUCATION

### 4.4.5.1 SVRA INTERPRETIVE SIGNIFICANCE

Prairie City SVRA provides several opportunities for interpretation and educational programs related to regional and local natural resources, cultural history, and OHV recreation. The SVRA lands were originally home to the Valley Nisenan Maidu Native Americans, who inhabited the area until the discovery of gold and the ensuing Gold Rush. During the Gold Rush era and until the 1950s, the area was the site of placer mining operations; it was owned first by the Natoma Water and Mining Company and later by the Capital Dredging Company. Acres of cobbled dredge tailings are still visible in the SVRA. After the gold mining days, the area became home to a number of cattle ranches.

In the early 1960s, Aerojet purchased the southern portion of the existing SVRA to build and test rocket engines for the federal government. Today, both the test rocket launch pit and the dome-shaped control

room called the “Moon Room,” which were part of the M-1 Rocket Engine Program for the National Aeronautics and Space Administration (NASA), remain intact. In the latter half of the 20th century, motorcycle enthusiasts began to ride and compete at the SVRA, where a variety of terrains and trails and an extensive selection of tracks for OHV recreational opportunities have now been established.

Prairie City SVRA, like all SVRAs, faces the challenge of both providing high-quality recreation and protecting the SVRA’s cultural and natural resources. Interpretation is a key factor in helping SVRA visitors appreciate the land on which they recreate, and fostering in them an appreciation for the SVRA and a desire to protect it.

#### **4.4.5.2 SVRA INTERPRETIVE MISSION**

The interpretive mission of Prairie City SVRA is to provide a wide variety of long-term, sustainable OHV recreation opportunities for all ages and riding abilities while protecting and understanding the SVRA’s natural and cultural resources. Interpretation will aim to balance the importance of safe and responsible OHV use through training programs for youth and adults, with education on the natural resources in and local history of the SVRA.

#### **4.4.5.3 SVRA INTERPRETIVE VISION**

High-quality interpretation at Prairie City SVRA will encourage SVRA visitors to be educated in responsible OHV recreation practices and become knowledgeable of Prairie City SVRA’s cultural history and natural resources. Increased awareness of the significance of these local resources will inspire greater visitor appreciation and support, and provide visitors a sense of pride of ownership and belonging to the SVRA.

#### **4.4.5.4 INTERPRETIVE PERIODS**

##### **Primary Interpretive Periods**

- ▶ *12,000 years ago to 1850s:* Use of the SVRA lands and foothills by Valley Nisenan Maidu Native Americans for hunting, gathering, trading, and ceremonies.
- ▶ *1850s–1927:* Gold Rush era, including construction by Natoma Water and Mining Company of a canal to Prairie City (the Natoma Ditch) and a network of flumes and ditches crisscrossing the region.
- ▶ *1927–1952:* Capital Dredging Company mining operations.
- ▶ *1962–1972:* Construction and testing of rocket engines by Aerojet for the federal government, including the M-1 Rocket Engine Program for NASA.
- ▶ *1972–present:* OHV recreation.





## **Secondary Interpretive Period**

- ▶ *1952–1962*: Cattle ranching.

### **4.4.5.5 THEMES**

#### **Unifying Theme**

Prairie City SVRA provides important recreational opportunities for the local and regional community and an opportunity to learn about the natural and cultural resources found within the SVRA, while enjoying safe responsible activities.

#### **Primary Themes**

##### ***Off-Highway Vehicles***

- ▶ Prairie City SVRA is a fun and enjoyable place to learn about safe and responsible OHV recreation.
- ▶ Prairie City SVRA provides quality opportunities for responsible and sustainable recreation with a variety of OHV activities for the benefit and the inspiration of SVRA visitors.
- ▶ Prairie City SVRA is a place where people of all ages, interests, and skill levels will continue to enjoy for generations to come.

##### ***Resource Management***

- ▶ Prairie City SVRA ensures quality recreational opportunities while protecting sensitive natural resources, stabilizing soils, protecting the quality of the local water and the air, and preserving local cultural heritage.
- ▶ Prairie City SVRA is a place to learn about resource management.
- ▶ The Environmental Training Center serves as a venue to educate visitors about responsible riding and to share information about the SVRA's extensive resource inventory, monitoring, protection, and restoration efforts.

##### ***History***

Prairie City SVRA and surrounding communities have a rich history, including the early Native American inhabitants, Gold Rush–era mining operations, cattle ranching, Aerojet's M-1 Rocket Test Program for NASA in the early 1960s, and the establishment of OHV recreation use at the SVRA.

## Secondary Themes

### *Off-Highway Vehicles*

Prairie City SVRA is a showcase for OHV recreation. SVRA visitors are exposed to a wide range of OHV recreational opportunities for a variety of vehicle types and skill levels.

### *Local Plants and Animals*

Prairie City SVRA features terrain that varies from flat, open grasslands to rolling hills covered with native blue oaks, which provide habitat for a variety of plants and wildlife species.

Vernal pools in the SVRA provide habitat for a variety of protected and sensitive plant and wildlife species.

#### **4.4.5.6 INTERPRETIVE AND EDUCATIONAL (IE) GOALS AND GUIDELINES**

**IE Goal 1: Provide relevant and thematic interpretive materials that address the SVRA's sense of place and history and meet the needs and interests of the visitors.**

- ▶ **IE Guideline 1.1:** Develop an interpretation master plan (IMP) for the SVRA as a long-range planning document for interpretive services. The IMP shall expand upon the goals and guidelines identified in this General Plan and provide greater background and context for interpretation and educational programs at the SVRA. It shall define the objectives, methodologies, and concepts for how the goals stated in the General Plan will be achieved. The IMP shall analyze existing interpretive conditions and explore opportunities and constraints for expanding interpretation, safety and conservation messaging, and visitor outreach. The IMP shall provide the basis for interpreting the local history of Prairie City SVRA, including dredge mining, and Aerojet operations.
- ▶ **IE Guideline 1.2:** Educate visitors about resource management through site-specific interpretive panels and at the future visitor center.
- ▶ **IE Guideline 1.3:** Ensure that interpretation is engaging for all by addressing multiple learning styles, incorporating modern technology, and accommodating people with diverse abilities through varied interpretation techniques and media.
- ▶ **IE Guideline 1.4:** Involve local community organizations, including local California Native American tribes and individuals, in the creation of natural and cultural interpretive programs that are attractive to SVRA visitors.
- ▶ **IE Guideline 1.5:** Identify opportunities to incorporate the historical resources into interpretive OHV trails. Develop interpretive panels that inform the public about measures to protect and preserve the historical resources while highlighting the many uses of the SVRA. Encourage visitors to be a part of the physical, social, and cultural aspects of the heritage visible throughout the SVRA.



- ▶ **IE Guideline 1.6:** Encourage visitors to experience the landscape at trailside interpretive panels and overlooks. Develop areas near trails that have opportunities to view the natural landscape. Providing electronic and alternative methods to access interpretive information will reduce the size and complexity of interpretive displays while lowering the costs of acquisition and maintenance.
- ▶ **IE Guideline 1.7:** Increase the awareness of Prairie City SVRA’s historical significance through web-page development. Provide guidance for exploring the history of the SVRA. Develop online parkwide messaging for the public that includes the various opportunities, and incorporate the historical significance of the SVRA within the message.
- ▶ **IE Guideline 1.8:** Ensure that future educational and recreational planning efforts consider appropriate and safe opportunities while reducing potential risks to visitors.

**IE Goal 2: Increase visitors’ knowledge of and appreciation for recreational opportunities at the SVRA and in the region.**

- ▶ **IE Guideline 2.1:** Educate visitors about the diversity of recreational experiences currently offered within the SVRA. Once facilities envisioned in this General Plan become available, provide information about new and expanded recreational opportunities and interpretive programs.

**IE Goal 3: Expand understanding of ecological relationships and heighten awareness of and sensitivity to human impacts.**

- ▶ **IE Guideline 3.1:** Work with interested parties to provide education about the natural ecosystem processes at the SVRA.
- ▶ **IE Guideline 3.2:** Provide opportunities for visitors to gain an understanding of the SVRA’s diverse natural resources, including vernal pools, oak woodland, and grassland. Interpret local ecology and explain vulnerabilities of sensitive biological resources to human disturbance.
- ▶ **IE Guideline 3.3:** Highlight opportunities for OHV recreationists to minimize their impacts on natural resources through engaging, creative interpretive programming. Provide information about temporary and rotating area closures to encourage visitors to allow natural regenerative processes to occur in these areas; foster an understanding about the benefits of these closures.
- ▶ **IE Guideline 3.4:** Provide opportunities for visitors to gain an understanding of regional and local water quality issues, including the importance of water quality protection measures being implemented at the SVRA. Interpret the on-site surface water drainage system and include information on potential water quality pollution sources, about infiltration properties of the local soils, and about the importance of on-site treatment measures (e.g., sediment basins, vegetative buffers, remediation efforts associated with former Aerojet facilities, Barton Ranch acquisition).
- ▶ **IE Guideline 3.5:** Promote water conservation on-site, for both visitor use and operational purposes.

- ▶ **IE Guideline 3.6:** Interpret sustainability initiatives and inspire SVRA visitors to adopt similar measures in their daily lives, including during OHV recreation.

#### **IE Goal 4: Promote safe and responsible OHV recreation.**

- ▶ **IE Guideline 4.1:** Work with interested parties to develop interpretive resources, programs, and opportunities regarding safe and responsible OHV recreation.
- ▶ **IE Guideline 4.2:** Use a broad range of interpretive techniques to deliver SVRA information and public safety messages, such as responsible riding.
- ▶ **IE Guideline 4.3:** Continue to expand training programs that lead to ATV Safety Institute safety certification for adults and youth.
- ▶ **IE Guideline 4.4:** Collaborate with organizations such as the Motorcycle Safety Foundation and the ATV Safety Institute to provide additional opportunities for safety certification.
- ▶ **IE Guideline 4.5:** Expand opportunities for underserved youth, including the “Off-Highway PALs” program for youth, at the SVRA to teach safe, responsible OHV operation and provide opportunities for positive interactions with law enforcement officers.
- ▶ **IE Guideline 4.6:** Provide information about what to do in case of medical or public emergency, such as whom to call, where to go, and the basics of medical assistance.
- ▶ **IE Guideline 4.7:** Provide training and educational opportunities that focus on improving OHV riding skills.

#### **4.4.5.7 SVRA OPERATIONS AND MAINTENANCE (OM) GOALS AND GUIDELINES**

##### **OM Goal 1: Provide sustainable visitor services and infrastructure that encourage responsible visitor use of Prairie City SVRA and meet visitor needs.**

- ▶ **OM Guideline 1.1:** Provide utilities to meet the daily needs of staff members and visitors for existing facilities and new ones envisioned in this General Plan.
- ▶ **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 Guideline 1.4:** Following the construction of additional recreation facilities, provide adequate funding and staffing to operate the SVRA in a safe and efficient manner.
- ▶ **OM Guideline 1.5:** Coordinate with Sacramento County and the Connector JPA and participate in planning efforts related to future roadway improvements.

**OM Goal 2: Maintain and enhance the quality of OHV recreational opportunities.**

- ▶ **OM Guideline 2.1:** Provide OHV recreation opportunities at the Yost property acquisition area that accommodate a full range of OHV types and for the full range of skill levels.
- ▶ **OM Guideline 2.2:** Partner with organizations to enhance the OHV recreation experience with activities such as OHV events for kids, education and interpretive activities, and OHV races.
- ▶ **OM Guideline 2.3:** Monitor visitation patterns at Prairie City SVRA and implement management actions that respond to these trends while remaining consistent with the General Plan’s vision, goals, and guidelines.
- ▶ **OM Guideline 2.4:** Provide SVRA maps and trail signs that help visitors easily understand the allowable recreational activities within the different use areas.
- ▶ **OM Guideline 2.5:** Acquire neighboring lands from willing sellers to expand OHV recreational opportunities consistent with the General Plan.

**OM Goal 3: Provide facilities and services that contribute to the safety and convenience of visitors and staff.**

- ▶ **OM Guideline 3.1:** Provide signage to inform visitors of responsible OHV recreation practices and extreme temperature precautions. Provide signage that directs visitors to exit points for ease of egress in case of emergency. Clearly post the hours of operation, including seasonal changes, and enforce as applicable.
- ▶ **OM Guideline 3.2:** Ensure that recreation areas are maintained properly and monitor for hazards. Close areas with unsafe conditions until improvements are completed; close areas with unauthorized trails and restore these areas.
- ▶ **OM Guideline 3.3:** Provide clear signage and/or fencing as appropriate around areas of known potential hazard, such as drop-offs, or restricted areas such as the environmentally contaminated areas in Area 39.
- ▶ **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 3.5:** Prevent accidental fire ignition and spread of wildfire to adjacent areas by monitoring OHVs for spark arresters and by monitoring fuel handling practices. Limit fires to be contained within fire pits, noting such with signage, and provide campground facilities with fire pits for visitor use.
- ▶ **OM Guideline 3.6:** Design and maintain all access roads and entrances according to applicable safety standards.
- ▶ **OM Guideline 3.7:** 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 3.8:** Continue to coordinate with state and local districts and agencies for emergency response.
- ▶ **OM Guideline 3.9:** 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 3.10:** 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.
- ▶ **OM Guideline 3.11:** Use animal-proof trash cans and recycling containers.
- ▶ **OM Guideline 3.12:** Mark the boundaries of the SVRA and the different use areas (if applicable) clearly with signs, fences, barriers, or a combination. Identify use areas and appropriate uses on visitor maps.
- ▶ **OM Guideline 3.13:** Provide Occupational Safety and Health Administration (OSHA) training for staff, and utilize OSHA-certified staff to coordinate with Aerojet and oversee excavation associated with construction and maintenance activities within Area 39.

**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 4.1:** Coordinate with sponsoring organizations regarding scheduling, operations, and management of special events. Issue a special-event permit to event coordinators that details sponsor obligations.
- ▶ **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 traffic control and parking measures. Specific measures may include 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 Guideline 4.4:** Anticipate and accommodate an increased need for restroom facilities during special events, according to standard ratios stipulated in the special-event permit.
- ▶ **OM Guideline 4.5:** Plan and design facilities and utilities to accommodate concessionaires at special events.

**OM Goal 5: Develop and maintain SVRA facilities and monitor OHV activities to ensure compatibility with surrounding land uses.**

- ▶ **OM Guideline 5.1:** Manage the SVRA in a manner that honors existing easements and does not adversely affect easement use by the respective parties.
- ▶ **OM Guideline 5.2:** Require that noise levels not exceed relevant jurisdiction (county) noise standards for hourly exposure at or beyond the boundary line of the SVRA. In the SVRA, similar limits shall be strived for in areas of permanent human habitation (e.g., State Parks caretaker housing units).
- ▶ **OM Guideline 5.3:** Maintain instrumentation and trained personnel to enforce the California Vehicle Code regulation concerning excessive vehicle noise. All vehicles operating in the SVRA shall meet applicable noise limits set in the California Vehicle Code.
- ▶ **OM Guideline 5.4:** Maintain a buffer area between OHV trails at Prairie City SVRA and the on-site properties to minimize conflicts and prevent OHV use where it is not allowed. Specifically, maintain buffers of 100 feet and 50 feet from State Parks caretaker housing and on-site offices, respectively. OHV use should be limited to speeds of 15 miles per hour within 100 feet of State Parks caretaker housing and within 50 feet of offices.
- ▶ **OM Guideline 5.5:** 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 manufacturers' specifications (e.g., mufflers, shrouds, filters);
  - using quieter than standard equipment when possible (e.g., electrically powered equipment);
  - limiting construction activities to between 8:00 a.m. and 6:00 p.m., Monday through Saturday (excluding emergency work);

- restricting, when possible, equipment travel near noise-sensitive receptors, unless the equipment used would not exceed the daytime standard of 55 A-weighted decibels day-night average sound level (dBA  $L_{eq}$ ) and the nighttime standard of 45 dBA  $L_{eq}$  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 shields (e.g., berms, stationary barriers, noise blankets, shrouds) when construction activities would occur over the long term or when activities take place within close proximity of on-site uses;
  - 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 5.6:** Subject to existing law, require mufflers that are consistent with the equipment manufacturer's specifications (original equipment or equivalent).

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

- **OM Guideline 6.1:** The following Basic Construction Emission Control Practices are required during construction of all projects (regardless of significance) occurring within the Sacramento Metropolitan Air Quality Management District's jurisdiction, which would include the entire planning area.
- Water all exposed surfaces during construction activities two times daily. Exposed surfaces include but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
  - Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
  - Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day during construction activities, and as necessary during operations. Use of dry power sweeping is prohibited.



- Limit construction-related vehicle speeds on unpaved roads to 15 miles per hour.
  - Complete all paving of roadways, driveways, sidewalks, and parking lots as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
  - Minimize idling time either by shutting equipment off when not in use or by reducing the time of idling to 5 minutes (required by California Code of Regulations Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
  - Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- **OM Guideline 6.2:** For projects that would generate air pollutant emissions that exceed the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) construction threshold of significance, SMAQMD recommends the following measures to reduce exhaust-related air pollutant emissions. It is possible that not all of SMAQMD's required measures would apply to the proposed construction activities.
- The project representative shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.
  - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.
  - The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
  - This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
  - The District's Equipment List Form can be used to submit this information.
  - The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
  - The project representative shall provide a plan for approval by the lead agency and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the

construction project, including owned, leased, and subcontractor vehicles, will achieve a projectwide fleet-average 20 percent oxides of nitrogen (NO<sub>x</sub>) reduction and 45 percent particulate reduction compared to the most recent California Air Resources Board fleet average.

- This plan shall be submitted in conjunction with the equipment inventory.
  - Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.
  - The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
  - The project representative shall ensure that emission from all off-road diesel powered equipment used in the planning area do not exceed 40 percent opacity for more than 3 minutes in any one hour.
  - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately.
  - Noncompliant equipment will be documented and a summary provided to the lead agency and District monthly.
  - A visual survey of all in-operation equipment shall be made at least weekly.
  - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.
  - SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other SMAQMD, state, or federal rules or regulations.
- **OM Guideline 6.3:** For projects that would involve substantial earth disturbance activities (e.g., substantial cut-and-fill operations, disturbance of more than 35 acres per day) and could potentially exceed SMAQMD's respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM<sub>10</sub>) threshold (i.e., ambient air quality standard), SMAQMD recommends the following measures to reduce fugitive dust-related air quality emissions.
- Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.



- Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 miles per hour (mph).
  - Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.
  - Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.
  - Install wheel washers for all existing trucks, or wash off all trucks and equipment leaving the site.
  - Treat site accessed to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.
  - Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of SMAQMD shall also be visible to ensure compliance.
- ▶ **OM Guideline 6.4:** For projects that would exceed SMAQMD thresholds of significance, require that contractors and/or staff implement the following actions to minimize emissions of ozone precursors (reactive organic gases [ROG] and NO<sub>x</sub>) during construction activities:
- Substitute electric- or gasoline-powered equipment for diesel-powered equipment, when feasible.
  - Use alternatively fueled construction equipment on-site, such as compressed natural gas, liquefied natural gas, propane, or biodiesel.
- ▶ **OM Guideline 6.5:** Require that event sponsors and/or staff members implement the following actions to reduce the release of fugitive dust during special events:
- Before each special event, apply best available control measures (BACMs) for dust suppression that are safe for human exposure and ground application to areas that are not paved or covered with gravel and that would be used for parking, foot traffic, and/or nonmobile activities at special events (e.g., vendors, concert locations, display areas).
  - Apply BACMs immediately before setup of a special event and at the end of each special-event day, when the majority of visitors have left the SVRA. Apply subsequent treatments as needed during the special event if excessive dust is observed. Apply BACMs for dust suppression to control trackout/carryout and sediment where unpaved areas join paved areas.
- ▶ **OM Guideline 6.6:** Conduct a project-level environmental analysis for all construction projects located within 500 feet of any residences (on-site or off-site) to assess potential air quality impacts of

construction-related emissions on the existing resident(s). If any applicable SMAQMD health risk significance thresholds (e.g., 10 in a million excess cancer risks, health hazard index above 1.0) are determined to be exceeded, the applicant and contractor shall implement all necessary measures to reduce impacts to a less-than-significant level. Measures could include but are not limited to use of Tier 4 equipment, use of alternative-fueled equipment, and limiting the hours of construction per day.

- ▶ **OM Guideline 6.7:** Continue to implement all existing dust suppression maintenance practices.

**OM Goal 7: Manage the SVRA for the protection of human health and ecological health based on recommendations developed in the Aerojet Feasibility Study for Area 39.**

- ▶ **OM Guideline 7.1:** Incorporate information from the Aerojet Feasibility Study for Area 39 when developing detailed plans for facilities proposed and envisioned in this General Plan. All facilities should be sited and managed to ensure that health hazards to sensitive receptors (construction workers, SVRA users and employees, and habitat/wildlife receptors) are avoided. Measures may include implementation of project-specific design measures such as modifications to area closures, enforcement of limits on uses in identified areas, specific best management practices, monitoring, or remedial measures identified in the Feasibility Study.

**OM Goal 8: Manage the SVRA to maintain current aesthetic qualities and reduce any 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. Locate facilities with minimal impact on the viewshed and views from Scott Road, a Sacramento County–designated scenic corridor. Plant California native plant and tree species to screen the northeast corner of the 4x4 trials area from views along Scott Road, and as necessary to screen new facilities from views.
- ▶ **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.



#### **4.4.6 CONTINUED PLANNING AND ISSUE RESOLUTION**

Upon adoption of this General Plan and certification of the associated environmental impact report, site-specific planning may move forward and more detailed plans and specific projects envisioned in this General Plan may be implemented. Future projects will require project-specific review pursuant to CEQA and may require project-specific permits.

Planning topics that likely will evolve over the life span of this General Plan are expected to include those related to the regulation of protected resources such as biological resources, water quality and supply, cultural resources, air quality, and noise; issues related to climate change; issues related to population growth/change; and issues related to new forms of recreation and fluctuation of user volumes in relation to age demographics and the economy. The goals and guidelines in this General Plan have been developed to be flexible in adapting to future change and, where applicable, call for the implementation of the most recent standards related to resource management and protection.

### **4.5 MANAGING VISITOR CAPACITY**

To comply with PRC Section 5019.5, State Parks must assess carrying capacity issues when drafting general plans. State Parks defines “carrying capacity” as a prescribed number and type of visitors that an area will accommodate given the desired natural/cultural resource conditions, visitor experiences, and management programs.

#### **4.5.1 METHODOLOGY**

State Parks defines “visitor capacity management” as:

A methodology used to determine and maintain the desired resource and social conditions that fulfill the purpose and mission of a park. It includes establishing initial visitor capacities, then monitoring key indicators in order to identify appropriate management actions in response to unacceptable conditions.

An adaptive management process recognizes that management actions will have uncertain outcomes, and thus, that adjusting management and research decisions throughout the process to better achieve management objectives is important. The steps that typically compose an adaptive management process for State Parks are presented below. Steps 1–3 have been completed as part of the General Plan preparation process. Steps 4–7 should be implemented over time, as the goals and guidelines identified in this General Plan are implemented.

#### **STEP 1. IDENTIFY EXISTING OPPORTUNITIES AND CONSTRAINTS**

Existing opportunities and constraints are documented in Chapters 2 and 3 of this General Plan.

## **STEP 2. DETERMINE VISION AND DESIRED CONDITIONS**

The vision and goals for the General Plan were created based on review of the original Prairie City SVRA Master Plan and of the issues and opportunities identified during the planning process, research on existing conditions, input from OHMVR Division staff members, and public and agency input.

## **STEP 3. IDENTIFY ISSUES AND EVALUATE ALTERNATIVES**

The evaluation of planning concepts was a key step in the decision-making process toward developing this General Plan. Planning concepts were developed to illustrate different scenarios for how Prairie City SVRA may evolve over the long term. The planning concepts were analyzed to identify which combination of options best serves Prairie City's SVRA's purpose and vision, the goals of the OHMVR Division Strategic Plan, and the public's interest in Prairie City SVRA's future.

## **STEP 4. DEVELOP MEASURABLE INDICATORS**

Key indicators that can diagnose whether the desired conditions for an SVRA are being met were developed as part of the General Plan process. These indicators are presented below in Table 4-2.

## **STEP 5. ESTABLISH INITIAL VISITOR CAPACITIES**

Initial visitor capacities should be formulated based on an analysis of existing conditions, alternative considerations, desired future conditions, and prescribed goals and objectives. Because the number of visitors that Prairie City SVRA can support at any given time will depend on a variety of factors, the SVRA can be better managed through an adaptive management process, rather than by assigning a specific, quantifiable visitor capacity threshold. These factors include management actions such as operational decisions, oversight practices of the SPPOs, and resource management. Therefore, the visitor capacity of Prairie City SVRA is addressed in terms of desired outcomes and indicators. For example, visitor attendance could be considered within capacity if Prairie City SVRA receives successful assessments relative to the indicators provided below. Initial visitor capacity is presented in terms of positive indicators in Table 4-2.

## **STEP 6. MONITOR USE AND IDENTIFY CHANGING CONDITIONS**

The guidelines listed below provide a framework for monitoring potential impacts on or changes at Prairie City SVRA. The indicators identified in this section will be used to determine when an unacceptable condition exists and management actions are necessary.

## **STEP 7. ADJUST ENVIRONMENTAL OR SOCIAL CONDITIONS**

This section includes guidelines to be implemented by Prairie City SVRA management staff members if monitoring efforts reveal that environmental or social conditions may be approaching or exceeding the thresholds established under Step 4, above.



<b>Table 4-2. Desired Outcomes and Indicators for Visitor Capacity</b>			
Goals and Guidelines	Desired Outcomes	Indicators (Environmental and Social)	Potential Management Actions and Monitoring Activities
<b>Visitor Experience and Opportunity</b>			
<b>VEO Goal 1:</b> When planning for recreation opportunities and visitor experiences, provide a broad range of OHV recreation experiences and opportunities for visitors to enjoy and appreciate.	<ul style="list-style-type: none"> <li>A variety of OHV, recreational, and educational activities that enhance the appreciation and enjoyment of the SVRA's resources while balancing the protection needs of environmental resources.</li> </ul>	<ul style="list-style-type: none"> <li>Presence of returning SVRA visitors.</li> <li>Diversity of recreation activity throughout the SVRA.</li> <li>Diversity in SVRA visitation demographics.</li> <li>Conflict among SVRA visitors and differing recreation activities.</li> <li>Effects on SVRA resources with increases in SVRA visitation.</li> </ul>	<ul style="list-style-type: none"> <li>Implement the adaptive management process as part of SVRA operations.</li> <li>Observe SVRA resources and visitor activity during day-to-day operations.</li> <li>Design facilities for visitor needs.</li> <li>Conduct visitor satisfaction surveys.</li> <li>Evaluate new recreation opportunities, trends, and activities.</li> <li>Respond to changing visitor demographics.</li> <li>Implement a facility maintenance plan, as appropriate.</li> </ul>
<b>Natural Resource Management</b>			
<b>NRM Goal 1:</b> Manage the SVRA for a balance of uses that allow protection and stewardship of natural resources while maintaining a quality OHV recreational experience.	<ul style="list-style-type: none"> <li>Reasonable balance between OHV recreation opportunities and the protection of special-status species and native habitats.</li> <li>Minimization of soil erosion in key/sensitive areas.</li> <li>Water quality in compliance with federal and state environmental regulations.</li> </ul>	<ul style="list-style-type: none"> <li>Occurrence of special-status species.</li> <li>Presence of suitable wildlife habitat.</li> <li>Abundance of prey species.</li> <li>Reporting of periodic sightings of plants or wildlife.</li> <li>Presence of healthy plant communities.</li> <li>Occurrence of special-status plant or wildlife species.</li> <li>Lack of OHV damage to habitats and species in protected areas.</li> <li>Change in trail difficulty and/or safety conditions caused by erosion.</li> <li>Visible water quality sedimentation or pollution.</li> </ul>	<ul style="list-style-type: none"> <li>Establish and enforce OHV use in designated areas that are located outside of known occurrences of special-status species and habitat.</li> <li>Implement adaptive management measures based on information from the HMS.</li> <li>Use interpretive/educational signage and fencing in select areas to inform visitors and protect particularly sensitive areas.</li> <li>Regularly evaluate the condition of visitor experience.</li> <li>Identify all factors contributing to a given area with an erosion problem.</li> <li>Temporarily or permanently close certain trails or portions of the SVRA to reestablish vegetation if necessary.</li> </ul>
<b>Cultural Resources</b>			
<b>CR Goal 1:</b> Preserve and protect cultural resources.	<ul style="list-style-type: none"> <li>Retention of the integrity and value of cultural resources.</li> </ul>	<ul style="list-style-type: none"> <li>Disturbance to known cultural resource sites.</li> <li>Discovery of and disturbance to previously undiscovered cultural resource sites.</li> </ul>	<ul style="list-style-type: none"> <li>Survey, record, and evaluate areas of high probability for the presence of prehistoric and historic-era archaeological sites.</li> <li>Establish criteria of significance for each class of resource.</li> <li>Conduct additional historic research and evaluate the known historic-era sites and areas of historic-period activity.</li> <li>Monitor SVRA resources during daily operations to identify impacts of visitor activity and natural processes on resources.</li> <li>Use fencing, protective soil, and/or signage to prevent damage to or loss of cultural resources.</li> <li>Use adaptive management to ensure preservation and protection of sites.</li> </ul>
<b>Visitor Management</b>			
<b>VM Goal 1:</b> Establish and implement an adaptive management process for managing visitor capacity at Prairie City SVRA in support of the SVRA's purpose and vision.	<ul style="list-style-type: none"> <li>Management actions that reflect current conditions and management lessons learned.</li> </ul>	<ul style="list-style-type: none"> <li>Updated indicators and actions for adaptive management process.</li> </ul>	<ul style="list-style-type: none"> <li>Create a checklist of actions required for a successful adaptive management process.</li> <li>Review SVRA monitoring data and associated management recommendations before making management and improvement decisions.</li> </ul>
Notes: HMS = Habitat Monitoring System; OHV = off-highway vehicle; SVRA = State Vehicular Recreation Area Source: Data provided by State Parks and compiled by AECOM in 2014			

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## 4.5.2 VISITOR MANAGEMENT (VM) GOAL AND GUIDELINES

**VM Goal 1: Establish and implement an adaptive management process for managing visitor capacity at Prairie City SVRA in support of the SVRA's purpose and vision.**

- ▶ **VM Guideline 1.1:** Consider SVRA monitoring data and associated management recommendations before making management and improvement decisions.
  
- ▶ **VM Guideline 1.2:** If monitoring efforts reveal that conditions are approaching or exceeding thresholds, consider alternatives and take appropriate action. Adjust management actions to direct resource and visitor experience conditions to the desired state. Potential indicators and actions presented in this plan should be updated as necessary.

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## 5 REFERENCES

### 5.1 CHAPTER 1, “INTRODUCTION”

No references cited.

### 5.2 CHAPTER 2, “EXISTING CONDITIONS”

AECOM. 2009. *Folsom Plan Area Specific Plan* boundary. City of Folsom Sphere of Influence developed for the Folsom South of U.S. Highway 50 Specific Plan Project.

———. 2014a (July). Easements within the Prairie City SVRA General Plan Planning Area. Adapted in 2014 from California Department of Parks and Recreation land ownership record digital maps. Received by AECOM via e-mail from Sarah Lose of the California Department of Parks and Recreation on December 13, 2012.

———. 2014b (July). Habitat types within the Prairie City SVRA General Plan planning area. Adapted from Parus Consulting habitat mapping using GPS survey of wetlands and heads-up digitizing of National Agriculture Imagery Program 2012 aerial imagery.

———. 2014c (March 10). *Cultural Resources Analysis for Prairie City State Vehicle Recreation Area*. Sacramento, CA. Memorandum to Alicia Perez of California Department of Parks and Recreation, Sacramento, CA.

———. 2015 (August 31). *Assessment of Health Risk from Inhalation of Fugitive Dust Containing Cadmium for the Prairie City State Vehicular Recreation Area EIR*. Letter memorandum to the Prairie City SVRA General Plan Team. Sacramento, CA.

Aerojet Rocketdyne Holdings Inc. 2010a (June). Aerojet, Solar Power, Inc. and SMUD Announce Completion of Six-Megawatt Solar Installation at Aerojet’s Sacramento Site. Available: <http://www.rocket.com/article/aerojet-solar-power-inc-and-smud-announce-completion-six-megawatt-solar-installation>. Accessed May 5, 2014.

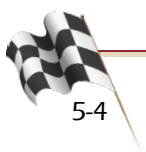
———. 2010b (October 28). *Final Boundary Operable Unit (OU-6) Remedial Investigation and Risk Assessment, Aerojet Superfund Site, Sacramento County, California*. Memorandum to Gary Riley of U.S. Environmental Protection Agency, San Francisco, CA; Alexander MacDonald, California Regional Water Quality Control Board Central Valley Region, Rancho Cordova, CA; and Ed Cargile, State of California Site Mitigation Program, California Department of Toxic Substances Control, Sacramento, CA.

- . 2013 (November). *Draft Remedial Investigation Supplement for the Island Operable Unit (OU-7), Aerojet Superfund Site, Sacramento County, California*. Prepared by CBI and Shaw Environmental, Inc. Sacramento, CA.
- AMA. *See* American Motorcyclist Association.
- American Motorcyclist Association. 2013. *American Motorcyclist Association 2013 Annual Report*. Pickerington, OH.
- Anderson, M. K. 1990. California Indian Horticulture. *Fremontia, Journal of the California Native Plant Society* 18(2):7–14.
- . 1991. California Indian Horticulture: Management and Use of Redbud by the Southern Sierra Miwok. *Journal of Ethnobiology* 11(1):145–157.
- . 1993. The Mountains Smell Like Fire. *Fremontia, Journal of the California Native Plant Society* 21(4):15–20.
- Anderson, M. K., and G. P. Nabhan. 1991. Gardeners in Eden. *Wilderness*, fall:27–30.
- ARB. *See* California Air Resources Board.
- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds.). 2012. *The Jepson Manual: Vascular Plants of California*, second edition. Berkeley: University of California Press.
- Beals, R. L. 1933. Ethnology of the Nisenan. *University of California Publications in American Archaeology and Ethnology* 31(6):335–414.
- Binford, L. R. 1980. Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4–20.
- Brittan, M. R. 1996. Spring 1996 vernal pool survey at Prairie City State Vehicle Recreation Area. Unpublished report. Michael Brandman Associates, Sacramento, CA. Cited in State Parks n.d.(g).
- Cabe, P. R. 1993. European starling (*Sturnus vulgaris*). In *The Birds of North America*, No. 48, ed. A. Poole and F. Gill. Philadelphia and Washington, DC: The Academy of Natural Sciences and The American Ornithologists' Union. Cited in State Parks n.d.(g).
- California Air Resources Board. 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. Last updated October 2000. Available: <http://www.arb.ca.gov/diesel/documents/rrpapp.htm>. Accessed March 10, 2014.



- . 2008 (December). *Climate Change Scoping Plan: A Framework for Change. Pursuant to AB 32, the California Global Warming Solutions Act of 2006*. Sacramento, CA.
- . 2011. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available: <http://www.arb.ca.gov/ch/landuse.htm>. Last updated January 31, 2011. Accessed March 10, 2014.
- . 2012. California State Implementation Plans. Available: <http://www.arb.ca.gov/planning/sip/sip.htm>. Last updated November 16, 2012. Accessed March 13, 2013.
- . 2013. *The California Almanac of Emissions and Air Quality*, 2013 Edition. Air Quality Planning and Science Division. Sacramento, CA.
- . 2014a. Toxic Air Contaminants Monitoring. Available: <http://www.arb.ca.gov/aaqm/toxics.htm>. Last updated January 10, 2014. Accessed June 10, 2014.
- . 2014b. Off-Highway Recreational Vehicles—Public Outreach Archive. Available: <http://www.arb.ca.gov/msprog/offroad/orrec/archive.htm>. Last updated December 8, 2014. Accessed May 19, 2015.
- . 2014c (May). *First Update to the Climate Change Scoping Plan: Building on the Framework. Pursuant to AB 32, the California Global Warming Solutions Act of 2006*. Sacramento, CA.
- . 2015. Top 4 Summary at Sacramento–Del Paso Manor, 2010–2012 (carbon monoxide, nitrogen dioxide, ozone [1-hour and 8-hour], PM<sub>10</sub>, and PM<sub>2.5</sub>). Available: <http://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed March 5, 2015.
- California Attorney General’s Office. 2010 (January 6). *Addressing Climate Change at the Project Level*. Available: [http://ag.ca.gov/globalwarming/pdf/GW\\_mitigation\\_measures.pdf](http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf). Accessed March 27, 2013.
- California Building Standards Commission. 2013. California Green Building Standards Code (CALGreen). California Code of Regulations, Title 24, Part 11, Effective Date: January 1, 2014. Sacramento, CA. Chapter 1, “Administration.”
- California Department of Finance. 2014 (December 15). Report P-1 (County) State and County Population Projections July 1, 2010–2060 (5-year increments). Demographic Research Unit, Sacramento, CA.
- California Department of Fish and Wildlife. 2014. RareFind 3.1.x, California Natural Diversity Database. Sacramento, CA. (Updated monthly by subscription service.)

- California Department of Parks and Recreation. n.d.[a]. *1998 Prairie City SVRA Annual Habitat Monitoring Report*. Off-Highway Motor Vehicle Recreation Division.
- . n.d.[b]. *Prairie City State Vehicle Recreation Area Habitat Monitoring System Annual Report 1999*. Off-Highway Motor Vehicle Recreation Division.
- . n.d.[c]. *2003 Annual Habitat Monitoring Report: Carnegie State Vehicle Recreation Area*. Inventory, Monitoring, and Assessment Program, Natural Resources Division. Sacramento, CA.
- . n.d.[d]. *Carnegie and Prairie City SVRA Biological Surveys—2004 & 2005*.
- . n.d.[e]. *2006 Habitat Monitoring Report: Carnegie State Vehicular Recreation Area and Prairie City State Vehicular Recreation Area*. Natural Resources Division. Sacramento, CA.
- . n.d.[f]. *Habitat Monitoring at Prairie City State Vehicular Recreation Area—2007*.
- . n.d.[g]. *2008/2009 Habitat Monitoring Report: Prairie City State Vehicular Recreation Area*. Sacramento, CA.
- . n.d.[h]. *2010 Habitat Monitoring Report: Prairie City State Vehicular Recreation Area and Clay Pit State Vehicular Recreation Area*. Sacramento, CA.
- . 1991. *Prairie City State Vehicular Recreation Area Master Plan*. Adopted July 20, 1991, by the Off-Highway Motor Vehicle Recreation Commission; approved September 20, 1991, by Henry R. Agonia, Director. Sacramento, CA.
- . 1998 (January). *1997 Prairie City State Vehicular Recreation Area Habitat Monitoring Annual Report*. Off-Highway Motor Vehicles Recreation Division, Twin Cities District.
- . 2001. *The Seventh Generation: The Strategic Vision of California State Parks*. Sacramento, CA.
- . 2005a (June). *Prairie City State Vehicular Recreation Area Land Ownership Record*.
- . 2005b (July). *Carnegie and Prairie City State Vehicular Recreation Areas, 2004–2005 Biological Surveys*. Natural Resources Division, Inventory, Monitoring and Assessment Program.
- . 2007 (November). *OHV BMP Manual for Erosion and Sediment Control*. Prepared by Salix Applied Earthcare and Geosyntec Consultants. Redding and San Diego, CA.
- . 2008. *Soil Conservation Standard and Guidelines*. 2008 Grants and Cooperative Agreements Program Regulations. Off-Highway Motor Vehicle Recreation Division.



- . 2009a. *California State Parks Off-Highway Motor Vehicle Division Strategic Plan*. Sacramento, CA.
- . 2009b. *California State Parks Accessibility Guidelines*. Accessibility Section, Acquisition and Development Division.
- . 2010. *Cultural Resource Inventory of the Prairie City State Vehicular Recreation Area*. Off-Highway Vehicle Recreation Division, Sacramento, CA.
- . 2011. *Wildfire Management Plan, Prairie City State Vehicular Recreation Area*.
- . 2012a (August). *Prairie City SVRA Barton Ranch Property Acquisition, Initial Study/Mitigated Negative Declaration*. Off-Highway Motor Vehicle Recreation Division, Sacramento, CA. Prepared by TRA Environmental Sciences, Inc., Menlo Park, CA.
- . 2012b. *Prairie City (Yost) Reclamation Annual Monitoring Report—Final*. Prepared by Teichert Materials, Sacramento, CA.
- . 2012c. *Phase 1 Environmental Site Assessment Prairie City Barton Ranch, Rancho Cordova, CA*. Sacramento, CA. Prepared by Geocon Consultants, Inc., Rancho Cordova, CA.
- . 2012d. *A Summary of Monitoring Wildlife at Carnegie SVRA and Prairie City SVRA (2003-2009)*.
- . 2012e (December 10). *Prairie City State Vehicular Recreation Area, Visitor Attendance by Calendar Year*. Data provided to AECOM by California Department of Parks and Recreation.
- . 2013a. *Recreation Areas and Facilities*. Available: [http://ohv.parks.ca.gov/?page\\_id=26682](http://ohv.parks.ca.gov/?page_id=26682). Accessed July 11, 2014.
- . 2013b (July 3). *Prairie City State Vehicular Recreation Area Biological Resources Assessment*. Off-Highway Motor Vehicle Recreation Division, Sacramento, CA. Prepared by Parus Consulting, Roseville, CA.
- . 2013c. *Prairie City SVRA. Water Conservation Measures*. Available: [http://ohv.parks.ca.gov/?page\\_id=122](http://ohv.parks.ca.gov/?page_id=122). Accessed July 24, 2014.
- . 2013d (January). *Online Survey Results, Summary of Key Findings*. Rancho Cordova, CA. Prepared by AECOM, Sacramento, CA.
- . 2014a (January). *Off-Highway Motor Vehicle Recreation Commission Program Report*. Off-Highway Motor Vehicle Recreation Commission.

- . 2014b. Species Data for AECOM General Plan Inclusion. Provided to AECOM via e-mail by Max Heitner, Environmental Scientist, California Department of Parks and Recreation Twin Cities District–Prairie City Sector, on August 22, 2014.
- . 2014c. Cooper’s hawk observations. Provided to AECOM via e-mail by Max Heitner, Environmental Scientist, California Department of Parks and Recreation Twin Cities District–Prairie City Sector, on August 25, 2014.
- . 2014d. 2013 Prairie City SVRA attendance data by month. Provided to AECOM via e-mail by Jeanne Sisson, Superintendent II, Prairie City SVRA/Clay Pit SVRA, on July 18 and July 21, 2014.
- . 2015a. California Natural Diversity Database. *Legenere limosa* observation. Submitted on May 21, 2015.
- . 2015b. California Natural Diversity Database. Swainson’s hawk observation. Submitted on May 21, 2015.
- . 2015c. California Natural Diversity Database. Swainson’s hawk observation. Submitted on May 21, 2015.
- . 2015d. California Natural Diversity Database. Swainson’s hawk observation. Submitted on May 21, 2015.
- California Department of Transportation. 2009 (June). Memorandum for Final Environmental Impact Report for the White Rock Road General Plan Amendment and Widening, Improvement and Safety Project (Phases A, B & C) (Resolution E-09-54). Available: [http://www.dot.ca.gov/hq/transprog/ctcbooks/2009/0709/39\\_2.2c3.pdf](http://www.dot.ca.gov/hq/transprog/ctcbooks/2009/0709/39_2.2c3.pdf). Accessed August 20, 2014.
- . 2013. Officially Designated Scenic Highways. Available: <http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm>. Accessed May 6, 2014.
- California Department of Water Resources. 2004. *California’s Groundwater*. Bulletin 118. Sacramento Valley Groundwater Basin, South American Subbasin. Last updated February 27, 2004.
- California Geological Survey. 2008. Probabilistic Seismic Hazards Ground Motions Interpolator. Available: <http://www.conservation.ca.gov/cgs/rghm/psha/Pages/index.aspx>. Accessed January 14, 2014.
- . 2012. Alquist-Priolo Earthquake Fault Zone Maps. Available: <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx>. Last updated September 21, 2012. Accessed January 14, 2014.





- California Herps. 2013. *Lithobates catesbeianus*—American Bullfrog. A Guide to the Amphibians and Reptiles of California. Available: <http://www.californiaherps.com/frogs/pages/l.catesbeianus.html>. Accessed October 17, 2013.
- California Native Plant Society. 2015. *Inventory of Rare and Endangered Plants*, online edition (version 8-02). Rare Plant Program. Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed January 5, 2015.
- California Natural Diversity Database. 2014 (December). RareFind 5 (Commercial Version): An Internet Application for the Use of the California Department of Fish and Wildlife's Natural Diversity Database. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento, CA. Accessed December 30, 2014.
- California State Public Works Board. 2004. Meeting Minutes. Board meeting occurred on March 12, 2004. Sacramento, CA.
- Caltrans. *See* California Department of Transportation.
- Cao, T., W. A. Bryant, B. Rowshandel, D. Branum, and C. J. Wills. 2003. Revised 2002 California Seismic Shaking Analysis: *The Revised 2002 California Probabilistic Seismic Hazard Maps, June 2003*, Appendix A. Available: <http://www.conservation.ca.gov/cgs/rghm/psha/Pages/index.aspx>. Accessed January 13, 2014.
- Capital SouthEast Connector JPA. 2012 (February). *Capital SouthEast Connector Project Volume 2 of the Final Program Environmental Impact Report—Revisions to the Draft Program Environmental Impact Report*. State Clearinghouse No. 2010012066. Mather, CA. Prepared in association with City of Elk Grove, City of Folsom, City of Rancho Cordova, El Dorado County, and Sacramento County, with technical assistance from ICF International, Sacramento, CA.
- . 2015 (May 13). *Capital SouthEast Connector Language in Draft SVRA General Plan EIR*. Mather, CA. Memorandum report from Derek Minnema, Project Manager, to Jeanne Sisson, State Park Superintendent, Prairie City SVRA.
- CDFW. *See* California Department of Fish and Wildlife.
- Central Valley Regional Water Quality Control Board. 2011 (October). *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region: The Sacramento River Basin and the San Joaquin River Basin*. Fourth Edition, revised October 2011 (with Approved Amendments). Sacramento, CA.
- Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

CGS. *See* California Geological Survey.

City of Folsom. 2011. *Folsom Plan Area Specific Plan*. Folsom, CA. Prepared by Torrence Planning, El Dorado Hills, CA.

———. 2012. Sphere of Influence South of Hwy 50. Available: [http://www.folsom.ca.us/home\\_nav/sphere](http://www.folsom.ca.us/home_nav/sphere). Accessed May 1, 2014.

———. 2014. Staff Report for the June 10, 2014 City Council meeting. Community Development Department. Folsom, CA.

City of Rancho Cordova. 2006 (June). Planning area boundaries as shown in Figure LU-6 of the *Rancho Cordova General Plan Land Use Element*. Available: <http://www.cityofranhocordova.org/Index.aspx?page=104>. Adapted by AECOM in GIS for display in the Prairie City SVRA General Plan.

CNDDDB. *See* California Natural Diversity Database.

CNPS. *See* California Native Plant Society.

Cook, S. F. 1955. *The Epidemic of 1830–1833 in California and Oregon*. *University of California Publications in American Archaeology and Ethnology* 43(3):303–326.

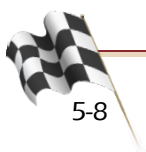
Cordell, H. K., C. J. Betz, G. T. Green, and B. Stephens. 2008 (February). *Off-Highway Vehicle Recreation in the United States and its Regions and States: An Update National Report from the National Survey on Recreation and the Environment (NSRE)*. RECSTATS Research Report in the Internet Research Information Series (IRIS). Available: <http://www.fs.fed.us/recreation/programs/ohv/IrisRec1rpt.pdf>. Accessed April 3, 2013.

Cycleland Speedway. 2012. Home. Available: <http://www.cyclelandspeedway.com/>. Accessed July 3, 2014.

Day, H. W. 1992. Tectonic Setting and Metamorphism of the Sierra Nevada, California. In *Field Guide to the Geology and Metamorphism of the Franciscan Complex and Western Metamorphic Belt of Northern California*, eds. P. Schiffman and D. Wagner. California Division of Mines and Geology, Special Publication 114. Sacramento, CA.

Deis, R. 1996. *Shell Bead and Ornament Analysis for CA-Sac-127, Rooney Extension, Sacramento County, California*. Manuscript in possession of author.

Derr, E. H. 1989. *A Cultural Resources Survey of the Prairie City OHV State Park, Sacramento County, California*. Prepared for ECOS Inc., Sacramento, CA. Prepared by Cultural Resources Unlimited, Sacramento, CA.



DOE. *See* U.S. Department of Energy.

DOF. *See* California Department of Finance.

Dupras, D. 1988. *Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Sacramento-Fairfield Production-Consumption Region*. California Division of Mines and Geology. Special Report 156. Sacramento, CA.

———. 1999. *Mineral Land Classification: Portland Cement Concrete-Grade Aggregate and Kaolin Clay Resources in Sacramento, County, California*. California Division of Mines and Geology, Open-File Report 99-09. Sacramento, CA.

DWR. *See* California Department of Water Resources.

Environmental Laboratory. 1987 (January). *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.

E-Street MX. 2014. Home. Available: <http://estreet.riverfrontmxpark.com/>. Accessed July 3, 2014.

EPA. *See* U.S. Environmental Protection Agency.

Faber-Langendoen, D., J. Nichols, L. Master, K. Snow, A. Tomaino, R. Bittman, G. Hammerson, B. Heidel, L. Ramsay, A. Teucher, and B. Young. 2012. *NatureServe Conservation Status Assessments: Methodology for Assigning Ranks*. Arlington, VA: NatureServe.

Federal Highway Administration. 1988. Visual Impact Assessment for Highway Projects. Available: <http://www.dot.ca.gov/ser/downloads/visual/FHWAVisualImpactAssmt.pdf>. Accessed July 11, 2014.

Fennessy, Chris. Engineering manager, Environmental Remediation Department. Aerojet Rocketdyne, Folsom, CA. December 10, 2014—Meeting with Danielle Hughes of AECOM and Sarah Cumber-Lose of the California Department of Parks and Recreation regarding the potential for hazardous wastes to exist in the portion of the planning area formerly owned by Aerojet and operated as a rocket testing site.

FHWA. *See* Federal Highway Administration.

Fredrickson, D. 1973. Spatial and Cultural Units in Central California Archaeology. Reprinted 1994. In *Toward a New Taxonomic Framework for Central California Archaeology*. In *Contributions of the University of California Archaeological Research Facility, Berkeley*, No. 52, Berkeley, CA.

Galloway, D., D. R. Jones, and S. E. Ingebritsen. 1999. *Land Subsidence in the United States*. U.S. Geological Survey, Circular 1182. Reston, VA.

- Governor's Office of Planning and Research. 2003. *State of California General Plan Guidelines*. Sacramento, CA.
- Grady, M. A. 1969. *An Osteological Analysis of Selected Burials from the Rooney Extension of 4-SAC-127, Sacramento, California*. Master's thesis, Sacramento State College, Sacramento, CA.
- Harper, Nathan. Maintenance Chief. California Department of Parks and Recreation, Off-Highway Motor Vehicle Division, Prairie City State Vehicular Recreation Area, Folsom, CA. June 3, 2015—Email to Matt Hertel regarding the water quality testing of the drinking water well located in the planning area.
- Helley, E. J., and D. S. Harwood. 1985. *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California*. U.S. Geological Survey, Map MF-1790.
- Higgins, C. T., and J. P. Clinkenbeard. 2006. *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California*. California Division of Mines and Geology, Special Report 192.
- Ichinose, G. A., K. Satake, J. G. Anderson, R. A. Schweickert, and M. M. Lahren. 2000 (April 15). The Potential Hazard from Tsunami and Seiche Waves Generated by Future Large Earthquakes within the Lake Tahoe Basin, California-Nevada. *Geophysical Research Letters* 27(8):1203–1206. Available: <http://onlinelibrary.wiley.com/doi/10.1029/1999GL011119/pdf>.
- Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. Geneva, Switzerland.
- IPCC. See Intergovernmental Panel on Climate Change.
- Jennings, C. W. 1994. *Fault Activity Map of California and Adjacent Areas, with Locations and Ages of Recent Volcanic Eruptions*. Scale: 1:750,000. California Division of Mines and Geology, Geologic Data Map No. 6. Sacramento, CA.
- Jones & Stokes. 1994. Vernal pool resources at Prairie City State Vehicle Recreation Area. Unpublished report, prepared for California Department of Parks and Recreation, Sacramento, CA. Cited in State Parks n.d.(c) and n.d.(g).
- Keskeys, Ryan. Captain, Station 63. Sacramento Metropolitan Fire District, Rancho Cordova, CA. August 23, 2013—telephone call with Philip Hinshaw of A. D. Hinshaw Associates confirming that SMFD Station 63 would be the first responder to fires at Prairie City SVRA.
- Kroeber, A. L. 1925. *Handbook of the Indians of California*. New York: Dover Publications, Inc.



- Lenzie, Sheryl, Associate Planner, and Surinder Singh, Principal Planner. Sacramento County Department of Community Development, Planning and Environmental Review, Sacramento, CA. August 25 and September 17, 2015—e-mails to Matt Hertel of AECOM providing confirmation that Scott Road is a Sacramento County–designated scenic corridor.
- Levy, R. 1978. Eastern Miwok. In *Handbook of North American Indians*, Vol. 8, *California*, eds. W. C. Sturtevant and R. F. Heizer, 398–413. Washington, DC: Smithsonian Institution.
- Lowther, P. E. 1993. Brown-headed cowbird (*Molothrus ater*). In *The Birds of North America*, No. 48, ed. A. Poole and F. Gill. Philadelphia: The Academy of Natural Sciences, Washington, DC. Cited in State Parks n.d.(g).
- Loyd, R. C. 1984. *Mineral Land Classification of the Folsom 15-Minute Quadrangle, Sacramento, El Dorado, Placer, and Amador Counties, California*. California Division of Mines and Geology, Open-File Report 84-50. Sacramento, CA.
- LSA. 2003 (March 21). *Results of Preliminary Sensitive Biological Resources Constraints Analysis for the Proposed Adventure Park Project, Prairie City SVRA*. Rocklin, CA. Memorandum report to Karen Feldheim of California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division.
- Mackwood, Brian. Captain. California Department of Forestry and Fire Protection, Placerville, CA. August 23, 2013—telephone call with Philip Hinshaw of A. D. Hinshaw Associates regarding CAL FIRE wildland fire protection at Prairie City SVRA.
- MMX Racing. 2010. FAQs. Available: <http://mmxracing.com/>. Accessed July 23, 2010.
- NRCS. See U.S. Natural Resources Conservation Service.
- Office of the Governor. 2012 (April). Executive Order B-18-12. Available: <http://gov.ca.gov/news.php?id=17508>. Accessed July 11, 2014.
- . 2015 (April 1). Governor Brown Directs First Ever Statewide Mandatory Water Reductions. Available: <https://www.gov.ca.gov/news.php?id=18913>. Accessed September 23, 2015.
- Office of the White House. 2009. Memorandum for the Administrator of the Environmental Protection Agency. Subject: State of California Request for Waiver under 42 U.S.C. 7543(b), the Clean Air Act. Available: [http://www.whitehouse.gov/the\\_press\\_office/Presidential\\_Memorandum\\_EPA\\_Waiver](http://www.whitehouse.gov/the_press_office/Presidential_Memorandum_EPA_Waiver). Accessed March 5, 2009.
- Olmsted, F. H., and G. H. Davis. 1961. *Geologic Features and Ground-Water Storage Capacity of the Sacramento Valley California*. U.S. Geological Survey, Water-Supply Paper 1497. Prepared in



cooperation with the California Department of Water Resources. Washington, DC:  
U.S. Government Printing Office.

OPR. *See* Governor's Office of Planning and Research.

Sacramento Central Groundwater Authority. 2012 (February). *Sacramento Central Groundwater Authority Groundwater Elevation Monitoring Plan*. Sacramento, CA.

Sacramento County. 2004. *Traffic Impact Analysis Guidelines*. Sacramento, CA.

———. 2007 (April). *County of Sacramento Pedestrian Master Plan*. Sacramento, CA.

———. 2011 (April). *Sacramento County Bicycle Master Plan*. Sacramento, CA.

———. 2012 (December). *County of Sacramento Emergency Operations Plan*. Sacramento, CA.

———. 2014a. Regional Parks: Go Outside and Play! Available:  
<http://www.regionalparks.saccounty.net/Pages/default.aspx>. Accessed July 2, 2014.

———. 2014b. Deer Creek Hills Preserve. Available: <http://www.regionalparks.saccounty.net/Parks/OpenSpaces/Pages/DeerCreekHills.aspx>. Sacramento. Accessed July 2, 2014.

———. 2014c (May). Polygons of streams and rivers in Sacramento County. Available:  
<http://www.sacgis.org/GISDataPub/Data/Forms/DataUpdate.aspx>. Accessed June 5, 2014.

Sacramento County Community Planning & Development Department. 2011a (November 9).  
*Sacramento County General Plan of 2005–2030*, Land Use Element. Sacramento, CA.

———. 2011b (November 9). 2030 General Plan Land Use for Sacramento County, California. GIS shapefile received by AECOM from Sacramento County Community Planning & Development Department via file transfer in January, 2012. Available:  
<http://www.per.saccounty.net/LandUseRegulationDocuments/Pages/GeneralPlanUpdate.aspx>.

———. 2014 (May 28). *Sacramento County General Plan of 2005–2030*, Circulation Element. Amended November 9, 2011, and May 28, 2014. Sacramento, CA.

Sacramento County Water Agency, Central Sacramento County Groundwater Basin Stakeholders, and the Water Forum Successor Effort. 2006 (February). *Central Sacramento County Groundwater Management Plan*. Prepared in concert with Montgomery Watson Harza. Available:  
[http://www.scgah2o.org/documents/CSCGMP\\_final.pdf](http://www.scgah2o.org/documents/CSCGMP_final.pdf). Accessed April 22, 2015.

Sacramento Metropolitan Air Quality Management District. 1977a. Rule 402, Nuisance. Available:  
<http://airquality.org/rules/>. Last updated March 4, 2014. Accessed March 8, 2014.



- . 1977b. Rule 403, Fugitive Dust. Available: <http://airquality.org/rules/.pdf>. Last updated March 4, 2014. Accessed March 8, 2014.
- . 2006. Rule 201, General Permit Requirements. Available: <http://airquality.org/rules/.pdf>. Last updated March 4, 2014. Accessed March 8, 2014.
- . 2014. *CEQA Guide to Air Quality Assessment in Sacramento County*. Published December 2009; revised April 2011, April 2013, and June 2014. Sacramento, CA. Chapter 6, “Greenhouse Gas Emissions.”
- Sacramento Valley Conservancy. 2011. *Deer Creek Hills Preserve Master Plan*. Available: [http://www.sacramentovalleyconservancy.org/admin/upload/MP\\_Final\\_.pdf](http://www.sacramentovalleyconservancy.org/admin/upload/MP_Final_.pdf). Adopted October 25, 2011. Accessed July 15, 2014.
- Sawyer, J. O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*, first edition. Sacramento: California Native Plant Society.
- Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation*, second edition. Sacramento: California Native Plant Society Press.
- Sawyer, T. L. (compiler). 1999. Fault Number 1650, Incline Village Fault. In *Quaternary Fault and Fold Database of the United States*. U.S. Geological Survey, Earthquake Hazards Program. Available: <http://earthquake.usgs.gov/hazards/qfaults/>. Last updated July 23, 2012. Accessed December 29, 2014.
- Sawyer, T. L., and K. M. Haller (compilers). 2000. Fault Number 1649, North Tahoe Fault. In *Quaternary Fault and Fold Database of the United States*. U.S. Geological Survey, Earthquake Hazards Program. Available: <http://earthquake.usgs.gov/hazards/qfaults/>. Last updated July 23, 2012. Accessed December 29, 2014.
- SCWA et al. *See* Sacramento County Water Agency, Central Sacramento County Groundwater Basin Stakeholders, and the Water Forum Successor Effort.
- Seinfeld, J. H., and S. N. Pandis. 1998. *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*. New York: John Wiley & Sons, Inc.
- Shingle Springs Band of Miwok Indians. 2015. A Brief Tribal History. Available: [http://www.shinglespringsrancheria.com/content/index.php?option=com\\_content&view=article&id=57&Itemid=132](http://www.shinglespringsrancheria.com/content/index.php?option=com_content&view=article&id=57&Itemid=132). Accessed August 24, 2015.

Sierra College Natural History Museum. 2011. Sierra College. Sierra Nevada Virtual Museum. Available: <http://www.sierranevadavirtualmuseum.com/docs/galleries/nathist/paleontology/fossils.htm>. Accessed April 11, 2011.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

Society of Vertebrate Paleontology. 1995. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources—Standard Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:22–27.

———. 1996. Conditions of Receivership for Paleontologic Salvage Collections [final draft]. *Society of Vertebrate Paleontology News Bulletin* 166:31–32.

State Parks. *See* California Department of Parks and Recreation.

State Water Resources Control Board. 2010. Section 303(d) List of Water Quality Limited Segments. Available: [http://www.swrcb.ca.gov/centralvalley/water\\_issues/tmdl/impaired\\_waters\\_list/#currentrpt](http://www.swrcb.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/#currentrpt). Accessed March 25, 2014.

Stirton, R. A. 1939. Cenozoic Mammal Remains from the San Francisco Bay Region. *University of California Department of Geological Sciences Bulletin* 24(13).

SVP. *See* Society of Vertebrate Paleontology.

SWRCB. *See* State Water Resources Control Board.

Transportation Research Board. 1980. *Interim Materials on Highway Capacity*. Circular 212. Washington, DC.

———. 2000. *Highway Capacity Manual*. Washington, DC.

UCMP. *See* University of California Museum of Paleontology.

United Auburn Indian Community. 2015. The History. Available: <http://www.auburnrancheria.com/about/the-history>. Accessed August 24, 2015.

University of California Museum of Paleontology. 2014. Museum of Paleontology Database. Accessed January 14, 2014.

USACE. *See* U.S. Army Corps of Engineers.

U.S. Army Corps of Engineers. 2004. *Formal Response to the Preliminary Delineation of the Waters of the United States Prairie State Vehicular Recreation Area OHV Environmental Training Facility Project*. Reference Number 200300743. Cited in State Parks 2013b.





———. 2008. *Formal Response to the Request for an Approved Jurisdictional Determination for the Prairie City State Vehicular Recreation Area Project*. Reference Number SPK-2008-475. Cited in State Parks 2013b.

U.S. Census Bureau. 2000. Results of electronic database search for Sacramento County, CA. U.S. Profile of General Demographic Characteristics, Census 2000 Summary File 1. Available: <http://factfinder2.census.gov>. Accessed July 2, 2014.

———. 2010. DP-1. Results of electronic database search for Sacramento County, CA. Profile of General Demographic Characteristics: 2010. Available: <http://factfinder2.census.gov>. Accessed July 2, 2014.

U.S. Department of Energy. 2013. Energy Independence and Security Act of 2007. Available: <http://www.afdc.energy.gov/laws/eisa>. Last updated November 12, 2013. Accessed March 11, 2014.

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.

———. 2012a. Ground-level Ozone, Health Effects. Available: <http://www.epa.gov/airquality/ozonepollution/health.html>. Last updated November 1, 2012. Accessed June 10, 2014.

———. 2012b. Carbon Monoxide. Available: <http://www.epa.gov/airquality/carbonmonoxide/>. Last updated December 10, 2012. Accessed June 10, 2014.

———. 2012c. Lead in Air: Basic Information. Available: <http://www.epa.gov/airquality/lead/basic.html>. Last updated March 13, 2012. Accessed June 10, 2014.

———. 2013a. Particulate Matter. Available: <http://www.epa.gov/airquality/particlepollution/>. Last updated March 18, 2013. Accessed March 7, 2014.

———. 2013b. Nitrogen Dioxide. Available: <http://www.epa.gov/airquality/nitrogenoxides/>. Last updated April 4, 2013. Accessed March 7, 2014.

———. 2013c. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available: <http://www.epa.gov/climatechange/endangerment/comments/volume10.html>. Last updated September 9, 2013. Accessed March 11, 2014.

———. 2014b. Sulfur Dioxide. Available: <http://www.epa.gov/airquality/sulfurdioxide/>. Last updated April 18, 2014. Accessed June 10, 2014.

- . 2015. Superfund Site Overview: Aerojet General Corp. Available: <http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/BySite/Aerojet%20General%20Corp.?OpenDocument>. Last updated March 17, 2015. Accessed April 17, 2015.
- U.S. Fish and Wildlife Service. 1997. *Review of the Sand Drag Event at Prairie City State Vehicular Recreation Area for Amendment to the Programmatic Consultation of February 28, 1996* (Service file #1-1-96-F-1) (Programmatic Consultation). Cited (as USFWS 1997a) in State Parks 2013b.
- . 2002 (May 28). *Recovery Plan for the California Red-legged Frog (Rana aurora draytonii)*. Region 1, Portland, OR.
- . 2004 (August 4). Determination of Threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities. Final Rule. *Federal Register* 69:47212–47248.
- . 2012 (June). *Giant Garter Snake 5-Year Review: Summary and Evaluation*. Sacramento Fish and Wildlife Office, Sacramento, CA.
- . 2014. Critical Habitat Portal: FWS Critical Habitat Database for Threatened & Endangered Species. Available: <http://criticalhabitat.fws.gov/crithab/>.
- USFWS. *See* U.S. Fish and Wildlife Service.
- U.S. Geological Survey. 2005. Elevation contours derived from the National Elevation Dataset in 10-foot increments. Available: <http://viewer.nationalmap.gov/viewer/>. Accessed July 3, 2014.
- . 2010 (March). GIS data of the National Hydrography Dataset for California, NHD11005\_CA.gdb. Available: <ftp://nhdftp.usgs.gov/StateExtracts/High/FileGDB/>. Accessed June 1, 2010.
- U.S. Natural Resources Conservation Service. 2013. Web Soil Survey. Available: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Last updated November 2013. Accessed February 27, 2014.
- Wagner, D. L., C. W. Jennings, T. L. Bedrossian, and E. J. Bortugno. 1987. *Geologic Map of the Sacramento Quadrangle*. California Division of Mines and Geology, Regional Geologic Map Series, Map No. 1A. Sacramento, CA.
- Wahl, R. E., M. E. Hynes, D. E. Yule, and D. J. Elton. 1989. *Seismic Stability Evaluation of Folsom Dam and Reservoir Project*. Report 6, Right and Left Wing Dams. Department of the Army Corps of Engineers, Technical Report GL-87-14. Vicksburg, MS.



- Western Regional Climate Center. 2014a. Folsom, California—Period of Monthly Climate Summary. Available: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3111>. Accessed June 10, 2014.
- . 2014b. Average Wind Direction. Available: <http://www.wrcc.dri.edu/climatedata/climtables/westwinddir/#CALIFORNIA>. Accessed June 10, 2014.
- . 2014c. Average Wind Speeds—MPH. Available: <http://www.wrcc.dri.edu/climatedata/climtables/westwind/#CALIFORNIA>. Accessed June 10, 2014.
- Wiese, M. 2015. GenCorp sells chunk of land to developer. *Sacramento Business Journal*, March 5, 2015. Available: <http://www.bizjournals.com/sacramento/news/2015/03/05/gencorp-sells-chunk-of-land-to-developer.html>. Accessed April 28, 2015.
- Wills, C. J., R. J. Weldon II, and W. A. Bryant. 2007. California Fault Parameters for the National Seismic Hazard Maps and Working Group on California Earthquake Probabilities 2007. In *The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2)*, Appendix A. U.S. Geological Survey Open-File Report 2007-1437A and California Geological Survey Special Report 203A. Reston, VA.
- Wilson, N. L., and A. H. Towne. 1978. Nisenan. In *Handbook of North American Indians (California)*, Vol. 8:387–397, eds. W. C. Sturtevant and R. F. Heizer. Washington, DC: Smithsonian Institution.
- Witham, C. W. 2006. *Field Guide to the Vernal Pools of Mather Field, Sacramento County, California*. Native Plant Society Sacramento Valley Chapter. Sacramento, CA.
- WRCC. See Western Regional Climate Center.

### 5.3 CHAPTER 3, “ISSUES AND ANALYSIS”

- AECOM. 2014 (July). Habitat types within the Prairie City SVRA General Plan planning area. Adapted from Parus Consulting habitat mapping using GPS survey of wetlands and heads-up digitizing of National Agriculture Imagery Program 2012 aerial imagery.
- California Department of Parks and Recreation. 2008. *2008 Soil Conservation Standard and Guidelines*. 2008 Grants and Cooperative Agreements Program Regulations. Off-Highway Motor Vehicle Recreation Division.
- Capital SouthEast Connector Joint Powers Authority. 2012. *Capital SouthEast Connector Project Volume 2 of the Final Program Environmental Impact Report—Revisions to the Draft Program Environmental Impact Report*. Adopted February 2012.
- Capital SouthEast Connector JPA. See Capital SouthEast Connector Joint Powers Authority.

City of Folsom. 2011. *Folsom Plan Area Specific Plan*. Folsom, CA. Prepared by Torrence Planning, El Dorado Hills, CA.

———. 2014. Staff Report for the June 10, 2014 City Council meeting. Community Development Department. Folsom, CA.

Lenzie, Sheryl, Associate Planner, and Surinder Singh, Principal Planner. Sacramento County Department of Community Development, Planning and Environmental Review, Sacramento, CA. August 25 and September 17, 2015—e-mails to Matt Hertel of AECOM providing confirmation that Scott Road is a Sacramento County–designated scenic corridor.

Sacramento County Community Planning & Development Department. 2014 (May 28). *Sacramento County General Plan of 2005–2030*, Circulation Element. Adopted December 15, 1993; amended November 9, 2011 and May 28, 2014. Sacramento, CA.

State Parks. *See* California Department of Parks and Recreation.

U.S. Fish and Wildlife Service. 1996 (February). *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California*.

USFWS. *See* U.S. Fish and Wildlife Service.

## **5.4 CHAPTER 4, “THE PLAN”**

California Department of Parks and Recreation. 2010 (February). *DPR Operations Manual: Interpretation and Education*. Available: [http://www.parks.ca.gov/pages/735/files/dom0900-interpchapter\\_final.pdf](http://www.parks.ca.gov/pages/735/files/dom0900-interpchapter_final.pdf). Accessed February 18, 2015.

———. 2013. *Interpretation Planning Workbook*. Interpretation and Education Division, Sacramento, CA.

City of Sacramento. 2014 (August). *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update*. SCH #2012122006. Community Development Department, Environmental Planning Services, Sacramento, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.

Society of Vertebrate Paleontology. 1996. Conditions of Receivership for Paleontologic Salvage Collections [final draft]. *Society of Vertebrate Paleontology News Bulletin* 166:31–32.

State Parks. *See* California Department of Parks and Recreation.

SVP. *See* Society of Vertebrate Paleontology.



U.S. Fish and Wildlife Service. 1996 (February). Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California.

USFWS. *See* U.S. Fish and Wildlife Service.

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