California Department of Fish and Wildlife
Boden Canyon Ecological Reserve

Initial Study/Mitigated Negative Declaration
Final March 2021

Written comments or inquiries regarding this plan should be submitted to:
California Department of Fish and Wildlife
South Coast Region
ATTN: Boden Canyon Ecological Reserve Land Management Planning Team
3883 Ruffin Road, San Diego, CA 92123
or by email to BodenCanyonLMP@wildlife.ca.gov
This document can be found as an electronic file at:
https://www.wildlife.ca.gov/Lands/Planning

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1. INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study (IS) and Mitigated Negative Declaration (MND) have been prepared by the California Department of Fish and Wildlife (CDFW) to evaluate the potential environmental effects of the proposed Land Management Plan (LMP) for the Boden Canyon Ecological Reserve (the Reserve), located in San Diego County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq*., State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq*., and Fish and Game Code (FGC) §1019.

An IS is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, an MND may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is CDFW. The contact person for the lead agency is:

Tim Dillingham, Project Manager
Supervisor, Lands Program
California Department of Fish and Wildlife, South Coast Region
3883 Ruffin Road
San Diego, CA 92123
Tim.Dillingham@wildlife.ca.gov

All inquiries regarding environmental compliance for this project, including comments on this environmental document should be addressed as indicated above.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Land Management Plan (LMP) on the Reserve. Resource avoidance, minimization and mitigation measures have been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

Chapter 1 - Introduction
The IS/MND begins with an introduction describing its purpose and organization.

Chapter 2. - Project Description
This chapter describes the project, which is the adoption of an LMP for the Reserve. It also describes the reasons for preparing the LMP, the scope of the LMP, and the LMP's goals and objectives.

Chapter 3 - Environmental Setting, Impacts, and Avoidance/Minimization/Mitigation (AMM) Measures

This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental resource or impact, and evaluates each through the CEQA IS Environmental Checklist. (See Initial Study Checklist below). Avoidance, minimization and mitigation measures shall be incorporated, where appropriate, to eliminate or reduce any potentially significant impacts to a less-than-significant level. These mitigation measures are found in table format for each potential environmental impact.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the text discussions for each section in the IS that identifies potential significant environmental impacts (by environmental issue), which may result from implementation of the LMP. The checklist is found below in Chapter 3. All potentially significant impacts of the LMP would be avoided or mitigated to a less than significant level by project revisions or other requirements imposed on the LMP.

Based on the IS and supporting environmental analysis provided in this document, the proposed LMP would result in less-than-significant impacts to the following resources or issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, Tribal cultural resources, utilities and service systems and wildfire.

In accordance with §15064(f) of the CEQA Guidelines, an MND shall be prepared if the proposed project would not have a significant effect on the environment after the inclusion of mitigation measures. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that an MND be adopted in accordance with CEQA Guidelines.

2. PROJECT DESCRIPTION

2.1 INTRODUCTION

This IS has been prepared by the CDFW to evaluate the potential environmental effects of the LMP on the Reserve. The proposed project (the LMP) would establish goals and tasks for the development of specific management, monitoring and maintenance activities within the Reserve.

2.2 PROJECT LOCATION

BODEN CANYON ECOLOGICAL RESERVE

The Boden Canyon Ecological Reserve (Reserve) consists of 1,221 acres of biologically important land under the ownership of the California Department of Fish and Wildlife (CDFW). The Reserve is located in Boden Canyon, in central San Diego County in the upper San Pasqual area, San Dieguito River watershed, approximately 9 miles east of Escondido and northwest of the community of Ramona. It is located predominantly to the north of Highway 78. (See Figures 1 and 2, Regional and Vicinity Maps of the project area). Public access to the Reserve is from its east side, from Orosco Ridge located on USFS land adjacent to Pamo Valley. Management and emergency access are through a locked gate at a small turnout off Highway 78.

Figure 1. Regional Map

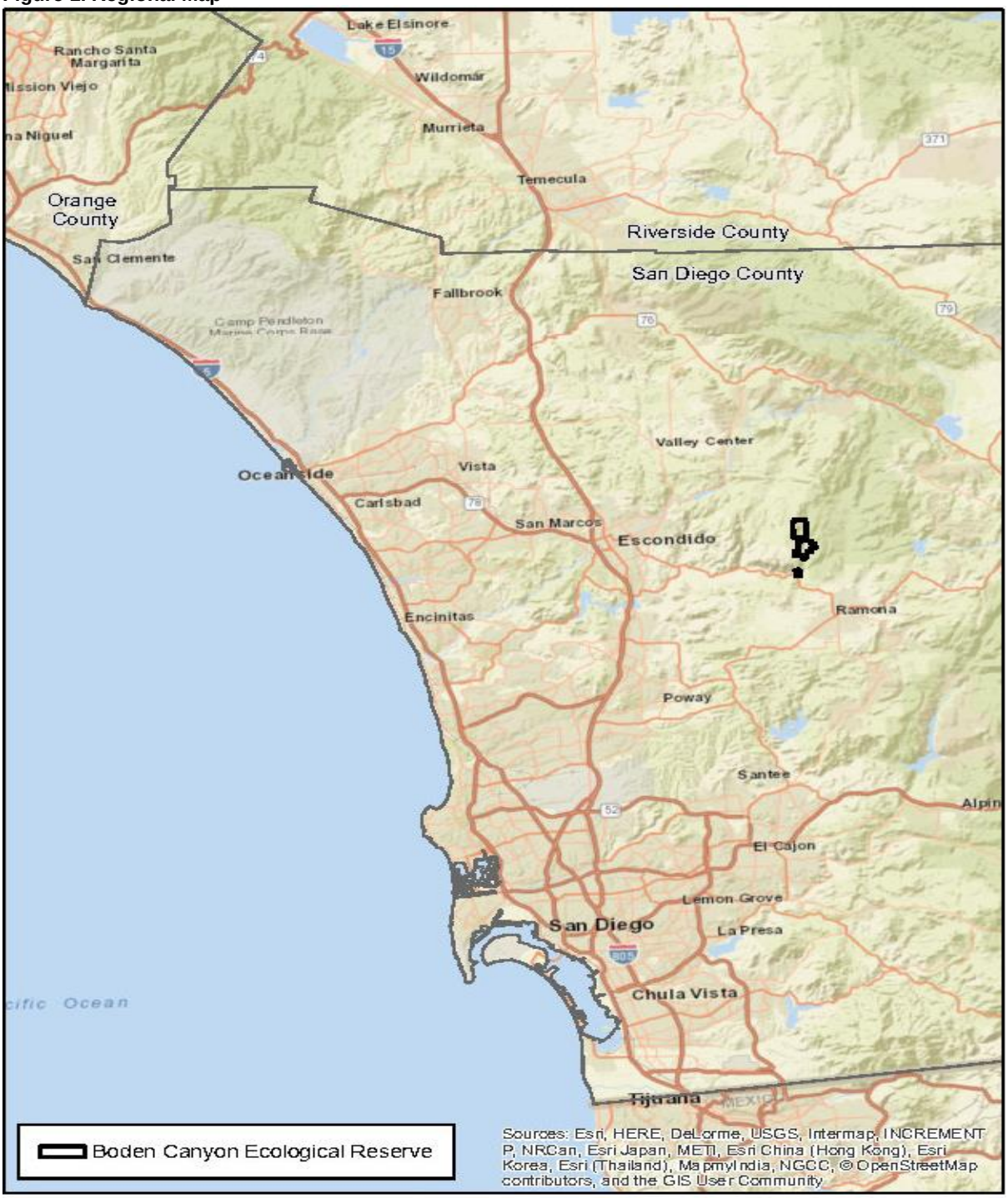
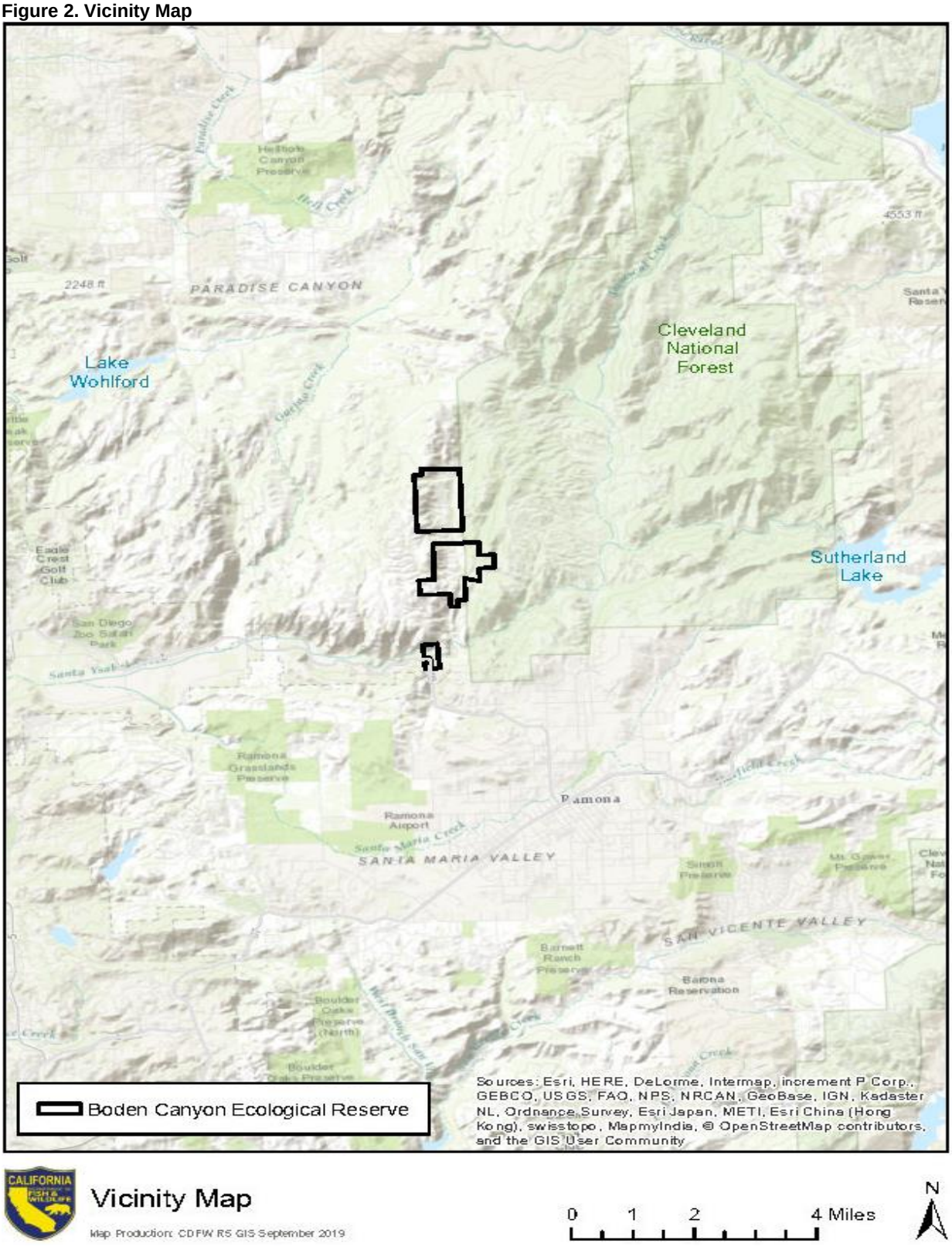


Figure 2. Vicinity Map



2.3 BACKGROUND AND NEED FOR THE PROJECT

The Reserve was acquired by the Wildlife Conservation Board (WCB) on behalf of CDFW to conserve and protect core riparian, oak woodland, chaparral and coastal sage scrub vegetation communities and to provide crucial wildlife linkages, as identified in the Multiple Species Conservation Plan (MSCP) (City of San Diego 1998; See Figure 3).

The MSCP identifies Boden Canyon as a core resource area and an important biological linkage to areas outside the MSCP Plan Area. The site provides a connection between the San Dieguito River Valley and the Rancho Guejito area adjacent to Pamo Valley, forming one of the longest natural corridors in San Diego County, extending north to Riverside County. Boden Canyon is roughly 4 miles long and ¾-mile wide. It sits in the landscape between the Cleveland National Forest to the east, and the privately held Rancho Guejito to the west. While Boden Canyon is not an inherently unique feature in the landscape, most of the low-lying canyons within the region that are similar to Boden Canyon have been irreparably damaged by long histories of heavy agriculture and urban fringe development. As a result of the impacts and losses suffered, few canyons remain as intact representations of San Diego County's natural communities.

CDFW acquired 1,221 acres of Boden Canyon over a two-year period. The property acquired includes 14 separate parcels that collectively form three discrete areas within Boden Canyon (See Figures 4 and 5). The properties were acquired primarily using Habitat Conservation Funds (Proposition 117, the Mountain Lion Initiative) designated for land purchases under the NCCP Act as well as from private grants, State Coastal Conservancy transaction funds and land value donations from various sellers. The total cost for acquisition of the 1,221 acres was $5,943,063. The WCB approved the initial purchase of 561 acres at its February 24, 1998 meeting, and then acquisition of 2 additional land areas identified as Expansion #1, consisting of 590 acres and Expansion #2, consisting of 70 acres, at the November 18, 1999 meeting.

Together these three acquisitions conserved, protected and enhanced core habitat areas and provided crucial wildlife linkages in the MSCP. The area is habitat for numerous species, which benefit from a healthy, diverse, intact native environment that this LMP would help to foster. Many of the species that are found on the Reserve are also Covered Species under the MSCP. See Appendix B of the LMP for the list of plants and wildlife found on the Reserve.

Figure 3. Regional Planning Boundaries

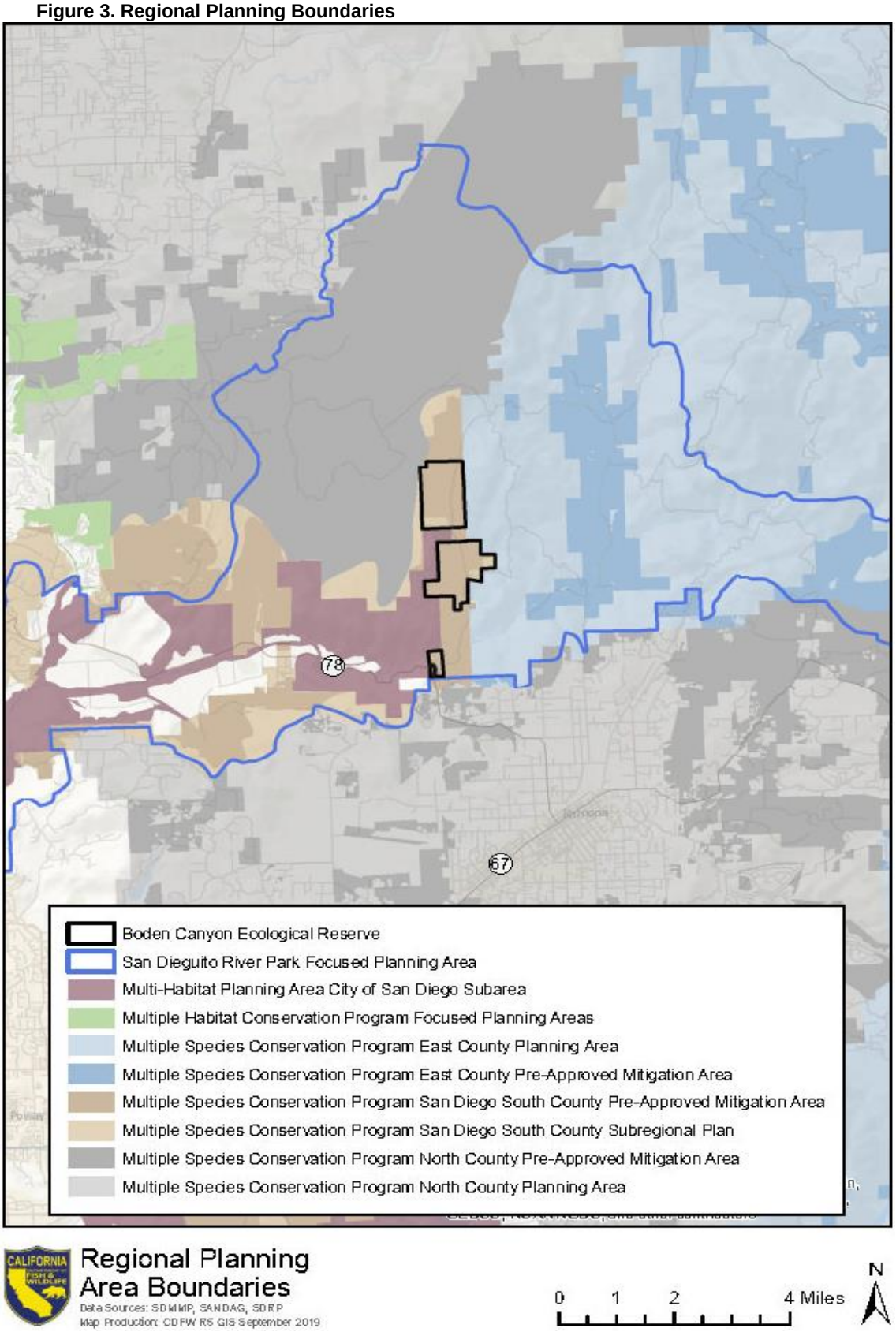


Figure 4. Parcels

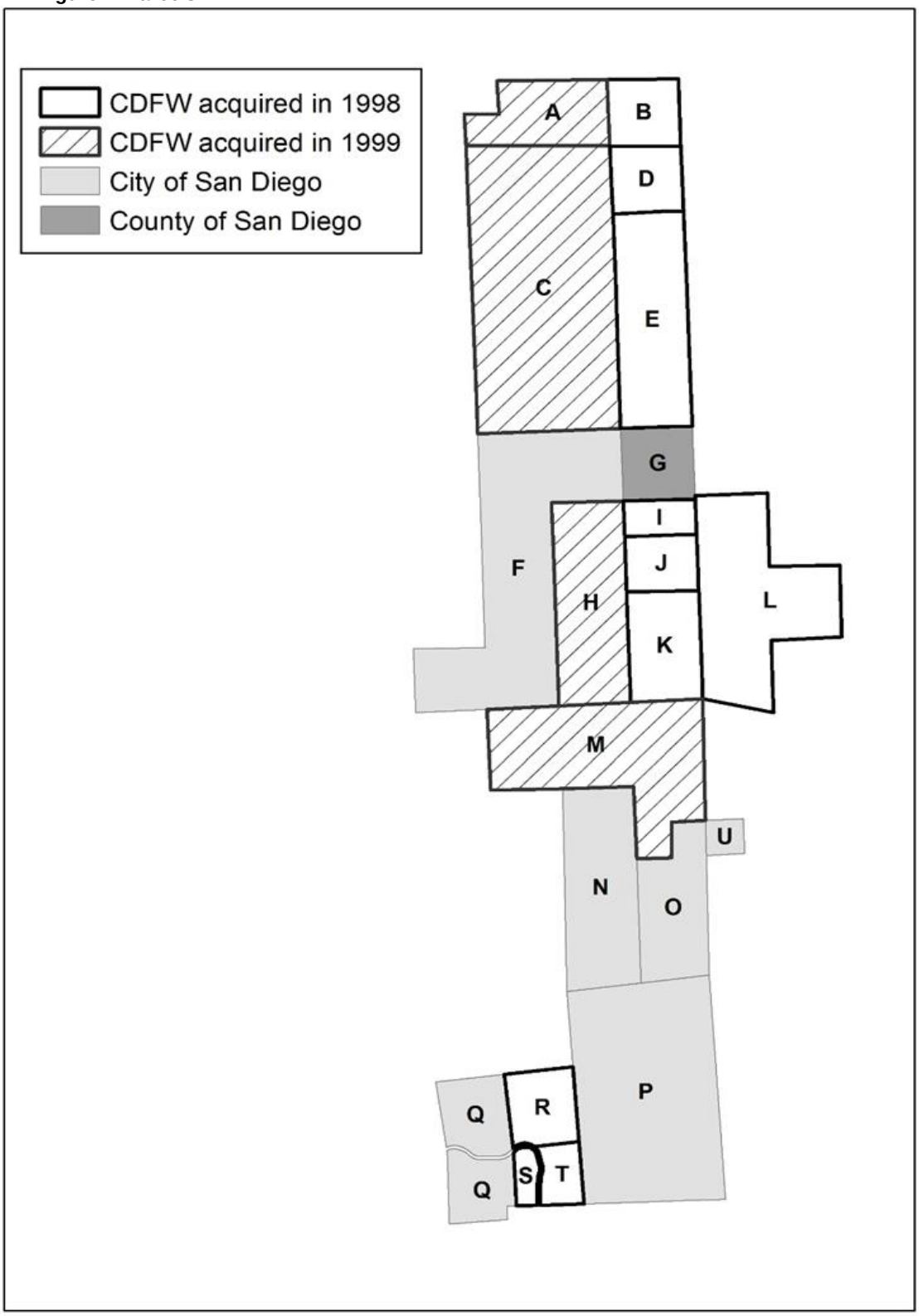
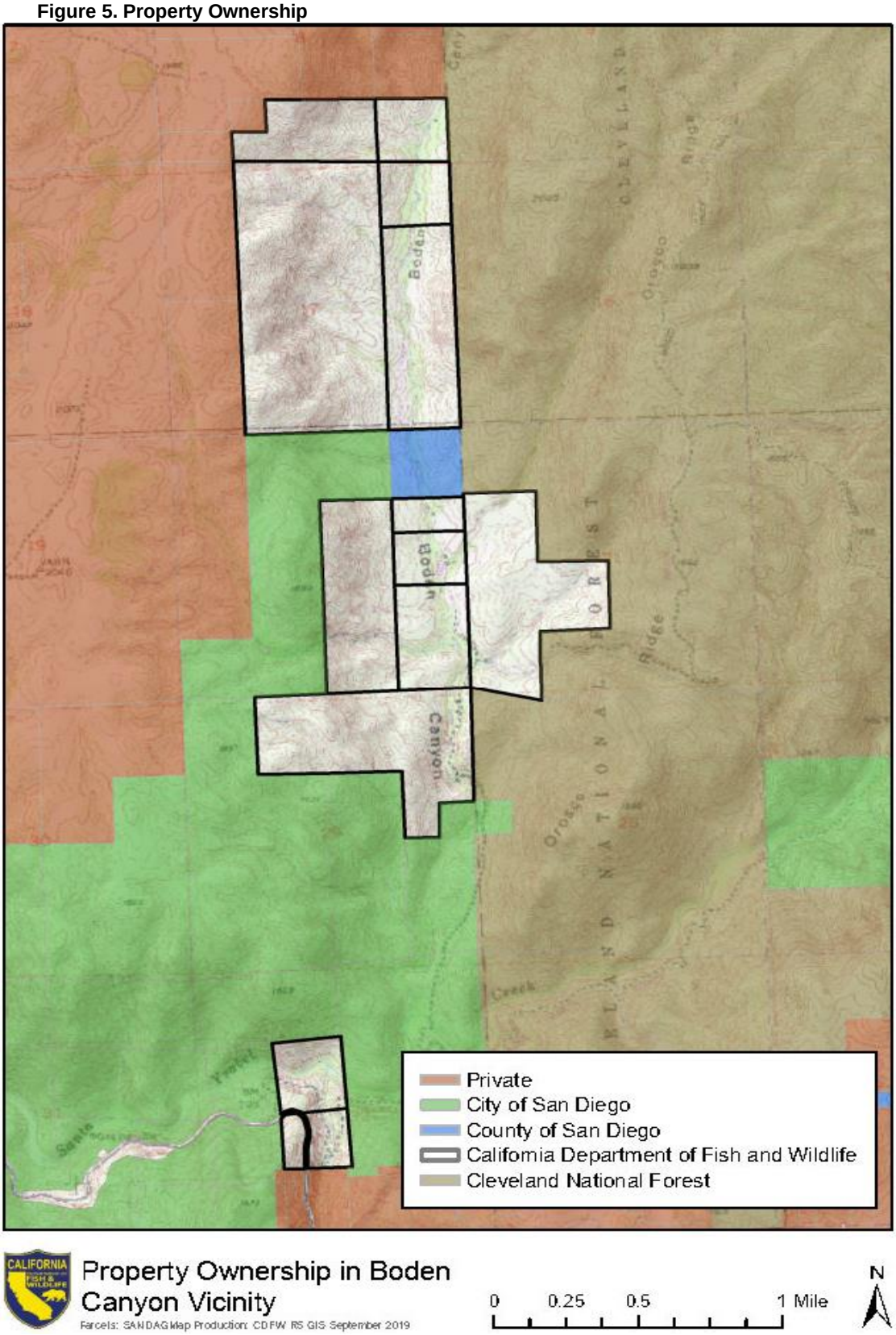


Figure 5. Property Ownership



2.4 PROJECT OBJECTIVES

The purpose of the LMP is to serve as a descriptive inventory of fish, wildlife, plants, and habitat types that occur on the Reserve; provide a guide for appropriate uses of the Reserve; and provide an overview of and vision for the Reserve's operation, maintenance, and personnel requirements. The primary use of the Reserve will be as conserved open space and wildlife habitat, with public uses that are wildlife dependent, including hunting, hiking, education, and scientific research. Management will focus on maintaining viable populations of sensitive species and their habitats, and on the enhancement of natural communities within an ecosystem-based framework. Emphasis will be placed on the conservation and enhancement of riparian and wetland areas, and the control of noxious weeds.

2.5 PROJECT DESCRIPTION

In the LMP, the Management Program has been divided into six categories or elements: 1) Biological Elements; 2) Biological Monitoring Elements; 3) Public Use Elements; 4) Facility Maintenance Elements; 5) Fire Management Elements; and 6) Cultural Resources Elements. For each element, CDFW has developed goals, objectives, and management and monitoring guidelines for avoiding and/or minimizing potential environmental impacts. These elements are described below. For more detailed information on each of these, refer to Chapter IV of the LMP.

- Biological Element: provides descriptions of the species, habitats, or vegetation communities.
- Biological Monitoring Element: describes the proposed monitoring program.
- Public Use Element: consists of recreational, scientific, and other uses or activities appropriate to and compatible with the purpose for which the Reserve was acquired.
- Facility Maintenance Element: describes the general maintenance and administrative program which helps maintain orderly and beneficial management of the Reserve.
- Fire Management Element: describes the Pre-, During- and Post-Fire goals, tasks and impact guidelines pursuant to the Fish and Game Commission and Board of Forestry Joint Policy regarding wildfire.
- Cultural Resources Element: lists the prehistoric and historic archaeological sites as well as historic resources (e.g., historic roads, homesteads and ranching structures).

BIOLOGICAL ELEMENTS

Habitat Management is a high priority and includes the conservation and enhancement of the terrestrial and aquatic habitats on the Reserve. Improving the quality of the habitat would ensure that the property continues to support healthy populations of native species and continues to function as an important wildlife corridor. Habitat Management includes three general habitat

types under Biological Elements: 1) Riparian and Other Wetland Communities; 2) Oak Woodland; and 3) Chaparral, Scrub, and Grasslands. Additionally, wildlife corridors and buffers are included within the Habitat Management Section (Chapter IV. C.1) of the LMP.

Species Management includes forty (40) sensitive species, both plants and wildlife, found within the Reserve. This sensitivity is based on species' listing designations (state and federal), state status, or coverage under the MSCP, two are listed as endangered (1 federal, 1 state and federal), 1 is listed as state-threatened, and 3 are considered state fully protected species. An additional 20 species are designated state species of special concern, while 15 are Covered Species under the MSCP, and 11 are addressed in the Management and Monitoring Strategic Plan (MSP). The MSP further categorizes species that are better-managed within their vegetative communities (included in the Habitat Management Element), and those that are species-focused (included in the Species Management Element -Chapter IV. C. 2). The LMP's species management list shall be updated when additional listings occur or when additional MSCP Covered Species are detected in the Reserve.

See Table 4 of the LMP for sensitive species documented within the Reserve and their status, and Table 5 for those species that have a potential to occur or have been previously reported to occur within the Reserve. Note that some species meet more than one sensitive species criteria; this is shown in the columns of Tables 4 and 5.

The range of activities associated with the Biological Element includes:

- Conducting habitat assessments and regular surveys for special status plants/wildlife on the Reserve.
- Enhancing habitat quality and suitability for listed/sensitive species through control of nonnative plants and animals.
- Evaluating major disasters (e.g., fires, floods) occurring on the Reserve to determine extent of habitat degradation and impacts to species' populations and developing remedial measures to offset immediate and long-term disturbance.
- Minimizing or restricting maintenance activities and public access within occupied sensitive species' habitat during the breeding/nesting season or during other vulnerable times (e.g. arroyo toad movement) to avoid impacts to listed/sensitive species.
- Coordinating with local and regional agencies/groups to ensure the conservation of special status species, sensitive vegetation communities, and biological corridors within the area.
- Maintaining and regularly updating GIS database of listed/sensitive species' occurrences and suitable/occupied habitat.
- Providing opportunities for interpretation and research of biological resources on the Reserve.

BIOLOGICAL MONITORING ELEMENTS

The range of activities associated with the Biological Monitoring Element includes:

- Implementing the Biological Monitoring Program identified within the LMP, including conducting non-baseline, focused surveys in habitats or for specific species on the Reserve.

- Collaborating with other agency and collaborating entities to allow other biological monitoring within the Reserve.

- Installing photo-points, plots or transects that enable the long-term monitoring program to efficiently gather data within the Reserve.

PUBLIC USE ELEMENTS

The range of activities associated with the Public Use Element includes:

- Hunting

- Education/Interpretation (incl. special events; signs/informational kiosks)

- Environmental Research

- Hiking Trails

Regulated public access for hunting is authorized within the Reserve. This currently includes upland game hunting opportunities and potentially may include additional game and nongame hunting opportunities such as deer hunting depending on the future adoption by the Fish and Game Commission and applicable addition to the State's lands regulations. The hunting program includes plans to enhance water availability within the Reserve for the benefit of both game and nongame species. Educational and interpretive programing and environmental research to benefit the understanding of the mission of CDFW and the various wildlife species and habitats at the Reserve will be encouraged. Trails that currently exist as roadways will be maintained in their current state and alignment. No new trails are proposed. Existing roadway trails may only be improved as funding permits; any increase in trail length or width will be analyzed for potential environmental impacts and will follow the avoidance, minimization and mitigation measures outlined herein.

FACILITY MAINTENANCE ELEMENTS

Existing facilities include degraded and partial remains of structures left from historic dwellings (see Chapter II.C. Cultural Resources of LMP), or are the gates and fencing remaining from the previous landowner and/or those installed by CDFW. Informational kiosks within the Reserve are also considered in this section.

Circulation through the Reserve is on one unpaved road used for management, maintenance, emergency access and public pedestrian use, with no additional designated trailheads or trails.

The range of activities associated with the Facility Maintenance Element includes:

- Installation and maintenance of access controls (gates)
- Identification and management of cultural resources as related to facility maintenance
- Road maintenance
- Fencing maintenance
- Repair and maintenance of culverts/stream crossings
- Installation of signs/kiosks at entry points and signs along the boundary

FIRE MANAGEMENT ELEMENTS

The goal of this element is to take preventative and proactive measures to reduce too-frequent wildfires, to increase CDFW communication with CalFire on optimal pre-, during-, and post-fire management actions, and to be prepared to work with CalFire and other fire agencies in all these stages.

Potential activities for fire management can include:

- Communicating with CalFire twice annually, prior to wildfire season and after wildfire season.
- Prioritizing maintenance and repair of the one main road for emergency vehicular access and pre-, during- and post-fire activities.
- Conducting necessary fuel reduction operations (e.g. mechanical, herbicide or prescribed fire) within the Reserve based on the advice and assessment of CalFire and/or other fire management experts.
- Reduce non-native vegetative growth that creates a “flashy fuel” situation or depletes the ground water resource needed for native plants and animals.

CULTURAL RESOURCES ELEMENTS

A primary goal of this element is to identify, document, evaluate, and protect cultural resources within the Reserve. All management actions should be designed and implemented to avoid significant impacts to known, as well as potential, cultural resources.

Potential activities involving cultural resources include:

- Collecting initial information and maintaining a current, updated inventory, GIS mapping, and informational database for cultural or archaeological resources within the Reserve that are listed in, or may be eligible for listing in, the South Coast Information Center and with the State Historic Preservation Officer.

- Collecting initial information and maintaining a current, updated inventory, GIS mapping, and informational database for those historic resources within the Reserve that may be eligible for listing in the California Register of Historical Resources and/or the National Register of Historic Places.

- Recommending appropriate preservation treatments, managerial actions, and appropriate uses.

- Employing applicable professional standards to determine appropriate use (stabilization, restoration, reconstruction, or modification for adaptive reuse) for all historic resources to provide for their regular maintenance and long-term preservation.

- Providing cultural resource training to CDFW staff and making locations of previously recorded cultural sites known to the Reserve manager, applicable staff and game wardens so that they can monitor site conditions and watch for deterioration and/or vandalism.

- Developing measures to protect cultural resources during wildfire incidents, flash flood events, earthquakes, or other natural disasters, and procedures for assessing damages after a natural disaster event.

- Assessing the effects of visitor use and natural erosion on archaeological sites.

2.6 PROJECT IMPLEMENTATION

The LMP will be implemented upon its approval. No projects meeting the definition of a project under CEQA are planned to be implemented on the Reserve in the immediate future. Potential projects, as they are determined, would be funded through a variety of sources and all permit requirements would be identified and met at that time. As these funding sources become available, the highest priority needs for the Reserve would be assessed and plans made on how these needs shall be best met.

2.7 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The LMP is consistent with local plans and policies, including the California Code of Regulations, Title 14; California Fish and Game Code; and the MSCP.

California Environmental Quality Act (CEQA)
Established in 1970, CEQA is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or reduce the environmental effects by implementing feasible alternatives or mitigation measures. It is the state counterpart to the National Environmental Policy Act (NEPA) and is the fundamental regulation influencing the environmental effects of development within California.

Natural Community Conservation Planning (NCCP) Act
Under the State's NCCP Act of 1991 and the federal Endangered Species Act, the County and City of San Diego approved the Multiple Species Conservation Program Plan in 1998. The MSCP is an NCCP that covers approximately 900 square-miles of southwestern San Diego County. It works across political boundaries in an effort to conserve San Diego's diversity of

native plants and animals, as well as protecting habitats, watersheds, and water quality. Local jurisdictions and special districts will implement their respective portions of the MSCP Plan through subarea plans, which describe specific implementing mechanisms for the MSCP.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key stakeholders in the process. The Reserve falls within the County of San Diego's Subarea Plan South County Segment. More specifically it is located within the "Pre-Approved Mitigation Area" (PAMA) of the Metro-Lakeside-Jamul segment. PAMA are areas that were considered to have very high and high habitat value, and were therefore, identified for long-term preservation.

San Diego County General Plan

The Conservation and Open Space Element *(Chapter 5)* of the County's 2011 General Plan relates directly to the Reserve. Addressing nine resource types including biological, water, cultural, and visual resources, the Element is intended to help guide development while conserving natural resources, protecting open space, and providing park and recreation resources. Amongst its goals is a regionally coordinated preserve system that would be monitored and managed to facilitate "the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species."

SANDAG Regional Open Space Strategy

The San Diego Association of Governments' (SANDAG) Regional Open Space Strategy sets aside open space and protects the environment by ensuring that adequate quantities of diverse habitat types are maintained, and that the plants and animals found in these habitats are less likely to become endangered. Central to this is the creation and retention of open space corridors within and between communities.

San Diego County Master Trails Plan

CDFW properties are integral to a coordinated system of regional open space areas, biological linkages, and trail networks. CDFW reviews and, where/when appropriate, coordinates or consults with County staff on community needs regarding trails and trail systems relative to all CDFW properties, including the Reserve and this LMP.

On January 12, 2005, the San Diego County Board of Supervisors unanimously approved the adoption of the County Trails Program and the Community Trails Master Plan (CTMP). The County Trails Program will be utilized by the County to develop a system of interconnected regional and community trails and pathways. These trails and pathways are intended to address an established public need for recreation and transportation but will also provide health and quality of life benefits associated with hiking, mountain biking, and horseback riding throughout the County's biologically diverse environments. The County Trails Program involves both trail development and management on public, semi-public, and private lands. The Community Trails Master Plan (2009) is the County's planning document for the trails program and contains proposed community trail alignment and pathway plans.

www.sandiegocounty.gov/content/sdc/pds/community-trails-master-plan.html

https://www.sandiegocounty.gov/content/dam/sdc/pds/CTMP/Regional.pdf

The Active Transportation Plan links the CTMP soft-surface trails with other on- and off-road active transportation facilities for a comprehensive network.

The County Department of Parks and Recreation has responsibility for trail maintenance and community-initiated trail development issues. Visit this page for current open and developed trail systems in communities and County parks.

The San Dieguito Community Plan found within the above first link lists the Coast to Crest Trail as a proposed trail. In the second link above, the County defers to the San Dieguito River Park Joint Powers Authority website for additional information on the Coast to Crest Regional Trail. The Coast to Crest Trail is proposed to be routed through the southern portion of the Reserve.

City of San Diego General Plan

While not located in the City of San Diego, the Reserve is immediately adjacent to City-owned lands, including 1) the San Pasqual Agricultural Preserve to the west, 2) lands acquired originally for a water resource development project “Boden Reservoir Basin” and 3) lands used for mitigation purposes. Existing trails are described in the City’s General Plan, under Parks and Recreation, Open Space Lands, however specific trail information is deferred to the San Dieguito River Park website (sdrp.org).

Existing trails within the City of San Diego include the Clevenger Canyon North and South Trails. The trails are steep and rocky and are not permitted for multiple use (no bikes or horses) at this time. These are pedestrian use only. This use is consistent with CDFW regulations for pedestrian use only within the Reserve. Proposed trails important to the City include connections with the San Dieguito River Park and Cleveland National Forest.

Coordination with multiple City entities is important to the long- term management and continued conservation of the Reserve as well as to public recreation in the area.

San Dieguito River Park (SDRP) Focused Planning Area (FPA)

The San Dieguito River Park Joint Powers Authority has been the community lead on the Coast to Crest (CTC) Trail for over 30 years. The San Dieguito River Valley Regional Open Space Park identifies the Reserve in its CTC Trail FPA. Both CDFW and WCB recognized the importance of this proposed trail at the time of acquisition and desire to provide compatible public access. It is understood that a multi-use “Coast to Crest Trail” is a likely cornerstone of the Regional Open Space Park. Approximately 48 miles of the CTC trail (out of 71 miles desired) has been completed.

Currently, a generalized trail corridor is proposed by the SDRP Joint Powers Authority (JPA) and supported by numerous organizations including the San Dieguito River Valley Conservancy to traverse east-west through the southern portion of Boden Canyon. This generalized corridor is called the Lower Santa Ysabel Trail in the JPA documents; however,

the final alignment, uses, and protective measures are currently not available. In 2017, a concept was shared verbally with CDFW where a general alignment would follow the existing dirt road located through the Reserve, however this alignment is not substantiated in any current document. While the trail was envisioned and planned over 30 years ago, the segment that is proposed to cross the Reserve is still depicted as being in the bottom of the drainage in riparian habitat. Any trail proposed on the Reserve must obtain approval from CDFW as well as any other landowners (City of San Diego, County of San Diego and USFS, Cleveland National Forest). Such a trail would be included within the Reserve only if it is not in conflict with the primary goals of this LMP, the rules and regulations of the Reserve, and the underlying philosophy that the type and magnitude of allowed use must not result in substantive short- or long-term detriment to the natural environments. Subsequent CEQA analysis and review would need to be conducted by the SDRP or the applicable lead agency for any proposed project(s).

2.8 DISCRETIONARY APPROVALS

Any resource agency permits required for implementing projects within the Reserve shall be coordinated with the agency and/or jurisdiction before a project enters its implementation phase. Additionally, any applicable federal permits would be identified prior to implementing a new project and mitigation or avoidance strategies will be met or exceeded.

2.9 SIGNIFICANCE CRITERIA

The following criteria were considered in determining whether an impact (prior to minimization/conservation measures) within the Reserve as identified in the LMP on biological and water quality resources would be considered “significant” under CEQA;

- Long term degradation of a sensitive plant community because of substantial alteration of landform or site conditions;
- Substantial loss of a plant community and associated wildlife habitat;
- Fragmentation or isolation of wildlife habitats, especially riparian and wetland communities;
- Substantial effects to jurisdictional waters including wetlands requiring a 404, 401, or 1601 permit;
- Substantial disturbance of wildlife resulting from human activities;
- Permanent disruption of natural wildlife movement corridors;
- Substantial reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation of;
- Any take of species qualifying as rare and endangered under CEQA;
- Any take of species that are state- or federally listed as threatened or endangered;

- Results in the destruction or adverse modification of critical habitat as defined by U.S. Fish and Wildlife Service (USFWS);

- Substantial reduction or elimination of species diversity or abundance of any native species of animal;

- Conflict with any adopted habitat Conservation Plan, Natural Community Conservation Plan, or any other regional or state habitat conservation plan, local ordinance, or policy;

- Violation of any water quality standards or waste discharge requirements;

- Substantial depletion of groundwater supplies or interference with groundwater recharge such that there would be a net deficit in aquifer volume of a lowering of the local groundwater table;

- Substantial alteration of the existing drainage pattern of site or area in a manner which would result in substantial erosion or siltation on or off site;

- Substantial alteration of the existing drainage pattern of site or area in a manner which would result in substantial flooding on or off site;

- Creation of or contribution to runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrading water quality.

3. ENVIRONMENTAL CHECKLIST

This chapter includes the Initial Study Checklist below, and text following the Checklist describing the checklist sections. This chapter tiers off the Project Description identified in Chapter 2, specifically Section 2.5 above and as detailed in the LMP. Chapter 3 includes the Environmental Factors Potentially Affected by the Project, the Determination with signatory page, and the Evaluation of Environmental Impacts.

The CEQA Guidelines require a brief explanation for all answers to the checklist except those that are “No Impact” and are adequately supported by other sources, in this case the LMP. Below are explanations for each category (Aesthetics, Air Quality, etc) and a discussion of the impact analysis. Where necessary, a discussion of the mitigation measures proposed for implementation to reduce an environmental impact to a level of “Less than Significant” is included herein. Mitigation Measures, where necessary, are provided in table format below.

ENVIRONMENTAL CHECKLIST FORM

1. Project title:
   Boden Canyon Ecological Reserve Land Management Plan

2. Lead agency name and address:
   California Department of Fish and Wildlife, South Coast Region
   3883 Ruffin Road, San Diego, CA 92123

3. Contact person and phone number:
   Tim Dillingham, 858-627-3939

4. Project location:
   Boden Canyon, off Highway 78; nine miles east of Escondido, San Diego County

5. Project sponsor's name and address:
   California Department of Fish and Wildlife, South Coast Region
   3883 Ruffin Road, San Diego, CA 92123

6. General plan designation:
   open space

7. Zoning:
   open space

8. Description of project:
   Completion and implementation of a Land Management planning document for the Boden Canyon Ecological Reserve

9. Surrounding land uses and setting:
   Surrounding land uses are US Forest Service, San Diego County and San Diego City open space lands. There are private lands, both rural residential and undeveloped to the west and south of the project area.

10. Other public agencies whose approval is required:
    none

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?
    Yes. Notifications were sent in July of 2018 and communications regarding consultation occurred in September 2018. Notifications on the availability of the Draft IS/MND and LMP were sent to the various local Tribes whether previous interest was shown or not. No comments were received from any Tribe during the public review period of Sept 1-30, 2020.

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages

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

DETERMINATION

On the basis of this initial evaluation:

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION was prepared.

DocuSigned by:
Ed Pert
A87CE992DB57479...
Signature

3/16/2021
Date

I. **AESTHETICS.** Except as provided in Public Resources Code Section 21099, would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Environmental Setting

Aesthetic resources within the Reserve are many and varied but include the riparian areas along Santa Ysabel Creek and the Boden Canyon drainage, rugged hills and chaparral-clad slopes, and scattered oak groves. Views looking into the canyon and from the canyon looking all directions are aesthetically pleasing. The one historic ranch road, the old homestead infrastructure such as water cisterns, and other elements including abandoned olive trees offer glimpses into earlier uses of the property. Minimal development has left the Reserve with a feeling of tranquility and remoteness despite being less than 40 miles from downtown San Diego, the nation’s 8th largest city. Opportunities to see wildlife such quail, turkey, and deer reinforce the area’s role as a protected buffer and wildlife corridor.

Discussion

a) Scenic vistas in the Reserve would be preserved and, in some areas, enhanced through the promotion of native vegetation communities and opportunities for wildlife viewing in protected habitat.

b) The proposed LMP would not damage any scenic resources.

c) The proposed LMP would not degrade the existing visual character of the site.

d) There are currently no light sources in the Reserve, and none are proposed.

LMP ELEMENT	MITIGATION MEASURES – AESTHETIC RESOURCES (AR)	MONITORING REQUIREMENT	TIMING OF ACTION
Site maintenance	**AR 1:** Guidelines will be developed that outline materials & methods to be used for fencing & signs.	CDFW to develop guidelines.	Prior to site maintenance
Recreational monitoring & compliance	**AR 2:** Public use of the Reserve will be regulated & monitored, with only pedestrians permitted. Vehicle use on roads will be limited to CDFW staff, emergency response, & pre-approved groups (e.g., for biological surveys, special events, etc.).	CDFW to ensure implementation & monitoring.	Continuous
Recreational access	**AR 3:** All trail use will conform to CDFW regulations and policies.	CDFW to ensure implementation & monitoring.	Continuous
Recreational access	**AR 4:** To help ensure potential impacts to resources are insignificant, any potential future trails within the Reserve proposed by others will be established within the footprint of the existing dirt road using the shortest & most direct route possible. These other parties would need to conduct applicable CEQA review and obtain necessary permits.	CDFW to evaluate & ensure implementation.	Prior to trail construction
Recreational monitoring	**AR 5:** Continually evaluate recreation activities to identify & report changes that are warranted to maintain consistency with Reserve goals.	CDFW to evaluate on a regular basis.	Continuous

II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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

Environmental Setting

The agricultural land use in Boden Canyon has historically been limited primarily to food crop production and minimal grazing beginning approximately in the 1890s, with indications of limited orcharding (olives). The area at that time was known as Vineyard, California.

By the late 1900's, Boden Canyon was being assessed for a variety of uses, including a water reservoir site, a regional land fill site, a proposed recreational vehicle camping park, and was also being marketed as mitigation land. Any past agricultural use of the land gradually disappeared, with scattered remnants of ranch structures remaining as the only vestiges of this era.

Discussion

a) According to the State of California Department of Conservation's California Important Farmland Finder (CIFF) mapping application http://maps.conservation.ca.gov/ciff/ciff.html, a small portion, of about 14 acres, at the south end of the Reserve overlaps as "Farmland of Local Importance" and a small portion of about 8 acres on the north end of the Reserve overlaps with mapping for "Grazing Land". However, the majority of the Reserve is mapped as "Other Land", meaning land which does not meet the criteria of any other category, such as low-density rural developments, heavily forested land, mined land, or government land with restrictions on use. The description for the category "Farmland of Local Importance" states that the land is of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee, and the description for the category "Grazing Land" is land on which the existing vegetation is suited to the grazing of livestock.

b) The existing zoning is as MSCP Preserve Area (County General Plan, Ch. 5), hence the proposed LMP would not conflict with any zoning for agricultural use, nor does it conflict with the Williamson Act.

c) The proposed LMP would not conflict with existing zoning or cause rezoning of forest land. The Reserve is currently zoned as MSCP Preserve Area and is no longer used for agricultural purposes.

d) The proposed LMP would not result in the loss of forest land or conversion of forest land to non-forest land.

e) The proposed LMP would not result in the conversion of Farmland to non-agricultural use nor would it result in the conversion of forest land to non-forest use.

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Environmental Setting

The Reserve is located within the San Diego County Air Pollution Control District (APCD), the local air quality management district. The District's plans include the San Diego Regional Air Quality Strategy (RAQS), addressing State requirements, and the San Diego portion of the California State Implementation Plan (SIP), addressing federal requirements.

The Southern California area as a whole is characterized by abundant sunshine, which drives the photochemical reactions which form pollutants such as ozone. Additionally, the summertime maximum mixing height (an index of how well pollutants can be dispersed vertically in the atmosphere) in the region averages the lowest in the U.S.

The most recently completed air quality plan prepared by the District is the 2011 Ambient Air Quality Network Plan. This plan provides detailed measurements of major criterion pollutants; the closest measuring station to the Reserve is in the community of Escondido. Actions associated with the management of the Reserve would not affect the implementation of the Air Quality Network Plan.

Discussion

a) The proposed LMP for the Reserve would not conflict with or obstruct implementation of the San Diego County Ambient Air Quality Network Plan. Because activities on the

Reserve would be largely passive, with limited vehicular traffic, there will be very little introduction of pollutants from either development or use.

b) There shall be no cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. The proposed LMP would not violate any air quality standards maintained by the San Diego County Air Pollution Control District.

c) The Reserve would not expose visitors to substantial pollutant concentrations.

d) The proposed plan would not result in emissions or create objectionable odors.

LMP ELEMENT	MITIGATION MEASURES – AIR QUALITY (AQ)	MONITORING REQUIREMENT	TIMING OF ACTION
Site maintenance Fugitive dust	**AQ 1:** Standard protocols for dust & drift control during maintenance activities such as periodic road grading & spraying for control of invasive vegetation shall be followed.	CDFW to ensure implementation.	During site maintenance
Vehicle operations Exhaust emissions	**AQ 2:** Idling of vehicles shall be minimized to the maximum extent.	CDFW to ensure implementation.	During site maintenance & public use activities
Vehicle operations Exhaust emissions Sensitive species	**AQ 3:** Speed limit on all dirt roads shall not exceed 15 MPH.	CDFW to ensure implementation.	During site maintenance & public use activities

IV. BIOLOGICAL RESOURCES. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

Habitat Types

There are 14 habitat types (vegetation alliances) within the Reserve. This includes open water as a general habitat type, and the grassland communities (native and non-native) have been lumped for simplicity.

Table 1. Vegetation Alliances within Boden Canyon Ecological Reserve

Vegetation Alliance Names	Common Names for Vegetation Type	Approx. Acres
Adenostoma fasciculatum Alliance	Chamise Chaparral	150.6
**Adenostoma fasciculatum-Xylococcus bicolor* Alliance	Chamise-Mission Manzanita Chaparral	712.9
Artemisia californica Alliance	California Sagebrush -Coastal Sage Scrub	11.7
Artemisia californica-Eriogonum fasciculatum Alliance	California Sagebrush-California Buckwheat Scrub	17.9
Eriogonum fasciculatum Alliance	California Buckwheat Scrub	3.1
**Keckiella antirrhinoides* Alliance	Diegan Sage Scrub	3.3
Lotus scoparius Alliance	Deerweed Scrub	62.8
Malosma laurina Alliance	Laurel Sumac Scrub	12.1
Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	Grassland	70.1
Open Water	Open Water (pond)	1.8
**Platanus racemosa* Alliance	California Sycamore Woodlands	75.0
Quercus agrifolia Alliance	Coast Live Oak Woodland	77.6
**Quercus engelmannii* Alliance	Engelmann Oak Woodland	5.2
**Salix gooddingii* Alliance	Southern Riparian Woodland	3.2
Grand Total (approximate acreage)		**1207.3**

The alliances denoted with the "" in Table 1 above are considered sensitive natural communities by CNDDB. Additionally, there are two sub-categories called "associations" within these alliances that are considered sensitive by CNDDB, including the California Buckwheat Scrub Alliance in the *Eriogonum fasciculatum/Salvia columbariae-Mirabillis laevis* Provisional Association and the Coast Live Oak Woodland Alliance in the *Quercus agrifolia/Salix lasiolepis*

Association. In the Reserve, approximately 66 % of the vegetation alliances/associations are considered sensitive. For a detailed breakdown please see Appendix C of the LMP.

All above acreages are approximate and do not equal the known 1,221 acres of the Reserve.

For complete descriptions of the habitat types and vegetation alliances, see Chapter IV of the LMP.

BIOLOGICAL RESOURCES

Baseline inventories for wildlife and vegetation communities were conducted within the Reserve beginning in 1994, prior to its acquisition. Since 1994, more focused inventories have been completed for arroyo toads, birds, bats and butterflies. Depending on available funding and/or CDFW expertise, surveys for species not yet inventoried would be initiated and for those species previously surveyed, inventories would be continued or updated as needed. All floristic surveys will follow protocols recommended by CDFW, and wildlife surveys will follow various USFWS/U.S. Geological Survey (USGS) recommended protocols.

LISTED/SENSITIVE SPECIES

Sensitive Wildlife Resources

The California Natural Diversity Database (CNDDB) (California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB), Special Animals List, February 2018) was queried to compile a list of possible special status wildlife and fish species present in the project area. A total of six special status wildlife species were identified within the San Pasqual and Rodriguez Mountain 1:24,000 quadrangles (Appendix C of LMP) including three bats, two birds and one reptile. CDFW Environmental Scientists compared specific habitat requirements, life history notes, elevation, species distribution, and other species lists to determine if any other special status species may be present within the Reserve. This effort resulted in a list of 41 special status species for the Reserve. An expanded discussion with species summary accounts are provided in Chapter III of the LMP for those sensitive or protected species with a known occurrence within the Reserve. Those sensitive wildlife species not detected on the Reserve, but with a high potential to occur within the Reserve are discussed in the LMP as well.

Two federally endangered species are found on the Reserve: the arroyo toad (*Anaxyrus californicus*) and the least Bell's vireo (*Vireo bellii pusillus*; also state endangered). One state threatened species, the tricolored blackbird, has also been documented on the Reserve. Three CDFW fully protected species are also found on the Reserve: the golden eagle, the white-tailed kite and the ringtail.

Sensitive Botanical Resources

Three special status plant species and six rare natural communities were identified in CNDDB as occurring within the San Pasqual and Rodriguez Mountain 1:24,000 quadrangles (Appendix C of LMP) including Robinson's peppergrass, delicate clarkia and Palmer's goldenbush. None of these plants are federally or state-listed, however all are CNPS List 1B species. One additional locally sensitive and MSP plant, the Engelmann oak, occurs within the Reserve. Five other locally sensitive plants on the CNPS List 4B occur on the Reserve. The rare natural communities found on site are noted in Table 1 above.

Known occurrences for any special status plant species were obtained from the CDFW CNDDB Rarefind Database, the MSP Master Occurrence Matrix (MOM) database and/or from CDFW files and staff (refer to Chapter III Section C in the Land Management Plan for sensitive plant species summaries for those found within the Reserve).

Planning

In planning and implementing the habitat and species portion of the Biological Element of the LMP, CDFW would give priority to management activities that avoid direct impacts to protected resources, including native vegetation communities and the associated species they support. If direct impacts cannot be avoided, then site-specific plans would be prepared for management and maintenance activities subject to CEQA review and must comply with all applicable regulations. Implementation of the proposed Mitigation Measures reduce these potential impacts to below a level of significance.

Discussion

a) The LMP would not have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species, and it is consistent with the specific conservation objectives of the MSCP and the California Fish and Game Code. It is possible that certain activities could potentially impact habitat that may be used by locally occurring listed/sensitive species. Any such impacts are expected to be limited in size and scope, short-term in nature, and largely confined to areas that are already disturbed (e.g., dirt road, culverts) or less likely to support wildlife/plants of concern. Consequently, management-related activities are not expected to have a substantial adverse effect on any species. To the maximum extent feasible, management-related activities within habitat of a special status species shall be conducted outside the breeding season (March 1 – Sept 1, generally) or other critical life phase of the wildlife/plant. Potentially significant impacts would be avoided by conducting vegetation surveys prior to initiation of any project. For any potential CEQA defined project, a CEQA analysis would be conducted prior to start of said project.

b) Conservation of the riparian and aquatic/wetland habitat, as essential features of the Reserve's watershed ecosystem, has been identified as a key goal of the LMP's Biological Element. This shall be accomplished through reducing the cover and extent of invasive plants and maintaining and enhancing riparian vegetation communities to help sustain populations of special status species that rely on the habitat for foraging, breeding and roosting. Such activities would also benefit the more common species that use these riparian/wetland areas. There are no proposed projects within any wetland riparian habitat other than the removal of non-native/invasive species and bi-annual presence/absence surveys for arroyo toad and least Bell's vireo and associated habitat monitoring. These surveys will be conducted according to USGS/USFWS protocol when staffing availability permits or be conducted in concert with participating MSP entities. The invasive species removal efforts would be mitigated for by conducting such activities in accordance with herbicide labelling and recommendations from CDFW personnel possessing a valid Qualified Applicator License/Qualified Applicator Certificate. In addition, no vegetation clearing or land disturbance within the stream channels shall be conducted without prior authorization from CDFW, U.S. Army Corps of Engineers, and Regional Water Quality Control Board, as appropriate.

c) See discussion above for b).

d) The Reserve functions as part of a regional biological corridor. The Science and Collaboration for Connected Wildlands (formerly the South Coast Wildlands), working with various federal, state, and local agencies in a document entitled “Missing Linkages” (Penrod et. al. 2001) has identified current core areas of importance and areas considered to have “missing linkages” for numerous wildlife and plant species. The South Coast Ecoregion is described in Chapter 6.0 of that document. Boden Canyon is located on the eastern edge of Stewardship Zone 14 on the South Coast Vision Map (Figure 6.7 of that document) in an NCCP Core Area, and as well, can be located between two missing linkages, numbers 3 and 5. Boden Canyon contributes to overall connectivity east-west and north-south. In the Missing Linkages document, in “Linkage Description Log, Map ID #3”, the San Dieguito River connection is described as having: Degree of Threat: 2 (minimal); Type of Threats: exotic plants, agriculture and recreation; and its feasibility as a linkage is a 5- meaning it has a good opportunity for connectivity. Management and uses of the Reserve as described in the LMP would not impede movement of any native or migratory species or impede use of native nursery sites nor would it adversely affect any regional linkages.

e) The conservation of approximately 5 acres of Engelmann oak woodland and 77 acres of coast live oak woodlands found in the main Boden Canyon tributary and along Santa Ysabel Creek has been recognized as an important management goal. Engelmann oak habitat, which is limited in distribution throughout California and the County, supports a broad range of bird and mammal species, including game species such as deer, quail, and wild turkey. Accordingly, the LMP would focus on ensuring the persistence of Engelmann oak woodland on the Reserve, managing for species abundance and richness, and enhancing the habitat to benefit special status and game species. The proposed LMP, therefore, does not conflict with any local policies or ordinances protecting biological resources.

f) The LMP is consistent with the provisions of the MSCP, the MSP and the California Fish and Game Code. A total of 85 species are covered under the MSCP. Of these, 1 plant and 14 wildlife species are known to occur within the Reserve. An additional 12 species (1 plant and 11 wildlife species) are included in the Management Strategic Plan for Conserved Lands in Western San Diego County, Vol. 1 (MSP, SDMMP 2013). Therefore, when developing goals and objectives for these species, CDFW has adhered to the Conditions of Coverage identified in the MSCP and, where appropriate, the MSP will be used and CDFW would implement the Management Unit (MU) 5 goals for species that occur on the Reserve.

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Nesting birds	**Bio 1**: To avoid impacts to nesting birds, the clearing of vegetation (when biologically warranted) & maintenance projects (when warranted), shall occur outside of the peak avian breeding season, which generally extends from March 1 through September 1 (as early as January 1 for some raptors, and as late as September 15 for other birds). If work is necessary during the breeding season, a qualified biologist shall conduct weekly surveys, starting within three days prior to start to ensure no nesting birds in the area will be impacted by the project. If an active nest is identified, a buffer shall be established between activities & the nest so that birds are not disturbed. The buffer should maintain a minimum radius of 300 feet (500 feet for raptors), or an appropriate buffer determined by a qualified biologist, and be delineated when necessary by temporary fencing, & remain in effect as long as work is occurring or until the nest is no longer active. During work, no activities shall take place within the fenced nest zone until the young have fledged, are no longer being fed by the parents, & shall not be impacted by the project. Reductions in the nest buffer distance may be appropriate depending on the species involved, ambient levels of the project-related noise, screening vegetation, or other possible factors.	CDFW to ensure implementation, conduct surveys, & confirm.	Prior to, & during LMP projects and/or maintenance
Native & sensitive vegetation	**Bio 2**: Conduct vegetation surveys prior to initiation of any CEQA-defined project.	CDFW to ensure implementation & confirm.	Prior to project
Native & sensitive vegetation	**Bio 3:** Inventory & map the invasive plant populations that pose a threat to sensitive/native vegetation communities on the Reserve.	CDFW to ensure implementation & map.	Every 10 years or following a major disturbance event
Native & sensitive vegetation	**Bio 4**: Conduct annual treatment & control of invasive/nonnative plants, targeting species (e.g., tamarisk, nonnative herbs & grasses) that are detrimental to habitats & species of concern.	CDFW to ensure implementation & report to appropriate agencies.	Annually

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Native & sensitive vegetation	**Bio 5**: Use BMPs to minimize the introduction & spread of non-native/invasive plant species. (BMPs for land managers in: http://www.calipc.org/ip/prevention/landmanagers.php)	CDFW to ensure implementation.	Continuous
Wildlife & sensitive species	**Bio 6**: Conduct a tracking study of wildlife use within the Reserve to assess the functionality of the drainage and uplands as a biological corridor. This study will be completed in 2021 and results incorporated into the LMP.	CDFW to ensure implementation & prepare appropriate reporting.	Funding was approved in 2019 and this task is in progress.
Sensitive species	**Bio 7**: Compile an inventory of the individual Engelmann oaks on the Reserve (i.e., locations, DBH, canopy, seedling/sapling counts, & health of individual trees) as part of the oak woodland assessment. Regularly monitor & control oak pests that could threaten the health of oak woodlands. A Diseased Tree Study is in progress and will be completed in 2021.Results will be incorporated into the LMP.	CDFW to ensure implementation.	Continuous, Funding was approved in 2019 and a Diseased Tree Study is in progress.
Riparian disturbance	**Bio 8**: Identify & map areas within riparian/wetland habitat that are at high risk for degradation/conversion. Assess impacts to the habitat & any existing infrastructure & provide recommendations for corrective action.	CDFW to ensure implementation.	Every 5 years, or following a major disturbance event
Sensitive habitat	**Bio 9**: Establish permanent vegetation plots & photo stations within the four major habitat communities (i.e., oak woodland, riparian, shrub land, & grasslands) to document existing conditions, management practices, & vegetation changes over time. Institute monitoring procedures, & periodically evaluate & refine the protocol to improve habitat structure/function. Update CALVEG every 10 years or following any major disaster occurring on the Reserve.	CDFW to ensure implementation & report to appropriate agencies.	Continuous
Sensitive species Sensitive land use	**Bio 10**: Coordinate with local entities, State & Federal agencies, universities, other reserve owners, & institutions on methods to develop & sustain biological corridors on a regional level. Work shall include efforts to acquire & conserve critical parcels of land, inventory & monitor the Reserve's natural resources, & public interpretation. A buffer system to minimize conflicts with nearby land uses, & protect native	CDFW to ensure implementation & coordination.	Continuous

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
	habitat in Boden Canyon, will also be coordinated with appropriate groups.		
Rare & sensitive vegetation	**Bio 11**: Conduct rare plant surveys every 3 to 5 years, as funding & staffing levels allow, to document the presence/absence of sensitive plant species, including Palmer's goldenbush. Occurrences shall be recorded & updated after each field effort, & an evaluation of potential threats to survival/persistence will be completed for each rare plant.	CDFW to ensure implementation & prepare appropriate reporting.	Every 3 to 5 years
Sensitive species	**Bio 12**: Conduct surveys for Harbison's dun skipper every 3 to 5 years as funding & staffing levels allow. Maintain & regularly update GIS information for the species. Enhance habitat in locations both suitable & previously occupied by the Harbison's dun skipper.	CDFW to ensure implementation & prepare appropriate reporting.	Every 3 to 5 years
Sensitive species	**Bio 13**: At a minimum, conduct presence and/ or absence surveys every 1 to 2 years & a habitat assessment for the arroyo toad every 5 years.	CDFW to ensure implementation & prepare required reporting.	Survey every 1 to 2 years; habitat assessment every 5 years
Public education & training	**Bio 14**: Develop and provide education or training to groups recreating on-site & install signage along the Santa Ysabel Creek and Boden drainage during the arroyo toad breeding season to alert the public/staff of the area's sensitivity.	CDFW to ensure implementation.	Continuous
Sensitive species	**Bio 15**: Control nonnative predators, enhance habitat, seasonally restrict access to arroyo toad breeding locations, & limit roadway use or implement reduced speeds during rainfall events along the main access route and throughout the Reserve.	CDFW to ensure implementation.	Continuous
Sensitive species	**Bio 16**: Conduct least Bell's vireo surveys every 2 to 3 years to establish the presence/absence of the species, habitat usage and trends on the Reserve. Ensure persistence of suitable habitat through maintenance and management.	CDFW to ensure implementation & prepare required reporting.	Every 2 to 3 years
Sensitive species	**Bio 17**: Coordinate and/or participate in local & regional monitoring efforts for raptor species, such as the northern harrier & golden eagle. Potentially limit public use or maintenance activities in known roosting or nesting areas or	CDFW to ensure implementation.	Continuous

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
	impose seasonal restrictions to prevent harm/harassment to the species.		
Sensitive species	**Bio 18**: Every 5 years, survey the roosting/breeding sites of the Townsend's big-eared bat, and assess the status of the pallid bat, western red bat, and pocketed free-tailed bat on the Reserve through periodic surveys of potential & known roosting/breeding locations. Participate in MSCP/MSP radio-telemetry or other studies or monitoring efforts, as appropriate. Potentially limit public use or maintenance activities within proximity of known roosting/breeding sites or impose seasonal restrictions. Avoidance/Minimization measures for various species should follow strategies proposed in Chapter 7.0 of *Bat and Bridges Technical Bulletin (Hitchhiker Guide to Bat Roosts)* (Erickson et al. 2002).	CDFW to ensure implementation & prepare reporting requirements.	Survey roosting and breeding sites every 5 years
Wildlife	**Bio 19:** Complete an inventory & population counts for game species on the Reserve & update as needed. Enhance habitat for game & other wildlife species through the creation of brush piles and maintenance of water sources (e.g., guzzlers, wells).	CDFW to ensure implementation.	Continuous or as needed
Public education & training Sensitive species Sensitive cultural resources	**Bio 20:** Educational materials shall be provided to educate users regarding all Mitigation Measures required including: protection of cultural resources, protection of natural resources, & protection of species listed by CDFW & USFWS as threatened, endangered, or species of concern.	CDFW to develop training materials and ensure implementation.	Prior to hunting or high use seasons
Site maintenance Sensitive species	**Bio 21:** Repairs to roads, bridges, & culverts will be conducted within the existing footprint of the roads/structures, during normal daytime business hours (except for emergencies). Prior to any road work (surface grading) within arroyo toad use areas roadways will be walked by a biologist to ensure no arroyo toads are present. Removal of vegetation overgrowth of the roads, bridges, & culverts will be conducted outside the bird nesting season (March 1-Sepember 1, generally) unless a qualified biologist completes pre-activity surveys to ensure no nesting birds will be impacted. All road gravel that is brought in from outside sources will be washed off-site to help	CDFW to ensure implementation & conduct surveys.	Continuous; A Hydrology and Hydraulics study was completed in 2020 and recommendations provided for erosion control relative to culverts and

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
	prevent the spread of non-native invasive plants. If a significant impact will be likely, such as the potential take of a listed species, all work will be stopped until it is determined that conditions are safe to continue.		repair of head cuts along roads. This information was incorporated into the LMP.
Site maintenance Wildlife movement Sensitive species	**Bio 22**: To facilitate wildlife movement: survey, evaluate, & remove unneeded internal fencing. No removal or installation of fencing/signage will occur during the bird nesting season (March 1-September 1, generally) unless a biologist conducts a pre activity survey within one week of scheduled work & determines there will be no impacts to nesting birds.	CDFW to ensure implementation & conduct surveys.	Continuous
Wildlife	**Bio 23**: Evaluate & repair/enhance springs, guzzlers, & existing wells to enhance water availability for game & other wildlife species.	CDFW to ensure implementation	Continuous
Research fieldwork	**Bio 24**: Facilitate & coordinate scientific research required to implement the LMP & focus environmental research on topics that will help CDFW achieve the goals & objectives outlined in the LMP, & thereby enhance adaptive management of the Reserve. Identify research projects that are consistent with LMP goals for environmental research on the Reserve & develop guidelines for submitting proposals for such work. Require submission of field data & final reports of all authorized research conducted on the Reserve.	CDFW to ensure implementation & coordination	Continuous
Sensitive vegetation	**Bio 25**: Non-native plants will be controlled where these species threaten to reduce the quality of habitat for wildlife or where non-natives pose a competitive threat to important native plant communities. Non-native plant species will be controlled using an integrated approach that relies on both non-chemical & chemical (i.e. herbicide) use strategies. The risk that herbicides pose to nontarget organisms is dependent on both exposure & toxicity. This relationship between risk, exposure & toxicity can be assessed using the Hazard Quotient (HQ) method (http://www.fs.fed.us/foresthealth/pesticide/pdfs/Pre pEnvirmentalDoc_11-2014.pdf). To reduce	CDFW to ensure implementation & prepare appropriate reporting	Continuous

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
	the risk posed to wildlife species at the Reserve, no herbicide will be used unless its calculated HQ value is below the Level Of Concern for the appropriate exposure scenario. Additionally, the risk to non-target wildlife & special-status plant species will be reduced by making low-volume, spot treatments using hand-held equipment targeted specifically at non-native plants.		

V. CULTURAL RESOURCES. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in California Public Resources Code §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Public Resources Code §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

Environmental Setting

Archaeological and Ethnographic Context

The cultural story of this landscape starts long ago. The Kumeyaay believe that their ancestors were placed in this area by the creator and they have been here since time began. Scientific evidence, such as radiocarbon dating, indicates that people have been living in southern California for more than 9,000 years, with some evidence from the Channel Islands showing humans having been in this area for over 13,000 years. The general history of Native American Indians in the vicinity of what we know today as Rancho Guejito and Allesandro Ranch indicates that the land was occupied and managed by the San Pasqual Band of the Kumeyaay Tribe for an estimated 8,000 years (personal communication in CDFW files and property history, Stan Smith, 2000). The earliest, generally accepted occupation of the San Diego area is the San Dieguito Complex dating to approximately 10,000 years before present (Tuma, et al. 2015).

Cultural Resource Studies were done in the vicinity of the Reserve 2015 in conjunction with a proposed agricultural project on the nearby Rancho Guejito. Three sites were evaluated at that time including one just to the north west of Boden Canyon called the “Vineyard Areas” within the Rancho Guejito Property (BonTerra Psomas as cited in Tuma, et al. 2015). The report indicates that eight technical studies were conducted in the past (1979-2002) within a quarter mile of that proposed project site.

More recently, in 2020, cultural resources study was funded and conducted at the Reserve. The tasks of the study included a Records Search, a Sacred Lands File Search, Tribal Outreach, and field surveys over a portion of the Reserve. They also prepared a Cultural Resources Treatment and Protection Plan (CRTPP) (PanGIS, Inc.2021). Their records search identified one resource previously known from the Reserve, and their pedestrian surveys within the Reserve encountered seven previously unrecorded archaeological resources. Of these seven newly identified sites, 2 are categorized as prehistoric resources and 5 are historic. Based on these field surveys, it is now believed that Boden Canyon was used as a prehistoric habitation site. Additionally, three previously known resources were identified in the search within a quarter mile of the Reserve. This information will be used by CDFW to ensure the cultural resources are protected and managed. The protocols and measures in the CRTPP will be followed for all known resources and for any newly discovered resources as well. Following the CRTPP ensures the “no impact” status as delineated in this checklist.

Historic Context

The Reserve is located within Boden Canyon, where the homestead for the Johann Boden family was active in the late 1800’s. According to CDFW file documents with notes from the Boden Family and from the previous landowner, Stan Smith, a small community known as Vineyard was located in northern Boden Canyon in the late 1800’s. CDFW file notes indicate Johann met and married Nellie Renauld in 1893. They lived in Boden Canyon in a farmhouse and had seven or more children while in the canyon and grew produce to sell at market in old San Diego (Old Town). The notes state they rode a wagon and would have to camp out for a night whenever they went into San Diego. They eventually moved into San Diego where additional Boden children were born. By the time CDFW acquired the property, only remnants of structures were visible. Numerous wildfires have occurred within Boden Canyon over the last century leaving nothing but fragments of the former Johann Boden homestead. CDFW staff have documented remnant structures within the Reserve and these are likely what were formerly associated with crop production, ranching, habitation, and water supply sites. Structure foundations, fence lines, cisterns, tanks, historic vegetation, and other remnants of previous land uses of this property are all that currently remain. As mentioned above, newly encountered historic period resources were identified and recorded in 2020. CDFW will follow protocols and measures in the CRTPP for both historical and prehistorical resources.

Planning

It is important for planning and management purposes to know what archaeological and historic sites exist within the Reserve, where they exist, what condition they are in, and what threats they face. Threats to both the known and undocumented archaeological and historical sites include erosion, fire, LMP activities, unauthorized trails and use, and vandalism including artifact collecting. Maintenance and repairs to existing facilities, visitor-use activities, and habitat/fire management work all have the potential to disturb, degrade, or damage surface and/or buried

archaeological remains, historic structures, historic features, landscapes, or sacred sites. The 2020 cultural resources study strengthens CDFW's ability to protect and manage the resources located within the Reserve. Following the protocols and measures in the CRTPP and implementation of the following Mitigation Measures reduces any future potential impacts to below a level of significance.

Discussion

a-b) The project will not cause a substantial adverse change in the significance of a historical or archaeological resource. Archeological and historical resources are known to occur within the Reserve. While installation and maintenance of facilities (kiosks, signs), visitor use, and habitat and fire management work all have the potential to disturb surface and/or buried cultural remains, none of these activities is expected to have any significant impact to known resources. By following the protocols in the CRTPP and the Mitigation Measures below any potential impact to known resources or those identified in the future will be avoided or minimized to a level of insignificance.

c) No known burial ground or human remains have been found on the Reserve. Mitigation Measure CR10 will be followed in the event any are found.

LMP ELEMENT	MITIGATION MEASURES – CULTURAL RESOURCES (CR)	MONITORING REQUIREMENT	TIMING OF ACTION
Historical resources	**CR1**: A current/updated inventory, GIS mapping, & informational database for cultural resources within the Reserve that may be eligible for listing in the California Register of Historical Resources and/or the National Register of Historic Places shall be developed and maintained. All unlisted, eligible, or potentially eligible historical resources should be mapped, recorded, & evaluated to determine their eligibility status for placement on the National Register or California Register of Historic Places. Any such evaluation will not be destructive in nature; any approved data recovery (excavation) shall not harm other resources.	CDFW to ensure implementation.	Continuous; A Cultural Resources Inventory, Survey, and Searches were conducted in 2020; a Treatment and Protection Plan was done in 2021.
Cultural resources	**CR2**: Prior to any actions that have the potential to disturb an area of known or possible archeological sites, or in areas that have not been inspected for archaeological resources within the past 5 years, Environmental Review will be completed & additional research, archaeological survey, and/or testing will be carried out to determine if significant cultural resources exist.	CDFW to ensure implementation.	Prior to project

Archaeo-logical research & fieldwork	**CR3**: Any fieldwork such as archaeological survey, testing, or other onsite research shall require internal pre-project environmental review & potentially permitting if work is being done by outside consultants or non-state entities.	CDFW to ensure review.	Prior to fieldwork
Cultural resources	**CR4**: Locations of previously recorded cultural sites shall be made known to CDFW staff (e.g., Reserve manager, game wardens) so that they can monitor site conditions & watch for deterioration and/or vandalism.	CDFW to ensure implementation.	Prior to site monitoring
Cultural resources	**CR5**: The effects of visitor use & natural erosion on known cultural resource sites shall be assessed.	CDFW to ensure implementation.	Continuous
Historical resources	**CR6**: Additional studies (e.g., archival research, detailed site & structure recordation, GIS mapping, subsurface testing, etc.) shall be conducted for any proposed project or undertaking that has the potential to disturb any known or potentially eligible historical resource; care will be taken to ensure that the associated evaluations are not destructive to the resource..	CDFW to ensure implementation.	Prior to project
Cultural resources	**CR7**: Any new facilities including roads, trails, fence lines, structures, etc. shall be designed & constructed to avoid cultural resources to the extent possible. As per professional standards for assessing & mitigating significant impacts to historical resources, treatment measures in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf) will be implemented to reduce potential significant impacts to a level less than significant.	CDFW to ensure implementation.	Prior to, & during project
Cultural resources	**CR8**: If unexpected cultural remains are uncovered during any project activities, work will be stopped in that area so that the resource can be recorded, the nature of the deposit can be determined, & an appropriate avoidance, protection, or recovery plan can be implemented.	CDFW to ensure implementation.	During project
Cultural resources	**CR9**: Introduction of incompatible elements shall be avoided. Restoration & replacement of historic architectural features should be based on detailed & accurate representation of original features as substantiated by historical, physical, pictorial, or archaeological evidence.	CDFW to ensure implementation.	During project

LMP ELEMENT	MITIGATION MEASURES – HUMAN REMAINS	MONITORING REQUIREMENT	TIMING OF ACTION
Human remains	**CR10**: In the event that human remains are discovered, work will cease immediately in the area of the find & the project manager will notify the appropriate CDFW personnel. The CDFW Reserve manager, regional manager, or authorized representative will notify the County Coroner/Medical Examiner in accordance with §7050.5 of the California Health & Safety Code. If the coroner/ME determines the remains represent Native American internment, the Native American Heritage Commission in Sacramento will be consulted to identify the most likely descendants & appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete. (PRC §5097.98).	CDFW to ensure implementation.	During project

VI. ENERGY. Would the project:

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

Environmental Setting

The LMP describes the management activities expected to occur for operations and maintenance of the Reserve. The public uses are also described in the LMP. Neither the management or public uses (existing or proposed) would be considered significant regarding consumption of energy. Reserve is primarily managed with low energy use (hand tools and small gas powered implements), and the public uses allowed do not require energy consumption.

Discussion

a) The LMP would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

b) The LMP does not conflict with or obstruct any renewable energy plan or energy efficiency plan.

VII. GEOLOGY AND SOILS. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Environmental Setting

The Reserve is located on the western slopes of the Peninsular Ranges. Topographic relief is diverse and, in some cases, extreme. The following information on geology and geomorphology was obtained from the Geology of Southern California (Decourten 2009). Reminiscent of the Sierra Nevada, the western slope of the Peninsular Ranges descends gradually through a foothills zone to the coastal plain of southern California. Rivers such as the San Luis Rey, Santa Margarita, and San Dieguito flow west through the foothills zone in scenic canyons similar to those in the Sierra Nevada foothills. In fact, the Peninsular Ranges and the Sierra Nevada appear to have more in common than just their overall physiography. The bedrock patterns of the two regions are also similar, suggesting some parallels in the geologic history.

Soils found on the Reserve, and their terrain type, include:

- Cieneba rocky coarse sandy loam, 9 to 30 percent slopes (eroded)
- Cieneba-Fallbrook rocky sandy loams, 30 to 65 percent s lopes (eroded)
- Fallbrook sandy loam, 15 to 30 percent slopes (eroded)
- Fallbrook sandy loam, 9 to 15 percent slopes (eroded)
- Riverwash
- Rough broken land
- Tujunga sand, 0 to 5 percent slopes

- Visalia sandy loam, 2 to 5 percent slopes

Those soil types found in an eroded state are considered having the potential for erosion hazards and fall into categories A, C and D (see LMP Chapter II.B.2.) and briefly described below:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Major earthquake fault lines in southern California include the San Andreas, San Jacinto, Elsinore and Imperial Fault lines. The Reserve is not within or near these fault lines, however, as evidenced by occasional earthquakes throughout southern California, earthquake damage is still possible if/when a strong earthquake hits.

Discussion

a) The proposed LMP would not expose people or structures to potential substantial adverse effects including the risk of loss, injury or death due to earthquakes and other related geologic hazards. Review of the most recent Alquist-Priolo Earthquake Fault Zoning Map (https://www.conservation.ca.gov/cgs/alquist-priolo) determined that the Reserve is not located within an Earthquake Fault Zone, thus minimizing the potential for adverse impact due to geologic activity.

b) There are no planned activities that would result in substantial soil erosion or the loss of topsoil. Periodic road grading and its associated compaction should limit the potential for erosion impacting the Reserve's one unpaved road; moreover, use of the road would be limited to CDFW staff and Emergency operations.

c) The project is a LMP; and no existing buildings are located on the Reserve. As such, nothing is located on soils that are unstable, or that could become unstable as a result of the project and potentially result in either on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. No new structures are planned as a part of this LMP.

d) This LMP does not propose construction of any new buildings, no expansive soils testing per the Uniform Building Code shall be completed at this time.

e) There are no existing septic systems and there will be no construction of new systems as part of this LMP.

f) No unique paleontological resources or unique geologic features shall be directly or indirectly destroyed.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Environmental Setting

Greenhouse Gas (GHG) emissions are said to result in an increase in the earth's average surface temperature commonly referred to as global warming. This rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system, known as climate change. These changes are now broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels (Cañada de San Vicente LMP, 2016).

GHGs include carbon dioxide, methane, halocarbons (i.e. HFCs), and nitrous oxide, among others. Human induced GHG emissions are a result of energy production and consumption, and personal vehicle use, among other sources. A regional GHG inventory prepared for the San Diego Region identified on-road transportation (cars and trucks) as the largest contributor of GHG emissions, accounting for 46% of the total regional emissions. Electricity production and natural gas combustion were the second (25%) and third (9%) largest regional contributors, respectively, to regional GHG emissions.

Climate changes resulting from GHG emissions could produce an array of adverse environmental impacts including water supply shortages, severe drought, increased flooding, sea level rise, air pollution from increased formation of ground level ozone and particulate matter, ecosystem changes, increased wildfire risk, agricultural impacts, ocean and terrestrial species impacts, among other effects.

In 2006, the State passed the Global Warming Solutions Act of 2006, commonly referred to as AB 32, which converted the greenhouse gas emissions reduction goal for the State of California into law. The law mandates that by 2020, State emissions must be reduced to 1990 levels by reducing greenhouse gas emissions from significant sources via regulation, market mechanisms, and other actions.

According to the San Diego County Greenhouse Gas Inventory (2008), the region must reduce its GHG emissions by 33 percent from "business-as-usual" emissions to achieve 1990 emissions levels by the year 2020. "Business-as-usual" refers to the 2020 emissions that would have occurred in the absence of the mandated reductions.

Senate Bill 375 (SB 375), passed in 2008, links transportation and land use planning with global warming. It requires the California Air Resources Board (ARB) to set regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles. Under this law, if regions develop integrated land use, housing, and transportation plans that meet SB 375 targets, new projects in these regions can be relieved of certain review requirements under CEQA. Development of regional targets is underway and the San Diego Association of Governments (SANDAG) is in the process of preparing the region's Sustainable Communities Strategy (SCS) which would be a new element of the 2050 Regional Transportation Plan (RTP). The strategy would identify how regional greenhouse gas reduction targets, as established by the ARB, would be achieved through development patterns, transportation infrastructure investments, and/or transportation measures or policies that are determined to be feasible. In addressing the potential for a project to generate GHG emissions that would have a potentially significant cumulative effect on the environment, a 900 metric ton threshold was selected to identify those 38 projects that would be required to calculate emissions and implement mitigation measures to reduce a potentially significant impact. The 900 metric ton screening threshold is based on a threshold included in the California Air Pollution Control Officers Association white paper (CAPCOA 2009) that covers methods for addressing greenhouse gas emissions under CEQA. The CAPCOA white paper references the 900 metric ton guideline as a conservative threshold for requiring further analysis and mitigation. The 900 metric ton threshold was based on a review of data from four diverse cities (Los Angeles in southern California and Pleasanton, Dublin, and Livermore in northern California) to identify the threshold that would capture at least 90% of the residential units or office space on the pending applications list. This threshold would require a substantial portion of future development to minimize GHG emissions to ensure implementation of AB 32 targets are not impeded. By ensuring that projects that generate more than 900 metric tons of GHG implement mitigation measures to reduce emissions, it is expected that a majority of future development would contribute to emission reduction goals that would assist the region in meeting its GHG reduction targets.

It should be noted that an individual project's GHG emissions would generally not result in direct impacts under CEQA, as the climate change issue is global in nature; however, an individual project could be found to contribute to a potentially significant cumulative impact. CEQA Guidelines Section 15130(f) states that an EIR shall analyze greenhouse gas emissions resulting from a proposed project when the incremental contribution of those emissions may be cumulatively considerable. This document is not an EIR and impacts under GHG are listed as "no impact" on the Initial Study checklist.

San Diego County is presently in non-attainment for the 1-hour concentrations under the California Ambient Air Quality Standard (CAAQS) for O3. San Diego County is also presently in

non-attainment for the annual geometric mean and for the 24-hour concentrations of Particulate Matter less than or equal to 10 microns (PM10) under the CAAQS. O3 is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage; and pesticides. Sources of PM10 in both urban and rural areas include motor vehicles, wood burning stoves and fireplaces, dust from construction, landfills, agriculture, wildfires, brush/waste burning, and industrial sources of windblown dust from open lands.

The Project Area is contained within the San Diego Air Basin. This air basin has varying levels of attainment or non-attainment for criteria pollutants. One of the main determinants of the climatology of the San Diego County is the presence and location of a semi-permanent, high pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, the Pacific High is located well to the north, causing storm tracks to be directed to the north and producing clear skies in San Diego County. However, during the winter, the Pacific High moves southward, and low-pressure storms are brought into the county, resulting in widespread precipitation. The heaviest precipitation occurs from November through April, averaging 6-15 inches along the coast to over 30 inches in the Laguna Mountains. The desert areas receive less than 9 inches per year. The average mean temperature is 62.2°F, and the maximum and minimum mean temperatures are 75.7°F and 48.5°F, respectively. The wind in the project area blows predominantly from the northwest most of the year with winds from the east confined to drier periods in late summer and fall. A major portion of the air pollution affecting the project area is wind-transported and likely arises from urban sources such as San Diego, Riverside, and the greater Los Angeles area. Tropical storm fronts occasionally enter the area from the south and east, carrying quantities of fine dust and silt. There is also air pollution generated inside the project area. Vehicles operating on the highways, surface streets, and dirt roads of the county produce exhaust emissions and contribute to the air-borne particulate matter (dust and sand).

Air quality impacts from the proposed project operations are the result of emissions from motor vehicles associated with the project. This study utilizes the San Diego County Land Use Environment Group (LUEG) established guidelines for determining significance which incorporate the Air Pollution Control District's (SDAPCD) established screening-level criteria for all new source review (NSR) in APCD Rule 20.2. These screening-level criteria are used as a numeric method to demonstrate that a project's total emissions (e.g. stationary and fugitive emissions, as well as emissions from mobile sources) would not result in a significant impact to air quality. Since APCD does not have screening level criteria for emissions of VOCs, the use of the screening level for reactive organic compounds (ROC) from the South Coast Air Quality Management District (SCAQMD) for the Coachella Valley (which are more appropriate for the San Diego Air Basin) are used.

The nature of this project does not involve any related construction and therefore would only generate operational emissions associated with vehicle trips. According to the Bay Area Air Quality Management District CEQA Guidelines for Assessing the Air Quality Impacts of Projects and Plans, projects that generate less than 2,000 average daily traffic (ADT) are below the screening-level criteria established by the LUEG guidelines for determining significance. As such, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, the vehicle trips associated with the proposed project are not expected to significantly contribute to an existing or projected air

quality violation. No other potential sources of air pollutants have been identified based on the projected activities in the project description.

Discussion

a) The project is expected to generate less than 900 metric tons of GHG emissions based on estimates of GHG emissions for various project types included in the CAPCOA white paper. Emissions from the project would be generated from small trucks or emergency vehicles. The project's GHG emissions are found to have a less than cumulatively considerable contribution to GHG emissions because the project would generate less than 900 metric tons of GHGs.

   Furthermore, projects that generate less than 900 metric tons of GHG would also participate in emission reductions because air emissions including GHGs are under the purview of CARB (or other regulatory agencies) and would be "regulated" either by CARB, the Federal Government, or other entities. As a result, even the emissions that result from projects that produce less than 900 metric tons of GHG would be subject to emission reductions. Likewise, the project would also participate in the mandated emissions reductions through energy and resource use that is subject to emission reduction mandates beyond "business-as-usual."

   Therefore, it is determined that the project would not result in significant impacts to the environment associated with GHG emissions and no mitigation is required.

b) As state and local plans are further developed to address greenhouse gas emissions, such as a local Sustainable Communities Strategy and updated General Plan Policies, the project can be further evaluated to determine whether it would impede the implementation of AB 32 GHG reduction targets. For the reasons discussed in the response to question VIII. a. above, the project would not impede the implementation of AB 32 reduction targets. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Environmental Setting

Hazardous waste may be present within construction materials used for CDFW information kiosks or in remnant structures within the Reserve. Appropriate testing, as necessary, of

building materials that have potential to contain hazardous materials shall take place prior to construction/demolition to minimize risks to human health.

Discussion

a-d) Implementation of the proposed LMP is not anticipated to involve the transport, use or disposal of any hazardous materials; accidental release of hazardous materials, substances or waste; emission or handling of hazardous waste within one quarter mile of an existing or proposed school; or location on a site which is listed as a hazardous material site.

e) The Reserve is not located within two miles of a public airport, public use airport or private airstrip.

f) No emergency response plans or emergency evacuation plans shall be impaired by implementation of the LMP. Existing response plans would remain in place in the event of an emergency.

g) Although a small increase in public visitation to the Reserve could occur as a result of the proposed LMP, its implementation shall not expose people or structures to a significant risk of loss, injury or death from wildland fires. Additionally, general fire management procedures (e.g., roads/firebreaks) would be implemented on the Reserve to control and minimize the threat of wildfires.

LMP ELEMENT	MITIGATION MEASURES – HAZARDS/HAZARDOUS MATERIALS (HAZ)	MONITORING REQUIREMENT	TIMING OF ACTION
Hazardous substances	**Haz 1:** In the case that hazardous waste such as lead or asbestos are found within building materials that will be impacted during modification or demolition, appropriate measures will be taken to ensure their safe removal & compliance with appropriate laws & regulations.	CDFW to ensure implementation.	During project
Fire	**Haz 2:** Fire Management activities such as fuel modification shall be subject to site specific planning with CAL FIRE & conducted in accordance with CAL FIRE & CDFW regulations & policies.	CDFW to ensure implementation. CAL FIRE to confirm.	Prior to project

X. HYDROLOGY AND WATER QUALITY. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☐	☒
i) result in a substantial erosion or siltation on- or off-site;	☐	☐	☐	☒
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☒	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Environmental Setting

The Reserve is located in a rural and incorporated portion of San Diego County in the California Floristic Province, Southwest Region, Peninsular Ranges Subregion (Hickman 1993). Elevations range from 600 to 1,900 feet above sea level. The climate is considered Mediterranean and fluctuates with seasons of hot dry summers and mild wet winters. Average annual rainfall is approximately 16-22 inches, which falls as rain primarily from November-April. Temperatures range from highs of 67-100+ degrees F and lows from 37-57 degrees F. The freeze-free period is from 275 - 350 days (Miles and Goudey 1997).

The Reserve occurs within the San Dieguito watershed, which covers approximately 346 acres. About 83% of the watershed is open space and provides habitat for hundreds of species of plants and animals. The San Dieguito River officially begins at the confluence of two streams, Santa Ysabel Creek and Santa Maria Creek. Santa Ysabel Creek flows westward through the Reserve at its southern end (San Dieguito River Wikipedia). The unnamed tributary through Boden Canyon drains into Santa Ysabel Creek. Water sources in the Reserve range from ephemeral drainages and year-round springs; seasonal seeps which flow only in high rainfall years. There is a man-made pond in the center of the Reserve that fills generally each winter, depending on the amount of rain, and is often dry by early summer. During periods of prolonged draught, the pond remained dry for years.

Riparian and other aquatic habitats found on the Reserve are associated primarily with Santa Ysabel Creek and the Boden Canyon tributary. These habitats provide food, water, cover, and migration and dispersal corridors for an abundance of wildlife including the federally-listed endangered arroyo toad and least Bell's vireo (also state-listed). Other special-status species that occur in these habitats include the western spadefoot, two-striped garter snake, yellow warbler, yellow-breasted chat and pallid bat. Approximately half of the 162 avian species observed on the Reserve were detected in riparian vegetation. Game species found in these habitats include wild turkey and mourning dove.

There are a number of old wells within the Reserve, none of which are in working condition. There is no information on when they were drilled or when they were operational, however, it is assumed they were present during the homestead years of the early to mid-1900's.

Discussion

a) Implementation of the proposed LMP would not violate any water quality standards or waste discharge requirements; no activities are proposed which would result in the discharge of water or wastewater.

b) Activities associated with the LMP are not expected to deplete or interfere with groundwater recharge. Rainwater would fill existing wildlife watering devices (guzzlers). CDFW would evaluate and repair/enhance springs, guzzlers, and existing wells to enhance water availability for wildlife as funding and staffing are available. Should expanded or additional water supplies be required, an evaluation of potential impacts to groundwater supplies/recharge would be needed before new construction occurs.

c) The LMP would not alter any of the existing drainage courses by grading, construction of new buildings or paved areas. The drainage pattern of onsite creeks would not be altered, and the project would not increase the rate or amount of surface runoff.

    i. The LMP will not result in substantial erosion or siltation on- or off-site

    ii. The LMP should not result in the substantial increase or amount of surface runoff resulting in flooding on- or off-site; however, there is a low potential for the existing small dam located in the Reserve to fail during a less than 100-year rain event that could cause an increase of surface flow downstream. There is one existing earthen dam and an associated concrete spillway in the center of the Reserve constructed in or around 1979. While the dam and spillway have been in existence for decades, the dam is undocumented, and its structural integrity is unknown. A qualitative assessment of the dam and spillway was conducted in 2020 under a WCB Grant to the San Diego Natural History Museum and a report was prepared (Cairns, CValdo Corporation, 2021). The assessment and conclusion were provided to CDFW. The dam is roughly 32 feet high and contained approximately 9 acre-feet of surface storage in May of 2020. The underground storage capacity is unknown and would require a bathymetric study be done to determine it. Due to the unknown below ground water storage it is not definitive whether or not this dam falls under jurisdiction of the California Division of Safety of Dams (DSOD, (https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams/Jurisdictional-Sized-Dams)). Regardless, the dam and spillway were evaluated and determined to be in poor condition. The concrete slope is failing, there is piping failure and a potential for over-topping during a less than 100-year storm event is possible. The report stated, however, that due to the “small size of the reservoir impacts to life or property associated with failure of the dam are less than that of many of the dams within the DSOD jurisdiction” (Cairns, CValdo, 2021). Recommendations made include repair, replacement, removal or breaching of the dam during dry weather conditions. The relatively minor act of breaching (compared to dam repair or removal) would alleviate the potential for overtopping of the dam and reduce the risk of downstream damage. CDFW will pursue this recommendation and as a result this potential impact is less than significant with mitigation incorporated.

Additionally, keeping the dam as-is could potentially affect habitats and species if it were to over top in a storm event; the discharge of fine silt that could temporarily alter the sandy conditions of Santa Ysabel Creek and reduce its suitability for Arroyo Toad use through increasing the amount of suspended sediments. Conversely, in the event of a catastrophic failure of the dam, considerable hydrologic scouring could occur in a manner that reshapes the reasonably flat sandy confluence of Boden Canyon and Santa Ysabel Creek. This flood scouring could result in the creation of shallow ponds excavated out of the sandy sediments. All storm events are acts of nature and unpredictable and, as such, actual impacts cannot be known until they occur.

See Mitigation Measure "WQ 9" below that will reduce this potential impact to a level less than significant

iii. The LMP would not create or contribute to runoff water that would exceed stormwater drainage systems or contribute to polluted runoff.

iv. The LMP would not impede or redirect flood flows.

d) The Reserve is not located in a flood hazard zone, a tsunami zone or a seiche zone that would result in release of pollutants. Large enough water bodies do not exist close enough for threat of either seiche or tsunami. Although erosion potential is possible, the threat of inundation by mudflow is minimal.

e) The LMP would not conflict with or obstruct implementation of any water quality or groundwater management plan.

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
Erosion & sedimentation	**WQ 1:** BMPs to address erosion & excess sedimentation shall be incorporated into activities/operations that have the potential to cause discharges off-site. Weed-free products will be used to the extent possible to minimize the spread of exotics.	CDFW to ensure implementation.	During project
Site maintenance	**WQ 2:** BMPs employed during surface-disturbing activities shall comply with all applicable water quality standards.	CDFW to ensure implementation.	During project
Site maintenance Sensitive vegetation	**WQ 3:** No vegetation clearing or land disturbance within the stream channels shall be conducted without prior authorization from CDFW, U.S. Army Corps of Engineers, & Regional Water Quality Control Board, as appropriate.	CDFW to ensure implementation.	Prior to project

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
Site maintenance Sensitive vegetation Sensitive species	**WQ 4**: Pesticide & herbicide use within riparian & wetland areas shall be limited/controlled. Any applications shall be conducted in accordance with herbicide labelling & recommendations from CDFW personnel possessing a valid Qualified Applicator License/Qualified Applicator Certificate.	CDFW to ensure implementation.	Continuous
Construction	**WQ 5:** Debris or runoff, generated as the result of a project, shall be directed away from any drainage and/or culverts to prevent deposition into waterways.	CDFW to ensure implementation.	During project, & post-project
Well installation	**WQ 6:** Any additional wells that would be installed on the Reserve shall be subject to the California Well Water Standards, as applicable & may require additional CEQA review.	CDFW to ensure implementation.	Prior to project
Site maintenance	**WQ 7:** All repairs to wells, springs & guzzlers will be conducted in the daytime & outside of the bird nesting season (generally March 1-September 1) unless a biologist conducts pre activity surveys within one week of scheduled repairs & determines there will be no impacts to nesting birds.	CDFW to ensure implementation.	During project
Site maintenance	**WQ 8:** Impacts to Santa Ysabel Creek, Boden Canyon drainage, riparian areas, & wetlands shall be minimized during road use or maintenance activities through the use of BMPs, timing/scheduling of work, & other measures, as deemed appropriate to conditions on-site.	CDFW to ensure implementation.	Continuous
Evaluation and Routine Monitoring	**WQ 9:** Experts in the field of dam safety evaluated the existing dam and provided a report with recommendations to CDFW. This report will be submitted for budgetary action and implementation at the first opportunity. A monitoring program designed to track the stability and safety of the dam and spillway during the interim will be developed and routinely implemented.	CDFW to ensure implementation of recommendations.	Funding was allocated to a Hydrology and Hydraulics Study in 2019; results were provided to CDFW in 2021 and incorporated

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
			herein and in the LMP.

XI. LAND USE AND PLANNING. Would the project:

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Environmental Setting

No communities exist within the Reserve.

Discussion

a) No communities exist within the Reserve nor could the Reserve divide an established community.

b) The LMP would not conflict with any other plans relating to the Reserve. The Reserve is located in the General Plan area known as “North County Metro” and is in the far southeastern end of that unit. The unit lies just north of the Ramona Community Plan planning boundary and is just east of the San Dieguito planning area. Chapter 5 (Conservation and Open Space Element) of the County’s 2011 General Plan incorporates the area around the Reserve which is consistent with the planned management and use of the Reserve. The LMP would not conflict with any applicable habitat conservation plan or natural community conservation plan. Refer also to Section IV of the LMP.

XII. MINERAL RESOURCES. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Environmental Setting

Mineral resource extraction is not occurring on the Reserve, nor is it a land use that is compatible with the mission of CDFW.

Discussion

a-b) No mineral sources of value to the region, residents of the state or locally are known within the Reserve. No known mining activity has occurred on the Reserve.

XIII. NOISE. Would the project result in:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

The Reserve is considered open space and there is no source of noise currently emanating from the area. Limited seasonal hunting on the Reserve includes the sound of periodic gunfire, but such activities occur under regulated seasons and conditions. The size of the property and the fact that hunting also occurs on the adjacent Cleveland National Forest to the east limits the significance of noise impacts on adjacent private properties.

Discussion

a) Implementation of the LMP would not expose people or generate noise levels in excess of any standards established by local, state, or federal standards nor increase the ambient noise levels in the vicinity of the Reserve.

b) Implementation of the LMP would not expose people or generate excessive ground-borne vibrations or noise levels.

c) The Reserve is not located within two miles of a public or public use airport or in the vicinity of a private airstrip.

LMP ELEMENT	MITIGATION MEASURES – NOISE (NO)	MONITORING REQUIREMENT	TIMING OF ACTION
Recreational compliance Noise	**NO 1:** The hunting program will be conducted in accordance with all CDFW hunting regulations, seasons, times and policies.	CDFW to ensure implementation.	Continuous

XIV. POPULATION AND HOUSING. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

There are no existing dwelling structures within and none are planned for the Reserve.

Discussion

a) Implementation of the LMP would not induce any substantial population growth, either directly or indirectly.

b) No housing or people would be displaced as a result of implementation of the LMP.

XV. PUBLIC SERVICES. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Environmental Setting

The Reserve is managed as open space with limited management and a low density of public users. CDFW has its own law enforcement staff that conduct routine patrols within the Reserve. Emergency responders have access into the Reserve as is necessary. The LMP does not create the need for an increase in public services.

Discussion

a) The LMP does not create the need for any governmental facilities, or the need to physically alter or construct any facilities. The LMP does not require any increase in Fire or Police Protection, Schools, Parks, or other public facilities. The Reserve is under a Cooperative Agreement with CalFire for protection as a State Responsibility Area.

XVI. RECREATION:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting

The Reserve provides wildlife-dependent recreational activities such as research, education and hunting opportunities. Public uses of the property are limited and regulated. Any changes to the existing uses within the Reserve would need to be proposed by CDFW or other party and authorized by the Fish and Game Commission pursuant to the California Code of Regulations (CCR) Title 14, Sections 550 and 630.

Discussion

a) Implementation of the LMP would not induce substantial increased use of the Reserve or of other nearby recreational facilities, nor would it increase use of regional parks or facilities.

b) The LMP does not include construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

XVII. TRANSPORTATION. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Environmental Setting

Visitors can reach the Reserve via Orosco Ridge Road near Pamo Valley through the Cleveland National Forest. For detailed directions, see the CDFW website for Boden Canyon Ecological Reserve at (https://www.wildlife.ca.gov/Lands/Places-to-Visit/Boden-Canyon-ER). Vehicular access for management, monitoring, enforcement and emergency access is through an existing locked gate at a small turn out off Highway 78.

Discussion

a) The level of "Less than Significant" is appropriate because the LMP does not currently conflict with any circulation system for transportation. However, there is a planned trail segment of the Coast to Crest (CTC) Trail through the southern-most section of the Reserve that is proposed by other entities which envisions use by pedestrians, equestrians, and bicyclists. It may be determined to be "Significant" or "Less than Significant with Mitigation" in the future by those entities planning the trail. This proposed trail segment also includes non-CDFW property to the east and west of the existing trail in the Reserve that is currently "pedestrian only" due to the steep and rocky terrain. The San Dieguito River Park Joint Powers Association (JPA) has a Concept Plan that includes a portion of the Reserve, and that same Concept Plan is referenced in the San Diego County Trail's Master Plan and is mentioned in the City of San Diego's draft Master Parks Plan. The CTC Trail is also listed with other trails in the 2011 State Parks Corridor Map and associated discussion. While the Plans themselves may be approved, the trail segment within the Reserve has not been engineered, provided to CDFW for comment or submitted through the CEQA process. The currently proposed trail alignment through the Reserve is not feasible as it would route users through sensitive riparian habitat where listed species have been known to be present. Potential may exist to use the existing dirt road, however connections to the west appear arduous and potentially inappropriate for horses and bikes. CDFW will provide access to the JPA or other entities for any trail planning effort located within the Reserve and will coordinate with them, the County or City on any trail-planning issues (for more information on the current and proposed trail in this area see the JPA website at sdrp.org).

It is not expected to result in substantial increase in traffic to the area. No policies, plans or programs supporting alternative transportation shall be affected by implementation of the LMP. The Reserve has been open for public use since the late 1980's. Uses include hunting, research, hiking and nature study.

b) The LMP does not conflict with any CEQA provisions, including Section 15064.3 of the CEQA Guidelines.

c) The LMP contains no design features or incompatible uses that would increase hazards.

d) Emergency access shall remain sufficient.

XVIII. TRIBAL CULTURAL RESOURCES.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	☐	☐	☐	☒
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Environmental Setting

See Section V. Cultural Resources above.

Discussion

See Section V. Cultural Resources above.

a) The LMP would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is either listed in the California Register of Historical Resources, or has been determined by the lead agency to be significant.

A records search for and inventory of Cultural and Historic Resources within the Reserve was conducted in 2020. A Cultural Resources Treatment and Protection Plan was also developed. All Mitigation Measures developed under Section V above apply to this section as well.

XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Setting

There are several old wells in non-operational condition on the Reserve. There are no electrical services or other utilities on the Reserve nor are they planned to be installed within the Reserve.

Discussion

a) The LMP does not call for any development or activities that would result in new or expanded utilities or service systems.

b) The LMP does not anticipate the need to construct new water supply systems. water or wastewater facilities.

c) The LMP does not call for any wastewater treatment systems.

d) The LMP does not propose any development that would generate solid waste in excess of state or local standards.

e) There are no visitor portable toilets, nor any water, sewer, or solid waste utilities at the Reserve, hence all federal, state, and local statutes shall be complied with for the management of solid waste.

XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental Setting

The project area is located in a fire hazard severity zone classified as “Very High” and falls within a State Responsibility Area (SRA). SRAs are designated by the Board of Forestry pursuant to Public Resources Code section 4125, where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the State of California.

Water for fire suppression within the Reserve is limited to the availability of open water in the pond in the central part of the Reserve. If the pond is dry, the nearest available water to the Reserve is Lake Wohlford (6.7 mi) and/or Lake Sutherland (7.0 miles) away. The closest fire stations to the Reserve are Ramona Fire Department Station #82 (7.9 miles), and the CAL FIRE Ramona Station #86 (12 miles) away.

While fire protection is important to this relatively remote and dry, fire-prone area, the lack of new development proposed by the LMP would result in no impact on public services in the area, including fire protection.

Management concerns include fire risk due to the prevalence of nonnative grasses in the woodland understory and the proximity of chaparral and scrub habitats with high fuel loads. Wildfires such as the 2007 Witch Creek Fire, which burned over 1,200 acres of the Reserve, are fed by these high fuel loads and under dry, hot or windy conditions are a threat to existing development and human safety. Wildfire management is essential for human safety and to minimize catastrophic fire damage to vegetation, wildlife and other resources on the Reserve.

Discussion

a) The LMP would not impair any adopted emergency plan.

b) The project (the LMP) contains no occupants so would not expose any occupants to pollutants or the uncontrollable spread of wildfire. However, any staff or public users that might be on the Reserve at the time of a wildfire would need to react swiftly and exit the area immediately.

c) The Reserve contains a maintained dirt road that runs north-south in the center of the canyon. This dirt road also acts as a fuel break. It is maintained annually or as-needed by CalFire through our joint agency Operating Agreement.

d) The LMP would not expose people to significant risks as a result of post-fire slope instability or drainage changes. As mentioned in b) above, any staff or public that visits the Reserve should always be aware of their surroundings. This includes being watchful for natural events that may occur at any time when in the back country.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) The project (the LMP) does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or native animal community, reduce the number or restrict the range of a rare or endangered plant or animal, as long as the Mitigation Measures included in Chapter 3 of this document (and compiled in Chapter 5 below) are implemented. Habitat improvement over the long-term is likely to occur as a result of efforts to reduce non-native/invasive weed populations on sensitive habitat throughout the Reserve.

   Project design and cultural resource mitigation measures would ensure that there is a less than significant impact to this area. While management, maintenance of facilities (kiosks, roads, etc), visitor use, and habitat and fire management work all have the potential to disturb surface and/or buried cultural remains, none of these activities is expected to have a significant impact to known or potential cultural resources. Completion of the LMP would allow the CDFW to efficiently manage and monitor the Reserve and conduct applicable research/studies on the Reserve.

b) Less than significant cumulative impacts are associated with the project (the LMP) when viewed in conjunction with the effects of past projects, other current projects and probable future projects.

   The LMP would have less than significant environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly when all mitigation measures and best management practices are followed as described in this document and in the LMP. See discussion above for Section X, item C ii regarding hydrology. In the Reserve.

4. BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

BEST MANAGEMENT PRACTICES

Best Management Practices, or BMPs, are put into place to ensure that tasks and management activities use the practices that are the safest, most effective and efficient, and cause little to no impacts to resources, the environment and to humans. BMPs are mentioned in certain mitigation measures for Biology (BIO 5, BIO 18, BIO 26) and Hydrology/Water Quality (WQ1 WQ2, WQ8). Standard protocols are also called-for in this document and are included in the mitigation measures for Air Quality (AQ1). Additionally, there are standard protocols for surveying listed species, for conducting habitat or vegetation assessments, strategies from technical bulletins, code sections, and/or when planning or implementing engineering and construction tasks. Where there are BMPs, standard or professional protocols, or guidelines, CDFW will follow them to the maximum extent when implementing the LMP.

Where there are no industry standards or guidelines, CDFW will work with appropriate staff and experts in the select fields to develop and implement them in order to provide a consistent approach to land management that is safe, efficient and effective. Specifically, AR1, BIO14, BIO21, BIO25, and WQ9 mention where CDFW will be developing guidelines, materials or a program for the Reserve.

MITIGATION MONITORING PLAN

The purpose of this Mitigation Monitoring Plan (MMP) is to ensure effective implementation of the Mitigation Measures identified by the Initial Study/MND and proposed by CDFW as part of the Land Management Plan. The MMP consists of the mitigation measures contained in this MND and in the consolidated table below (Table 2).This MMP includes:

- Mitigation measures that the CDFW must implement as part of the proposed project
- The actions required to implement these measures
- The monitoring requirements; and
- The timing of implementation for each measure.

CDFW will use this MMP as the framework for annual monitoring that will be completed on the Reserve.

The CDFW will carry out construction field monitoring to ensure full implementation of all measures. CDFW staff shall also have the authority to stop work if necessary and shall issue non-compliance notices, as appropriate.

MINOR PROJECT CHANGES OR VARIANCES

CDFW Reserve Manager will ensure that any proposed minor project changes that may be necessary due to final engineering or variances or deviations from the procedures identified under the monitoring program are consistent with CEQA requirements. No minor project changes or variances will be approved by CDFW if they are located outside of the geographic

boundary of the project study area or create new or substantially more severe significant impacts. A variance should be strictly limited to minor project changes that will not trigger other permit requirements unless the appropriate agency has approved the change, does not increase the severity of an impact or create a new impact without appropriate agency approval, and clearly and strictly complies with the intent of the mitigation measure or applicable law or policy.

A proposed project change that has the potential for creating significant environmental effects will be evaluated to determine whether a petition to modify and/or supplemental California Environmental Quality Act (CEQA) review is required. Any proposed deviation from the approved project, adopted mitigation measures, and correction of such deviation, will be reported immediately to CDFW Reserve Manager for review. The CDFW Reserve Manager will review the variance request to ensure that all of the information required to process the minor project change is included. In some cases, project refinements may also require approval by jurisdictional agencies. In general, a minor project change request must include the information listed below.

- Detailed description of the location, including maps, photos, and/or other supporting documents;
- How the variance request deviates from a project requirement;
- Biological resource surveys or verification that no biological resources would be significantly impacted;
- Cultural resource surveys or verification that no cultural resources would be significantly impacted; and
- Agency approval (if necessary).

Table 2. Consolidated Mitigation Measures

LMP ELEMENT	MITIGATION MEASURES – AESTHETIC RESOURCES (AR)	MONITORING REQUIREMENT	TIMING OF ACTION
Site maintenance	**AR 1**: Guidelines will be developed that outline materials & methods to be used for fencing & signs.	CDFW to develop guidelines.	Prior to site maintenance
Recreational monitoring & compliance	**AR 2**: Public use of the Reserve will be regulated & monitored, with only pedestrians permitted. Vehicle use on roads will be limited to Department staff, emergency response, & pre-approved groups (e.g., for biological surveys, special events, etc.).	CDFW to ensure implementation & monitoring.	Continuous
Recreational access	**AR 3:** All trail use will conform to CDFW regulations and policies.	CDFW to ensure implementation & monitoring.	Continuous
Recreational access	**AR 4**: To help ensure potential impacts to resources are insignificant, any potential future trails within the Reserve proposed by others will be established within the footprint of the existing dirt road using the shortest & most direct route possible. These other parties would need to conduct applicable CEQA review and obtain necessary permits.	CDFW to evaluate & ensure implementation.	Prior to trail construction
Recreational monitoring	**AR 5**: Continually evaluate recreation activities to identify & report changes that are warranted to maintain consistency with Reserve goals.	CDFW to evaluate on a regular basis.	Continuous

LMP ELEMENT	MITIGATION MEASURES – AIR QUALITY (AQ)	MONITORING REQUIREMENT	TIMING OF ACTION
Site maintenance Fugitive dust	**AQ 1**: Standard protocols for dust & drift control during maintenance activities such as periodic road grading & spraying for control of invasive vegetation shall be followed.	CDFW to ensure implementation.	During site maintenance
Vehicle operations Exhaust emissions	**AQ 2**: Idling of vehicles shall be minimized to the maximum extent.	CDFW to ensure implementation.	During site maintenance & public use activities
Vehicle operations Exhaust emissions	**AQ 3**: Speed limit on all dirt roads shall not exceed 15 MPH.	CDFW to ensure implementation.	During site maintenance & public use activities

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Sensitive species Nesting birds	**Bio 1**: To avoid impacts to nesting birds, the clearing of vegetation (when biologically warranted), shall occur outside of the peak avian breeding season, which generally extends from February 1 through September 1 (as early as January 1 for some raptors and as late as September 15 for some birds). If work is necessary during the breeding season, a qualified biologist shall conduct weekly surveys, starting within three days prior to start to ensure no nesting birds in the area will be impacted by the project. If an active nest is identified, a buffer shall be established between activities & the nest so that birds are not disturbed. The buffer should maintain a minimum radius of 300 feet (500 feet for raptors), or an appropriate buffer determined by a qualified biologist, and be delineated by temporary fencing, & remain in effect as long as work is occurring or until the nest is no longer active. During work, no activities shall take place within the fenced nest zone until the young have fledged, are no longer being fed by the parents, & shall not be impacted by the project. Reductions in the nest buffer distance may be appropriate depending on the species involved, ambient levels of project-related noise, screening vegetation, or other possible factors.	CDFW to ensure implementation, conduct surveys, & confirm.	Prior to, & during construction and/or maintenance

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Native & sensitive vegetation	**Bio 2**: Conduct vegetation surveys prior to initiation of any CEQA defined project.	CDFW to ensure implementation & confirm.	Prior to project
Native & sensitive vegetation	**Bio 3**: Inventory & map the invasive plant populations that pose a threat to sensitive/native vegetation communities on the Reserve.	CDFW to ensure implementation & map.	Every 10 years or following a major disturbance event
Native & sensitive vegetation	**Bio 4**: Conduct annual treatment & control of invasive/nonnative plants, targeting species (e.g., tamarisk, nonnative herbs & grasses) that are detrimental to habitats & species of concern.	CDFW to ensure implementation & report to appropriate agencies.	Annually
Native & sensitive vegetation	**Bio 5**: Use BMPs to minimize the introduction & spread of non-native/invasive plant species. (BMPs for land managers in: http://www.calipc.org/ip/prevention/landmanagers.php)	CDFW to ensure implementation.	Continuous
Wildlife & sensitive species	**Bio 6**: Conduct a tracking study of wildlife use within the Reserve to assess the functionality of the drainage and uplands as a biological corridor. This study will be completed in 2021 and results incorporated into the LMP.	CDFW to ensure implementation & prepare appropriate reporting.	Funding was approved in 2019 and this task is in progress.
Sensitive species	**Bio 7**: Compile an inventory of the individual Engelmann oaks on the Reserve (i.e., locations, DBH, canopy, seedling/sapling counts, & health of individual trees) as part of the oak woodland assessment. Regularly monitor & control oak pests that could threaten the health of oak woodlands. A Diseased Tree Study is in progress and will be completed in 2021.Results will be incorporated into the LMP.	CDFW to ensure implementation.	Funding was approved in 2019 and this task is in progress.
Riparian disturbance	**Bio 8**: Every 5 years, or following a major disturbance event, identify & map areas within riparian/wetland habitat that are at high risk for degradation/conversion. Assess impacts to the habitat & any existing infrastructure, & provide recommendations for corrective action.	CDFW to ensure implementation.	Every 5 years, or following a major disturbance event

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Sensitive habitat	**Bio 9**: Establish permanent vegetation plots & photo stations within the four major habitat communities (i.e., oak woodland, riparian, shrub land, & grasslands) to document existing conditions, management practices, & vegetation changes over time. Institute monitoring procedures, & periodically evaluate & refine the protocol to improve habitat structure/function. Update CALVEG every 10 years or following any major disaster occurring on the Reserve.	CDFW to ensure implementation & report to appropriate agencies.	Continuous
Sensitive species Sensitive land use	**Bio 10**: Coordinate with local entities, State & Federal agencies, universities, other reserve owners, & institutions on methods to develop & sustain biological corridors on a regional level. Work shall include efforts to acquire & conserve critical parcels of land, inventory & monitor the Reserve's natural resources, & public interpretation. A buffer system to minimize conflicts with nearby land uses, & protect native habitat in Boden Canyon, will also be coordinated with appropriate groups.	CDFW to ensure implementation & coordination.	Continuous
Rare & sensitive vegetation	**Bio 11**: Conduct rare plant surveys every 3 to 5 years, as funding & staffing levels allow, to document the presence/absence of sensitive plant species, including Palmer's goldenbush. Occurrences shall be recorded & updated after each field effort, & an evaluation of potential threats to survival/persistence will be completed for each rare plant.	CDFW to ensure implementation & prepare appropriate reporting.	Every 3 to 5 years
Sensitive species	**Bio 12**: Conduct surveys for Harbison's dun skipper every 3 to 5 years as funding & staffing levels allow. Maintain & regularly update GIS information for the species. Enhance habitat in locations both suitable & previously occupied by the Harbison's dun skipper.	CDFW to ensure implementation & prepare appropriate reporting.	Every 3 to 5 years
Sensitive species	**Bio 13**: At a minimum, conduct presence/absence surveys every 1 to 2 years & a habitat assessment for the arroyo toad every 5 years.	CDFW to ensure implementation & prepare required reporting.	Survey every 1 to 2 years; habitat assessment every 5 years

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Public education & training	**Bio 14**: Develop and provide education or training to groups recreating on-site & install signage along the Santa Ysabel Creek and Boden drainage during the arroyo toad breeding season to alert the public/staff of the area's sensitivity.	CDFW to ensure implementation.	Continuous
Sensitive species	**Bio 15**: Control nonnative predators, enhance habitat, seasonally restrict access to arroyo toad breeding locations, & limit roadway use or implement reduced speeds during rainfall events along the main access route and throughout the Reserve.	CDFW to ensure implementation.	Continuous
Sensitive species	**Bio 16**: Conduct least Bell's vireo surveys every 2 to 3 years to establish the presence/absence of the species, habitat usage and trends on the Reserve. Ensure persistence of suitable habitat through maintenance and management.	CDFW to ensure implementation & prepare required reporting.	Every 2 to 3 years
Sensitive species	**Bio 17**: Coordinate and/or participate in local & regional monitoring efforts for raptor species, such as the northern harrier & golden eagle. Potentially limit public use or maintenance activities in known roosting or nesting areas or impose seasonal restrictions to prevent harm/harassment to the species.	CDFW to ensure implementation.	Continuous
Sensitive species	**Bio 18**: Every 5 years, survey the roosting/breeding sites of the Townsend's big-eared bat, and assess the status of the pallid bat, western red bat, and pocketed free-tailed bat on the Reserve through periodic surveys of potential & known roosting/breeding locations. Participate in MSCP/MSP radio-telemetry or other studies or monitoring efforts, as appropriate. Potentially limit public use or maintenance activities within proximity of known roosting/breeding sites or impose seasonal restrictions. Avoidance/Minimization measures for various species should follow strategies proposed in Chapter 7.0 of *Bat and Bridges Technical Bulletin (Hitchhiker Guide to Bat Roosts)* (Erickson et al. (2002).	CDFW to ensure implementation & prepare reporting requirements.	Survey roosting and breeding sites every 5 years

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Wildlife	**Bio 19**: Complete an inventory & population counts for game species on the Reserve & update as needed. Enhance habitat for game & other wildlife species through the creation of brush piles and maintenance of water sources (e.g., guzzlers, wells).	CDFW to ensure implementation.	Continuous, as funding becomes available.
Public education & training Sensitive species Sensitive cultural resources	**Bio 20**: Educational materials shall be provided to educate users regarding all Mitigation Measures required including: protection of cultural resources, protection of natural resources, & protection of species listed by CDFW & USFWS as threatened, endangered, or species of concern.	CDFW to develop training materials and ensure implementation.	Prior to hunting or high use seasons
Site maintenance Sensitive species	**Bio 21**: Repairs to roads, bridges, & culverts will be conducted within the existing footprint of the roads/structures, during normal daytime business hours (except for emergencies). Prior to any road work (surface grading) within arroyo toad use areas roadways will be walked by a biologist to ensure no arroyo toads are present. Removal of vegetation overgrowth of the roads, bridges, & culverts will be conducted outside the bird nesting season (generally, March1-Sepember 1) unless a qualified biologist completes pre-activity surveys to ensure no nesting birds will be impacted. All road gravel that is brought in from outside sources will be washed off-site to help prevent the spread of non-native invasive plants. If a significant impact will be likely, such as the potential take of a listed species, all work will be stopped until it is determined that conditions are safe to continue.	CDFW to ensure implementation & conduct surveys.	Continuous; A Hydrology and Hydraulics study was completed in 2020 and recommendations provided for erosion control relative to culverts and repair of head cuts along roads. This information was incorporated into the LMP.
Site maintenance Wildlife movement Sensitive species	**Bio 22**: To facilitate wildlife movement: survey, evaluate, & remove unneeded internal fencing. No removal or installation of fencing/signage will occur during the bird nesting season (generally March 1-September 1) unless a biologist conducts a pre activity survey within one week of scheduled work & determines there will be no impacts to nesting birds.	CDFW to ensure implementation & conduct surveys.	Continuous
Wildlife	**Bio 23**: Evaluate & repair/enhance springs, guzzlers, & existing wells to enhance water availability for game & other wildlife species.	CDFW to ensure implementation	Continuous

LMP ELEMENT	MITIGATION MEASURES – BIOLOGICAL RESOURCES (BIO)	MONITORING REQUIREMENT	TIMING OF ACTION
Research fieldwork	**Bio 24**: Facilitate & coordinate scientific research required to implement the LMP & focus environmental research on topics that will help CDFW achieve the goals & objectives outlined in the LMP, & thereby enhance adaptive management of the Reserve. Identify research projects that are consistent with LMP goals for environmental research on the Reserve & develop guidelines for submitting proposals for such work. Require submission of field data & final reports of all authorized research conducted on the Reserve.	CDFW to ensure implementation & coordination	Continuous
Sensitive vegetation	**Bio 25**: Non-native plants will be controlled where these species threaten to reduce the quality of habitat for wildlife or where non-natives pose a competitive threat to important native plant communities. Non-native plant species will be controlled using an integrated approach that relies on both non-chemical & chemical (i.e. herbicide) use strategies. The risk that herbicides pose to nontarget organisms is dependent on both exposure & toxicity. This relationship between risk, exposure & toxicity can be assessed using the Hazard Quotient (HQ) method (http://www.fs.fed.us/foresthealth/pesticide/pdfs/PrepEnvirmentalDoc_11-2014.pdf). To reduce the risk posed to wildlife species at the Reserve, no herbicide will be used unless its calculated HQ value is below the Level Of Concern for the appropriate exposure scenario. Additionally, the risk to non-target wildlife & special-status plant species will be reduced by making low-volume, spot treatments using hand-held equipment targeted specifically at non-native plants.	CDFW to ensure implementation & prepare appropriate reporting	Continuous

LMP ELEMENT	MITIGATION MEASURES – CULTURAL RESOURCES (CR)	MONITORING REQUIREMENT	TIMING OF ACTION
Historical resources	**CR1**: A current/updated inventory, GIS mapping, & informational database for cultural resources within the Reserve that may be eligible for listing in the California Register of Historical Resources and/or the National Register of Historic Places shall be developed and maintained. All unlisted, eligible, or potentially eligible historical resources should be mapped, recorded, & evaluated to determine their eligibility status for placement on the National Register or California Register of Historic Places. Any such evaluation will not be destructive in nature; any approved data recovery (excavation) shall not harm other resources.	CDFW to ensure implementation.	Continuous; A Cultural Resources Inventory, Survey, and Searches were conducted in 2020; a Treatment and Protection Plan was done in 2021.
Cultural resources	**CR2**: Prior to any actions that have the potential to disturb the area of known or possible archeological sites, or in areas that have not been inspected for archaeological resources within the past 5 years, Environmental Review will be completed & additional research, archaeological survey, and/or testing will be carried out to determine if significant cultural resources exist.	CDFW to ensure implementation.	Prior to project
Archaeo-logical research & fieldwork	**CR3**: Any fieldwork such as archaeological survey, testing, or other onsite research shall require internal pre-project environmental review & potentially permitting if work is being done by outside consultants or non-state entities.	CDFW to ensure review.	Prior to fieldwork
Cultural resources	**CR4**: Locations of previously recorded cultural sites shall be made known to CDFW staff (e.g., Reserve manager, game wardens) so that they can monitor site conditions & watch for deterioration and/or vandalism.	CDFW to ensure implementation.	Prior to site monitoring
Cultural resources	**CR5**: The effects of visitor use & natural erosion on known cultural resource sites shall be assessed.	CDFW to ensure implementation.	Continuous
Historical resources	**CR6**: Additional studies (e.g., archival research, detailed site & structure recordation, GIS mapping, subsurface testing, etc.) shall be conducted for any proposed project or undertaking that has the potential to disturb any known or potentially eligible historical resource; care will be taken to ensure that the associated evaluations are not destructive to the resource.	CDFW to ensure implementation.	Prior to project

LMP ELEMENT	MITIGATION MEASURES – CULTURAL RESOURCES (CR)	MONITORING REQUIREMENT	TIMING OF ACTION
Cultural resources	**CR7**: Any new facilities including roads, trails, fence lines, structures, etc. shall be designed & constructed to avoid cultural resources to the extent possible. As per professional standards for assessing & mitigating significant impacts to historical resources, treatment measures in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties will be implemented to reduce potential significant impacts to a level less than significant.	CDFW to ensure implementation.	Prior to, & during project
Cultural resources	**CR8**: If unexpected cultural remains are uncovered during any project activities, work will be stopped in that area so that the resource can be recorded, the nature of the deposit can be determined, & an appropriate avoidance, protection, or recovery plan can be implemented.	CDFW to ensure implementation.	During project
Cultural resources	**CR9**: Introduction of incompatible elements shall be avoided. Restoration & replacement of historic architectural features should be based on detailed & accurate representation of original features as substantiated by historical, physical, pictorial, or archaeological evidence.	CDFW to ensure implementation.	During project

LMP ELEMENT	MITIGATION MEASURES – HUMAN REMAINS (HR)	MONITORING REQUIREMENT	TIMING OF ACTION
Human remains	**CR 10**: In the event that human remains are discovered, work will cease immediately in the area of the find & the project manager will notify the appropriate CDFW personnel. The CDFW Reserve manager, regional manager, or authorized representative will notify the County Coroner/Medical Examiner in accordance with §7050.5 of the California Health & Safety Code. If the coroner/ME determines the remains represent Native American internment, the Native American Heritage Commission in Sacramento will be consulted to identify the most likely descendants & appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete. (PRC §5097.98).	CDFW to ensure implementation.	During project

LMP ELEMENT	MITIGATION MEASURES – GEOLOGY & SOILS (GEO)	MONITORING REQUIREMENT	TIMING OF ACTION
Construction activities	**Geo 1**: There are no structures, other than informational kiosks, nor are any planned, however the most recent revision of the California Building Code shall be implemented if any buildings are proposed to mitigate the risk of loss, injury, or death due to geologic hazards.	CDFW to ensure implementation.	Prior to, & during project
Construction activities	**Geo 2**: Any paleontological resources that are unearthed as part of ground-disturbing activities would result in the suspension of work in order to evaluate & potentially recover the findings.	CDFW to ensure implementation.	During project
Construction activities	**Geo 3**: To the maximum extent feasible, any new facilities shall be designed & constructed to conform with the landscape's natural contours, so as to minimize overall topographic change.	CDFW to ensure implementation.	Prior to, & during project

LMP ELEMENT	MITIGATION MEASURES – HAZARD/HAZARDOUS MATERIALS (HAZ)	MONITORING REQUIREMENT	TIMING OF ACTION
Hazardous substances	**Haz 1**: In the case that hazardous waste such as lead or asbestos are found within building materials that will be impacted during modification or demolition, appropriate measures will be taken to ensure their safe removal & compliance with appropriate laws & regulations.	CDFW to ensure implementation.	During project
Fire	**Haz 2**: Fire Management activities such as fuel modification shall be subject to site specific planning with CAL FIRE & conducted in accordance with CAL FIRE & CDFW regulations & policies.	CDFW to ensure implementation. CAL FIRE to confirm.	Prior to project

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
Erosion & sedimentation	**WQ 1**: BMPs to address erosion & excess sedimentation shall be incorporated into activities/operations that have the potential to	CDFW to ensure implementation.	During project

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
	cause discharges off-site. Weed-free products will be used to the extent possible to minimize the spread of exotics.		
Site maintenance	**WQ 2**: BMPs employed during surface-disturbing activities shall comply with all applicable water quality standards.	CDFW to ensure implementation.	During project
Site maintenance Sensitive vegetation	**WQ 3**: No vegetation clearing or land disturbance within the stream channels shall be conducted without prior authorization from CDFW, U.S. Army Corps of Engineers, & Regional Water Quality Control Board, as appropriate.	CDFW to ensure implementation.	Prior to project
Site maintenance Sensitive vegetation Sensitive species	**WQ 4**: Pesticide & herbicide use within riparian & wetland areas shall be limited/controlled. Any applications shall be conducted in accordance with herbicide labelling & recommendations from CDFW personnel possessing a valid Qualified Applicator License/Qualified Applicator Certificate.	CDFW to ensure implementation.	Continuous
Construction	**WQ 5**: Debris or runoff, generated as the result of a project, shall be directed away from any drainage and/or culverts to prevent deposition into waterways.	CDFW to ensure implementation.	During project, & post-project
Well installation	**WQ 6**: Any additional wells that would be installed on the Reserve shall be subject to the California Well Water Standards, as applicable & may require additional CEQA review.	CDFW to ensure implementation.	Prior to project
Site maintenance	**WQ 7**: All repairs to wells , springs & guzzlers will be conducted in the daytime & outside of the bird nesting season (generally March 1-September1) unless a biologist conducts pre activity surveys within one week of scheduled repairs & determines there will be no impacts to nesting birds.	CDFW to ensure implementation.	During project
Site maintenance	**WQ 8**: Impacts to Santa Ysabel Creek, Boden Canyon drainage, riparian areas, & wetlands shall be minimized during road use or maintenance activities through the use of BMPs,	CDFW to ensure implementation.	Continuous

LMP ELEMENT	MITIGATION MEASURES – HYDROLOGY/WATER QUALITY (WQ)	MONITORING REQUIREMENT	TIMING OF ACTION
	timing/scheduling of work, & other measures, as deemed appropriate to conditions on-site.		
Evaluation and Routine Monitoring	**WQ 9:** Experts in the field of dam safety evaluated the existing dam and provided a report with recommendations to CDFW. This report will be submitted for budgetary action and implementation at the first opportunity. A monitoring program designed to track the stability and safety of the dam and spillway during the interim will be developed and routinely implemented.	CDFW to ensure implementation of recommendations.	Funding was allocated to a Hydrology and Hydraulics Study in 2019; results were provided to CDFW in 2021 and incorporated herein and in the LMP.

LMP ELEMENT	MITIGATION MEASURES – NOISE (NO)	MONITORING REQUIREMENT	TIMING OF ACTION
Recreational compliance Noise	**NO 1**: The hunting program will be conducted in accordance with all CDFW hunting regulations, seasons, times and policies.	CDFW to ensure implementation.	Continuous

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For the entire list of References used in the LMP, please see the LMP.

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ABBREVIATIONS USED

ADA	Americans with Disabilities Act
ASMD	Area-Specific Management Directives
BMP	Best Management Practice
CalFire/CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game (now CDFW)
CDFW	California Department of Fish and Wildlife (formerly CDFG)
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database (CDFW)
CNPS	California Native Plant Society
ER	Ecological Reserve
GIS	Geographic Information System
HCP	Habitat Conservation Plan
IS	Initial Study
LMP	Land Management Plan
MND	Mitigated Negative Declaration
MSCP	San Diego County Multiple Species Conservation Program Sub-Regional Plan
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
PRC	[California] Public Resources Code
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SSC	Species of Special Concern (CDFW)
SWPPP	Stormwater Pollution Prevention Plan
USACOE	United States Army Corps of Engineers
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WA	Wildlife Area
WPCP	Water Pollution Control Plan

Appendices

A. RESPONSE TO COMMENTS (Final MND only)

While CEQA does not require the lead agency responds to comments submitted for an MND, CDFW intends to provide adequate documentation and consideration of comments received in the below Response to Comments section. The number of comment letters received within the allotted review period will be provided. For efficiency and effectiveness, CDFW has chosen to respond by topic rather than to individual letters.