



P A C H E C O S T A T E P A R K

Preliminary General Plan and Draft Environmental Impact Report

SCH No. 2003121089

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January 12, 2004

TO All Interested Agencies, Organizations, and Persons

NOTICE OF AVAILABILITY

PACHECO STATE PARK PRELIMINARY GENERAL PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

A Draft Environmental Impact Report (EIR) has been prepared by the California Department of Parks and Recreation (Department) for the Pacheco State Park Preliminary General Plan (General Plan). The Department is the lead agency, pursuant to the California Environmental Quality Act (CEQA), responsible for preparation of this document.

Project Location

The entrance to Pacheco State Park is off Dinosaur Point Road, south of State Route 152, between Interstates 101 and 5, approximately 24 miles west of the City of Los Banos and 20 miles east of Gilroy in the counties of Merced and Santa Clara.

Project Description

The proposed project is the development of a General Plan for Pacheco State Park. In accordance with Public Resources Code §5002.2 referencing General Plan guidelines and §21000 et seq. concerning the California Environmental Quality Act (CEQA) the Department is preparing a General Plan for the purpose of guiding future development activities and management objectives at the Park. The Park is a recent addition to the State Park system, opened to the public in 1997 and has not had a General Plan prepared to date. A portion of the 6,900 acre parcel, donated by the late Paula Fatjo, a descendant of Francisco Pacheco is currently open to the public for hiking, mountain biking, horseback riding and interpretive programs. The land around Pacheco was originally part of El Rancho San Luis Gonzaga, a 48,000-acre Mexican land grant deeded to Juan Perez Pacheco in 1843. The Park contains a rich array of natural and cultural resources, several residences, garages, paddocks, and outbuildings and is characterized by scenic expanses of open land laced with old ranch roads. Portions of the property are leased for the production of energy through wind turbines and cattle grazing.

The General Plan sets forth management zones that are based on existing conditions and resources and provide an overall intention for managing different areas of the Park recognizing the uniqueness qualities and diversity of the site. Additionally, the Plan contains a comprehensive set of park-wide goals and guidelines for the long-term direction of the Park. A number of Park improvements are identified in three alternatives including the development of a recreational vehicle and an equestrian campground, a visitor center, re-use and rehabilitation of the existing buildings and additional interpretive programs. All alternatives provide for long term natural and cultural resource management and sustainable development for the Park.

Summary of Impacts

The EIR is a program-level analysis of the potential environmental impacts associated with the Preliminary General Plan. No significant environmental impacts would occur as a result of the proposed project.

Public Comment Period

The 45-day public comment period for this Draft EIR will commence on January 12, 2004 and conclude on February 26, 2004. Copies of the Preliminary General Plan and Draft EIR will be available at the Four Rivers Sector office (31426 Gonzaga Road, Gustine, CA, 95322, 209-826-1197) at the Los Banos Library (1312 South 7th Street, Los Banos, CA 93635, 209-826-5254), at the address noted below, and at The Department website at <http://www.parks.ca.gov/>. Once there, click on "General Plans in Progress" in the right margin. Please submit comments in writing to the address provided below. Comment letters must be postmarked by February 26, 2004.

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PACHECO STATE PARK

Executive Summary

Executive Summary

Pacheco State Park consists of 6,900 acres of former ranchland along State Route (SR) 152 known as Pacheco Pass, at the edge of the Diablo range. It is served by two major north-south arteries— Interstate 5 (I-5), which passes 16 miles to the east, and U.S. Highway 101 (US 101), which passes approximately 30 miles to the west. The Park is generally equidistant between the cities of Gilroy and Los Banos and an approximate two hour drive from San Francisco as shown on Regional Map, Map ES-1. Map 1 shows the relationship of Pacheco State Park to the San Luis Reservoir State Recreation Area, also managed by the Department. The property is unique within the State Park system as it was bequeathed by the former owner Paula Fatjo in her will, to the California Department of Parks and Recreation (the Department) who currently manages the park. The mission for this Park synthesizes the wishes of Ms. Fatjo as described in her will as well as the Department's goals for resource protection and quality visitor experience and education in the form of various types of recreation.

Map ES-1 Regional Map



An important component of Ms. Fatjo's will is that all income which may accrue to the Department from the Park is to be used for the development of the Park and shall not be used in the State's general fund. To accomplish this, a public benefit non-profit corporation was created and known as the Fatjo

Corporation. The corporation consists of a seven member Board of Directors and is responsible for receiving and managing the financial assets of the Park and distributing these to the Department to “support, foster, and promote the maintenance, protection and supervision, extension improvement and interpretation of the Fatjo Project.”

Currently, less than 3000 acres of the Park are open to the public and due to its recent inclusion into the State Park system in 1997, a General Plan is being created to set forth the long term vision for the Park’s use and management. The unique location of the Park representing coastal and valley ecosystems and its use as a former ranch as well as future demand for additional recreation, provide opportunities to consider a long term vision of the park. A portion of the Park is leased to a wind energy company and is developed with windmills. Map 2 illustrates the existing facilities in the Park. Additionally, the Park is located adjacent to the San Luis Reservoir State Recreation Area, also managed by the Department to the east and the San Luis Wildlife Area managed by the California Department of Fish and Game to the north allowing for coordinated management. Challenges in the vicinity of and within the Park include the limited access from SR 152, a busy vehicular corridor already exceeding its capacity as well as the use and maintenance of existing structures on the site. Additionally, the Park contains a rich array of natural and cultural resources that require holistic management in combination with visitor use and education. Map 3 summarizes the key biological features and wildlife survey points in the Park. Trail use is the most active visitor activity currently, and many opportunities exist for continuing and expanding trail use with the development of a comprehensive trail management plan throughout the Park. Map 4 illustrates the existing trail network.

This plan includes an overview of existing conditions including a summary of opportunities and constraints, a plan for the future use and management of the Park and the associated environmental analysis pursuant to the California Environmental Quality Act (CEQA). The Department has embarked on similar planning work on many of its units throughout the state and utilizes the *California State Parks Planning Handbook* to guide the planning process and the contents of General Plans. Long term management at Pacheco State Park needs to balance the physical and cultural resources, visitor use and education and operations and maintenance of the Park. The context of the Park within the local and regional planning framework will ensure partnering with public agencies, landowners and other stakeholders to ensure coordinated and efficient plan implementation.

APPROACH TO THE PRELIMINARY GENERAL PLAN

A thorough analysis of existing conditions was undertaken as a part of the general planning process utilizing the collective knowledge of the Department staff and focused research of the physical and operational conditions as well visitor activity. The District and other interested agencies, along with landowners, recreational users, and other individuals all provided information about the history and conditions at Pacheco State Park and these were summarized in a written and graphic report. A geographic information system (GIS) was set up for the Park to compile much of the information currently known and collected about the natural and cultural systems of the park and was used to structure the key issues that needed to be addressed and to make decisions, based on all data available.

The Department staff participated in several meetings and workshops to identify and develop strategies that address the specific issues for management at Pacheco State Park. Existing site data and preliminary opportunities and constraints were presented at a public workshop and scoping meeting held in January 2002. This session as well as a visitor survey sought to inform the public about the general planning

process and to solicit ideas for park enhancements and different visions for the park's future. Public agencies in the region also provided feedback through the CEQA scoping process and attendance at workshops.

Based on all information and stakeholder input, three alternatives plans were developed that provide choices for park use and management and were presented to the public in May 2003. Each provides different options for implementing resource management and visitor use and education programs for the park varying from the least amount of new improvements or passive plan (alternative 1) to a more active plan containing more intensive facility development (alternative 3). The development of management zones and goals and guidelines based on four broad planning areas (resource management, visitor experience and education, local and regional planning and infrastructure and operations) were developed to provide the framework for future plan implementation. Additionally, for each planning area, a series of quality indicators were developed to enable Park staff to monitor the carrying capacity of the Park over time and adjust management actions accordingly.

The Preferred Alternative (2) reflects the Departments' mandate, public interests, agencies' relevant rules and regulations, the park's purpose and vision, and opportunities and constraints in all planning areas. It will provide implementation of the park-wide goals and guidelines while balancing current and future needs to ensure plan longevity.

SUMMARY OF THE PLAN

This *Preliminary General Plan* sets forth management zones that, based on existing conditions and resources as well as the landscape character, provide an overall intention for managing different areas of the Park recognizing the uniqueness and diversity of the landscape. The four management zones are:

- Administration and Operation Zone (AO)
- Frontcountry Zone (FC)
- Backcountry (BC)
- Leased Zone (LE)

Map 5 illustrates the Park management zones. For each zone a summary of existing features, purpose and intent, resource goals and land use is presented. The AO zone is essentially areas of existing buildings and will be used for Park operations, residences and maintenance activities however allowing limited public use. The FC Zone can be considered the face of the Park where visitors will experience first upon entry and which will contain the most active user facilities. The backcountry zone will allow public access predominantly in the form of hiking, biking and equestrian trails and will have limited motorized access, respective of the primitive landscape character. The LE Zone is based on the current area of the site that contains windmills and allows for this land use to continue with limited public access.

Park-wide management goals and guidelines for the Park will be used to implement all phases of Park use and future actions and to measure Plan success. These are set up for four broad planning areas with specific issue areas relevant to the Park within each category as follows:

- **Resource Management**
 - Scenic/Aesthetic

Cultural/Historic
Geology/Soils
Hydrology/Water Quality
Vegetation
Wildlife

- **Visitor Experience and Education**

Visitor Facilities
Trails
Interpretive Themes
Concession Opportunities

- **Local and Regional Planning**

Interagency Cooperation
Regional Plans
Population and Demographics
Linkages

- **Infrastructure and Operations**

Park Access and Circulation
Leases and Special Agreements
Staffing Needs and Facilities
Utilities

Recognizing that the Park's carrying capacity is based on many factors including data collection, park purpose and the desired future conditions, a series of quality indicators were developed to set up a framework for measuring carrying capacity based on the planning areas outlined in the Plan. From these, managers can use adaptive management strategies to determine when alternative management actions are needed to ensure that the desired conditions are being met.

All three alternatives developed to implement the Plan are respectful of the need to protect and preserve natural and cultural resources throughout the Park. Maps 6-11 illustrate the primary components of the three alternatives. Resource management activities are generally equal in resource protection across all alternatives however with provisions for different ways to accomplish resource goals. Also, in all three alternatives, the park-wide goals and guidelines provide for the Plan to be self-mitigating. The preferred alternative 2 provides a balance of additional visitor and operational facilities while still maintaining the essential character and resource base of the Park. This balance will allow for more visitors to use the Park over time, providing more diverse opportunities for a wider range of people.

ENVIRONMENTAL ANALYSIS

The *Preliminary General Plan* for Pacheco State Park reflects the Department's dual mandates as the steward of sensitive resources and the provider of recreation opportunities. The protection and restoration of natural and cultural resources are key components of the General Plan and therefore, the Plan is able to be self-mitigating. Through the evaluation of environmental factors and potential impacts during the preparation of the Plan, it is possible to ensure that the Plan prevents significant impacts to resources.

The plan leaves large expanses of the park undeveloped allowing for it to remain as a regional wildlife corridor, the protection of native vegetation watershed and surface water stewardship, scenic beauty and cultural landscape and resource preservation. The plan also identifies conceptual sites for proposed new and expanded park facilities which would be located in the least environmentally constrained areas of the park. The environmental analysis prepared for the *Preliminary General Plan* is programmatic in scope and does not contain project-specific analysis for the facilities recommended in the plan.

A description of each of the alternatives is provided categorized by planning areas and noting the differences between each. Potential for significant environmental effects was identified and impact analysis was prepared for the following resources:

- Hydrology and Water Quality
- Air Quality
- Biological Resources
- Cultural Resources
- Transportation and Traffic
- Utilities and Public Services
- Aesthetics

For each of the potential impacts identified, the plan guidelines serve as mitigation and when implemented, would maintain potential environmental impacts at a less-than-significant level for each environmental resource area. Specific projects would undergo subsequent CEQA review in the future as appropriate.

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1. *Introduction*

1.1 INTRODUCTION TO THE PARK

Location and History of Pacheco State Park

Pacheco State Park (SP) is a 6,900-acre parcel located along the south side of Pacheco Pass off State Route (SR) 152. It is situated in western Merced County and eastern Santa Clara County, 24 miles west of the city of Los Banos and 27 miles east of the city of Gilroy. Pacheco SP (the Park) is adjacent to the San Luis Reservoir State Recreation Area (SRA) and sits on the eastern slope of the Diablo Range at the edge of the San Joaquin Valley. Map 1 illustrates the area location of the Park and its proximity to the San Luis Reservoir SRA.

The landscape is composed of windswept oaks on grassy rolling hills with many fine views of San Luis Reservoir and the San Joaquin and Pajaro Valleys. More than 25 miles of riding and hiking trails are presently open for public use. Visitors may see deer, tule elk, bobcats, mountain lions, coyotes, foxes, hawks, eagles, and a variety of smaller animals. In the springtime, the meadows and hillsides offer spectacular wildflower displays.

Paula Fatjo, who deeded the land to the State, was a direct descendant of Francisco Pacheco, a holder of Mexican-period land grants in the area whose family held its lands through five generations. Fatjo's ranch was a portion of El Rancho San Luis Gonzaga, originally granted in 1843 to Francisco Pacheco's son, Juan Perez Pacheco. In the middle of the 19th century, the family's land holdings totaled nearly 150,000 acres.

A remnant of the Park's history is a portion of Merced County's first adobe, a frontier outpost with gun ports in its thick walls, which still stands near Park headquarters. On its original site until 1965, the adobe was threatened with destruction by the construction of San Luis Reservoir. It partially collapsed while being moved to the new ranch site in the effort to save it. Also to be seen on the property, are segmented sections of Andrew Firebaugh's original toll road over the pass, built in 1857-58. The road was used by the Butterfield Stage Lines, which carried the mail and passengers from St. Louis to San Francisco for several years before the Civil War.

Purpose of Acquisition

Pacheco SP is a recent addition to the State Park system, opened to the public in 1997. It was deeded by the former owner, Paula Fatjo, for the "protection, maintenance, and fostering of the natural flora and fauna." There is a special financial arrangement for the Park. A private entity, the Fatjo Corporation, manages the Park funding using monies left from the original \$700,000. endowment left by Ms. Fatjo and from wind turbine lease agreements that were formed before her death. In addition, the California Department of Parks and Recreation (the Department) funds some of the projects at the Park. Of the total acreage, about one half is currently open to the public.

Unit Classification

Pacheco SP is classified as a State Park. This classification is described in PRC §5019.53 as follows:

5019.53. State parks consist of relatively spacious areas of outstanding scenic or natural character, oftentimes also containing significant historical, archaeological, ecological, geological, or other similar values. The purpose of state parks shall be to preserve outstanding natural, scenic, and cultural values, indigenous aquatic and terrestrial fauna and flora, and the most significant examples of ecological regions of California, such as the Sierra Nevada, northeast volcanic, great valley, coastal strip, Klamath-Siskiyou Mountains, southwest mountains and valleys, redwoods, foothills and low coastal mountains, and desert and desert mountains.

Each state park shall be managed as a composite whole in order to restore, protect, and maintain its native environmental complexes to the extent compatible with the primary purpose for which the park was established.

Improvements undertaken within state parks shall be for the purpose of making the areas available for public enjoyment and education in a manner consistent with the preservation of natural, scenic, cultural, and ecological values for present and future generations. Improvements may be undertaken to provide for recreational activities including, but not limited to, camping, picnicking, sightseeing, nature study, hiking, and horseback riding, so long as those improvements involve no major modification of lands, forests, or waters. Improvements that do not directly enhance the public's enjoyment of the natural, scenic, cultural, or ecological values of the resource, which are attractions in themselves, or which are otherwise available to the public within a reasonable distance outside the park, shall not be undertaken within state parks.

Sense of Place

Pacheco SP is a 6,900-acre vestige of what was originally a 150,000-acre parcel; it has endured, relatively unchanged, more than a century of land use and environmental change in its locale. The essence of the Park is the great feeling of vastness and the unencumbered landscape devoid of the boundaries that define the smaller parcels in its vicinity. The Park's strategic location at the edge of the Diablo Range area defined as "Pacheco Pass" has historically allowed and continues to provide a link between the Pacific Coast and the Central Valley of California. This location is also unique ecologically and climatically, creating a rich mosaic of diverse flora and fauna. The rustic working ranch provides a feeling of an earlier California, a sense of the way the land was integral for its use as a cattle ranch and the immense effort it must have taken to sustain such a vigorous way of life. While the land is not "worked" nearly as intensely as it was in the past, the remaining landscape creates a pastoral memory of another era.

These natural and cultural forces, through the passing of this land from Paula Fatjo to the people of the State, have left myriad experiences for today's visitor. Modern-day equestrians are attracted to the Park for the opportunity to follow some of the original paths of previous ranchers herding their cattle. Researchers and scientists enjoy exploring the physical features of the area to receive further insight into such rich resources. Nature enthusiasts are delighted to commune with raw nature in a setting that is ever-changing with the seasons. Hikers and mountain bikers are challenged by the network of old ranch roads that can be continually traversed without repetition, offering a wide array of terrains and sensory experiences. These are just a sampling of the visitors to the Park; many more will come well into the future. This land needs to be revered so they, too, can cherish the remarkable "sense of place."

1.2 PURPOSE OF THIS GENERAL PLAN

This General Plan is intended to document and set a vision for the future of Pacheco SP. It provides an opportunity to evaluate and formulate a purpose and vision for the Park and to define its future significance as a major recreational resource located centrally within California. It also sets forth a guide for future natural and cultural resource management, recreational uses, visitor facilities, and interpretive opportunities. The Department's General Plan Unit, in conjunction with its Central Valley District office, are required to develop a General Plan and EIR for Pacheco SP in accordance with Public Resources Code (PRC) §5002.2 (referencing General Plan guidelines) and PRC §21000 et seq. (the California Environmental Quality Act [CEQA]). The purpose of the General Plan is to guide future development activities and management objectives at the Park.

Subsequent Planning Actions

Programs and projects that will be implemented as a result of the General Plan may require additional planning. The Department has a planning handbook that sets forth subsequent planning actions. Such actions include the preparation of specific management plans to protect sensitive resources or the development of specific project plans for new facilities to determine how they will relate to their surroundings.

Future planning efforts may also include the preparation of project-specific environmental compliance documents for implementation of management plans and subsequent development projects. These documents will tier off and be consistent with the General Plan's Program Environmental Impact Report (EIR). More information regarding this process is presented in Chapter 4. Securing any permits required for future implementation projects would also be part of subsequent planning actions.

Finally, the General Plan may need to be amended if any new acquisitions are added to the existing Park or if any other circumstances make parts of the current plan no longer applicable.

Public Involvement Program

Public outreach is an important component of the general planning process. It is sought at the outset and throughout the planning process for a variety of reasons. State Parks are managed for recreation opportunities, the preservation of natural and cultural resources, and use by the people of California. Constituency building is needed to ensure the public's support for their local parks. A mailing list was compiled using the names and addresses of Park visitors and participants in interpretive programs, as well as other agencies and entities required by CEQA. Because Pacheco SP is new, visitors to the adjacent SRA were also included. A variety of methods, such as public meetings, surveys, and newsletters, were used to reach out to stakeholders of the Park and to identify their needs and concerns for the Park's future. The following outlines the specific components and dates of the public outreach efforts for Pacheco SP:

- Notice of Preparation – November 22, 2002
- Newsletter No. 1 and survey – December 2002 (mailed)
- Public Meeting No. 1 – January 11, 2003
- Newsletter No. 2 and stakeholder summary – May 2003 (mailed and distributed onsite)

- Public Meeting No. 2 – May 27, 2003
- Focus Group Meeting (Fatjo Board) – July 23, 2003

The survey information and any written or spoken comments were included in the summaries of the public meetings and the stakeholder summary. The meeting summaries, stakeholder comments, Notice of Preparation and the newsletters including a copy of the survey, are provided in Appendix A. The second newsletter was mailed with a copy of the stakeholder summary; to ensure that visitors not on the mailing list were also surveyed, however, copies of the second newsletter that were distributed onsite also included the survey that was mailed with the first newsletter. Of the 1,250 surveys that were mailed and distributed, 26 (2%) were filled out and mailed back. Of both newsletters, 888 were mailed out and 500 were distributed onsite. The mailing list database, currently with 650 entries, is being maintained throughout the planning process and is updated continually as new information requests are received. Similarly, entries are deleted for survey respondents who indicate on the survey form that they want to be removed from the database.

1.3 CONTENTS OF THE GENERAL PLAN AND ENVIRONMENTAL IMPACT REPORT

This document serves as the General Plan and Program EIR for Pacheco SP. The program-level EIR is included herein to analyze and disclose any significant and potentially significant effects that may result from the implementation of the General Plan. The EIR informs decision makers and the public about the environmental consequences of the adoption of the General Plan, consistent with the requirements of CEQA and the State CEQA Guidelines. This Draft General Plan and EIR, Volume I is organized into the following chapters:

Chapter 1: Introduction provides general background information including the location, history, and formation of Pacheco SP; summarizes the Department's General Planning process; and outlines the contents and organization of this document.

Chapter 2: Existing Conditions describes the Park's current physical and social conditions, including information on land use; significant physical, biotic, cultural, aesthetic, and recreational values; and existing facilities. The Existing Conditions chapter also lists system wide and regional planning influences affecting the Park, describes its demographic resident and visitor profile, and lists issues to be addressed in the General Plan. This chapter serves as the environmental setting for the General Plan's programmatic EIR.

Chapter 3: Park Plan identifies the goals and guidelines that will direct future management and operation of Pacheco SP. This chapter includes the Park's Purpose and Vision, describes geographic-based management zones, and provides Parkwide management goals and guidelines.

Chapter 4: Environmental Analysis contains the environmental impact analysis for the General Plan's programmatic EIR, pursuant to the State CEQA Guidelines.

Chapter 5: References contains a list of the organizations and persons consulted during the preparation of this document, and a complete list of references.

Chapter 6: Glossary of Terms and Acronyms defines terms used in this document and identifies the full name or phrase represented by abbreviations.

Chapter 7: Report Preparers identifies the preparers of this Draft General Plan and EIR.

The General Plan and EIR are combined under one document, so some chapters of this document serve both purposes. For example, Chapter 2, Existing Conditions, provides background information about existing conditions for the General Plan and also serves as the environmental setting for the EIR, as required by CEQA. Similarly, Chapter 3, Park Plan, serves as the project description for the EIR.

The EIR prepared for the General Plan is programmatic in scope, and therefore does not contain project-specific analysis for any of the projects recommended in the General Plan. Specific projects will undergo subsequent CEQA review in the future as described above under “Subsequent Planning Actions.”

Volume II of the General Plan and EIR will contain all public comments received during the circulation of the Draft General Plan and EIR, responses to these comments, and additional appendices, as applicable.

2. *Existing Conditions*

This chapter summarizes the existing land uses, significant resource values, existing facilities, and local and regional plans that influence the management, operations, and visitor experiences of Pacheco SP. The information provides the baseline data for developing the goals and guidelines for the General Plan and serves as the environmental setting for environmental review.

2.1 UNIT SUMMARY

Existing Land Use

Surrounding Land Uses / Regional Context

Pacheco SP is located on the eastern slope of the Diablo Range. The Park is about 5 miles long from east to west and 2.5 miles wide from north to south. Approximately 90% of the Park lies within Merced County with the remainder in southeastern Santa Clara County. The Park's eastern boundary adjoins the San Luis Reservoir SRA.

The majority of lands surrounding the Park are sparsely developed and are designated Foothill Pasture under the Merced County General Plan or Ranchlands under the Santa Clara County General Plan. Residential and ranchlands are the primary existing land uses adjacent to the Park. The nearest incorporated cities are Gilroy, approximately 27 miles to the west in Santa Clara County; Hollister, 22 miles to the southwest in San Benito County; Los Banos, 24 miles to the east in Merced County; and Gustine, 30 miles to the northeast in Merced County. The unincorporated town of Santa Nella lies approximately 17 miles to the northeast, east of San Luis Reservoir.

Parkwide Land Uses

Pacheco SP includes 6,900 acres to the west of the San Luis Reservoir SRA. The original ranch complex and residence of Paula Fatjo including associated corrals and ancillary buildings still exists and functions predominantly as the Park headquarters. Grazing occurs on the western portion of the site over approximately 3000 acres as per a lease agreement that began prior to Paula Fatjo's death and transfer of the Park to the Department. The eastern portion of the Park is leased to International Turbine Research, Inc. (ITR) who operates a wind power plant (wind farm) and maintains turbines that generate approximately 22.5-23 million kilowatt hours (kWh) of annual energy, which is purchased by Pacific Gas and Electric Company (PG&E) (DPR 2001). Current visitor facilities include vehicular parking, day use area, chemical toilets and a series of trails used for hiking, mountain biking and horseback riding predominantly. Map 2 illustrates the Park's existing facilities.

Significant Resource Values

Physical Resources

Climate

Due to the Park's location on the east side of the Diablo range the weather resembles that of the adjacent San Joaquin Valley. From November to May the climate is cool and moist, while from May to

November it is hot and dry. In mid to late summer temperatures often exceed 100°F. Morning summer coastal fog regularly reaches as far inland as the western slope of the park. Ground fog is frequent in this area from December to March. From April to June, temperatures are more moderate, and the crest is often capped in fog or low clouds. Normally it is foggy from early morning until about noon during spring, but the fog occasionally persists longer, and clouds and fog are often thick during the winter when storms move through the area.

Precipitation is mostly in the form of rain, but there are occasional dustings of snow, particularly at the highest elevations. Precipitation records have not been consistently maintained at the Park, but can be estimated from information available from the U.S. Soil Conservation Service (SCS), the California Department of Water Resources (DWR), and the Santa Clara Valley Water District (SCVWD). The SCS reports the following general precipitation totals applicable to the Park: 8–13" in the San Joaquin Valley, 9–14" in the foothills, and 13–24" in the coastal mountains.

On the east side of San Luis Reservoir, DWR has recorded meteorological data since 1963. The precipitation average has been 9.93", with a range from 3.40" (1975-76) to 17.69" (1982-83). Because the eastern Park boundary lies approximately 7 miles across the reservoir from this station, these measures may be indicative of the minimum average expected for the San Joaquin Valley side of the Park. Monthly average total precipitation data collected from the Desert Research Institute's Los Banos weather station recorded from 1948-2003 reveals that in winter (Dec-Feb) precipitation ranges from 1.40-1.75 inches, spring (Mar-May) 1.37-.37 inches, summer (Jun-Aug) 0-.73 inches and fall (Sep-Nov) .25-1.15 inches. In addition, rainfall has been recorded since July 1995 by two gauges located near the Park headquarters. Annual precipitation ranged from a low of 11.91" in 2000-01 to a high of 32.25" in 1997-98, with an average of 18.51".

Wind is a prevalent feature during most of the year. At DWR's Romero Overlook on San Luis Reservoir, winds average 14 miles per hour (mph) annually and 20 mph in the summer. The effect of wind on the Park's landscape is very evident. Winds generally prevail from the west, and the consistent, strong wind pressure has caused exposed trees to lean permanently in the direction of the wind.

Another sign of wind influence is the presence of 167 wind turbine generators installed by a private operator, ITR, across the tops of several ridges. The wind generators capture and convert wind energy to electrical energy, and their performance coincidentally illustrates the duration and strength of the winds through Pacheco Pass. The wind season is recognized as March through October, when 90% of annual electrical production occurs. Using the conversion of wind energy to electrical production as a measure of strength, on average, net electrical production is 22.5-23 million kWh per year.

Topography

Pacheco SP is located predominantly on the eastern slope Diablo Range, easternmost chain of the central California Coast Ranges and consists of steeply sloped grass-covered hills in the eastern areas of the Park that become part of the lower mountain range generally in the west. A small portion of the western edge of the Park is on the west slope of the range as the summit is located just north of the northwest corner of the Park. From the east, the land rises from an elevation of 640 feet to its highest point of 1,927 feet at Spike's Peak in the Park's southwest corner.

There are significant areas of moderately gentle terrain (15% slopes or less) in three areas. The first is located near the entrance and includes an area of about 100 acres; the second is near the ranch housing complex and includes approximately 40 acres; and the third is an area in excess of 100 acres around Mammoth Lake at the geographic center of the Park. In addition, the slopes in some areas are as steep as 30–50% (DPR 1996).

Although largely unaltered, the topography has been modified by activities associated with road grading, building construction, installation of wind turbine generator towers, and creation of stock watering ponds and reservoirs.

Geology

Pacheco Pass, elevation 1368' is located in the east-central Diablo Range, easternmost chain of the central California Coast Ranges. The quadrangle, situated about 110 miles southeast of San Francisco and 285 miles northwest of Los Angeles, is transected in an east-west direction by SR 152. The geological mapped area, extending 4km west of the crest of the Diablo Range to its eastern Franciscan margin, contains the largest exposure of high-pressure, low temperature metamorphic rocks in the coterminous United States; moreover, it constitutes the most accessible tract of coherent Franciscan metasedimentary rocks in the Coast Ranges (Ernst 1993).

Pacheco SP lies along the crest of the Diablo Range geomorphic province. It is underlain by rocks of the Franciscan assemblage containing predominantly metagraywacke, metashales, chert, and greenstone. This area has been subject to both historic and active landslides. Historically, slides up to one-third square mile in size carried unconsolidated soil, gravel, and even 50-foot rock blocks downslope. Remnants of several Quaternary landslides are present consisting of unconsolidated soil, gravel, and boulder-size rock fragments and blocks of rock up to 50 feet in size on a side. Recent slides have been smaller, generally less than a few hundred feet across and are characterized by a well defined, lightly eroded headwall while older landslides are well dissected and cover an area of up to one-third square mile (DPR 1996).

The unit is composed of fine to medium grained, thinly to irregularly bedded to massive metagraywacke with occasional to frequent interlayered black metashale and very minor sequences of interbedded chert, and greenstone. Rock types other than metagraywackes and metashale are uncommon. Rock outcrops can be found throughout the Park, attributed to the complexity of the underlying structure with its intense folding and zones of fracturing. Many small unnamed fault lines have been recorded in the area.

Other rock types found are minor phyllonite, phyllonitic metashale, serpentine, talcose serpentine, and chlorite schist. The geologic structure is usually complex with irregular folding of beds and zones of intense to very intense fracturing. Fracturing and jointing in outcrops are variable, ranging from a few inches to several feet apart.

Several mineral resources are identified in the *Merced County Year 2000 General Plan* (Merced County 1990) as being located within the vicinity of Pacheco Pass. These include aragonite in veins and replacement patches in the Franciscan rocks, which are found in association with other minerals such as lawsonite, pumpellyite, and brown flakes of stilpnomelane.

The U.S. Geological Society (USGS) mapped and named the two nearby faults as the Telsa-Ortivalita fault and the Gonzaga fault. The Telsa-Ortivalita fault runs north-south beneath San Luis Reservoir and passes within 1 mile of the eastern boundary of the Park, marking the respective boundaries of the

Franciscan ophiolite to the west and the Valley sediment deposits to the east. The Gonzaga fault runs generally east-west, north of Dinosaur Point Road, and passes within a few hundred feet of the northern boundary of the Park. The two faults intersect at a perpendicular angle 1 mile north of the Park.

Soils

Soils along Pacheco Pass have been mapped and described by SCS as being of sedimentary and metamorphic origins, and of three primary soil types known as Millsholm, Fifield, and Gonzaga. Millsholm soils are sedimentary and cover about 44% of the Park. These soils have a typical surface layer of pale brown loam about 6 inches thick, underlain by fractured sandstone and shale. Soil permeability is moderate on well-drained slopes of 8–75%. Runoff is rapid and erosion is very high. Available water capacity is very low to low. Effective rooting depth is limited by sandstone and shale at a depth of 15 to 20 inches.

Fifield soils formed in material dominated from sedimentary and metamorphic rock. The surface is of brown sandy loam about 5 inches thick, with about 10% gravel. Depth to sandstone or shale ranges from 15 to 20 inches. Effective rooting is limited by sedimentary or metamorphic bedrock at a depth of 20–35 inches. Runoff is rapid and the hazard of water erosion is high on slopes that range from 30% to 35%.

Gonzaga soils have a characteristic brown surface layer, and are found intermingled with Fifield soils at a ratio of about 25%. Gonzaga soils are derived from sedimentary and metamorphic rock, and contain 10–25% gravel and cobbles. Gonzaga soils are found on 30–50% slopes. The depth of soil to slightly weathered sedimentary or metamorphic rock ranges from 25 to 40 inches. Permeability of this soil type is very low, leading to high runoff and moderate erosion. The low permeability and shallow and highly erodible characteristics of the soil in the Park contribute to the fragility of its landscape and must be considered in plans and designs for land use and recreational development.

Hydrology and Floodplain

Surface Water

Pacheco SP falls within two watersheds, divided along the Merced County/Santa Clara County line. Lands in Merced County lie in the Panoche–San Luis Reservoir watershed, part of the San Joaquin River Basin, and runoff flows into San Luis Creek. Historically, San Luis Creek met the San Joaquin River, which empties into San Francisco Bay; since the completion of San Luis Dam, however, runoff from San Luis Creek has been captured in San Luis Reservoir and diverted for State Water Project (SWP) purposes. Areas in Santa Clara County lie in the Pajaro watershed, part of the Pajaro River Basin, and runoff flows into Pacheco Creek and on to the Pajaro River, which empties into Monterey Bay.

Approximately 90% of the project area falls in the Panoche-San Luis Reservoir watershed, which encompasses a total area of approximately 1,213 square miles (776,781 acres) (EPA . This area includes two tributaries to San Luis Creek—Hidden Creek and Salt Creek—as well as more than 20 small springs and unnamed seasonal springs, as shown on the USGS Pacheco Pass Quadrangle. Additionally, there are approximately 25 small reservoirs throughout the project area that capture and store surface water runoff. These were originally created to serve as stock watering ponds and none is large enough to require state certification for dam safety. Six reservoirs contain water year around and have been named on the USGS 7.5 minute Pacheco Pass quadrangle map as Nun Lake, Diamond Lake, which straddles the southern Park boundary, Bear Hide Lake, Wolf Lake, Dinosaur Lake, and Mammoth Lake.

Approximately 10% of the project area lies within the Pajaro watershed, which encompasses a total area of approximately 1,320 square miles (838,326 acres). This area includes four unnamed tributaries to the South Fork Pacheco Creek, as well as two unnamed ponds.

Surface water quality in both the Panoche-San Luis Reservoir and Pajaro watersheds falls under the management of the State Water Resources Control Board (SWRCB); the Panoche-San Luis Reservoir watershed is a part of the Central Valley Region (Central Section), and the Pajaro watershed is a part of the Central Coast Region. Both watersheds are classified as category I (impaired) priority watersheds. Major water quality issues that have been identified in both basins include toxicity attributed to pesticides, high nutrient concentrations in smaller tributaries, native fish habitat disruption, poor water chemistry, and high agricultural runoff. The SWRCB has set a goal of zero toxicity throughout both basins and has designated both as target areas for habitat restoration; the U.S. Environmental Protection Agency (USEPA) has set standards for allowable maximum pollutant and nutrient concentrations.

Groundwater

There are currently four wells in use in the project area. Three wells in the Pajaro watershed support the historic and residential developments; one newly developed well in the Panoche-San Luis Reservoir watershed near Mammoth Lake supports the office and work area of ITR, which operates and maintains the nearby wind turbine generators. All four wells are recharged by precipitation in their respective watersheds and subsequent percolation into groundwater aquifers. Groundwater supports seven of the springs known to exist in the project area, six of which are named on the USGS Pacheco Pass map: Shadow Spring, Pigs Bath Tub, Lucky Spring, Sunburnt Spring, Langston Spring, and Windmill Spring. These named springs generally appear to provide water year round, but flow rates become very low during summer months.

Flood-prone Areas

The Federal Emergency Management Agency (FEMA) has mapped the project area as Zone D, an area of undetermined but possible flood hazard. The potential for flooding exists primarily in the low-lying areas along the many creeks and springs in the area and in the vicinity of the small reservoirs located throughout the area. USGS formerly maintained one flow gauge immediately outside the Park, located in the Panoche-San Luis Reservoir watershed in the vicinity of Dinosaur Point at the Wolf Creek station. Peak flow data are available for 1959–1969, during which flood events occurred early in 1963 and early in 1967. There are no other flow gauges in the vicinity of the Park.

Air Quality

Pacheco SP is located on the borders of two air basins: on the western edge of the San Joaquin Valley Air Basin (SJVAB), which includes Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties, and portions of Kern County; and the eastern edge of the San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, San Mateo, Santa Clara, Marin, Alameda, Contra Costa, and Napa counties and portions of Sonoma and Solano counties. Because it is located in two air basins, the Park falls in both the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the Bay Area Air Quality Management District (BAAQMD).

The Park is located on the western rim of the San Joaquin Valley, an intermountain valley bounded to the east by the Sierra Nevada, to the west by the Coast Range, and to the south by the Tehachapi

Mountains. The SJVAB is predominantly agriculturally oriented, with some industrial activities in the cities of Bakersfield, Lathrop, Kingsburg, Madera, Modesto, Riverbank, Corcoran, Stockton, Fresno, Tracy, Elk Hills, and Avenal. The SFBAAB, on the other hand, includes the second largest metropolitan area in California, many industrial facilities, and many very densely populated areas, as well as a large amount of open space. Both the SJVUAPCD and the BAAQMD are required by state law to achieve and maintain the federal and state ambient air quality standards. Ambient air quality standards are levels of air pollutants that are considered unhealthy if exceeded.

Airflow and weather patterns within the SJVAB change throughout the year, affecting seasonal air quality. Summer conditions in the SJVAB are hot and dry, with airflow dominated by a semi permanent subtropical high-pressure zone causing winds to be light and variable. Summer inversion layers are also common, further decreasing dispersion during summer months. The SJVAB experiences mild winters dominated by frontal systems and troughs originating in the northern Pacific Ocean. Winter rains are followed by atmospheric instabilities and increased vertical mixing of the atmosphere, which leads to improved air quality during winter months. Fronts and troughs are frequently pushed north by high-pressure systems, however, causing decreased winds and poorer dispersion. Airflow and dispersion are greatest during spring and fall months when winds are strongest, and most variable in direction as a result of temperature differences between coastal and valley air. The strongest winds in the region blow during April–August period, with velocities as high as 30–40 mph.

The concentration of air pollutants in both the SJVAB and the SFBAAB varies from day to day depending on the ability of the atmosphere to disperse pollutants. Emissions for all criteria pollutants except particulate matter with a diameter of 10 micrometers or less (PM_{10}) show decreasing trends in both basins. PM_{10} emissions, however, have increased in the SJVAB over the past 15 years primarily because of vehicle travel on unpaved roads. Air quality in Merced County exceeds the standards for ozone and PM_{10} , both of which are designated criteria pollutants, several days each year. In addition to the number of small pollutant sources within the county, Merced County is also subject to pollutants transported from areas of higher population density, higher vehicle traffic, and industrial activity. There are sources of PM_{10} , carbon monoxide, NO_x , reactive organic gases, and other air pollutants in the SJVAB in the metropolitan areas of Stockton, Modesto, Merced, Fresno, Visalia, and Bakersfield; northerly winds also transport pollutants from the greater Sacramento area and the San Francisco Bay Area. Seasonal conditions resulting in poor dispersion and mixing may allow some accumulation of pollutants in the vicinity of the project area. However, air quality in Merced County has been improving over the past decade as shown by decreased concentrations of ozone, PM_{10} , carbon monoxide, and nitrogen dioxide. Nonattainment of standards usually occurs during summer months when airflow and dispersion are least.

Air quality in Santa Clara County has exceeded the standards for ozone, PM_{10} , and carbon monoxide several days each year during the past 20 years. The number of days during which standards were exceeded has been declining steadily, from as high as 50 days per year to between 10 and 20. Emissions in the SFBAAB include many industrial and commercial sources, as well as the increasing number of vehicles. Seasonal conditions resulting in poor dispersion and mixing may allow some accumulation of pollutants in the vicinity of the project area.

Noise

By definition, noise is human-caused sound that is considered unpleasant and unwanted. Whether a sound is considered unpleasant depends on the individual who hears the sound and the setting and

circumstance under which the sound is heard, for example while at work or while relaxing. Sounds found desirable during times of rest, relaxation, and outdoor activity, as provided at Pacheco SP, are referred to as natural quiet and include natural, outdoor ambient sounds without the intrusion of human-caused sounds. The enjoyment of natural sounds contributes to Park visitors' experiences, and natural quiet can be essential for some individuals to achieve a feeling of peace and solitude. In contrast, noise within the Park results from human-made and mechanical sources, including motor vehicles, aircraft overflights, and human activities such as talking and shouting.

The noise environment throughout Pacheco SP is influenced primarily by visitor activities and motor vehicles. The majority of the existing Park uses, including hiking, horseback riding, mountain biking, and picnicking, constitute a minor noise source throughout the Park. However, noise from motor vehicles, including private automobiles and trucks, recreational vehicles, and maintenance vehicles, is noticeable in the vicinity of roads and parking areas during periods of peak use. In addition, Park operations and maintenance activities occasionally generate noise. Windmills located in a portion of the Park do generate noise from the operation of the unit as well as the sound of wind hitting the turbines; however, noise associated with wind turbines is generally minor (NWCC 2003, AWEA 2003). Noise-intensive operations and maintenance activities such as facility maintenance and use of motor-driven equipment do not contribute significantly to the noise environment. Noise occurs from nearby SR 152 vehicular traffic and overhead air traffic however no noise data is currently available.

Some land uses are considered more sensitive to ambient noise levels than others because of their associated activities and degree of noise exposure, including both duration of exposure and level of insulation from noise. Residences, hotels and motels, schools, libraries, churches, hospitals, and parks and other outdoor recreation areas are generally more sensitive to noise than commercial and industrial land uses. Sensitive receptors in the Park include staff residences and Park visitors.

Biotic Resources

Introduction

Significant biotic resources at the Park were determined through a review of existing documentation; consultation with biologists familiar with the local biological resources; and data collected by EDAW biologists during reconnaissance-level surveys in September 2002. Data sheets documenting these surveys can be found in Appendix B. The field locations noted in the data sheets are shown on Map 3. Sources of information reviewed by EDAW biologists included the California Natural Diversity Database (CNDDDB 2002) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants (CNPS 2002).

Regulatory Background

Regulatory compliance issues that may need to be addressed before implementation of the General Plan for the Park are discussed below.

Federal Regulatory Issues

Federal Endangered Species Act. Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) has regulatory authority over projects that may affect the continued existence of a federally listed Threatened or Endangered species. Section 9 of ESA prohibits the take of

federally listed species and take is defined under ESA, in part, as killing, harming, or harassment of such species. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of ESA outlines procedures for federal interagency cooperation and participation in the conservation and recovery of federally listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with other federal agencies with regulatory authority to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or to destroy or adversely modify designated critical habitat. Critical habitat is any specific area that has the physical and biological features essential to the conservation of a listed species, and that may require special management considerations or protection.

For projects where a federal nexus is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under §10(a) of ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

Clean Water Act. The U.S. Army Corps of Engineers (USACE) regulates the placement of fill into waters of the United States under §404 of the Clean Water Act. Waters of the United States include lakes, rivers, streams, and their tributaries and wetlands. Wetlands are defined under §404 as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Activities that require a permit under §404 include, but are not limited to, placing fill or riprap, grading, mechanized land clearing, and dredging. Any activity that results in the deposit of dredged or fill material within the “ordinary high-water mark” of waters of the United States usually requires a permit from USACE, even if the area is dry at the time the activity takes place. A variety of processes are available for obtaining §404 authorization from USACE, ranging from the Nationwide Permit process to the Individual Permit process.

State Regulatory Issues

California Endangered Species Act. Pursuant to the California Endangered Species Act (CESA), a permit from the California Department of Fish and Game (DFG) is required for projects that could result in take of a State-listed Threatened or Endangered species. Section 2080 of CESA prohibits take of State-listed species. The take of State-listed species incidental to other otherwise lawful activities requires a permit, pursuant to §2081(b) of CESA. The State has the authority to issue an incidental take permit under §2081 of the California Fish and Game Code, or to coordinate with USFWS during the §10(a) process to make the federal permit also apply to State-listed species.

Section 1600 of the California Fish and Game Code. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to regulation by DFG, pursuant to §1601 of the California Fish and Game Code. Section 1601 makes it unlawful for any governmental agency, State or local, and any public utility to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake without first notifying DFG of such activity. The regulatory definition of a stream is a

body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. DFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A DFG Streambed Alteration Agreement must be obtained for any project that would result in an impact on a river, lake, or stream.

Section 3503.5 of the California Fish and Game Code. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds-of-prey in the orders Falconiformes or Strigiformes." These orders include hawks, owls, eagles, and falcons. The loss of an active nest is considered by DFG to be a violation of this code. This statute does not provide for the issuance of any type of incidental take permit.

Special-status Species

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing as Threatened or Endangered under ESA or CESA;
- Species considered as candidates for listing as Threatened or Endangered under ESA or CESA;
- Wildlife species identified by DFG as Species of Special Concern (an administrative designation used to try to prevent these animals from becoming threatened or endangered by addressing issues of concern early enough to secure long-term viability of the species);
- Animals fully protected under the California Fish and Game Code; and
- Plants on CNPS List 1B (plants rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened, or endangered in California but more common elsewhere).

Special-status Wildlife

A list of special-status species known to occur, or that could occur, in the unit is included in Table I. A thorough biological inventory has not been completed at the Park. However, based on the results of the investigation that took place, it has been determined that the unit provides important habitat for the following special-status wildlife species and that these species should be considered significant resources: San Joaquin kit fox (*Vulpes macrotis mutica*), California red-legged frog (*Rana aurora draytonii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California tiger salamander (*Ambystoma californiense*), and western pond turtle (*Clemmys marmorata*). In addition, nesting and wintering habitat for special-status raptors should be considered as a significant resource value at the Park. Future biological studies and additions to the State and federal lists of threatened and endangered species could result in additional species meeting the significant resource values criteria.

Table I
Special-status Species at Pacheco State Park

SPECIES	HABITAT	POTENTIAL FOR OCCURRENCE	CNPS	DFG	USFWS
PLANTS					
Hospital Canyon Larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	Wet, boggy areas	May be present in wet areas.	1B	—	—
Four-Angled Spikerush <i>Eleocharis quadrangulata</i>	Seasonally or permanently wet or moist areas	Potentially present within wet areas including springs and stock ponds, although not observed during surveys.	1B	—	—
Round-Leaved Filaree <i>Erodium macrophyllum</i>	Grasslands	Observed by Edminster onsite.	2	—	—
Napa Western Flax <i>Hesperolinon</i> sp. nov.	Chaparral, especially serpentine	Potentially present in chaparral.	1B	—	—
Hall's Bush Mallow <i>Malacothamnus hallii</i>	Chaparral	High potential because species occurs nearby and along SR 152 road cut.	1B	—	—
INVERTEBRATES					
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i>	Elderberry shrubs	Status is unknown, but species may be present. A few scattered elderberry shrubs were found during 2002 surveys.	—	—	FT
FISHES					
San Joaquin Roach <i>Lavinia symmetricus</i>	Small, warm intermittent streams	Status is unknown, but species is not expected because of the absence of suitable habitat.	—	CSC	—
AMPHIBIANS AND REPTILES					
California Tiger Salamander <i>Ambystoma californiense</i>	Vernal pools and stock ponds in grasslands	Status is unknown, but species may be present. Stock ponds and other seasonal pools without predatory fish may be suitable breeding habitat.	—	CSC	FC
Western Spadefoot <i>Scaphiopus hammondi</i>	Vernal pools and other seasonal ponds	Status is unknown, but species may be present.	—	CSC	—
California Red-legged Frog <i>Rana aurora draytonii</i>	Stock ponds and other natural and artificial permanent aquatic habitats	Known to breed in several stock ponds.	—	CSC	FT
Foothill Yellow-legged Frog <i>Rana boylei</i>	Generally restricted to shallow, flowing streams with some cobble-sized substrate	Not expected because of the absence of suitable habitat. Reported to the CNDDDB as occurring in Los Banos Creek upstream of Los Banos Reservoir.	—	CSC	—
Western Pond Turtle <i>Clemmys marmorata</i>	Ponds, marshes, streams, and irrigation ditches	Known to occur. Observed during 2002 field survey in Mammoth Lake and in a stock pond adjacent San Luis Reservoir south of Dinosaur Point.	—	CSC	—
Blunt-nosed Leopard Lizard <i>Gambelia sila</i>	Sparsely vegetated plains, alkali flats, low foothills, washes, and arroyos	Not expected. Current range is restricted to areas further south. The CNDDDB includes a 1931 occurrence from the vicinity of San Luis Dam.	—	CE	FE

Table I
Special-status Species at Pacheco State Park

SPECIES	HABITAT	POTENTIAL FOR OCCURRENCE	CNPS	DFG	USFWS
San Joaquin Whipsnake <i>Masticophis flagellum ruddocki</i>	Grasslands	Status is unknown, but species is expected to occur. The CNDDDB includes numerous occurrences from the Los Banos Valley.	—	CSC	—
BIRDS					
Swainson's Hawk <i>Buteo swainsoni</i>	Grasslands, riparian woodland, and agricultural fields	Status is unknown, but species is not expected to nest or forage in the Park because of the absence of suitable habitat and steeply sloped terrain. Known to nest at O'Neill Forebay Wildlife Area.	—	CT	—
Golden Eagle <i>Aquila chrysaetos</i>	Grasslands, open woodlands	Observed during 2002 field surveys. Suitable nesting habitat is present.	—	CSC	—
Bald Eagle <i>Haliaeetus leucocephalus</i>	Usually found in grasslands and open woodlands near large bodies of water	May winter in small numbers at San Luis Reservoir. Not expected to nest in the Park.	—	CE	PD
Prairie Falcon <i>Falco mexicanus</i>	Grasslands and other open habitats with nearby cliffs for nesting sites	Status is unknown, but species is expected to forage at least occasionally onsite. No suitable nesting habitat. Known to occur at Los Banos Reservoir (observed during 2002 field surveys).	—	CSC	—
Northern Harrier <i>Circus cyaneus</i>	Grasslands, marshes, and agricultural fields	Observed during 2002 field surveys. Nesting status is not determined, but suitable nesting habitat is present.	—	CSC	—
Ferruginous Hawk <i>Buteo regalis</i>	Grasslands and agricultural fields	Status is unknown, but species may be an uncommon winter visitor.	—	CSC	—
Mountain Plover <i>Charadrius montanus</i>	Grasslands and agricultural fields on flat terrain	Not expected to occur because of the absence of suitable habitat and steeply sloped terrain.	—	CSC	PT
Burrowing Owl <i>Athene cunicularia</i>	Grasslands and agricultural fields	Status is unknown, but species is likely to occur in small numbers during winter and the nesting season.	—	CSC	—
California Homed Lark <i>Eremophila alpestris actia</i>	Grasslands and agricultural fields	Observed during 2002 surveys. Nesting status is unknown, but suitable habitat is present.	—	CSC	—
Loggerhead Shrike <i>Lanius ludovicianus</i>	Grasslands and agricultural fields	Observed during 2002 surveys. Nesting status is unknown, but suitable habitat is present.	—	CSC	—
Peregrine Falcon <i>Falco peregrinus</i>	Shoreline areas, edges of marshes, bays, reservoirs, beaches	Incidental visitor; nesting habitat is absent.	-	CE	-

Table I
Special-status Species at Pacheco State Park

SPECIES	HABITAT	POTENTIAL FOR OCCURRENCE	CNPS	DFG	USFWS
Tricolored Blackbird <i>Agelaius tricolor</i>	Freshwater marsh, riparian habitat, and agricultural fields	Status is unknown, but suitable foraging habitat is present. Known to nest at O'Neill Forebay Wildlife Area.	—	CSC	—
MAMMALS					
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i>	Grasslands and open scrub	Status is unknown, but species is not expected to occur. Oak woodland and the steeply sloped hillsides that characterize the Park are generally avoided by kit fox.	—	CE	FE
Yuma myotis <i>Myotis yumanensis</i>	Roosts in treehollows, cracks in cliffs, mines, caves, structures; forages over grasslands and water bodies	Suitable habitat is present, but status is unknown.	-	CSC	SC
Pallid Bat <i>Antrozous Pallidus</i>	Roosts in caves, mines, homes, cliffs cracks; forages over ground	Suitable habitat is present, but status is unknown.	-	CSC	-
Pale Big-eared Bat <i>Corynorhinces Townsendii pallescens</i>	Roosts in caves, mines, and structures; forages over grasslands, woodlands, and water bodies	Suitable habitat is present, but status is unknown.	-	CSC	SC
Greater Western Mastiff-Bat <i>Eumpos perotis californicus</i>	Roosts in cracks in cliffs, structures, and hollow trees with a 2- to 3-meter (6.5- to 9.8-foot) freefall area to gain flight	Suitable foraging habitat is present, but status is unknown.	-	CSC	SC

California Native Plant Society (CNPS)

1B - Plants rare, threatened, or endangered in California and elsewhere

2 - Plants rare, threatened or endangered in California but more common elsewhere

California Department of Fish and Game (DFG)

CE - State-listed, Endangered

CT - State-listed, Threatened

CSC - California Species of Special Concern

U.S. Fish and Wildlife Service (USFWS)

FE - Federal Endangered

FT - Federal Threatened

FC - Federal Candidate

PT - Proposed for listing as Threatened

Source: CNDDDB 2002

San Joaquin Kit Fox

The San Joaquin kit fox is a State-listed Threatened and federally listed Endangered species and, therefore, receives protection under both CESA and ESA. Before 1930, kit foxes inhabited most of the San Joaquin Valley from southern Kern County to northern San Joaquin County. The current range is thought to cover less than half of the original area, with the largest portion of the range remaining in the southern and western parts of the San Joaquin Valley (USFWS 1998). The decline of the kit fox has been attributed to the conversion of natural habitat to agricultural and urban uses, and to oil development. The loss of native upland habitat has resulted in much of the kit fox range becoming fragmented, which is considered a serious threat to the kit foxes' survival (USFWS 1998). Other factors that have been

identified as threats to remaining kit fox populations include the use of rodenticides, disease, competition with larger canids, and factors related to California's increasing human population (e.g., vehicular mortality).

The current status of the kit fox in the unit is not known. Kit foxes have not been documented as occurring within the Park but were reported at numerous locations east of the Park during the 1990s and through 2003. Documented occurrences include several detections in the vicinity of Santa Nella and the San Luis Reservoir State Recreation Area (CNDDDB 2002, KFPACT 2002). USFWS considers the Santa Nella region, including portions of the San Luis Reservoir SRA, as crucial to the continued existence of the San Joaquin kit fox because this area has provided a narrow corridor connecting the northern and southern kit fox populations (KFPACT 2002). Although kit foxes in the Santa Nella region certainly could disperse to portions of the Park, kit foxes prefer grasslands and open scrublands with gentle topography. Annual grassland is the dominant upland habitat within the San Luis Reservoir SRA and the surrounding areas that are not developed or converted to agricultural land. Conversely, the Park is characterized by steep slopes covered by oak savannah and open grassland with small areas of dense woodlands. Kit foxes are not usually found in woodland habitats. Therefore, it is unlikely that the Park supports a resident kit fox population. However, given the close proximity of the Park to multiple documented occurrences and what the DFG and USFWS consider to be an important movement area for the species, the kit fox should be considered a significant resource value for the Park.

California Red-legged Frog

The California red-legged frog is a California Species of Special Concern and is federally listed as Threatened. This subspecies of red-legged frog occurs from sea level to elevations near 5,000 feet. It has been extirpated from 70% of its former range and now is found primarily in coastal drainages of central California, from Marin County south to northern Baja California. Potential threats to the species include elimination or degradation of habitat from land development and land use activities, and habitat invasion by non-native aquatic species (USFWS 2002).

The California red-legged frog requires a variety of habitat elements with aquatic breeding areas typically located within a matrix of riparian and upland dispersal habitats. Breeding sites of the California red-legged frog include freshwater habitats such as pools and backwaters within streams and creeks, ponds, marshes, springs, and lagoons. Additionally, California red-legged frogs frequently breed in artificial impoundments such as stock ponds (USFWS 2002).

The distribution of California red-legged frogs at the Park has not been conclusively determined, but data collected for this report suggest that the unit supports a large breeding population of red-legged frogs. Red-legged frogs were documented by biologists from EDAW and the University of California, Davis, at seven of the eight permanent stock ponds at the Park during September 2002 (Fitzpatrick, pers. comm., 2002) (Table 2). The only pond from which California red-legged frogs were absent was Nun Lake, which is known to support non-native fishes. A single red-legged frog was also found by an EDAW biologist at Salt Spring Creek. Earlier in the year, Department employees found California red-legged frogs at additional locations that are seasonally inundated.

Table 2
Amphibians, Reptiles, and Fish found in Stock Ponds at Pacheco State Park

LOCATION	CALIFORNIA RED-LEGGED FROG	WESTERN POND TURTLE	CALIFORNIA NEWT	FISH	SANTA CRUZ GARTER SNAKE
Nun Lake	No	No	No	Yes	No
Pig Pond	Yes	No	Yes	No	Yes
Diamond Lake	Yes	No	Yes	No	Yes
Bearhide Lake	Yes	No	Yes	No	Yes
Dinosaur Lake	Yes	No	Yes	No	No
Mammoth Lake	Yes	Yes	Yes	No	Yes
Wolf Lake	Yes	No	Yes	No	No

The Park is within the area designated as critical habitat for the red-legged frog (USFWS 2002). By definition, only aquatic and upland areas where suitable breeding and nonbreeding habitats is interspersed throughout the landscape and is interconnected by unfragmented dispersal habitat qualify as critical habitat for the red-legged frog. The critical habitat designation has been challenged in court and the status of the case has not been resolved. However, the designation remains in effect pending the outcome of the decision.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle was federally listed as Threatened on August 8, 1980 (USFWS 1980). The beetle is dependent on its host plant, elderberry (*Sambucus* spp.), which is a common component of the remaining riparian forest of the Central Valley. The amount and distribution of suitable habitat for the valley elderberry longhorn beetle has been reduced by the destruction of extensive areas of California's Central Valley riparian forest during the last 150 years as a result of agricultural and urban development (USFWS 1980). Loss of nonriparian habitat where elderberry occurs (e.g., savanna and grassland adjacent to riparian habitat, oak woodland, mixed chaparral-woodland), and where the beetle has been recorded, suggest further reduction of the beetle's range and increased fragmentation of its upland habitat (Barr 1991).

The presence or absence of the valley elderberry longhorn beetle at the Park has not been determined. A few scattered elderberry shrubs were found in the unit during 2002 surveys. However, the unit does not support any large areas of well-developed riparian habitat that typically characterizes occupied habitat. The CNDDDB includes one occurrence in the vicinity of the Park, and in 1987 two valley elderberry longhorn beetles were collected along Los Banos Creek, approximately 6 miles southeast of San Luis Reservoir. Because valley elderberry longhorn beetles have been found in the vicinity of the Park and elderberry shrubs are present, it is possible that elderberry longhorn beetles are present at the Park.

California Tiger Salamander

The California tiger salamander is considered a California Species of Special Concern and a candidate for federal listing as Threatened or Endangered. This large terrestrial salamander is generally restricted to

grasslands below 2,000 feet. California tiger salamanders move from subterranean refuge sites (e.g., small mammal burrows) to breeding sites (e.g., vernal pools, seasonal ponds) following relatively warm winter and spring rains (October through May). Tiger salamanders can successfully breed in artificial impoundments (e.g., stock ponds) as long as they do not contain fish. Because tiger salamanders have been known to travel long distances to reach suitable breeding ponds, DFG considers upland habitat within 1 kilometer (km) (0.62 mile) of potential breeding locations as potential habitat (DFG 1997). A minimum of 10 weeks is required to complete development through metamorphosis (Jennings and Hayes 1994).

Although breeding by tiger salamanders has been documented in permanent ponds, if there are predatory fish or bullfrogs in the pond, breeding will most likely be unsuccessful (Jennings and Hayes 1994). The presence of western newts in ponds also indicates that the ponds may not be suitable sites for tiger salamander breeding. However, herpetologists generally agree that western newts and California tiger salamanders prefer different breeding and upland habitat and not that one species precludes the presence of the other (Berry, pers. comm., 2002). Tiger salamanders are restricted to valley and foothill grasslands; western newts tend to occupy creeks and ponds in open canyons with nearby wooded areas. California newts are common in several of the permanent stock ponds at the Park (Table 2).

Focused surveys for tiger salamanders have not yet been conducted at the Park and, therefore, it is not known whether this species is present. However, research biologists at the University of California, Davis, did sample many of the permanent ponds in September 2002 to try to locate a non-native tiger salamander that recently had been found in the region (Fitzpatrick, pers. comm., 2002). Although no tiger salamanders (native or non-native) were found, the researchers did identify areas of the Park that they believe could support California tiger salamanders.

Tiger salamanders were documented at several locations in the vicinity of the Park in the 1980s and 1990's, mostly in areas located south and east of the Park (CNDDDB 2002). There are also undocumented occurrences of adult tiger salamanders from the Basalt Campground area in the adjacent San Luis Reservoir SRA.

Western Pond Turtle

The western pond turtle is a California Species of Special Concern. This aquatic turtle is found in a variety of habitats including lakes, rivers, streams, and stock ponds. They unusually leave aquatic sites to reproduce and overwinter. Pond turtles nest in upland habitat, sometimes 400 meters (approximately 1,300 feet) or more from aquatic sites.

Western pond turtles were found at two locations within the Park during 2002 field surveys. A large population of pond turtles was present at Mammoth Lake. In 2002, an EDAW biologist also located a few pond turtles in a stock pond within the Park.

Special-status Raptors

Special-status raptors known or expected to occur at the Park include bald eagle, golden eagle, Swainson's hawk, prairie falcon, ferruginous hawk, burrowing owl, and northern harrier. The bald eagle currently is State-listed and federally listed as Endangered but recently has been proposed for federal delisting. Swainson's hawk is State-listed as Threatened. The other species have been identified as California Species of Special Concern. With the exception of the ferruginous hawk and the bald eagle,

which are expected to occur in the Park only during winter, all of these raptors potentially could use the Park as nesting habitat. Additionally, with the recent release of six juvenile California condors in nearby Pinnacles National Monument, this species could also be expected to use the Park for foraging and feeding or nest at Pacheco State Park. Although they prefer cliffs and rocky outcrops for nesting they are also known to use trees or snags and forage in grasslands and oak savanna.

Prairie falcons typically are found in open, arid areas near suitable cliffs for nesting. Prairie falcons are not expected to nest within the Park because there are no suitable nesting sites, but the Park does provide potential foraging habitat. Prairie falcons were observed upstream of Los Banos Reservoir during 2002 field surveys. Prairie falcons are known to nest on the cliffs above Los Banos Creek at the upper end of the reservoir. The CNDDDB also includes several occurrences of nesting prairie falcons in the region.

Swainson's hawks forage over valley grasslands and croplands and nest in isolated trees and riparian woodlands. Although there are no documented nesting occurrences of Swainson's hawks in the Park, nesting was documented at the O'Neill Forebay in 2001 and in Los Banos Valley in 1985 (CNDDDB 2002). Swainson's hawks generally avoid steeply sloped terrain and foothill oak woodlands and, therefore, are not expected to nest within the Park.

In California, bald eagles are found in a variety of habitats in winter, with the largest concentrations found in areas with large bodies of water that support abundant prey such as fish or waterfowl. Bald eagles occasionally have been seen during winter at O'Neill Forebay. They also could occur in small numbers at San Luis and Los Banos Reservoirs. Bald eagles currently are not known or expected to nest in the vicinity of the Park and are not expected to forage in the Park away from San Luis Reservoir SRA.

Golden eagle, ferruginous hawk, and northern harrier are all known or expected to occur within the unit. Burrowing owls could be present, but they are generally found at lower elevations and in more open habitat than that found in the Park. All of the occurrences of burrowing owls in the CNDDDB are from locations east of the Park. Northern harriers and golden eagles were observed during 2002 and both species potentially could nest within the Park. The ferruginous hawk is a regular winter visitor to grasslands and open oak woodlands in the region. Suitable foraging habitat for all four species is abundant throughout the Park. In addition, peregrine falcons are likely to occur at the Park on an incidental basis.

Plant Life

Vegetation

A variety of vegetation types occurs in the Park, including riparian and oak woodland, savanna, chaparral, scrub, grasslands, mesic herbaceous (wetland), and ruderal (non-native and weedy) plant communities. The woodlands tend to occur in the canyons and slopes, while the chaparral and scrub occur on the mid slopes throughout the Park. The riparian woodland occurs along watercourses and the mesic herbaceous vegetation occurs at seeps, stock ponds, and watercourses. Where appropriate, the naming system used in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) was incorporated into the name of the vegetation type. Appendix C contains a detailed discussion of the vegetation types found in the Park.

All of these vegetation types are considered to represent important resource values. The grassland, blue oak woodland, and blue oak savanna are the most common vegetation types and thereby define the Park. The riparian woodland, mesic herbaceous, coast live oak woodland, chaparral, and scrub types are important for habitat diversity. They do not cover as much area as the blue oak types and grassland but

provide habitat for many of the species that would not otherwise be found in the Park. In addition, areas within the riparian woodland and the mesic herbaceous vegetation types would be considered regulated wetlands and, therefore, fall under the jurisdiction of regulatory agencies. Ruderal vegetation is important because of the potential need for management.

Vegetation Dynamics

Climatic and Topographic Influences. Pacheco SP is located on the crest and eastern slope of the Diablo Range and therefore is influenced by the weather patterns of the San Joaquin Valley. The area is often windy, especially in the summer. This wind further exerts a drying influence on the vegetation. Nevertheless, the hot climate of the summers is ameliorated somewhat by the incursion of fog into the Park as a result of the marine flow from the west. Steep canyons and north-facing slopes also provide habitat for species that grow in the moister areas of the Park.

Plant Succession. The Park's natural vegetation consists largely of blue oak woodland, blue oak savanna, and grassland. There are areas of coast live oak woodland in the moister areas of the Park. Relatively small areas are vegetated by scrub and chaparral. The rate of change, if any, of blue oak savanna to blue oak woodland and of grassland to blue oak savanna is difficult to determine based on the field work conducted. The chaparral and scrub vegetation types currently are being colonized by blue oak (*Quercus douglasii*), coast live oak (*Q. agrifolia*), California bay (*Umbellularia californica*), and California buckeye (*Aesculus californica*). The ecological processes that determine the occurrence of the scrub types are not well known, but it is likely that without fire, the scrub types will eventually become oak woodland types. As with the chaparral, fire may be important in maintaining the species composition and diversity of scrub.

Unusual Aspects of the Vegetation. Pacheco SP is located in a low point of the Diablo Range with elevations ranging from 640 to 1,927 feet. Areas to the north and south, outside the Park, are as high as 3,000 feet. This topographic difference, along with the incursion of summer fog, may partially explain the occurrence of coast live oak on the eastern slopes of the Inner Coast Range, one of the few places where coast live oak is found so far inland. Correspondingly, interior live oak (*Quercus wislizenii*) and gray pine (*Pinus sabiniana*), two species that would be expected to occur in the Park, are absent. Also absent are manzanita (*Arctostaphylos* spp.) and ceanothus (*Ceanothus* spp.), with the exception of buckbrush (*C. cuneatus*). Hop tree (*Ptelia crenulata*) is particularly abundant at the Park and is a major component of the hollyleaf cherry/hop tree scrub.

Sensitive Vegetation

Sensitive vegetation types include those that have experienced a precipitous decline since the arrival of European descendants to California. These types have been lost as a result of conversion of land to agricultural, commercial, or residential uses. In some cases, poor management and invasive species have affected the occurrence and value of sensitive vegetation types.

Sensitive vegetation types that occur at the Park are California sycamore riparian woodland, mesic herbaceous vegetation, grasslands dominated by native species, oak woodland, and large trees.

The California sycamore riparian woodland occurs within watercourses subject to USACE and DFG jurisdiction. Mesic herbaceous vegetation often occurs in areas that are regulated wetlands according to USACE's definition, and is important for that reason. Riparian woodlands are important wildlife habitat and are used by a suite of bird species for foraging and nesting.

The oak woodland and savanna types provide habitat for a variety of wildlife species. Acorns are an important food source for a number of animal species, such as gray squirrels, acorn woodpeckers, scrub jays, and deer. Large trees, although not a vegetation type, also have high biological value. Trees greater than 24 inches in diameter often have lived for more than a century. These individuals, by virtue of their age and large size, have biological value. Dead trees (snags) and older large trees with decayed branches also are important for wildlife species because of their relative scarcity in woodland areas. Decomposer organisms colonize these snags and dead branches, and wildlife consume the decomposer organisms and use snags and dead branches to form nest cavities.

Rock outcrops are important for both plant and animal diversity. On the shallow soils of the rock outcrops, some native species can compete successfully with the non-native grass species. The rocks also provide protection from herbivores and allow seedlings to become established before they are eaten by rodents or large herbivores. As wildlife habitat, the rock outcrops are used for denning and as sentinel areas.

Special-status Plant Species

Special-status plant species are endangered, threatened, or otherwise rare or uncommon in California. These species are on either the State or Federal lists of Endangered or Threatened species, are candidates for such listing, or are on a variety of informal lists. These informal lists include the Special Plants list developed by DFG and lists developed by CNPS (2001, 2002). The CNPS lists include species considered rare and endangered in California and elsewhere (List 1B), species considered extinct (List 1A), and species considered rare and endangered in California but more common elsewhere (List 2).

Robert Edminster's list of plant species found in the Park contains some special-status species. These species are big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), a CNPS List 1B species; Santa Clara Valley liveforever (*Dudleya setchellii*), a federally listed endangered species; round-leaved filaree (*Erodium macrophyllum*), a CNPS List 2 species; and Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*), a CNPS List 1B species.

The big-scale balsamroot is a member of the sunflower family. One to several flowers, each with their own stalk, emerge from a leafy rosette in the spring. By summer this species dries out; it will emerge the following spring from its perennial rootstock. Big-scale balsamroot grows on the basaltic rock outcrops at the eastern end of the Park overlooking San Luis Reservoir. Dried individuals were observed in patches totaling less than 10,000 square feet in size on one of the basaltic rock outcrops. This occurrence of a population of big-scale balsamroot in Merced County has not been recorded previously (CNPS 2001).

The Santa Clara Valley liveforever is known only in the Coyote Valley from southern San Jose to San Martin. It is an obligate of serpentine soils. There are serpentine soils in the Park and west of the Park boundary where the Santa Clara Valley liveforever may have been observed.

The round-leaved filaree is an annual forb that grows in grassland areas. It blooms in the spring and dries out by early summer. It was most likely observed on the ridgetops in the Park (Edminster, pers. comm., 2002).

Congdon's tarplant is a summer and fall blooming species. It typically occurs in areas that are seasonally wet and can occur in vernal pool type environments. It appears very similar to Fitch's spikeweed (*Hemizonia fitchii*), which is common in the Park. Congdon's tarplant was not observed during the field

work despite a search of suitable areas. Its occurrence at the Park would be a new record for the California Native Plant Society database in Merced County (CNPS 2001).

Invasive Non-native Species

Non-native (exotic, alien, nonindigenous) species have not evolved in a particular area, and have been introduced through human activities, either incidentally or deliberately. Most non-native species are not invasive and do not have adverse effects on natural plant and animal communities. Nevertheless, some non-native species have resulted in the conversion of native habitats to a non-native vegetation type with resultant reduction of native plants and degradation of wildlife habitat.

Species at the Park with the potential to convert native habitats to areas of non-native vegetation are perennial pepperweed (*Lepidium latifolium*), Himalaya berry (*Rubus discolor*), yellow starthistle (*Centaurea solstitialis*), red brome (*Bromus madritensis* ssp. *rubens*), fennel (*Foeniculum vulgare*), and medusahead (*Taeniatherum caput-medusae*). These species are all on the Most Invasive Wildland Pest Plant list developed by the California Exotic Pest Plant Council. In addition, hoary cress (*Cardaria draba*) and milk thistle (*Silybum marianum*) are also of concern.

Non-native plants that occur at the Park and are classified as Wildland Plants of Lesser Importance by the California Exotic Plant Protection Council are bull thistle (*Cirsium vulgare*), tall fescue (*Festuca arundinacea*), poison hemlock (*Conium maculatum*), Italian thistle (*Carduus pycnocephalus*), and red starthistle (*Centaurea melitensis*).

Yellow starthistle, Italian thistle, and broad-leaved peppergrass are also on the California Department of Food and Agriculture's list of noxious weeds.

Grazing

Paula Fatjo had a lease for cattle grazing in the western portion of the Park in a series of ten paddock areas. Grazing leases do not exist for the eastern portion of the Park with the easternmost paddock fence ending at a point east of the Park entry. Grazing does not occur in the area leased for wind turbines and currently occupies less than half of the site. This lease has continued under the Department's ownership and currently, with a limited monitoring program, there is uncertainty as to whether grazing is beneficial to the site's biodiversity and species composition. Based on the existing lease, cows and their calves graze in 10 pastures on a rest/rotation basis from November to May, depending on rainfall. Each pasture is grazed for 3–8 days before the animals are transferred to another pasture. Grazing, therefore, takes place in each pasture only once a month or month and a half (30–50 days).

Animal unit months (AUM) measure a pasture's grazing intensity. The grazing intensity varies depending on the available forage. The 2002-03 yearly report reveals that 2,400 AUM occurred at the Park. The maximum AUM allowed at the Park is 2,800. Each mature cow is considered to be 1.0 AU, each weaned calf 0.6 AU, each yearling 12–17 months old is 0.7 AU, and each yearling 17–22 months old is 0.75 AU.

The draft grazing program prospectus stipulates that the "Lessee shall exercise good grazing practices to avoid overgrazing of the Premises." In addition, the Department's resource management objectives were described in the draft grazing program prospectus as "the reduction of introduced annual grasses and an increase of native perennial species." Despite the Department's goals, the frequent rotation among the

pastures, and the long rest period between grazing events, during the 2002 field reconnaissance, some slopes within the Park's pastures had very little residual dry matter. However, some similar ungrazed slopes also had little residual dry matter, possibly due to the shallow soil and low rainfall in the latter part of the rainy season. In grazed areas, these dry slopes were also observed to have less residual dry matter than the ungrazed areas.

Differences in the flora between grazed and ungrazed areas were difficult to determine. Both areas have wildflower displays in the spring. During field work in the fall, oak seedlings were observed in both areas, although qualitative observation indicated that there were more oak seedlings in ungrazed areas than in grazed areas.

Cultural Resources

Pacheco SP retains many traces of its prehistoric and historic cultural heritage. Because of its location at the eastern edge of the Diablo Range near the western extent of the central San Joaquin Valley, the landscape within and in the vicinity of the Park was an important area for Native Americans and, subsequently, Euroamerican settlers and entrepreneurs. The varied natural setting and accessibility to the San Joaquin Valley and the coast provide a diversity of settings and resources that have attracted a wide range of native and immigrant cultural groups for thousands of years.

The evidence of prehistoric and historic patterns of land use can be found throughout Pacheco SP. However, few systematic cultural resource investigations have been conducted in the Park proper over the preceding decades and these have not resulted in published data (Whatford 1996). The Park's rolling topography, unique vegetation evenly dispersed water sources and proximity to diverse Central Valley and coastal ecosystems make it highly likely that the area was heavily used throughout prehistoric and historic times. Given such a landscape, it is almost certain that there are many undocumented archaeological sites, features, and artifacts within the Park. As such, issues related to discovery of such resources during ongoing and future development and use of Pacheco SP need to be addressed if these resources are to be preserved for future generations.

Regulatory Setting

Both PRC 5024, 5024.5 and CEQA offer guidelines regarding impacts on cultural resources. Whether of historic or prehistoric age, cultural resources are referred to as historical resources. "Historical resource' includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1(j)).

Section 5024 and 5024.5 of the PRC states that "each state agency shall formulate policies to preserve and maintain, when prudent and feasible, all state-owned historical resources under its jurisdiction listed in or potentially eligible for inclusion in the National Register of Historic Places or registered or eligible for registration as a state historical landmark pursuant to Section 5021.."requires State agencies to formulate policies to preserve and maintain, when prudent and feasible, all state-owned historical resources under their jurisdiction that are listed or potentially eligible for inclusion in the National Register of Historic Places (NRHP). The criteria for inclusion are essentially equivalent to those for the California Register of Historical Resources (CRHR). Agencies may not undertake projects that adversely affect such resources

without prior consultation with the State Historic Preservation Officer (SHPO). The Department's policies for insuring compliance with these requirements are included in a Memorandum of Understanding with the SHPO and are incorporated in a Department Notice (DN 2002-3 and amendments).

CEQA states that if implementation of a project would result in significant impacts on important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources need to be addressed. The State CEQA Guidelines define a significant historical resource as a resource listed or eligible for listing on the CRHR. According to PRC 5024.1, an historical resource is eligible for inclusion on the CRHR if it:

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

In addition, the State CEQA Guidelines require consideration of unique archaeological sites. If an archaeological site does not meet the criteria for inclusion on the CRHR but does meet the definition of a unique archeological resource as outlined in CEQA (PRC §21083.2), it may be treated as a significant historical resource.

The preferred treatment option for both eligible and unique archaeological resources under CEQA (PRC §21083.2) is preserving such resources in place in an undisturbed state. Other acceptable methods of mitigation include excavation and curation or study in place without excavation.

The State Health and Safety Code (§7050.5) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The NAHC will shall immediately notify those persons it believes to be most likely descended from the deceased Native American, and direct the lead agency to consult with the appropriate Native Americans to develop an agreement for the treatment and disposition of the remains (PRC §5097.98).

For historic structures, public agencies follow the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995).

An additional type of historical resource relevant to Pacheco SP is cultural landscapes. If eligible to the CRHR or NRHP such landscapes should be treated as historical districts under the Department's CEQA and PRC 5024 obligations. Information and guidance on the protection of cultural landscapes is available through the Historic Landscape Initiative of the National Park Service. In *Protecting Cultural Landscapes*,

Planning, Treatment and Management of Historic Landscapes (Birnbaum 1994, Pg. 1), a cultural landscape is defined as a

“geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity or person or exhibiting other cultural or aesthetic values.”

It further states that there are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes and ethnographic landscapes. Of these, Pacheco SP most closely fits the definition of a historic vernacular landscape (Birnbaum 1994, Pg. 2) as a

“landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley. Examples include rural villages, industrial complexes and agricultural landscapes.”

Preservation planning for cultural landscapes includes the preparation of cultural landscape reports (CLRs), which document the history, significance, and treatment of a cultural landscape. CLRs are often prepared when a change is proposed and can be a “useful tool to protect the landscape’s character-defining features from undue wear, alteration or loss” (Birnbaum 1994). Preparation of CLRs can involve conducting historical research; preparing period plans; completing an inventory of, documenting, and preparing a plan of the existing conditions; conducting inventories of historic plants; analyzing the site to evaluate integrity and significance; and developing a treatment plan.

The Department’s Cultural Resources Division recognizes the importance of cultural landscapes and defines these for California as follows:

“Cultural landscapes portray how humans have used and adapted natural resources over time, whether through agriculture, mining, ranching and settlement activities, or traditional Native American cultural practices” (DPR 2003).

Cultural Setting

To place the prehistoric and historic sites of Pacheco SP into a broader context, the sites need to be examined from within a larger cultural framework. The variety of natural resources, rugged topography, and strategic location made the area an important economic center and transportation corridor for centuries. Consequently, cultural traces on the landscape reflect an equally diverse range of peoples and activities.

Prehistoric Archaeological Context

Although few cultural resource studies have been conducted within the Park, the area has benefited from extensive archaeological work conducted in the vicinity. During the 1960s, in anticipation of the construction of the nearby San Luis, Los Banos, and Little Panoche reservoirs, numerous early Native American sites were recorded. Although sites documented at Little Panoche are not included in this study, it is important to reference them, as they are located near the San Luis and Los Banos study areas

and contributed greatly to the archaeological record of the area. In several cases, the more substantial sites found in these project areas were the focus of intensive subsurface investigations (Nissley 1975; Olsen and Payen 1968, 1969, 1983; Pritchard 1970, 1983; Romoli and Ruby 1963). Based on some of this research, Olsen and Payen (1969) and Moratto (1984) have postulated estimated dates for the prehistoric cultural sequence of the area, which includes the Positas, Pacheco, and Gonzaga complexes. Varying occurrences of typologically and technologically distinct artifacts have provided archaeologists with a general sequence of cultural change over time. The causes of these changes tend to be varied, complex, and intricately interrelated and can include factors such as climate change and shifting degrees of external cultural contact.

Paleo-Indian (ca. 12,000-7,500 years before present [BP]): Although humans may have been present in North America long before this time, the best available archaeological evidence indicates that the first inhabitants in the New World arrived sometime around 12,000 years ago or earlier. Although somewhat controversial, a recent redating (Johnson et al. 2000) of the "Arlington Springs Woman," a Native American interment found on Santa Rosa Island (Orr 1962a, 1962b), indicates that these remains may date to as early as 13,000 BP, suggesting a much earlier occupation of California than previously supposed.

Paleo-Indian groups were probably small, consisting of extended families that ranged within large areas based on the seasonal availability of various plant and animal species. Although sites or artifacts dating to this early period have yet to be found within or in the vicinity of the Pacheco SP, they could be present in the area.

Positas Complex (ca. 5,300-4,600 BP): This cultural manifestation represents the earliest period for which extensive archaeological evidence has been noted in the Pacheco SP area. In general, little is known of this period and its relationship to earlier and later manifestations is somewhat unclear (Olsen and Payen 1969). However, by this time early Native Americans appear to have adopted a somewhat more settled lifeway. The lower cultural deposits from CA-Mer-94 at San Luis Reservoir (Olsen and Payen 1969) suggest that extensive trade networks had already been established by this time. Obsidian from distant sources and beads made from marine *Olivella* shells have been recovered from sites dating to this period. Other distinctive artifacts include small stone mortars, short cylindrical pestles, milling stones, and a wide range of flaked stone tools.

Pacheco Complex (ca. 4,600-1,700 BP): This period, best represented at CA-Mer-94 (Olsen and Payen 1969), has been divided into two phases based primarily on tool and shell bead forms. Pacheco B (extending until about 3,600 BP) exhibits characteristic foliate-shaped bifaces, rectangular marine *Haliotis* ornaments, and thick rectangular *Olivella* beads. Pacheco A, occurring after ca. 3,600 BP, includes a much wider variety of *Olivella* and *Haliotis* bead and ornament forms, perforated canine teeth, bone tools and whistles, and large stemmed and side-notched points. Abundant milling stones, mortars, and pestles indicate an increased reliance on gathered seed and nut foodstuffs. Evidence of trade also increases during this time; the bone and shell industries bear marked similarities to those noted in the Delta "Middle Horizon" and traits from western and southern assemblages (Moratto 1984, Olsen and Payen 1969).

Gonzaga Complex (ca. 1,700-1,000 BP): Noted from several sites in the San Luis Reservoir SRA (CA-Mer-3 and CA-Mer-94), this cultural manifestation has been noted throughout the west side of the Valley (Moratto 1984). Distinctive features include a mix of extended and flexed human burials, bowl mortars, squared and tapered-stem projectile points, grass saws, and characteristic *Haliotis* and *Olivella* beads and

ornaments. Bone and shell artifacts closely resemble those from the Delta "Late Horizon," Phase I (Moratto 1984). However, relatively little is known of this period because the only excavated occurrences have consisted of funerary sites and the majority of the artifacts have consisted of grave goods (Breschini et al. 1983).

Panoche Complex (ca. 500-150 BP): Although the Panoche and Gonzaga are fairly well documented in the area and have been found at a limited number of sites, there appears to be a hiatus of approximately 500 years between these distinctive manifestations. During this time, there is a possibility that environmental conditions in the region were unfavorable, and could not support oaks and a subsistence system focused on the gathering and processing of acorns. However, direct archaeological evidence of a dramatic decrease in acorn-bearing oaks during this period has yet to be documented, and only additional research may shed some light on the apparent abandonment of the region between approximately 1,000 and 500 BP (Olsen and Payen 1969, Moratto 1984).

The late prehistoric to early historic Panoche complex has been documented at many western Valley sites. Large circular structures occur frequently along with flexed burials and primary and secondary cremations. Bone and shell artifacts including *Haliotis* epidermis disk beads and side-ground and rough disk *Olivella* beads appear similar to those noted from the Delta "Late Horizon" period. Small side-notched arrow points are found on sites dating to these period and many features of this complex extend well into the historic period as contacts with Euro Americans increased in frequency and intensity (Moratto 1984; Olsen and Payen 1969).

While a Gonzaga/Panoche 500-year occupation hiatus may be apparent based on the excavations of sites in the Pacheco Pass area, according to Breschini and Haversat (1987), this apparent abandonment may have been somewhat limited and more local in nature. Breschini and Haversat, based in part on excavations conducted at CA-Fre-1333, have suggested that the Gonzaga Complex dates should probably be extended several hundred years, considerably narrowing the gap between the Gonzaga and Panoche in the region. However, evidence for a period of abandonment in the late Panoche/early Gonzaga complexes can be discerned at CA-Fre-1333 and a concurrent dramatic change in site function from a small village to a sporadically used camp or shelter (Breschini and Haversat 1987). Although additional research would be necessary to confirm this hypothesis, such shifts in site function, population density, and intensity of land use could be related to a decrease in the density of acorn-bearing oaks in the region during this time.

The late prehistoric to early historic Panoche complex (or Late Period Phase II) has been documented at a number of western Valley sites (Breschini et al. 1983). Large circular structures occur frequently along with flexed burials and primary and secondary cremations. Bone and shell artifacts including *Haliotis* epidermis disk beads and side-ground and rough disk *Olivella* beads appear similar to those noted from the Delta "Late Horizon" period. Small side-notched arrow points are found on sites dating to this period and many features of this complex extend well into the historic period as contacts with Euroamericans increased in frequency and intensity (Moratto 1984, Olsen and Payen 1969).

Although Pritchard (1970) noted some protohistoric materials at CA-Mer-3, early accounts suggest that Pacheco Pass and the area around the Park had been largely abandoned by the local Native Americans by the early 19th century (Latta 1949, Olsen and Payen 1968) in early historic times. Much of this was likely the result of the increased Spanish, Mexican, and ultimately American use of the pass as an important transportation route. Bands of cattle and horse thieves apparently made frequent use of the

pass, and military expeditions made incursions into the area in search of runaway coastal mission Indians or in search of new workers. Collectively, these pressures proved too much for the local Yokut inhabitants, who fled the area shortly before large-scale Euroamerican settlement began in the 1840s (Hill et al. 1996, Shumate 1977).

Ethnographic Setting

Ethnographic and archaeological evidence indicates that, at least in later prehistoric and early historic times, Native American populations residing in the Pacheco Pass area belonged to the Yokut tribe and, more specifically, the Northern Valley Yokut (Wallace 1978, Kroeber 1925, Olsen and Payen 1968). Although the Yokuts appear to have been the predominant group in the region, evidence suggests strong coastal influences by Ohlone (Costanoan) groups. Olsen and Payen (1969) suggest that a “Western Yokut” division from the Pacheco Pass area has just as much in common with the Costanoan as it does with the Yokut, a situation recognized by Kroeber (1925) as well. Contact between coastal and interior tribal groups would have been facilitated by the presence of routes through Pacheco Pass, providing for an easy exchange of goods and cultural traits in prehistoric and early historic times. Archaeological materials uncovered by Treganza (1960), Riddell and Olsen (1965) Olsen and Payen(1969), Pritchard (1966, 1970, 1983), and Riddell (1970), although analyzed and interpreted according to the Valley cultural and temporal scheme, may have much in common with manifestations from the west side of the Diablo Range. If this is indeed the case, the late prehistoric and early historic inhabitants of the Pacheco SP area may have been affiliated just as much with the Ohlone as they were with the Yokut.

The Pacheco Pass area offers a diverse natural setting ranging from tule marshes to dry plains and a transition zone between the oak savanna and grassland environments. These varied ecosystems provided a wide array of floral species such as acorns, oats, and other seeds that served as staple foods, and various grasses used for basketry. Faunal resources found in the area include numerous fish species, shellfish, turtles, waterfowl, deer, tule elk, pronghorn antelope, lagomorphs, and numerous rodent, reptile, land bird, and insect species that would have provided sustenance and sources of various materials such as hide, bone, feathers, and ligament.

Based on current interpretations of archaeological and ethnographic evidence, however, the conventional interpretation of the cultural associations of the Native Americans from the Pacheco SP area is that the Yokuts were (are) the predominant tribe. The Yokut's Penutian language was spoken by some 40 groups using distinctive but closely related dialects. These groups inhabited three main geographic locales in Central California—the Southern Valley (Tulare Lake), the Northern Valley (San Joaquin Valley), and the foothills (Sierra Nevada) (Kroeber 1925, Wallace 1978).

The influence of Ohlone groups can be seen in the Pacheco Pass area and throughout the Central Valley in the form of exotic materials not found elsewhere in the region. Abalone shell is found on many archaeological sites and accounts indicate that salt, mussels, and dried abalone was frequently traded with interior groups (Davis 1961). Linguistic evidence of extensive contact between the coastal Ohlone and valley tribes can be found as well. For example, some Valley Miwok terms are the same as those found in Ohlone groups, suggesting an exchange network involving not only material goods but more diverse cultural traits as well. Trade and contact between the coastal and interior groups, however, was not simply a one-way exchange. Davis (1961) also notes that piñon nuts and clamshell disc beads found their way to coastal tribes from inland sources.

Yokut groups lived in small seasonal camps geared toward hunting or the gathering and processing of acorn and a variety of grasses, or in larger settlements built near perennial water sources such as those found in even modest drainages and springs. Dwellings in the larger villages consisted of circular tule covered structures and more elaborate semi subterranean pit houses. Ceremonial sweat houses and assembly chambers were often constructed within the more substantial villages. These larger settlements might include approximately 200 inhabitants constituting a small subtribe of the Yokut. A headman, while not necessarily possessing absolute powers, served as an advisor to these self-contained communities (Cook 1960, Wallace 1978). In general, open conflict or warfare appears to have been rare, and even when confronted with often hostile Euroamerican contact, the Yokut preferred to flee to remote canyons or tule marshes (Cook 1960, Wallace 1978).

Yokut material culture and technological systems were as varied as the environments in which the Yokut resided and reflected the diversity of the available resources. Mortars and metates, both portable and bedrock, were used for the processing of acorns and other gathered seeds and nuts. Baskets were produced in a wide variety of sizes and shapes, each suited to a particular task and adorned with patterns characteristic of Yokut artistic expressions. Exotic materials such as marine shell, ocean fish, and shellfish were obtained from Ohlone contact and obsidian was acquired from distant sources.

Although little is known regarding traditional pre-European spiritual life, early historic religious and spiritual practices among the Yokut are somewhat better documented and are closely related to that of the Costanoan groups (Kroeber 1907, Levy 1978). Based on some early ethnographic research (Kroeber 1925), it appears that the Yokuts living in the Pacheco Pass area participated in the Kuksu ritual system during the later historic period. Other spiritual components of Yokut culture such as shamanism, although not specifically described for inhabitants of the Pacheco SP area, was almost certainly an important element contributing to the physical and spiritual stability and well-being of the people in prehistoric and early historic times.

Historic Setting

The history of Pacheco SP is inextricably linked with the history of Pacheco Pass itself and the prominence of the area as an important transportation route. At least five formal roads were built through the pass in historic times, including the original Pass toll road constructed by Andrew Firebaugh in the late 1850s. Merced County built a new road by Firebaugh's grade in the 1870s; the general route of Firebaugh's highway was also followed by the State in the early 1900s, again in the 1930s, and finally with construction of SR 152 in the 1960s. Although SR 152 is the predominant route through the pass today, traces of the earlier roads can still be seen today and, in some cases, are still used for local traffic.

The first documented European expedition into the pass took place when Gabriel Moraga and Father Pedro Muñoz traveled through the area in 1806. This encampment likely took place along Cottonwood Creek at the San Luis waterhole on the night of June 21, the feast day of San Luis de Gonzaga. As was tradition for Spanish explorers of the day, Moraga and Muñoz named the area in the saint's honor (Hill et al. 1996). Moraga and Muñoz's expedition essentially cleared the way for future development of the pass as a transportation route. Throughout the early decades of the 19th century, the pass served as an escape route for Native Americans attempting to escape the coastal missions or, conversely, planning to attack coastal missions. Many of these Native Americans, trained as vaqueros, had been through the region previously when driving herds into the Central Valley, making the area an ideal refuge. In fact, Native American familiarity with the pass clearly predated historic periods, and the pass likely served as an

important transportation route between the Central Valley and the coast (Cook 1960, Kyle 2002, Shumate 1977, Pilling 1955).

One of the most important historical developments in relation to the Pacheco SP area took place in September 1843 when Jose Mejia and Juan Perez Pacheco petitioned the governor for rights to more than 48,000 acres in and around the pass that had previously been granted to Francisco Jose Rivera in 1841. The establishment of their ranch and their occupation and development of the property was presented as an "aid in the defense against hostile Indians." The Rancho San Luis Gonzaga was granted in November of that year and bordered the ranch (Rancho Ausaymas y San Felipe) owned by Pacheco's father since 1833. Pacheco SP is a remnant of this grant. Through additional grants and the purchase of additional lands in the region, the Pacheco family holdings exceeded 150,000 acres by the middle of the 19th century (DPR 1973, Hill et al. 1996).

To support the establishment of the new Rancho San Luis Gonzaga and run the agricultural and herding operations, Pacheco saw to the construction of the area's first adobe building around 1844 near the spot where Moraga and Muñoz had camped 40 years earlier. In later years it served as a stage stop, café, gambling hall, and eventually as a gas station and roadside stop for travelers heading through the pass (Hill et al. 1996). Paula Fatjo, a fifth-generation Pacheco descendant, moved back to the family ranch in 1947 and remodeled the adobe into the living room of her house. The following chronology from the Gonzaga Adobe Stabilization Study (Crosby et al 2003), further describes the history of the adobe:

1948 Paula Fatjo (granddaughter of Paula Malarín de Fatjo; great-granddaughter of Francisco Pacheco) moved into the Ganzaga Adobe. At this time, her ranch consisted of 14,000 acres on which she raised Arabian horses (Thome 1962a). The building was being used as a restaurant and bar prior to her arrival (Motazedí 1983).

n.d. A "screened in breezeway" was constructed to attach the adobe to a "rather modern design house."

1955 Photographs show wood shingle roof, un-whitewashed and eroding walls, and an arched porch on east wall of adobe.

1960 Mary J. and Paula Fatjo commission an appraisal (Fitzgerald 1960). The appraisal also addresses the ranch complex that has been built adjacent to the Gonzaga Adobe by this time.

1960-1961 Charles Pope (1961) recorded the Gonzaga Adobe for the Historic American Building Survey (HABS), designating the structure CAL-1891. His architectural description of the building included a floor plan and elevation drawings of the one-room structure and a written narrative:

"The adobe measures 46 x 21 feet with walls 2 feet thick and 9 feet high. The loopholes, about 4 inches x 8 inches, are preserved on the West and South sides. The wood trim, windows, and doors, roof and floors have been replaced and are not considered important historically, although they are in the style of the early construction. The roof appears to maintain the slope down in the early photographs. Shingles with small exposure have replaced shakes with exposures of 12 inches or more.

The foundations have been reconstructed in concrete and the floor changed from earth to wood. Early construction probably had an open ceiling with trusses held together with rawhide. The present roof structure dates from the 1930s, and wooden plank ceiling now covers the room.

The arched porch on the eastside was constructed in the 1930s when the building was used as a roadside tavern" (Pope 1961:5-6).

1962 With the condemnation of the land for the new San Luis Reservoir, Paula Fatjo made preparations to relocate the adobe. She contracted C.H. Basore Company from Pasadena to move the structure. Their contract specified that she had to prepare the building for the move by removing all the utilities and preparing a new foundation at the new location. Also removed were the arched porch on the east wall and breezeway on the north wall. Their fee was \$17,500 (Basore and Stratton 1962; n.d.).

Photographs of the building (on file at the Milliken Museum and Pacheco State Park) in preparation just before the move show a low board ceiling, and built in shelves extending the length of the south wall, on either side of the fireplace, and wrapping around to portions of the east and west walls. Other photographs show artifacts uncovered during the moving process including iron hardware, bottles, bone, and a mortar and pestle. Also uncovered was the original foundation, described as "sandstone, two feet thick and three feet deep" (Figure 17; Anonymous 1962a:C-1). Much of the preparation work occurred in late October and well into November. The arched porch was likely removed sometime in early November.

The original location of the adobe, and of the entire rancho complex, was destroyed during construction of San Luis Dam and associated facilities. Paula Fatjo attempted to have the building moved to her new ranch facilities (now contained within Pacheco SP) before construction of the reservoir. During transit, however, large portions of the structure collapsed as a result of unseen termite damage; all that remains today are the two end walls currently on display at the Pacheco SP headquarters (Hill et al. 1996).

As a result of the Gold Rush of 1849, and the discovery of gold in the Kern River in 1853, the Pacheco Pass area saw a dramatic increase in the number of travelers and became a favorite haunt for bandits and outlaws. This included the infamous Joaquin Murieta and his gang, who reportedly frequented the San Luis *aguajes* (waterhole) (Shumate 1977). In light of the rugged and often lawless nature of his new rancho, Pacheco moved his family away to the safety of Monterey in 1851. Shortly after this period, Pacheco leased the rancho to his son-in-law, Mariano Malarin, to operate a herding operation to supply meat to San Francisco and miners in Sierra foothill towns (Hill et al. 1996, Shumate 1977). After Pacheco's departure, the rancho headquarters and the adobe may have been abandoned, becoming an ideal hideout for Murieta. It was at this location in 1853 that Captain Harry Love, a deputy sheriff for Los Angeles County, and a contingent of State Rangers cornered Murieta and his gang, who were apparently on their way to the Mother Lode region to stage a large horse-theft raid. Although the raid itself was thwarted, Murieta and all of his men still managed to escape, despite eyewitness accounts that Love had most of them cornered in the Pacheco ranch adobe (Latta 1980).

Although several preliminary moves to establish a railroad through Pacheco Pass were made during the 19th century (Adler and Wheelock 1965, Eldredge 1915), transportation through the area remained centered on trails and roadways. These routes became more formalized in 1857 when Andrew Firebaugh completed a toll road over the pass. A year later the Butterfield Stage Lines started regular runs along this roadway, but these only lasted until 1861 (Shumate 1977). Pacheco's Rancho San Luis Gonzaga became a regular stop for the stage and an inn and stables were soon constructed to service travelers.

Since the pass was such an important transportation route between the coast and the Valley, stage stops and roadways, these facilities attracted not only the attention of private entrepreneurs such as Bell, but of government concerns as well. Merced County eventually went on to purchase the toll road, and reconstructed it in 1878. The present day Whiskey Flat Road follows Firebaugh's alignment along the northern boundary of Pacheco SP. In later years, the State of California developed a new highway through the pass, finally leading to further realignments and construction of present day SR 152 (Shumate 1977).

Although the lands now encompassing Pacheco SP were largely peripheral to Rancho San Luis Gonzaga, ranching continued to be an important economic pursuit in the vicinity throughout the 20th century. Paula Fatjo, owner of Rancho San Luis Gonzaga, moved into the new ranch headquarters, located just to the north of the original rancho adobe, in 1948. However, by the early 1960s, construction began on San Luis Reservoir, and large portions of the rancho were to be inundated. Ms. Fatjo reestablished her operations 12 miles to the east near the summit of Pacheco Pass (Hill et al. 1996) and moved a number of structures from the old ranch complex to this new location, including an addition she had attached to the 1844 adobe (see chronology above).

Tax disputes with Merced County resulted in Ms. Fatjo having to consider the sale of some 5,000 acres of the remaining Pacheco family holdings. Financial solutions were found in the passage of Proposition 13, which eased the tax burden, and in a 25-year lease of some portions of the ranch to support a wind energy conversion facility. With no surviving family members, Ms. Fatjo bequeathed the entire remaining acres of the Rancho San Luis Gonzaga to the State in 1992. Ultimately, this gift led to the establishment of Pacheco SP, situated immediately adjacent to and to the west of the San Luis Reservoir SRA (DPR 1973, Hill et al. 1996).

Significant Cultural Resources Values

Pacheco SP has not been subjected to intensive archaeological or historical investigations, in part because it is a recent State acquisition. A partial cultural resources survey was completed in 1996 as part of the Fatjo Project conducted by the State (Whatford 1996) to enable the Department to classify the new Pacheco SP according to PRC 5019, Article 1.7. To date, records of sites documented during the course of this survey as noted in Table 3 have not been submitted to the State Office of Historic Preservation Information Center and have not been assigned formal site numbers for inclusion in the California Historical Resources Information System (CHRIS).

Five sites exhibiting evidence of prehistoric Native American occupation and activities have been recorded within the Park. Two bedrock milling stations including multiple mortar cups were noted in seasonal drainages during the 1995 inventory (sites PS-2 and PS-3). Additional prehistoric resources have also been recorded and show further evidence of early Native American occupation. Sites PS-10, PS-11, and PS-12 contain bedrock mortars, midden deposits, and artifacts such as lithic debitage and bone fragments. One of these sites (PS-10) has been affected in historic times by the placement of several watering troughs and a possible minor creek diversion or dam to enhance the available water supply for cattle.

Historic resources situated within Pacheco SP include a number of sites and remains associated with transportation themes. Several segments of the original grade of Pacheco Pass Road (PS-13), constructed in 1857 by Andrew Firebaugh, still exist in the Park along with associated culverts and support walls.

Rebuilt and realigned sections of Firebaugh's road constructed by the State in the early decades of the 20th century are also present (PS-5). Also noted were four rock cairns (PS-4) and historic spring (PS-8) situated along Whiskey Flat Road that served as survey markers for the Santa Clara/Merced county line.

The remainder of the cultural resources recorded within the Park consist of features and sites associated with the Pacheco family ranching operations of the late 19th and early 20th centuries. Fences (PS-1, PS-6), spring developments (PS-9 and PS-10), and a windmill (PS-7) have all been documented and attest to the long term and widespread ranching activities that have taken place in the area for much of the past 150 years. In addition, the 1960s Fatjo ranch buildings and structures, and the Miller and Lux line shack have not been formally recorded. A report entitled *Gonzaga Adobe Stabilization Study* (Crosby et al 2003) was commissioned by the Department to conduct archival and field research to expand the known historical context, identify the historical significance, describe current conditions, and make recommendations for the stabilization and preservation of the adobe structure. The report recommendations emphasize preservation of the structure in its current form and location. At this point in time, none of the 1960s Fatjo ranch elements are considered historic resources according to the State CEQA Guidelines. However, considering their importance to the regional ranching industry and direct association with the origins of the Park, they should be formally evaluated as soon as possible for management purposes.

Table 3 presents the cultural resources documented in Pacheco SP. The sites and features recorded within the Park likely represent only a small portion of the cultural resources that actually exist within the Park. It has been estimated that less than 25% of the Park has been subjected to systematic archaeological inventory and has been conducted in limited areas of the Park, consequently, cannot be considered an accurate sampling of the cultural landscape.

Apart from the recorded prehistoric and historic sites and features situated within Pacheco SP, collections of materials are from the SRA and are presently being curated by the Department and the U.S. Bureau of Reclamation's (USBR) facility at Melones. Items from the Fatjo estate reside in the Park in a facility located in the 1960s ranch building complex and other materials have been curated at the San Luis Reservoir SRA headquarters on Gonzaga Road in Gustine. These include artifacts and materials from survey and excavation projects conducted in the Park vicinity for which the origin has not been determined.

Table 3
Cultural Resources Documented in Pacheco State Park

SITE NUMBER	DATE RECORDED	SITE TYPE
PS-1	3-11-96	Historic - redwood fence
PS-2	3-11-96	Prehistoric -bedrock mortars
PS-3	3-12-96	Prehistoric -bedrock mortars
PS-4	3-12-96	Historic -rock cairn
PS-5	3-15-96	Historic - road segments
PS-6	3-14-96	Historic -redwood fence

PS-7	3-13-96	Historic - windmill ruins
PS-8	3-14-96	Historic - spring development
PS-9	3-14-96	Historic - spring development
PS-10	3-15-96	Prehistoric–bedrock mortars (BRMs), midden Historic - spring development
PS-11	2-15-96	Prehistoric - BRMs, midden
PS-12	nd	Prehistoric - BRMs, midden
PS-13	1-15-01	Historic - old Pacheco Pass Highway
trinomial	4-7-03	1844 adobe

Source: California Department of Parks and Recreation, 2003. All sites are within the USGS Pacheco Pass 7.5 minute quadrangle.

Aesthetic Resources

Pacheco SP offers a variety of scenic and aesthetic resources, including wide open vistas. The Park’s landscape is predominantly undeveloped, characterized by open grassland and oak woodlands, and its location atop the Diablo Range provides impressive vistas in all directions. At its highest point, the 1,927-foot Spike’s Peak offers a sweeping 360-degree view of Mariposa and Fremont peaks to the south and southwest, Pacheco Peak and the Gabilan Mountains to the west, and Mount Hamilton to the northwest. To the east lie San Luis Reservoir and the San Joaquin Valley, with the crest of the Sierra Nevada in the background. In addition to the expansive views available from many points throughout the Park, the landscape of grasslands, woodlands, ponds, and natural springs throughout the Park provide seasonal interest. In the fall, trees and in summer, grasses turn gold and crimson, and spring rains rejuvenate plant life to a variety of greens and bursts of colorful wildflowers. Summer winds are prominent and have sculpted the old oaks into windswept forms.

Entry to the Park from Dinosaur Point Road is through the original wooden ranch gate, adding to the sense of entry and the feeling of a working ranch. The few structures, fences, and roads located within the Park also contribute to the aesthetic quality. Structures in the Park include a variety of construction styles and materials and accentuate the Park’s former ranch activities, particularly with some of the “folk art” detailing. Wooden fences wind throughout the property and define cattle paddocks and a series of enclosures near the residence buildings, most recently used for Paula Fatjo’s horse corrals. The “cultural” landscape of Pacheco SP is clearly reminiscent of its history as a working ranch and its vast open landscape feels endless, largely contributing to the scenic and aesthetic character.

In addition to structures associated with the Park’s history as a working ranch, there are 167 wind turbines located in the eastern portion of the Park. In 1984, Paula Fatjo agreed to a 25-year lease to allow up to 200 windmills to be installed across the ridgelines to harvest and transform wind funneled through the pass into electrical energy. The turbine towers are a physical intrusion into the natural setting, and spare parts and equipment located in their vicinity further encroach on the uninterrupted landscape. Windmills are visible from a portion of the Park’s vista points and from the adjacent San Luis Reservoir SRA lands as well as certain locations along SR 152.

Designated Scenic Areas and Routes

State Route 152

The Merced County Year 2000 General Plan (Merced County 1990) designates SR 152 west of I-5 as a State Scenic Highway because of its scenic vistas. In addition to traversing rich agricultural farmlands, a considerable distance of the route provides drivers with views of the extensive San Luis Reservoir. The State has established standards for protecting State designated scenic corridors. Minimum standards for scenic corridor protection include:

- Regulation of land use and density of development,
- Detailed land and site planning,
- Control of outdoor advertising (including a ban on billboards),
- Careful attention to and control of earthmoving and landscaping, and
- Careful attention to design and appearance of structures and equipment.

According to the Santa Clara County General Plan (County of Santa Clara 1994), SR 152 is considered one of the most dramatically scenic gateways into Santa Clara County. Santa Clara County is currently actively seeking official State designation of this road as a State Scenic Highway. Policy R-RC(i) 36 of the Santa Clara County General Plan is intended to protect the scenic value of several major county thoroughfares and entranceways through State Scenic Highway designation, including Pacheco Pass (SR 152 east of Gilroy).

Interpretive and Educational Resources

Hikers, mountain bike enthusiasts, and equestrians have an opportunity to learn California Native American and ranch history as well to enjoy abundant natural resources at the Park. The cultural and historic resources on the site as well as in the region provide abundant opportunities to educate the public about earlier life in this region of California.

Paula Fatjo's living quarters, which currently act as Park headquarters as well as the adjacent stables and garden tell the story of her tenure on this land, revealing much about her life and interests. This area is available for tours by advance arrangement with staff. The Park also hosts 10-15 school field trips each year, with the natural and cultural history the topics most requested by teachers. Several school groups each year arrange to tour the wind farm; to learn about the creation of energy from the wind generated structures.

Regularly scheduled guided walks are conducted on Saturdays and/or Sundays during the spring wildflower season which are publicized in local newspapers, on Park bulletin boards at Pacheco SP and San Luis Reservoir SRA, and on the Park's recorded information phone message. Current themes used for interpretive guided walks, school trips and slide presentations include the following:

- Rancho San Luis Gonzaga: The story of how the Pacheco family, through five generations, fought to hold on to their land and their rancho heritage.

- Pacheco Pass Corridor History: The story of the busy gateway between the coast and the Central Valley.
- Pacheco SP—A Gift to the People: The story of the special public/private partnership that was created when Paula Fatjo donated her land to the people of California.
- Oak Savanna/Spring Wildflowers: The story of the natural landscape of Pacheco SP, which contains sturdy oaks amidst the hillsides with a spring array of fleeting wildflowers.
- Wind and Water for Power Generation: The story of how the winds that blow over Pacheco SP and the water that flows through the aqueduct beneath it both generate renewable energy for California.

Freestanding interpretive shelters are installed at the entrance area and near the ruins of the old adobe. An informational bulletin board stands near the parking area at the entrance.

Recreational Resources

Recreational Activities and Facilities

Pacheco SP is used primarily for day hiking, bicycling, and horseback riding along the network of former ranch roads, which have been designated as multiuse trails. Expansive views of San Luis Reservoir and the Pajaro and San Joaquin valleys attract many visitors to the Park, as does the large number of spring wildflowers. Other recreational activities include picnicking and historic and interpretive opportunities, and special events including a Park-sponsored annual kite day and annual equestrian events. Table 4 summarizes existing recreational uses and facilities.

**Table 4
Park Uses/Facilities Inventory**

USES/FACILITIES
Mt. biking, horseback riding, hiking/Multi-use trails
Day Use/Picnic tables, barbecues, shade amadas, chemical toilets
Guided walks, interpretive programs/Information board
Grazing/Livestock Corrals
Energy Production/Wind energy facilities
Maintenance and operations/Park headquarters, Fatjo ranch

Recreational Facilities

A day-use parking area, which includes an information kiosk noting the Park’s special features, is located near the Park entrance. The Park also offers a picnic area, located near the main parking area, with nine picnic tables and three fire rings with grills. In addition, there are approximately 25 miles of multiuse trails throughout the Park that are currently frequented by hikers, equestrians, and mountain bikers. Tent camping is permitted upon request. The Park’s most unique recreation facilities are its historic and interpretive opportunities, as described in the section on Interpretive and Educational Resources above.

Existing Facilities

Buildings

The Park entrance is marked by a gate and wooded arch, symbolic of its former use as a working ranch. The remains of Rancho San Luis Gonzaga, the residence of Paula Fatjo contains several residences, garages, paddocks, and outbuildings, some of which are in a state of disrepair. The primary residence features a mixture of construction materials, including wood frame and stucco buildings while other structures include several buildings related to current and former Park operations, as detailed below.

Pacheco SP does not have a visitor center or staffed ranger station however there is an informational bulletin board near the parking area that provides a Park map, Park regulations, and visitor information. Further information can be obtained from rangers at the headquarters office currently located in a portion of the Fatjo residence.

Operations Facilities

Paula Fatjo's residence constructed of a mixture of wood and a variety of other construction materials, are currently serving as the Park headquarters providing office space and a small meeting area as well as the Park library and collections material, including books, papers, saddles, and furniture. In addition to the ranch house there are eight other buildings within the Park, including sheds, barns, and shacks. The tack shed houses horse-related items, including horse care items, saddles, and horse feed, and provides a small shelter for horses to come in out of the weather. The new tool shed houses tools, pesticides, and herbicides used in Park maintenance. A third dilapidated shed was located near the other two, but is no longer used. The small barn houses more tools, while the pole barn houses Park maintenance equipment. The birthing barn includes one room for horses to come in out of the weather and one small room used to store hay. A two-room sheep trailer and a two-room line shack, both previously used as farmhand residences, also are located within the Park. The line shack was built during the time Henry Miller leased the ranch and was later moved to its current location, where it was modified into a somewhat larger building and used on the ranch. A self-registration system is set up at the parking area for visitor sign-in and to collect \$4.00 per day for all users.

Concessions

There are no concessions available in the Park. The nearest available provisions are located 8 miles outside the Park at Casa de Fruta, which provides a gasoline station, private campground, convenience store, and fruit stand. Further provisions are available in Santa Nella, Gilroy, Los Banos, and Hollister.

Employee Housing

Two Park staff members reside full-time in a two-story building across the parking area from the Park headquarters. The upper floor is one residence and the bottom floor is the other residence. There is an attached carport and also a deck behind the bottom floor. There are no other residences within the Park. Nonresident staff members live in the surrounding area, primarily in Los Banos.

Restrooms

Three chemical toilets, one of which is handicap accessible, are provided for visitors at the parking area. No other public restrooms are available within the Park.

Circulation

Regional Traffic and Transportation

Pacheco SP is located between two of California's primary north-south conduits, US 101 and I-5, and adjacent to SR 152, the main east-west route through the Diablo Range. The Park has only one entrance, located off Dinosaur Point Road. Dinosaur Point Road is off SR 152 directly east of Pacheco Pass, making SR 152 the Park's sole access route. I-5 lies approximately 18 miles east of the Park along SR 152 and provides a direct route from the Stockton and Sacramento areas, while US 101 runs approximately 25 miles west of the Park and provides a reasonably direct route from the San Francisco Bay Area, San Jose, and Salinas. Numerous smaller roads and highways farther east and west of the Park, including SR 33, SR 99, SR 156, and SR 25, connect with SR 152 in the vicinity of the Park and provide access from Fresno, Modesto, Hollister, Monterey, Santa Cruz, and Castroville.

SR 152 between the Merced/Santa Clara county line and the junction with I-5 has been designated as a High Emphasis and Focus Route for the Interregional Road System (IRRS), a designation that highlights the route's critical importance to interregional travel and to the State as a whole. SR 152 carries industrial, commercial, agricultural, recreational, and private-vehicle traffic, with annual average daily traffic of more than 24,000 vehicles per day (Caltrans 2001). SR 152 currently experiences high traffic volumes in the project vicinity, and slight delays are common during peak hours (Merced County Planning Department 2000). However, according to the 2001 Regional Transportation Plan for Merced County, SR 152 will exceed capacity and have a level of service (LOS) of F in the vicinity of San Luis Reservoir by the year 2025 (MCAG 2001). (LOS is a means of evaluating deficiencies in the regional road network; LOS F applies to roadways characterized by forced or breakdown flows, "stop and go" traffic, and traffic approaching a point that exceeds the amount that can traverse the point [MCAG 2001].) In addition, the 2001 Regional Transportation Plan for the San Francisco Bay Area, which includes Santa Clara County, includes additional safety improvements on SR 152 to the west of the Park between US 101 and SR 156 (MTC 2002).

In addition to the IRRS designation, the segment of SR 152 in the project vicinity is a designated bike route on State highway (Caltrans 2001). Public transportation along SR 152 near the recreation area includes the Merced Area Regional Transit System and Greyhound-Trailways Bus Lines, although neither stops within the project area. In addition, a high-speed train line has been proposed that would pass through Pacheco Pass, northeast of San Luis Reservoir. Bicycle routes and public transportation are recognized as important alternatives to private vehicles and have been proposed throughout Merced County.

Furthermore, the segment of SR 152 in the project vicinity is designated as a State Scenic Highway, and is therefore protected from certain development and degradation of the roadway's scenic corridor.

Park Access and Roads

Pacheco SP has only one defined public entrance, located on Dinosaur Point Road approximately 0.5 mile south of SR 152. Visitors arriving from the west access the Park via a turning lane off SR 152, but access from the east requires a difficult left turn across traffic from SR 152 onto Dinosaur Point Road. Visitors returning to areas west of the Park must make a similarly dangerous left turn from Dinosaur Point Road onto westbound SR 152.

Signs for Pacheco State Park are located on SR 152 eastbound and westbound and at the park entrance. Signage along SR 152 for Pacheco SP is currently combined with signs for the Dinosaur Point use area of the San Luis Reservoir SRA which is also accessed from Dinosaur Point Road. It is difficult to discern from the signs, which include symbols for different activities, what uses are permitted at each location. The park entrance sign is located beside the park entrance gate off of Dinosaur Point Road. The sign is approximately parallel with the gate, and can be difficult to find. Signage within the park includes trailhead signs; “restricted access” and “authorized vehicles only” signs; “fee area ahead” signs; and speed limit signs. The majority of the signs within the park are trail markers, which are located at each trailhead and trail junction and indicate the trail names and distances to other intersections or points within the park.

The main access to the Park is the entry road, which passes from the Park entrance off Dinosaur Point Road through the parking and picnic areas and up to Park headquarters and the former Fatjo ranch. The entry road is the primary road used by Park visitors and staff members. In addition, Whiskey Flat Road branches to the west of the entry road and forms the Park’s western boundary; however, the Department uses this for service and emergency vehicles if necessary. Windmills Road is a privately owned north-south road through the Park off Dinosaur Point Road also known as the “Lindeman right-of-way.” It is used for access to privately owned lands south of the Park and for access to International Turbine Research, Inc. (ITR’s) windmill operations. There are a series of old ranch roads throughout the Park. Some are accessible by motor vehicles and are used by Park staff for patrol and monitoring. Most are multiuse trails used for hiking, horseback riding, and mountain biking. Map 4 shows the existing trail and road network.

Parking

The Department maintains one unpaved public parking area, located approximately 0.25 mile beyond the entry gate near the picnic area. The parking area, which consists of unmarked parking space sufficient to accommodate approximately 75 vehicles, is located adjacent to the picnic and day-use area. There is also parking at the headquarters for approximately six to eight vehicles, and an additional six spaces for the adjacent residences.

Trails

The Park is laced with approximately 25 miles of trails, most of which are double-track remains of ranch roads, although some are more rugged single-track trails. Trails are open to mountain bikers, horseback riders as well as hikers. Several options offer day-use visitors a choice of short, 1-mile loops, with the longest hike about 20 miles. Most of the trails are accessible via four-wheel drive, some are accessible with the Park’s off-highway vehicle, and some are not accessible by vehicles.

Utilities and Services

Sewage and Water Treatment

The ranch house is served by two septic tanks that treat the Park's sewage and wastewater. There is also a gray-water sump located near the ranch house used to dispose of sink water and bathwater from the residence.

Water Storage Tanks

Pacheco SP includes several man-made earthen dams, seven springs, four wells, and domestic water installation to serve the residences and provide water to stock troughs. Booster pumps pump well water to the Park residences and offices, and to livestock areas, from wells located east of the parking area. There are three tanks near the entrance to the Park that store water pumped from wells. A fourth spring-fed tank is used to supply the State-owned horse water trough and a small cattle water trough. Finally, there are a few small springs that supply small troughs in the backcountry areas. There is no drinking water available within the Park.

Power Lines

There are no power lines located within the Park, but a switchyard, collections lines, transformers and transmission lines associated with the wind energy facilities operation are located in the eastern portion of the Park in and around the existing windmills.

Other Utilities

Electricity and telephone services are available within the Park. Park facilities and residences receive electricity from distribution lines on Dinosaur Point Road and Whiskey Flat Road. There is one public telephone available, located along the northern fence line of the main parking area.

As part of water delivery to Santa Clara from the San Luis Reservoir a tunnel easement exists across Pacheco State Park that was set up as part of the federal CVP which was undertaken by USBR in 1935 for the purpose, among others, of furnishing water for irrigation, municipal, industrial, domestic, and other beneficial uses. The CVP provides water from the Sacramento River basin to the San Francisco Bay Area, the farmlands of the San Joaquin Valley, and other metropolitan areas in the south. The CVP consists of reservoirs, dams, pumping and conveyance facilities, and other associated appurtenances to store, pump, and convey raw water to its contractors. The San Felipe Division, a part of the CVP, was authorized in 1960 to provide supplemental water to the central coastal area of California, including the SCVWD and San Benito County Water District.

Water from San Luis Reservoir is transported to the Santa Clara/San Benito county service area via the Pacheco facilities, including but not limited to the Pacheco Pumping Station, substation, regulating tank, and tunnel. The Pacheco Pumping Station, substation, and regulating tank are located in the San Luis Reservoir SRA. Pacheco Tunnel Reach 2 is located below grade across Pacheco SP; the segment within the Park is approximately 16,000 linear feet in length. These facilities are owned by USBR and operated and maintained by SCVWD. Provision of water service and responsibilities for the operation and maintenance of these facilities are provided in the Contract No. 7-07-20-W0023 and Contract No. 6-07-20-X0290, summarized in Appendix E.

Park Support and Emergency Services

Pacheco SP is maintained by district staff members from the Department's Gonzaga Road Sector Headquarters office and by staff members who reside onsite at the Park.

Volunteer Programs

Volunteer programs in the Park include maintenance and search and rescue teams. The Merced County volunteer search and rescue team, which trains in the Park and nearby San Luis Reservoir SRA, help in the event of a search and rescue operation. The Back Country Horsemen group is a volunteer organization that helps Park staff with trail work and fencing. The group helps perform manual labor required for trail work and Park maintenance and provides pack mules to help Park staff members haul work supplies.

Fire Protection

Emergency fire protection is provided by the California Department of Forestry and Fire Protection's (CDF) Gonzaga Road field station, located at the San Luis Reservoir SRA. Supplemental protection is provided by Merced County.

Park Security

Park security is provided primarily by Park staff. Park security has not been a prominent issue, and security measures have been minimal. There are two gates within the Park, one at the Park entrance and one leading to the Park residences. Typically the entrance gate is open and the gate leading to the Park residences is closed.

Medical Aid

First aid is provided by Park staff. Emergency medical response in the past has been provided by both the Bell Station CDF crew and the San Luis/Santa Nella CDF stations, located at the adjacent SRA. CDF is equipped to respond to all medical emergencies and holds cooperative contracts and agreements with other State and local emergency response agencies, which provide supplemental resources when needed.

2.2 PLANNING INFLUENCES

Systemwide Planning

Planning for State Parks must be wide ranging to consider issues that cross regional, local community, and Park boundaries. Federal, State, county, and community agencies are responsible for providing oversight and review of various planning-related laws and policies. These laws and policies include the National Environmental Policy Act, CEQA, and the Americans with Disabilities Act (ADA), as well as regional water quality control board (RWQCB) and air quality management district regulations, CESA, and ESA.

Additionally, numerous Department resource management directives guide the Park planning process. Among them, the following directives are summarized below although all directives should be consulted when planning or implementing projects at Pacheco State Park.

- Department Mission Statement

- Public Resources Code
- California Recreational Trails Plan (Phase One)
- Access to Parks Guidelines
- California Heritage Task Force
- Concessions Program Policies

Department Mission Statement

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

Public Resources Code

PRC §§5019.50–5019.80, Classification of Units of the State Park System, provides guidelines for the designation of State Park units and guiding principles for State Park improvements. The Public Resources Code regulates the classification of different types of State Parks and provides guidelines for upkeep and improvements. This code will be used as a reference to plan appropriate improvements within Pacheco SP.

California Recreational Trails Plan (Phase One)

The California Recreational Trails Plan (DPR 2002) was prepared by the Department and released in June 2002. It identifies 12 trail-related goals and lists general action guidelines designed to reach those goals. The goals and their action guidelines will direct the future actions of the Department’s Statewide Trails Office regarding trail programs. This plan will be followed by a more comprehensive Statewide Trails Plan (Phase Two) to be developed. Phase One should serve as a general guide for trail advocates and local trail management agencies and organizations in planning future trails and developing trails-related programs. Phase Two will use the best of Phase One as a guide and will incorporate hard data and generally accepted planning practices including additional public input and comment.

The mission of the Statewide Trails Office is to:

Promote the establishment and maintenance of a system of trails and greenways that serves California’s diverse population while respecting and protecting the integrity of its equally diverse natural and cultural resource. The system should be accessible to all Californians for improving their physical and mental well-being by presenting opportunities for recreation, transportation, and education, each of which provides enhanced environmental and societal benefits.

Access to Parks Guidelines

The Access to Parks Guidelines were first published in 1994 and revised in 2000. The guidelines detail the procedure to make State Parks universally accessible while maintaining the quality of park resources. They specify accessibility standards for a variety of activities and uses, including trails, concessions, and picnic sites. Also included in the guidelines are recommendations and regulations for complying with the standards for accessibility.

California Heritage Task Force

Established in 1981 by the California State Legislature, the California Heritage Task Force was created to develop a set of policies and programs for the State's cultural heritage resources. The task force's report was published in 1984 as a guide to writing legislation regarding management of cultural resources.

Concessions Program Policies

The Department's Concessions Program Policies document provisions for leases and permits; program and concessionaire conflict resolution; outsourcing; contracts; interpretive concessions; public stakeholder meetings; performance bonds and sureties; and The policies also describe the request for interest process and include an integrated management plan.

An "interpretive concession" is defined as a concession that provides an educational service to the public by practicing skills reflective of the State Park's interpretive period or theme through products sold, services rendered, or interpretive programs provided.

The concessions program provides a very important part of the visitor experience. Concessionaires offer the facilities, services, and goods that the State could not otherwise provide, ranging from traditional food services and campground grocery stores, to Jeep tours and rafting trips. Within the system's historic parks, concessionaires help the Department achieve its educational mission by providing historical reenactments and other educational programs, known in the park profession as "interpretation." These programs add vitality, interest, and excitement to California's fascinating heritage as preserved and protected by the Department.

The Department partners with a variety of businesses, nonprofit organizations, and public agencies through concession contracts, cooperative agreements, and operating agreements to offer the public these goods and services. The way in which these opportunities are made available to the public is regulated by PRC §5080 et seq.

Regional Planning Influences

The following local and regional plans will have an influence on the management, operations, and visitor experiences of the Park and are summarized below. These documents are continually updated and should be reviewed for important new information from time to time.

- Merced County General Plan
- Santa Clara County General Plan
- Los Banos General Plan
- Hollister General Plan
- Gilroy General Plan
- Central Valley RWQCB Water Quality Control Plan for the Sacramento and San Joaquin River Basins
- San Luis Reservoir Low-point Improvement Study

- 2001 Merced County Regional Transportation Plan
- 2001 Regional Transportation Plan for the San Francisco Bay Area
- State Route 152 Transportation Concept Report
- California High-Speed Train Program EIR/EIS
- Merced County Association of Governments Regional Housing Needs Plan
- Merced County 20-Year Transportation Expenditure Plan
- Natural Communities Conservation Program

Merced County General Plan

Approximately 90% of the Park lies within Merced County with the remainder in southeastern Santa Clara County. Merced County has approved several major “new towns” within the immediate vicinity. Regional planning efforts envision new town development providing housing for commuters using SR 152 to access jobs in Santa Clara County. The Merced County General Plan was last updated in 1990 and covers physical growth and development through 2000.

The Merced County General Plan supports the conservation of open space. The “Urban Centered Concept” is the basic principle of land use policy and is directed at using cities and unincorporated communities or centers to accomplish anticipated urban expansion in an orderly manner. Pacheco SP is designated “Foothill Pasture” under the Merced County General Plan. This designation generally applies to lands on the east and west sides of the county—the Sierra Nevada foothills and the Diablo Range, respectively. The Foothill Pasture areas are used for noncultivated agricultural practices as well as livestock facilities, wastewater lagoons, and agricultural commercial facilities. Certain nonagricultural uses may also be found including mineral resource extraction and processing, institutional facilities such as hospitals and schools, outdoor public and private recreational facilities, and accessory uses. The zoning classification considered most compatible for Foothill Pasture designated areas is generally A-2 (Exclusive Agricultural), which applies to the project area (Merced County 1990).

Open Space/Conservation

The Merced County General Plan acknowledges that recreational facilities provide both economic benefits and open-space-related amenities to Merced County residents and places a high emphasis on public lands and public recreation areas. It mentions that the Department’s California Recreational Trails and Hostel Plan promotes a Yosemite-to-Monterey Hiking/Biking/Equestrian Corridor that would pass through the northern and western areas of Merced County.

Merced County also has implemented an Open Space Action Plan to carefully manage open-space resources to support the county’s anticipated population growth while preserving nonrenewable assets for future generations. To define or delineate open-space lands, the Open Space Action Plan relies on written policies and inventory maps, in addition to the General Plan land use map or individual communities’ Specific Urban Development Plans.

Santa Clara County General Plan

A small portion of the western part of the Park is within Santa Clara County. The *Santa Clara County General Plan, Charting a Course for the County's Future, 1995-2010* (Santa Clara County General Plan), was adopted in December 1994. It contains goals, strategies, and policies for three major areas of focus: (a) the countywide General Plan process, (b) planning for the rural unincorporated areas outside cities, and (c) planning for the remaining unincorporated areas (called pockets and islands) within cities' Urban Service Areas.

The most fundamental policy of the Santa Clara County General Plan pertains to countywide growth management and the accommodation of urban development. It stipulates that urban types and densities of development must be located only within cities' Urban Service Areas (areas planned for urbanization), in locations suitable for such development. Outside cities' Urban Service Areas, only nonurban uses and development densities are allowed, to preserve natural resources, rural character, and minimize population exposure to significant natural hazards, such as landslides, earthquake faults, and wildfire. As a whole, the countywide growth management policies described above have historically been referred to as the "joint urban development policies," held in common by the cities, Santa Clara County, and the Santa Clara County Local Agency Formation Commission (LAFCO), which controls city formation and expansion.

Pacheco SP is designated as "Regional Parks, Existing" in the Santa Clara County General Plan and abuts land designated as "Ranchlands."

The General Plan's Parks and Recreation Element contains a policy to protect scenic highway corridors, including the visual integrity of Pacheco Pass as a scenic gateway to the south county. Apparently, SR 152, the Pacheco Pass Highway, is on the State Master Plan but is not yet designated as a State Scenic Highway in Santa Clara County. This busy highway is one of the most dramatically scenic gateways into the county. Santa Clara County is currently actively seeking official State designation of this road as a State Scenic Highway.

There is also a South County Joint Area Plan, which is part of the Santa Clara County General Plan and covers the small portion of the Park within Santa Clara County. The South County Joint Area Plan is a comprehensive set of policies focusing on issues common to the jurisdictions of Morgan Hill, Gilroy, and the south county region of Santa Clara County. Santa Clara County adopted the South County Joint Area Plan in 1989. A mutual statement of policies for community development and environmental management, the plan is intended to achieve harmony and cooperation among the three south county jurisdictions, and consistency between their adopted policies.

Los Banos General Plan

The city of Los Banos, with a population of approximately 25,869, is the largest city in the western part of Merced County and is 24 miles east of the Park. *The City of Los Banos General Plan* (Los Banos General Plan) was adopted in 1999 and states that the most significant influence on future land use patterns in Los Banos will be the ultimate realignment of SR 152. This project was identified in the Merced County Regional Transportation Plan as being completed within the following 20 years, depending on funding.

Hollister General Plan

The city of Hollister, with a population of 36,599, is approximately 22 miles southwest of the Park in San Benito County (City of Hollister 2003). The *Hollister General Plan 1995-2010* (Hollister General Plan) was adopted in November 1995 and provides “a comprehensive land use plan for the City of Hollister” (City of Hollister 1995). The Hollister General Plan applies to the city of Hollister and its surroundings, and addresses physical, economic, and social concerns. The plan anticipates continued high growth rates in Hollister through 2010 and defines the City of Hollister’s goals and policies for growth and development. In addition, the plan states that Hollister has a total of 77.5 acres of parkland, and that the City of Hollister will encourage residential development near recreation facilities. The development of parks and recreation in the area is discussed in detail in the City of Hollister’s Parks and Recreation Master Plan.

Gilroy General Plan

The City of Gilroy, with a population of approximately 43,950, is 27 miles west of the Park in Santa Clara County. The City of Gilroy adopted the *Gilroy 2002-2020 General Plan* (Gilroy General Plan) on June 13, 2002. In summary, the plan forecasts a significant growth rate over the next few decades with a population of around 69,000 by 2023 and 92,000 by 2039. The City of Gilroy has prepared a draft Parks and Recreation Master Plan that outlines potential recreational demands needs and acreage deficiencies. (Steinmetz, pers. comm., 2002.)

Regional Water Quality Control Board Basin Plans

The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Basin Plans are prepared, adopted and amended by statewide Regional Water Quality Control Boards (RWQCB) and ultimately approved by the State Regional Water Quality Control Board (State Water Board). Pacheco SP falls within two regions of the State Water Board. A small portion of the Park, along the western boundary is within the Central Coast Region while the remainder of the Park is within the Central Valley Region. Both regions have Basin Plans and both have similar objectives and consist of a designation or establishment for the waters in a specified area of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives.

San Luis Reservoir Low Point Improvement Study

San Luis Reservoir, adjacent to Pacheco SP on the east, is owned and operated jointly by USBR and DWR, and is a key component of the State’s water supply system. With a capacity of more than 2 million acre-feet (af), the reservoir stores water from both the SWP and the federal Central Valley Project (CVP). San Luis Reservoir currently supplies water to the SCVWD and San Benito County Water District through the San Felipe Division.

The health of San Luis Reservoir has been degrading. During the summer, as San Luis Reservoir is drawn down, a thick layer of algae grows on the surface. When the amount of water drops to the beginning of the low point (300,000 af), algae begins to enter the San Felipe Division intake, degrading water quality and making the water harder to treat. In response, operations have been changed such that water levels are maintained above the low-point elevation, rendering approximately 200,000 af unavailable to State and federal users each year.

In response to the low-point problem, and encouraged by the CALFED Bay-Delta Program (CALFED), SCVWD prepared the *San Luis Reservoir Low Point Improvement Project Draft Alternatives Screening Report* (MWH and Jones & Stokes 2003). The report summarizes the low-point problem at San Luis Reservoir, the objectives of the project, the alternatives development, and screening process conducted to date, and information on the public outreach process. A summary of how this report may affect future plans at Pacheco SP is included as Appendix D. Seventy-five conceptual alternatives were screened to arrive at seven feasible alternatives recommended for further consideration, based on their ability to meet the goal and objectives of the project. The goal of the project is to increase the operational flexibility of storage in San Luis Reservoir and ensure a high quality, reliable water supply for San Felipe Division contractors. The alternatives that met this goal include the following:

- Algae Management
- Dissolved Air Flotation (DAF Treatment)
- Lower San Felipe Intake
- Bypass San Luis Reservoir
- Expand Pacheco Reservoir
- Combination Project
- No Action/No Project

SCVWD and USBR will act as co-lead agencies to prepare a joint EIR/environmental impact statement (EIS) to further evaluate a combination of these alternatives.

2001 Regional Transportation Plan for Merced County

Since 1972, the Merced County Association of Governments (MCAG) has been designated as the Regional Transportation Planning Agency (RTPA). As the RTPA, MCAG is required by State law to prepare a Regional Transportation Plan (RTP) and transmit it to the California Transportation Commission and the California Department of Transportation (Caltrans) every 3 years. The most recent RTP is from July 2001 (MCAG 2001).

RTP priorities relevant to the project area include the SR 152 Los Banos Bypass as a Tier One project and the widening of SR 152 to six lanes from SR 33 to San Benito County as a Tier Two project. Tier One lists projects with available funding and Tier Two lists projects that will be added to Tier One when additional funding is identified. The SR 152 Los Banos Bypass involves rerouting SR 152 to the north or south of the city of Los Banos. At the time of the RTP, environmental studies were under way (MCAG 2001).

2001 Regional Transportation Plan for the San Francisco Bay Area

The Metropolitan Transportation Commission prepared the *2001 Regional Transportation Plan for the San Francisco Bay Area* as a long-range planning document detailing the current and future investments and strategies needed to maintain, manage, and improve the surface transportation network in the nine-county San Francisco Bay Area, which includes Santa Clara County. The plan includes several new programs, such as the Regional Transit Expansion Program, Lifeline Transportation (to improve mobility of

low-income residents), and the Regional Bicycle Master Plan. It also includes programs to maintain the existing transportation network and improve transportation system management.

Southeastern Santa Clara County, including areas in the vicinity of the Park, is included in the plan's Silicon Valley sub area. Management objectives for this sub area include:

- managing travel in "gateways" leading into Santa Clara County to protect the core valley employment centers from traffic overload,
- managing major roads as one system to minimize overall system delays during peak hours, and
- maintaining reliable freeway operations in off-peak hours to provide adequate freight mobility.

Regional improvement projects in the vicinity of the Park include additional safety improvements on SR 152 between US 101 and SR 156. These improvements are intended to improve safety and traffic conditions along SR 152 in southeastern Santa Clara County, to the west of the Park.

State Route 152 Transportation Concept Report

As described above, SR 152 is an east-west rural interregional facility connecting the southern portions of the San Francisco Bay Area to the Central Valley, with linkages to southern California via I-5 and SR 99. SR 152 provides a moderate LOS for commercial truck travel, agricultural truck access to the Salinas and Central valleys, and recreational travel to the Monterey Bay area (via US 101 and SR 156). In Merced County, SR 152 crosses the city of Los Banos and is approximately 40 miles long (Caltrans 2001).

The State Route Transportation Concept Report (TCR) established the future concept for LOS for segments along SR 152 and broadly identified the nature and extent of improvements needed to attain that LOS. Operating conditions for each corridor were projected for 10-year and 20-year horizons. Beyond the 20-year planning period, the TCR identified the Ultimate Transportation Corridor (UTC) to ensure that adequate right-of-way was preserved for future ultimate facility projects. The TCR determined that the projected LOS was adequate within the next 20 years for a four-lane expressway for all segments but that the UTC was a six-lane expressway (Caltrans 2001).

California High-Speed Train Program EIR/EIS

Following adoption of a final business plan in 2000, the California High-Speed Rail Authority recommended that the State proceed with implementation of a statewide high-speed train system. The authority initiated the formal State and federal environmental review process by preparing a Program EIR/EIS (Parsons Transportation Group 2001a). As part of the Program EIR/EIS, a number of project alternatives were evaluated, including a high-speed train alternative. Within the high-speed train alternative, there is a range of high-speed train alignment and station options to be considered. Parsons Transportation Group is currently working on alternative development.

The alignment relevant to the Park extends from Merced through the San Joaquin Valley and Pacheco Pass and then heads north. Station options include Los Banos (near I-5) and either Gilroy (near the existing Caltrain station) or Morgan Hill (next to US 101), and the existing San Jose (Diridon) Station (Parsons Transportation Group 2001b).

All of the Pacheco Pass alignment options would place Merced on the Sacramento-to-Bay Area high-speed train line, with less frequent service than the Los Angeles-to-Bay Area trains. As currently configured, the Pacheco Pass alignment options would also involve construction of tunnels, including a tunnel up to 21.6 km (13.5 miles) long and one or two additional shorter tunnels. All Pacheco Pass alignments would provide high-speed train service to the Los Banos and Gilroy or Morgan Hill areas. The Pacheco Pass alignments would cross the San Luis Waterway but pass to the north of O'Neill Forebay and San Luis Reservoir (Parsons Transportation Group 2001b).

Merced County Association of Governments Regional Housing Needs Plan

MCAG is required to determine existing and projected regional housing needs for January 2001–July 2008, and to determine each local jurisdiction's share of the regional need for housing. Jurisdictions will then decide how they will address this need through the process of updating the Housing Elements of their General Plans. The most recent Regional Housing Needs Plan (MCAG 2002a) was adopted by the MCAG Governing Board on November 21, 2002.

Merced County 20-Year Transportation Expenditure Plan

The Merced County 20-Year Transportation Expenditure Plan (MCAG 2002b) will guide the expenditure of more than \$212 million in county transportation funds, plus federal and State matching funds over the next 20 years. The new plan was developed to serve major regional transportation needs in Merced County. It addresses local street and road requirements in each of the county's incorporated cities, as well as streets and roads in unincorporated areas that are maintained by Merced County.

The 20-Year Transportation Expenditure Plan was developed as an outgrowth of the 2001 RTP, which projected significant unmet transportation needs given current financing sources, and identified the need for a supplemental plan based on the creation of additional revenue (MCAG 2002b). The 20-Year Expenditure Plan does not include any projects along SR 152.

Natural Communities Conservation Program

The Natural Communities Conservation Program (NCCP), developed by DFG in 1991, is an effort unique to California. The NCCP provides regional planning strategies for the protection of plants, animals, and their habitats, while allowing suitable economic development. The primary objective of the NCCP is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. This General Plan adheres to the principles established in the NCCP regarding the protection of biodiversity.

Demographics

Pacheco SP is located within 1 to 2 hours' travel time of San Jose, Salinas, Monterey, and the Stockton and Fresno metropolitan areas, and within 2 to 4 hours' travel time of the San Francisco and Sacramento metropolitan areas.

Between 1990 and 2000, the San Francisco Bay Area added 760,000 new residents—an increase of more than 12%—for a total current population of approximately 6.8 million. The Association of Bay Area Governments (ABAG) projects that moderate growth in the region will continue, adding another 1.4 million residents by 2025, an increase of more than 20%. The Sacramento area is also growing in

population, having increased by 14.7% between 1990 and 2000; this is similar to California's overall growth rate of 13.6% over the same time period (U.S. Census Bureau 2000). This regional growth could contribute to higher demand for use of the Park.

Merced County General Plan Projections

The Merced County General Plan is based on the 1990 U.S. Census. The MCAG RTP and Regional Housing Needs Plan were updated with the 2000 U.S. Census. Summaries of the population growth from these plans are included below (Tables 5 and 6).

Regional Transportation Plan Projections

Population growth is a significant issue for the San Joaquin Valley in general and for Merced County in particular. Incorporated urban areas in Merced County include Atwater, Livingston, Los Banos, Dos Palos, and Gustine. The RTP projects the population of the County seat, Merced, for 2002 at 65,400.

**Table 5
Merced County Population and Employment Forecast**

	2000	2005	2010	2015	2020	2025
Population	215,256	242,846	273,923	304,784	337,935	373,170
Employment	81,661	88,857	94,656	100,412	104,963	121,929

Source: MCAG 2002a

**Table 6
Population Forecast by City or Community Growth Area Boundaries**

	2000	2005	2010	2015	2020	2025
Cities						
Gustine	4,655	5,119	5,588	6,020	6,502	6,965
Hollister	27,100	32,187	38,228	N/A	N/A	N/A
Los Banos	24,106	29,645	36,194	43,613	52,681	63,116
Communities						
Santa Nella	1,308	1,868	2,648	3,705	5,197	7,230
Totals						
Incorporated	144,636	166,708	189,741	210,361	231,350	252,168
Unincorporated	70,620	76,138	84,182	94,423	106,585	121,002
County	215,256	242,846	273,923	304,784	337,935	373,170

Sources and Notes:

1. *County total population without UC Merced from California Department of Finance, December 1998.*
2. *County total employment without UC Merced from Woods & Poole Economics, Inc., and Economic & Planning Systems, Inc., March 2000.*
3. *UC Merced related growth from EIP Associates, May 2000.*

4. City and community forecast from MCAG, July 2000.
5. The community forecast uses growth area boundaries from General Plans, referred to as the Specific Urban Development Plan boundaries. They are not by current city limits.
6. Numbers for intervening years will be interpolated.
7. City of Hollister projections from Hollister General Plan, November 1995; projections provided through 2010 only. Note: Actual 2000 population already exceeded projected population for 2005.

MCAG prepares and maintains population and employment forecasts for use in regional planning. The population and employment forecasts reflect the growth that is anticipated to occur during the next 25 years within Merced County and its cities and communities. These forecasts were last updated in July 2000. They are consistent with the California Department of Finance's countywide projections, with the addition of the growth related to the University of California, Merced (UC Merced). The totals for the county and selected communities are shown below.

MCAG Regional Housing Needs Plan Projections

Merced County is located in the center of the San Joaquin Valley. The county's 2000 population of 210,554 was distributed among six incorporated cities: Merced (63,893), Los Banos (28,150), Atwater (23,113), Livingston (10,473), Gustine (4,698), and Dos Palos (4,581). The remaining 77,927 residents were in unincorporated areas.

Table 7 depicts population growth during the past decade among jurisdictions in Merced County. Population shifts in Los Banos are especially noteworthy. The catalyst for the city's rapid growth (78.1% between 1990 and 2000) was migration from Santa Clara and other San Francisco Bay Area counties, as families pursued affordable housing on the west side of Merced County.

Table 7
Merced County Population Estimates and Percent Change, 1990-2000

JURISDICTION	1990	2000	PERCENT CHANGE
Merced County Total	178,403	210,554	11.4%
Atwater	22,282	23,113	3.7%
Dos Palos	4,196	4,581	9.2%
Gustine	3,931	4,698	19.5%
Livingston	7,317	10,473	43.1%
Los Banos	14,519	25,869	78.1%
Merced	56,216	63,893	13.7%
Unincorporated areas	69,942	77,927	11.4%

Source: 1990 and 2000 U.S. Census, <http://www.census>.

Continuing pressures on Merced County's west side from San Francisco Bay Area commuters and the projected 2004 opening of the UC Merced campus guarantee that substantial planning decisions will be made over the next decade.

Santa Clara County General Plan Projections

Between 1995 and 2010, Santa Clara County's population is projected to grow by more than 206,000 people. By 2010, the population of the county should reach an estimated 1.8+ million persons, nearly 315,000 more than in 1990. Annual growth rates during that period will range from 12,000 to 22,000 persons per year. These figures contrast sharply with the growth experienced in the 1950s and 1960s, when the population grew between 40,000 to 60,000 persons per year. More moderate rates of employment growth and housing development account for the slower rates of growth.

The percentage of population growth from immigration has steadily declined since the early 1970s, whereas between 1950 and 1970, immigration had been the predominant source of population growth. Levels of in-migration ranged from 11,000 persons in 1950 to a peak of 46,000 persons in 1960, making up 79% of the population growth for the county that year. In contrast, recent years have seen a net outmigration, particularly for young families.

Most of the growth in Santa Clara County's population is expected to occur in San Jose and, to a somewhat lesser extent, in the south county, while the north and west valley cities are expected to experience relatively little growth.

Los Banos General Plan Projections

The Los Banos General Plan used a 4% growth projection based on past growth statistics, expectations of growth by State and regional planning agencies, building permit activity, need for and limitation of public improvements, and typical growth rates of similar Central Valley communities. Population growth estimates are included in Table 8. The actual population of Los Banos in 2002 was 28,150, indicating that actual growth has exceeded projected growth.

**Table 8
Population Growth Estimates for Los Banos, 1997-2020 (at 4%)**

YEAR	POPULATION
1997	20,694
2000	23,278
2005	28,321
2010	34,457
2015	41,992
2020	51,005

Source: City of Los Banos 1999

Demographic Overview: Location and Population Centers

Pacheco SP is located in the western corner of Merced County, with a small portion crossing into Santa Clara County. The Park is in a primarily rural area, with adjacent lands consisting of privately owned cattle ranches. The closest cities are Hollister to the southwest, Gilroy to the west, Gustine to the northeast, and Los Banos to the east. In addition, the Park is within 1 to 2 hours' travel time of several cities and major metropolitan areas, including the San Francisco Bay Area, the Sacramento metropolitan area, Fresno, Merced, Modesto, Monterey, Salinas, San Jose, and Stockton.

Local and Regional Residents (Merced County)

Population Trends and Projections

Merced County has one of the highest annual growth rates in California, with a growth of 2.8% from January 2001 to January 2002. Santa Clara County had a much slower growth rate of 1.3% for the same period. The populations of Merced and Santa Clara counties as of January 1, 2002, were 218,900 and 1,719,600, respectively. Merced County's projected growth rates for the decades of 2000–2010 and 2010–2020 are 25% and 19%, respectively. Santa Clara County's projected growth rates for the same period are much lower, 12% and 7%.

The largest population centers in the region are the San Francisco Bay Area and the Sacramento metropolitan area. Growth in the major population centers surrounding the Park ranged from 1.0% to 2.8% between 2001 and 2002, with the highest rates in Stockton and Sacramento.

Employment (Local Market Analysis)

Merced County's economy is based primarily on agriculture and related industries along with a significant tourist trade, leading to highly seasonal employment patterns and high rates of unemployment. The median household income is \$35,500 (1999 data). Unemployment, however, is 14.4% (2001 data), the fourth highest of all counties in California, and 21.7% of the county's population lives below the poverty level. Santa Clara County has a much stronger economy, with a median household income of \$74,335 (1999 data). Santa Clara County has a much broader economic base, including agriculture and related industries, manufacturing and light industry, trade, and a strong tourist trade. Unemployment in Santa Clara County is much lower than that in Merced and only 7.5% of the population lives below the poverty level.

Demographic Diversity

Both Merced and Santa Clara counties have a diverse demographic composition. Merced County has a relatively young population, with a median age of 27 years; Santa Clara County has a slightly older population, with a median age of 34 years. Of the adults in Merced County age 25 and older, 63.8% are high school graduates and 11.0% have a bachelor's degree or higher. Of those in Santa Clara County, 83.4% are high school graduates and 40.5% have a bachelor's degree or higher. Merced County is 56.2% white, 3.8% black or African American, 1.2% Native American or Native Alaskan, 6.8% Asian, and 45.3% Hispanic or Latino; Santa Clara County is 53.8% white, 2.8% black or African American, 0.7% Native American or Native Alaskan, 25.6% Asian, and 24.0% Hispanic or Latino. A language other than English is spoken in 45.2% of Merced County households and 45.4% of Santa Clara County households; 24.8% of the Merced County population and 34.1% of the Santa Clara County population is foreign-born.

Existing and Potential Future Park Visitors

Visitor Attendance, Seasonal Fluctuations

Department sector staff gather and record visitor attendance data however there is little information regarding specific activities and duration of visitor stay and other detailed use data. Visitor attendance data were collected from the Park's self-registration and fee system from its opening through December 2001. During this period, visitors that registered and paid were recorded from sign-in sheets, while the numbers of others visitors, who did not pay, were estimated based on staff observations. Beginning January 1, 2001 through March 2003, the self-registration and fee system was discontinued and Park attendance was collected based on staff observations. The self-registration system and \$4.00 per day user's fee have been reinstated and is now being used to track attendance as was done previously. Attendance data show a steady increase in Park use between July 1999 and June 2003, with annual peak use occurring between March and May. Table 9 shows visitor attendance data for July 1999–June 2003.

Both methods used to date for monitoring attendance may significantly underestimate the number of Park visitors, and more studies are needed to accurately assess Park use. In November 2002 a survey was mailed to local residents that, when returned and tallied, may provide some information regarding patterns and levels of recreational use of the Park.

**Table 9
Pacheco State Park Monthly Visitor Attendance Data: July 1999 - June 2003**

MONTH	1999-2000			2000-2001			2001-2002			2002-2003		
	PAID DAY USE*	UNPAID DAY USE	OVERNIGHT USE	PAID DAY USE*	UNPAID DAY USE	OVERNIGHT USE	PAID DAY USE*	UNPAID DAY USE	OVERNIGHT USE	PAID DAY USE*	UNPAID DAY USE	OVERNIGHT USE
July	94	2	0	110	2	2	0	154	20	0	56	0
August	80	2	0	90	0	0	0	164	29	0	81	1
September	62	2	16	62	12	0	0	182	0	0	60	0
October	190	2	3	66	0	7	0	114	15	0	75	1
November	150	6	11	190	0	9	0	168	0	38	27	3
December	96	2	0	140	0	0	0	54	15	0	33	0
January	71	0	0	0	183	18	0	134	0	0	45	0
February	71	0	0	0	110	0	0	198	97	84	5	0
March	190	14	66	117	255	0	0	537	4	132	6	0
April	229	7	16	0	425	9	0	416	35	153	46	1
May	240	3	47	36	178	22	0	251		78	43	6
June	115	5	0	0	92	0	53	136		73	26	1
Annual Total	1588	45	159	811	1257	67	53	2508	215	558	503	13

NOTES:

Numbers represent the number of visitors applying to each use category.

Paid Day Use: Before January 2001, visitors recorded were calculated from a self-registration sign-in system which required people to pay a small day use fee. This system was temporarily suspended from January 1, 2001 to February 2003, so paid day use was 0 during that time. The system is now in place and there is a \$4.00 per day use fee. Some visitors do not pay and these numbers are estimated by the Department rangers under the category of 'unpaid day use.'*

Pacheco SP does not regularly offer overnight camping. In the case of a special event, arrangements may be made for overnight camping by contacting the Park rangers.

2.3 OPPORTUNITIES AND CONSTRAINTS

This section summarizes the key issues that will be addressed in the General Plan as well as a summary of opportunities and constraints as supporting documentation for these issues. The issues and their associated opportunities and constraints have been identified and documented from numerous sources during the planning process including user surveys and letters, public and planning team meetings, diverse and knowledgeable Department staff and academic research and reports. The four following planning areas have been identified to cover the range of issue topics and these will also be used in Chapter 3 to categorize the goals and guidelines:

- Resource Management
- Visitor Experience and Education
- Local and Regional Planning
- Infrastructure and Operations

Resource Management

Key Issues

- Cultural and historic resources inventory and protection
- Vegetation and wetlands management
- Wildlife species inventory and management
- Wild pig management
- Red-legged frog protection
- Scenic resources

Cultural and Historic Resources Inventory and Protection

Some of the Park's historic and cultural resources are mapped; however, this database is not comprehensive and additional resources may need to be included. This information is integral to planning for future uses and activities and to determine the best management strategy for such resources. It is also necessary to comply with CEQA. The Park also has an extensive collection of over 3,000 artifacts and documents associated with Rancho San Luis Gonzaga and Paula Fatjo's tenure on the land. The entire collection has been processed and entered into Department's collection management database and is temporarily stored in a side room of the Park's headquarters. The storage area is inadequate and the materials are not accessible by the general public.

Opportunities and Constraints:

- *There are many interpretive and educational opportunities for presenting cultural landscape, historic and Native American themes.*
- *There is no plan for completion of a cultural resources inventory for the Park.*
- *No management strategy has been established for protecting the known resources at the site.*
- *Cultural resources monitoring program is needed for ongoing evaluation of site conditions.*

- *The collections storage area is inadequate and there is no provision for maintenance and conservation of the collection.*
- *The Fatjo collection requires better storage and the system for display and public review.*

Vegetation and Wetlands Management

A vegetation inventory was completed for the Park in 1996 before it was included within the State Park system. This information is in text form only and is not linked graphically or digitally to specific locations on the site. To understand what resources are needed for vegetation management, how visitor uses affect vegetation, and how to protect certain vegetative resources, vegetative communities should be mapped. A complete wetlands inventory has also never been completed. A grazing regime currently exists on a portion of the Park however without sufficient monitoring the benefits or detriment to native species and wetlands resources is unknown. Various invasive species exist in the Park and there is no methodical program to manage these communities. Future management actions and tools should be devised to ensure ample protection of native vegetative communities and to comply with CEQA and other applicable laws.

Opportunities and Constraints

- *The Park's vegetative communities may need to be digitized based on previous and current inventory work.*
- *Known problem areas, such as parts of the Park containing invasive species, have not been defined and mapped; strategies are needed for managing these areas.*
- *The adequacy of the existing vegetation and wetlands inventory needs to be determined and data gaps need to be defined.*
- *The role of grazing in vegetation management needs to be addressed.*
- *The current status and future role of prescribed fire in vegetation management need to be assessed.*
- *Opportunities exist to devise Best Management Practices for on-site use.*
- *There are opportunities to rehabilitate and restore unique plant species occurrences and communities.*
- *Surface waters, pond shores and adjacent areas may be impacted from ground disturbance from wild pig foraging and cattle resulting in runoff, erosion, surface water contamination and sedimentation.*
- *Currently no comprehensive surface water management program or monitoring is in place.*

Wildlife Species Inventory and Management

Protocol species inventories have not been completed at Pacheco SP, although much is known about species that may exist on the site. There may be other State or federally listed species that require special management to ensure protection. Future facilities planning will require more detailed wildlife inventories to ensure critical habitats are maintained. The role of the Park as a regional wildlife link and corridor is not fully understood and could assist in determining future land uses and activities.

Opportunities and Constraints

- *Data collection, mapping, and analysis need improvement, perhaps through partnering with sister agencies and local institutions.*
- *Wildlife corridors and habitat areas need to be defined to ensure protection of species and minimum disturbance of habitat.*
- *Opportunities for rehabilitating wildlife habitat exist to maintain and enrich wildlife diversity.*
- *Protocols for future wildlife inventories need to be defined so they can be included in future budget allocations.*

Wild Pig Management

Wild pigs currently inhabit the Park and cause damage by disturbing the ground while foraging for roots and other edibles. This in turn has a negative effect on plant resources and the associated wildlife, as well as reducing plant cover on the Park's erodible soils exacerbating erosion and possible sedimentation to adjacent natural springs and ponds.

Opportunities and Constraints

- *Park staff members currently cannot keep up with the management of wild pigs.*
- *There is no program for pig management at the Park except for depredation performed by rangers.*
- *Explore opportunity to partner with adjacent landowners and agencies to reduce and eradicate wild pigs.*

Red-Legged Frog Protection

Reconnaissance-level field surveys conducted in September 2002 revealed that the ponds at Pacheco SP host the California red-legged frog, which is federally listed as Endangered. Park planning and management will need to incorporate the regulatory requirements into activities that may affect this species and their habitat.

Opportunities and Constraints

- *Regulations and permit processes applicable to the California red-legged frog need to be followed so that future actions can comply with State and federal laws.*
- *An assessment is needed of the inventory data collected to date and management strategies to ensure protection of the species.*
- *Explore opportunity to partner with DFG and researchers for inventory and monitoring work and to pool staff resources.*
- *Rehabilitate and restore areas of the Park that can support the species.*

Scenic Resources

The ridges at Pacheco SP offer stupendous, uninterrupted views in all directions and contribute to the overall beauty that is experienced there. Additionally, the open, undeveloped nature of the Park and the steep, dramatic topography allow the view to be dominated by the natural vegetation, devoid of extensive human-made features. The landscape character includes historical and cultural elements that are not documented.

Opportunities and Constraints

- *Significant view corridors and ridgetops are undefined and not documented.*
- *There are no criteria to determine when views will be affected.*
- *An inventory of cultural elements that contribute to the scenic and aesthetic character of the Park is lacking.*
- *Opportunities exist to interpret and educate about the landscape character and the features that define it.*

Visitor Experience and Education

Key Issues

- Limited public access
- Trails
- Interpretive opportunities
- ADA accessibility
- Concession opportunities
- Limited visitor use and demand data
- Recreation carrying capacity

Limited Public Access

Current visitor use of the Park is limited primarily by the lack of potable water, overnight accommodations and areas of the Park that are not open to the public such as the land leased for windmills and energy production. Interpretive programs and small classes can function better in a small-group, all weather gathering area. Lack of a well-defined entrance and signage inhibits visitors attending the Park for the first time. Currently there is not a clear outline of permitted uses and existing facilities.

Opportunities and Constraints

- *An assessment is needed for potable water supply and permanent restroom facilities.*
- *Explore the opportunity for enhancing the identity of the SP separate from the adjacent SRA.*
- *The demand for and feasibility of developing overnight camping facilities need to be assessed.*
- *Locations for addition, removal, or improvement of signage should be determined.*
- *Explore the opportunity to open more areas of the Park to the public.*

- *The demand for less active recreation opportunities (as opposed to hiking, horseback riding, and mountain biking) needs to be assessed. Specifically, the assessment should cover demand for developed picnic, interpretive, wildlife viewing, and nature study facilities and/or programs.*
- *A visitor center may be needed.*

Trails

There are many trails and old ranch roads at Pacheco SP. Many of these are marked and are open to the public and are currently all multiuse. Future usage may require some trails to become single-use. There are additional trails on the property that are not marked and are not sanctioned for public use, specifically in the wind turbine lease area. There are other areas of the property where it may be desirable to add or open trails. Trail usage can result in resource degradation and hence requires continuous maintenance and monitoring. Some old ranch roads and trails, due to their surface condition and location may contribute to runoff pollution and sedimentation to pond areas.

Opportunities and Constraints

- *Current demand for trails and the need for single-use trails should be assessed.*
- *The need for additional trails in other areas of the Park should be determined.*
- *Explore partnerships with trail user groups for maintenance, trails patrols and stewardship.*
- *The possibility of building additional facilities, including a paved multiuse trail for walking and bicycling, should be investigated.*
- *The existing trails map needs to be enhanced as new trails and uses are set up.*
- *A method needs to be developed for documenting resource damage resulting from trail use.*
- *Lack of a comprehensive trails assessment and management plan.*

Interpretive Opportunities

Park staff members host a variety of interpretive programs, predominantly through guided walks and tours. The Park's history and character offer future opportunities to expand interpretive programs; however, this may be limited by staff and facility resources. Interpretive opportunities can aid in enhancing identity and awareness to the Park which can assist the Department in stewardship efforts.

Opportunities and Constraints

- *The possibility of partnering with interested individuals, universities and organizations for interpretive programs, Park events and planned group use of the Park should be investigated.*
- *The status of existing interpretive programs needs to be reviewed, and the need for and actions necessary for program improvement or expansion should be assessed.*
- *Interpretive opportunities can be limited by a variety of resource constraints.*
- *Opportunities for self-guided interpretive walks and the need for additional displays.*
- *Opportunities exist to explore alternative methods of resource interpretation.*

ADA Accessibility

The Park's rugged terrain, steep slopes and historic structures make ADA accessibility a challenge. The majority of the Park currently is accessible by trails with only some accessible by vehicle. Accessibility should be considered in the planning and development of future Park facilities. Visitor access needs to include opportunities for users with varying degrees of ability.

Opportunities and Constraints

- *Areas of the Park that can be designed to best accommodate ADA accessibility need to be identified and planned when new facilities are developed.*
- *The site topography and natural features limit areas that can be made accessible however opportunities exist, particularly near the entrance and around the existing ranch structures to allow all users to experience the unique aspects of the Park.*

Concession Opportunities

There are currently no concessions available in the Park. There are opportunities to add concessions that complement the site's character and enhance overall Park function and interpretive ability. Themes include seasonal horseback riding facilities and reuse of existing buildings for overnight accommodations. Concessions should be considered for improving and enhancing Park operations in partnership with Department staff.

Opportunities and Constraints

- *The viability of providing concession services that compliment and enhance the Park's operations needs to be assessed.*
- *Opportunities exist to use concessions to embellish the interpretive programs at the Park through the addition of staff resources.*
- *It is not known whether the level of visitor use warrants a viable concession operation.*
- *Information needed to develop concessions at this location is currently lacking.*
- *Lack of services in the Park vicinity and the Park's remote location limit visitation and duration of stay.*

Limited Visitor Use and Demand Data

Facilities and uses should be planned using visitor use information. Currently there are only limited data regarding visitor use and demand. These data would help to determine the greatest need for facilities and the existing problems and opportunities. In addition, it would provide a means to track visitor satisfaction.

Opportunities and Constraints

- *Data currently being collected by the Department's Visitor's Survey Division are not being used to aid in planning for future visitors' needs.*
- *Explore the opportunity to use regional data sources and collaborating with county agencies and other entities to plan regional park facilities and conservation efforts.*

- *The system for tracking visitor use of the Park is limited and there is no database that can be readily accessed by Department staff to gain information about visitor and use trends.*

Recreation Carrying Capacity

A system of site indicators needs to be established to help staff members evaluate the Park's carrying capacity, so that future facilities and uses can be planned based on the ability of the Park's resources to withstand such activity. Measuring carrying capacity requires baseline information about the Park's users and resources to monitor change and gauge if capacity requires an alteration of management actions.

Opportunities and Constraints

- *There is no single method for measuring carrying capacity.*
- *Carrying capacity is often limited by the lack of available data to quantify change and its resultant effects on resources.*
- *The opportunity exists to provide simple indicators for managers to monitor and to be incorporated into standard operating procedures.*

Local and Regional Planning

Key Issues

- **Interagency cooperation**
- **Population and demographics**
- **Regional plans**

Interagency Cooperation

Some of the lands adjacent to Pacheco SP are owned and managed by DFG and DWR; the adjacent San Luis Reservoir SRA is managed by the Department. Parcels in the area also are owned or managed by private landowners. In addition, the Fatjo Corporation provides operational funds through income generated from the wind turbine lease and the Fatjo endowment. The sharing of land use and management responsibilities through cooperative working relationships enhances the Department's ability to operate efficiently and to build consensus for Park programs. Park planning therefore should be coordinated to ensure compatibility with the goals of federal, State, and local jurisdictions and stakeholders.

Opportunities and Constraints

- *Opportunities exist to outreach to agencies and landowners to encourage their participation and ensure their awareness of recommended planning projects and potential Department actions.*
- *A Memorandum of Understanding or similar agreement with agencies is needed to share resources and ensure coordinated implementation of Park management.*
- *Work closely with the Fatjo Board to keep them informed of Department actions and foster consensus for Park programs.*
- *Enforcement responsibility needs to be reviewed and the Department needs to continue cooperating with local agencies to share resources.*

Population and Demographics

The growing populations and changing demographics of the Central Valley (including Merced County) and Santa Clara, San Benito, and Monterey counties will influence future recreational demand at the Park. Increased Park use associated with changes in population and demographics will increase recreation demand, as indicated by the 2000 California State Parks Visitor Satisfaction Survey. Specifically, demand may increase for active and nature-based recreational uses such as hiking, mountain biking, and nature study. The Department will need to respond to these trends through appropriate unit development, maintaining a balance between facilities and recreation development and natural and cultural resource protection. Additionally, Park management should be evaluated regionally to ensure a well balanced mix of recreation opportunities.

Opportunities and Constraints

- *Development in the area should be tracked, and the Department needs to coordinate with adjacent counties to ensure that Park activities respond to demographic trends.*
- *The Department needs to respond to regional demands for recreational and nature-based facilities.*

Regional Plans

Pacheco SP is adjacent to the San Luis Reservoir SRA to the east and the San Luis Wildlife Area to the north, across Dinosaur Point Road. Also to the north, across SR 152, is the Upper Cottonwood Wildlife Area. Henry Coe State Park is northwest of the park near Morgan Hill and other entities such as the Nature Conservancy hold lands for conservation purposes in the vicinity.

Opportunities and Constraints:

- *Trail opportunities or other recreational links with adjacent San Luis Reservoir SRA lands need to be determined.*
- *Coordinate recreation and conservation planning with other Department sector staff and other regional agencies and entities.*
- *The Department should coordinate management and enforcement efforts with the San Luis Reservoir SRA and DFG for comprehensive planning of resources and visitors.*

Infrastructure and Operations

Key Issues

- Park access and circulation
- Leases and special agreements
- Staffing needs and facilities
- Utilities

Park Access and Circulation

Local and regional traffic and safety affect Pacheco SP, and should be addressed in planning for future use and development. Safe access from SR 152 has been identified as an issue since the Park's opening in

1997. Additionally, other access points to the Park should be assessed to ensure appropriate security and integration with adjacent lands with minimal disturbance.

Opportunities and Constraints

- *The adequacy of signage both within and outside of the Park needs to be assessed.*
- *The Department should provide recommendations to Caltrans for future safety improvements for ingress to and egress from SR 152.*
- *Traffic impacts of proposed uses and facilities should be assessed.*

Leases and Special Agreements

Currently, portions of the Park are leased for wind farming and cattle grazing. There are also access agreements over Windmills Road that the Park has with private landowners. The Santa Clara Valley Water District has a tunnel easement that goes through the Park pursuant to an agreement with USBR. Adjacent private landowners may encroach on Park lands or cause other disturbances such as domestic pet nuisances, excessive lighting and noise detrimental to wildlife, the spread of invasive exotic vegetation and an increased danger of fire. These uses need to be reviewed and assessed to determine whether they should be expanded or reduced in the future, and how they affect Park operations, visitor and resource protection.

Opportunities and Constraints

- *The Department should consult with organizations and individuals to whom land is leased to understand future needs and desires.*
- *Current locations within the Park where leased uses and other agreements are taking place need review; the effects on Park resources should be assessed.*
- *Opportunities exist to work with adjacent landowners through outreach to ensure maximum protection of Park resources and compatible land use.*

Staffing Needs and Facilities

Staff members from the adjacent San Luis Reservoir SRA are shared with Pacheco SP. Some of the staff members occupy a portion of the existing buildings at Pacheco SP for office space, living quarters, and storage. The remaining part of the existing buildings is not defined for any particular use. The remains of the adobe structure and historic remnants of the Fatjo ranch exist on the site; however, these areas are not accessible to the public. There is no provision for seasonal staff and throughout the Park, safety and communication facilities may be outdated or inadequate for public use.

Opportunities and Constraints

- *The Department should determine the adequacy of staff facilities and recommend methods of meeting future needs.*
- *Definition is needed of the minimum and maximum staff resources required to operate the Park based on existing and proposed uses.*

- *The Department should determine whether any existing buildings will be needed for public access and what will be needed to provide adequate access.*
- *The structural analysis report of the adobe structure needs to be reviewed and the viability of repair or other future actions needs to be determined.*
- *There is no indoor workspace or storage area for vehicles and supplies.*

Utilities

Pacheco SP does not have a source of potable water for the public. Water storage tanks and distribution piping for the existing buildings are limited. Any future uses or activities could be limited by the lack of potable water. Other existing infrastructure such as sanitary, electric, and communications systems are also limited and need upgrading before facilities are developed.

Opportunities and Constraints

- *The Department needs to determine the extent of future facilities and define infrastructure requirements and limitations.*
- *The priority of phased improvements needs to be determined, and such improvements should be planned as staff and monies become available.*
- *The adequacy of potable water storage and distribution within the Park needs to be assessed.*

3. Park Plan

This chapter is the core of the General Plan, setting forth the policies needed to manage all aspects of the Park. It describes the comprehensive long-range purpose and vision for the future of Pacheco SP. It provides policies in the form of goals and guidelines to guide future management decisions for the Park. This chapter also sets forth management zones for different geographic areas of the Park, each with their own resource goals and land uses. The General Plan is a guiding document that will give Park staff members a blueprint for managing visitor uses and facilities while also protecting natural, cultural, and scenic resources. This chapter also serves as the project description for the program-level EIR.

3.1 UNIT PURPOSE AND VISION

The Declaration of Purpose describes the Park's purpose and is the broadest statement of management goals designed to fulfill the vision for the Park. A Declaration of Purpose is consistent with PRC §5002.2(b), which requires "setting forth specific long-range management objectives for the unit consistent with the unit's classification..."

The initial purpose statement created by the Department for Pacheco SP is:

To preserve and protect a substantial area of rolling blue oak woodlands and open grasslands typical of the middle elevation of the southern Diablo Range. The unit contains numerous natural springs and extensive areas of native grasses. The unit is situated immediately south of Pacheco Pass, the principal route of the east-west movement of people and goods from the days of the Native Americans, through the Spanish, Mexican, and American periods. The unit contains a variety of structures and artifacts from its historic use as a cattle ranch. California State Parks will preserve, protect, restore, interpret, and manage the unit's natural, cultural, aesthetic, and scenic resources, features, and values, making them available to the public for their educational, inspirational, and recreational benefits. The department will work cooperatively with other entities to further these objectives.

Additionally, Paula Fatjo's will bequeathing the property to the State states that the property is "to be held, managed, used and expended for the charitable and educational purposes and objects of preserving, expanding, and improving the State Park system of the State of California..." (Fatjo 1992). The will further states that:

All income which may accrue to the Department of Parks and Recreation from Rancho San Luis Gonzaga, including, but not limited to, the income from the wind energy turbines on my property, is to be used for the development of my ranch for a park and recreation area and for the protection, maintenance, and fostering of natural flora and fauna thereon, and none shall go into and be used by the general fund of the state.

The purpose and vision herein serve to merge the objectives stated in the initial Department statement and to honor Paula Fatjo's will by planning and providing a clear strategy for the future of Pacheco SP. The Park today offers opportunities for hiking, horseback and bicycle riding, and study and interpretation of natural and cultural resources. It also provides wildlife habitat, production of wind energy, and extensive open-space values. Without a general plan, the Department cannot effectively implement

strategies for managing resources and visitors comprehensively, which can result in piecemeal and inefficient use of the Park and of valuable human and financial resources. The purpose and vision for Pacheco SP must be stated such that the natural, cultural, scenic, and recreational resources can be sustained well into the future.

Declaration of Purpose

The Declaration of Purpose is the “mission statement” for each unit of the State Park system. It guides the contents of the general plan and therefore the future management of the unit. A summary of key values of Pacheco SP as noted in the Department and Fatjo purpose statements includes:

- Vestige of California’s ranching history
- Blue oak woodland and native grasslands
- Historical location along corridor for passage from the coast to the Central Valley
- Natural springs
- Natural flora and fauna
- Cultural resources
- Scenic resources

A summary of key actions or uses noted in the Department’s purpose statement includes “preserve, protect, restore, interpret, and manage the unit’s natural, cultural, aesthetic and scenic resources, features, and values, making them available to the public for their educational, inspirational, and recreational benefits.” Key actions or uses stated in the Fatjo will include “to be held, managed, used and expended for the charitable and educational purposes...preserving, expanding, and improving the State Park system...” and “development for a park and recreation area and for the protection, maintenance, and fostering of natural flora and fauna thereon.”

A comprehensive purpose for Pacheco SP is:

To preserve, expand and improve the State Park system through the development of a park and recreation area at Pacheco State Park for the preservation, protection, maintenance, restoration, interpretation, management, and fostering of natural flora and fauna and cultural resources, making them available to the public for educational, inspirational, and recreational benefits.

Park Vision

The Park vision describes the future essential character and overall appearance of the Park during various phases of General Plan implementation and, ultimately, upon completion of plan development. Pacheco SP will be one of the last remaining vestiges of a California ranch and its associated landscape features within the region, providing a strategically located respite for coastal and valley visitors and celebrating the resources indicative of this historical location. The 6,900 acres of open space will provide a unique visitor experience. It will include ample facilities for functional and logical use of the rolling, scenic landscape dotted with natural springs and a mosaic of narrow ranch roads, some of which will be managed and maintained for public trail use while others may be rehabilitated to increase wildlife habitat. The land will look much like it did 100 years ago, providing key critical wildlife habitat and vegetative diversity.

Visitors will be greeted at an entry area that evokes a feeling of a traditional ranch, complete with scenic views of the undeveloped landscape. They will be oriented to a succinct cluster of facilities, designed to minimize intrusion, that offer a variety of Park experiences. These experiences will include horseback riding, hiking, camping, and opportunities to learn about the landscape's past and thriving future. They will be able to link up with adjacent open spaces through trail connections and enjoy distant views from ridgetop vistas. An intricate variety of trails will lace through the Park's myriad landscapes, fostering a sense of beauty and remoteness in the region.

Park managers and various interns and researchers will have an opportunity to partake in resource management using the state-of-the-art tools required for the conservation of native vegetation, wetlands, and wildlife. Natural springs and stock ponds will remain healthy and vital to support wildlife and will add to the diversity of natural systems in the region. Park staff members will have the personnel, infrastructure, and facilities in place to maintain the unit and operate with efficiency. The landscape will be managed utilizing best management practices for native vegetation preservation, habitat diversity and cultural resource protection and will continue to generate wind energy, which will support the operation and protection of the land, as requested by Paula Fatjo.

Future issues related to visitor use or other factors will be evaluated using goals and guidelines set forth in the General Plan. Current, state-of-the-art techniques will also be considered as required to accomplish the appropriate balance between visitor use and landscape conservation. The General Plan will help managers to prioritize and budget for a variety of operational, resource-based actions and facilities related to the visitor experience. In this way they will be able to balance and sustain the Park's resources as defined in the Declaration of Purpose and in honor of the Park's legacy.

3.2 MANAGEMENT ZONES

Management zones in this General Plan describe the overall management purpose and intent for future use of specific areas within the Park. The creation of management zones helps Park managers to focus activities and facilities in locations within the Park that are environmentally and logistically suitable. The proposed zones for the Park are as follows:

- Administration and Operations Zone (AO)
- Frontcountry Zone (FC)
- Backcountry Zone (BC)
- Leased Zone (LE)

The description of the management zones below includes each zone's unique characteristics and key existing features that are intended to be considered and incorporated into future plan implementation. Management zones provide the basis for the direction of the type and intensity of development and use within each area of the Park. Map 5 shows the layout and area of the existing and reduced LE Zone and proposed management zones. Natural and cultural resources exist in all zones within the Park and, as described below, shall be protected and managed as part of the future development of the zones. For each of the management zones the definition includes the following:

- Existing Features

- Purpose and Intent
- Resource Goals
- Land Use

Administration and Operations Zone (AO)

Existing Features

The Administration and Operations Zone (AO) is the smallest of the proposed management zones. This zone encompasses approximately 40 acres in the northwest corner of the Park. It contains the Fatjo residence and associated outbuildings as well as a series of corrals and remains of the adobe structure salvaged from the original Rancho San Luis Gonzaga property. The zone is accessed from the main entry road and is immediately adjacent to Whiskey Flat Road, which provides alternative access to this area should it be necessary for emergency and staff access. The location near the entry and existing buildings and infrastructure make this part of the Park a strategic place for this zone.

The zone was defined based on the Park's northern boundary and on the terrain to the south. It encompasses most of the flatter areas of the Park, generally north and below elevation 1,600 feet above mean sea level. This zone is the most developed portion of the Park, but the area appears like a working ranch with a large expanse of open landscape to the south. A small ridge naturally screens and separates this zone from the adjacent FC Zone to the east. Views to the north include the adjacent privately owned residential buildings.

Purpose and Intent

The intent of the AO zone shall be to keep the Park's administrative, operational, and maintenance activities clustered together and to provide for the separation of staff work areas from public use areas. Accordingly, administrative offices, work areas, equipment and materials storage, and staff parking and housing areas will be located in the AO. Public access to this zone is permitted, but it is limited and separated from maintenance and operations areas. The intent is to enable the public to experience the existing cultural landscape and any associated interpretive and educational programs that may be developed in the future.

Resource Goals

The resources associated with this zone are the cultural and historic elements, including buildings and landscape features, which define the core of the zone. Future development in this zone should respect and protect these resources through the sensitive siting and architecture of new structures as well as preservation of the configuration of existing site features. The existing configuration of buildings, corrals, and other landscape features contributes to the character of this zone and is essential to preserving the "ranch" history associated with the Park. In addition to the cultural and historic elements, the undeveloped landscape contains rolling terrain, with scattered single oaks and small clusters of oaks. Such terrain contributes to the sense of place in this zone.

Land Use

Activities in the AO Zone shall include the majority of the Park staff's administrative, operations, and maintenance activities, as well as limited public uses. Park staff members' activities shall include staff management activities, operations and maintenance activities, vehicle and equipment storage, and staff housing. Visitor use in the AO Zone shall be limited to guided walks to experience the cultural landscape features and associated buildings, hiking at designated trailheads, and interpretive programs. Table 10 provides a summary of AO zone activities.

**Table 10
Administrative and Operations Zone Land Use**

	EXISTING	PROPOSED
Features		
Fatjo residence	X	X
Corrals	X	X
Fencing	X	X
Tack barn and outbuildings	X	X
Adobe remains	X	X
Natural landscape	X	X
Facilities/Infrastructure		
Staff housing	X	X
Administrative office space	X	X
Maintenance and vehicle storage	-	X
Intern housing	-	X
Work area	-	X
Ranger station	-	X
Campfire center	-	X
Exhibit area/visitor center (entrance station)	-	X
Potable water	-	X
Uses		
Hiking	X	X
Guided walks	-	X
Interpretive programs	-	X
Wildlife viewing	-	X
Nature study and research	-	X
Resource management	X	X

Frontcountry Zone (FC)

Existing Features

The Frontcountry Zone (FC) is the second smallest of the proposed management zones. This zone encompasses approximately 547 acres along the Park's northern boundary, including the main entry. It contains a corral for livestock operations, the parking area, chemical toilets, the day-use area, the visitor information bulletin board, and trailheads. The zone includes the main entry off Dinosaur Point Road and most of the main access road into the Park parallel with the northern property line. It is logical to orient visitors in this zone and cluster future recreational facilities here for several reasons: This is the first zone that visitors experience when they enter the Park; the zone is already developed with base facilities for visitor use; and especially because it is adjacent to the AO Zone.

The FC Zone was defined based on the northern boundary of the Park and on the terrain to the south. Like the AO zone, it encompasses most of the flatter areas of the Park, generally north and below elevation 1,600 above mean sea level. This zone contains only a small developed area with large open landscape views to the south. Ridges naturally screen and separate this zone from the adjacent BC Zone to the south. Views to the north include the adjacent privately owned residential buildings and SR 152.

Purpose and Intent

The intent of the FC Zone is to provide visitor information and Parkwide orientation, with the most active visitor activities clustered within and around the existing developed portion of the zone. Accordingly, the main entry will remain in this zone, and new restroom facilities, new campsites that can accommodate tents, recreational vehicles and horse trailers, car and horse trailer parking, any new concessions, and expanded day-use facilities will all be located within this zone. Additionally, if a new visitor center is not incorporated within the AO Zone because of unforeseen constraints, it can be sited within the FC Zone. The intent of clustering the proposed development within and around the existing development is to ensure that the majority of the zone is left in a natural state and that existing open vistas remain un-interrupted.

Resource Goals

The resources associated with this zone are native vegetation; wildlife habitat; streams; rolling topography and scenic, open vistas; and cultural resources. Future development in this zone should respect and protect these resources through minimal disturbance and sensitive siting and architecture of new structures. New facilities should be clustered in and around existing development and sprawl into undeveloped portions of the zone should be prevented. The existing configuration of the livestock corral facilitates livestock operations, as it is adjacent to Whiskey Flat Road and can be used by neighboring ranchers.

Land Use

Activities in the FC Zone shall include the majority of the visitor facilities, including the most active uses such as camping and any future concessions. This zone is where visitors will first be oriented to the Park and then embark on their choice of recreation. Visitor options available in this zone include use of trails

for horses, hikers, or mountain bikers; departure to camps in the Backcountry Zone; camping for tents, recreational vehicles and horse trailers and day uses such as guided walks, interpretive programs, and nature study and research. Visitor use in this zone shall be the most intensive of any zone in the Park, but it shall be focused in designated areas. See Table I I for a summary of FC Zone activities.

Table I I
Frontcountry Zone Land Use

	EXISTING	PROPOSED
Features		
Main entry gate and drive	X	X
Livestock corral	X	X
Open landscape	X	X
Fencing	X	X
Facilities/Infrastructure		
Vehicular parking	X	X
Horse trailer parking and camping	-	X
Group campground	-	X
Restrooms (flush)	-	X
Chemical toilets	X	-
Concessions	-	X
Information bulletin board	X	X
Trails/trailheads	X	X
Visitor center	-	X
Interpretive loop trail	-	X
Uses		
Hiking	X	X
Mountain biking	X	X
Horseback riding	X	X
Guided walks	X	X
Tent camping	-	X
Day use	X	X
Horse trailer parking/group camp	-	X
Interpretive programs	X	X
Wildlife viewing	X	X

Table I I
Frontcountry Zone Land Use

	EXISTING	PROPOSED
Nature study and research	×	×
Resource management	×	×

Backcountry Zone (BC)

Existing Features

The Backcountry Zone (BC) is the largest of the proposed management zones. This zone encompasses approximately 4,184 acres, with the proposed reduction of the LE Zone, along the entire western boundary of the Park, north to the AO and FC Zones and east to and surrounding the LE Zone. It is the most undeveloped zone in the Park, containing multiuse trails and old ranch roads, ponds, and earthen dams and grazing areas. The narrow ranch roads that traverse the steep terrain and wild, natural landscape lace the entire zone and provide limited access to most of the more remote areas of the Park. The zone includes fenced paddock areas for livestock grazing and the Park’s highest elevation, at Spike’s Peak, 1,927 feet above mean sea level.

The zone was defined based on the western and southern boundaries and exclusive of the LE Zone as it currently exists. This zone is the most undeveloped portion of the Park and appears very wild and remote; in some locations, the sights and sounds of surrounding development and the adjacent highway are nonexistent. A series of ridges provides great open views in all directions, while the contrasting valleys contain riparian corridors and stock ponds that were almost all human-made or enlarged with the construction of earthen dams. Views to the west include the adjacent privately owned buildings, but most of the zone is in the internal part of the Park where views are of the surrounding open space. Views of the adjacent LE Zone to the east contain the windmills, but these are never all in sight at the same time based on their placement along different ridges.

Purpose and Intent

The purpose of the BC Zone shall be to keep a large portion of the Park in a wild and primitive state while still allowing visitor access and enjoyment. Additionally, the intent is to maintain the vegetative species and character of the landscape as a working ranch, while recognizing that certain activities such as grazing may not be as intensive. Accordingly, recreation facilities are limited but visitor access is extensive, consisting of hiking, horseback riding, and mountain biking on the existing multiuse trail network. This area will also contain any future primitive camping sites for trail users and may provide vault toilets. Utilities will be limited in this zone based on remote access and costs associated with new infrastructure.

Resource Goals

The resources associated with this zone are the unfragmented expanses of native vegetation and wildlife habitat, wetlands, cultural elements, and scenic vistas. Future development in this zone should respect and protect these resources through continued inventory and research. In addition, land management

activities should be aimed at reducing invasion by exotic species, disturbance by wild pigs, and degradation of wetlands; there should be sensitive siting of any future primitive campground and associated structures. Because this is the largest block of undeveloped habitat in the Park, Park managers should ensure that fragmentation and degradation does not occur through haphazard maintenance activities, inappropriate placement of new facilities, and visitor overuse.

Land Use

Activities in the BC Zone shall include a full array of resource management actions as appropriate, as well as the less intensive recreation uses and limited facilities associated with primitive camping. Less intensive uses include self-guided interpretive walks and other trail usage by mountain bikers, hikers, backpackers, horseback riders, birders, photographers, researchers, students, and Park staff members. Resource management activities will be especially active in this zone and grazing will continue; if it shows, through monitoring, a positive impact by its effects on species composition and wildlife habitat values, prescribed fire will also continue if deemed desirable, as per a fire management plan. Riparian restoration, exotic species removal, and eradication of wild pigs are other intended resource management activities. See Table 12 for a summary of BC Zone activities.

**Table 12
Backcountry Zone Land Use**

	EXISTING	PROPOSED
Features		
Steep terrain	×	×
Grazing paddocks	×	×
Ranch roads	×	×
Trails	×	×
Native vegetation and wildlife habitat	×	×
Ponds	×	×
Earthen dams	×	×
Facilities/Infrastructure		
Backpackers' camps	-	×
Vault toilets	-	×
Trail link to San Luis Reservoir SRA	-	×
Uses		
Hiking	×	×
Guided walks	-	×
Primitive camping	-	×
Horseback riding	×	×

**Table 12
Backcountry Zone Land Use**

	EXISTING	PROPOSED
Mountain biking	X	X
Wildlife viewing	X	X
Nature study and research	X	X
Resource management	X	X

Leased Zone (LE)

Existing Features

The existing LE Zone is based on the agreement that Paula Fatjo had with International Turbine Research regarding windmills and is 3,819 acres. The proposed LE Zone is approximately 55% smaller than the existing zone at approximately 2,129 acres. This zone encompasses all of the existing windmill sites with additional land for future expansion, but it excludes some of the areas of the Park that are currently being used for hiking and biking trails. These areas would become part of the BC Zone. The current LE Zone contains a series of small roads leading to the windmill sites as well as other old ranch roads. It also contains the office and parking area for ITR. Windmills Road traverses the LE Zone starting in the FC Zone at the northern Park boundary and ending at the southern Park boundary where it enters private property.

There are easements for private property owners to use this road to access their land to the south of the Park. The LE Zone also contains some creeks and ponds scattered throughout, as shown on Map 6 (in Chapter 4, Environmental Analysis). Other than the windmills and associated infrastructure, the LE Zone is undeveloped.

This zone is the second most developed portion of the Park after the AO Zone, but because of the minimal footprints of the windmills and their limited placement only on the highest ridges, much of the landscape remains open. Currently, the zone extends all the way to the eastern property line of the Park; it extends along much of the southern boundary as well. A small ridge naturally screens and separates this zone from the adjacent FC Zone on the east. Views to the adjacent San Luis Reservoir can be observed from the ridges in this zone.

Purpose and Intent

The intent of the LE Zone shall be to maintain windmills and associated power production and operation infrastructure. The purpose of proposing to reduce the land area that the lease encompasses and re-evaluating the lease agreement is to allow for more flexibility for the Department to manage these lands for resource protection and public access. Currently, the lease area covers many areas of the Park that are not being used for windmills or are desirable for such based on their elevation. The text of the lease may not be consistent with the Park purpose and vision. Maintaining windmill energy production on the property is consistent with the agreement that Paula Fatjo created prior to her transfer of the land to the

Department and to continue to generate income for use in the Park. It is also intended to ensure that resource protection in this zone is consistent with other resource goals in the Park and that public access to the proposed Lease Zone continues with guided tours. The land surrounding the new LE Zone will become part of the Backcountry Zone and will allow for trail linkages to be made within the Park and with the adjacent San Luis Reservoir State Recreation Area lands and possible southeast pedestrian entrance to Pacheco State Park.

Resource Goals

As in the BC Zone, the resources associated with the LE Zone are the remaining unfragmented expanses of native vegetation and wildlife habitat, wetlands, cultural elements, and scenic vistas. Future development in this zone should respect and protect these resources through continued inventory and research. In addition, land management activities should be aimed at reducing invasion of exotic species, disturbance by wild pigs, and degradation of wetlands, realizing that the placement of the windmills may inhibit some land management activities. Future facilities in this zone may be limited to additional windmills and associated infrastructure. The proposed boundary for the LE Zone will limit this zone to windmill activity, guided interpretive programs only, and some trail use through the conversion of ranch roads. When placing future windmills and planning trails, managers should ensure that habitat fragmentation and resource degradation do not occur through haphazard placement of new structures or visitor overuse.

Land Use

Activities in the LE Zone shall include all activities associated with windmill operations, interpretive programs, and guided walks and limited trail usage by hikers, horseback riders, mountain bikers and other users. See Table 13 for a summary of LE Zone activities.

**Table 13
Leased Zone Land Uses**

	EXISTING	PROPOSED
Features		
Ranch roads	X	X
Steep terrain	X	X
Ranch roads	X	X
Trails	X	X
Native vegetation and wildlife habitat	X	X
Ponds	X	X
Earthen dams	X	X
Ridges	X	X
Facilities/Infrastructure		
Windmills	X	X

**Table 13
Leased Zone Land Uses**

	EXISTING	PROPOSED
ITR office, switchyard, transmission lines	X	X
Windmill Road/service roads	X	X
Uses		
Limited trail use	-	X
Guided walks	-	X
Interpretive programs	-	X
Wildlife viewing	X	X
Nature study and research	X	X
Resource management	X	X

3.3 PARKWIDE GOALS AND GUIDELINES

This section presents Parkwide Goals and Guidelines for achieving the Declaration of Purpose and Vision Statement relating to all aspects of future Park management. Goals and guidelines are defined in the California State Parks Planning Handbook (2002):

Goal—General, overall, and ultimate purpose, aim or intent toward which management will direct effort. Goals are not necessarily measurable except in terms of the achievement of component objectives which attainment of the goal involves.

Guidelines—General set of parameters that provide directions towards accomplishing goals.

This section is organized following the broad categories outlined in Section 2.3, Opportunities and Constraints with abbreviations added for reference in Chapter 4:

- Resource Management (RES)
- Visitor Experience and Education (VIS)
- Local and Regional Planning (REG)
- Infrastructure and Operations (OPS)

For each category a series of goals is identified based on specific issues and needs identified for this unit, as well as the desired future condition based on the Park purpose and vision. These apply to all geographic areas of the Park. Each goal has guidelines to provide specific future actions that can be implemented to achieve goals in the future. Goals are numbered (e.g., RES-1) and referenced in the EIR to indicate which goals and guidelines mitigate environmental impacts. For each goal, one or more guidelines are provided to give direction in accomplishing the goal. Goals and guidelines provided herein are prepared to set the stage for achieving the desired future condition with current available information and data. It should be

emphasized that it is impossible to anticipate or realize all Park issues requiring guidance in the future. It is expected that as more research, data collection, monitoring, and reconnaissance take place more of the Park's features and activities are recorded, goals and guidelines may need to be adjusted or revised.

Resource Management (RES)

Resource management goals encompass all significant natural resource or physical elements found at Pacheco SP. These are the inherent values that make the Park unique, and long-term stewardship is essential to ensure that these resources are sustained and preserved for the future. These resources have been defined and described in Chapter 2, Existing Conditions, of this document and are presented in this section under the following categories:

- Scenic/Aesthetic (RES-S)
- Cultural/Historic (RES-C)
- Geology/Soils (RES-G)
- Hydrology/Water Quality (RES-WQ)
- Vegetation (RES-V)
- Wildlife (RES-W)

Scenic/Aesthetic (RES-S)

Scenic and aesthetic resources consist of site views, open landscape character, architectural styles, and details found onsite. The site's scenic qualities are perpetuated by the undeveloped landscape, consisting of open (grassland) and closed (woodland) vegetation defined by scattered large stately oaks as well as the rolling topography. The layout and configuration of the built structures on the site and their materials also contribute to the overall historic character, affecting scenic quality. Additionally, signage can portray an image or identity for the Park and contributes to the aesthetic experience.

Goal RES-S1

- Preserve open scenic vistas onsite through recognition of undeveloped ridgelines.

Guidelines

- Conduct a visual assessment for the placement of new structures and site features that need to be located in an identified viewshed.
- Where feasible, avoid placement of new structures or other obstructions at or near key vista points such as Spike's Peak.

Goal RES-S2

- Maintain large expanses of open space free of visual and physical interruptions.

Guideline

- Minimize the development of new structures and reduce existing structures and other features that visually and physically fragment open space.

Goal RES-S3

- Ensure that new structures are architecturally compatible with the site's character and/or history as a former ranch.

Guidelines

- Identify the architectural components (style) and other contributing elements that define the site's character and use this information as a checklist for ensuring that new structures conform.
- Where feasible, ensure that the mass and scale of new structures are compatible with those of existing structures and do not dominate the surrounding landscape.

Goal RES-S4

- Identify a common and unified set of site-related details and materials (gates, surface materials, fences, etc.) to ensure new facilities and infrastructure are compatible with the character of the site.

Guidelines

- Use design "clues" from existing fencing, gates, and other architectural details to replicate or copy new designs. Salvage or use onsite materials for new construction where possible.
- Minimize introduction of materials not in keeping with the local and onsite character.
- Develop a signage and wayfinding system that incorporates guidelines and standards for signage as well as the location, distribution, and frequency of signs.

Goal RES-S5

- Prevent aesthetic and environmental damage from duration and intensity of lighting and fixtures.

Guideline

- Ensure that light fixtures are designed and placed only as needed and are in keeping with site character. Minimize intensity by considering techniques such as low voltage fixtures and downlighting.
- Design lighting systems and facilities that minimize light pollution on site and to neighboring areas.

Cultural/Historic (RES-C)

Cultural resources consist of significant and potentially significant prehistoric and ethnographic sites, historic and ethnographic resources, and cultural landscapes. Pacheco SP includes an abundance of important cultural resources, including significant prehistoric resources, and historic ranch buildings and other structures.

Goal RES-C I

- Protect and preserve significant prehistoric, historic, and cultural landscape resources within the State Park, including those that may be undocumented.

Guidelines

- Complete and maintain the existing inventory, mapping system, and database for cultural resources within the Park.
- Provide for storage of collections and documentation and display of all cultural resources, including artifacts left by Paula Fatjo.
- Submit and complete site records to the State Historic Preservation Officer to establish and submit resources that may be eligible for inclusion in the National Register of Historic Places and/or the California Register of Historic Resources, or for listing and recognition under the Department's Cultural Resources Division including under cultural landscapes.
- Prepare a Parkwide Cultural Resources Management Plan that sets forth a process to record and document cultural resources and develop a long-range management and monitoring strategy. Such a strategy should evaluate alternatives such as preservation, stabilization, rehabilitation, or reconstruction of Pacheco SP's significant cultural resources.
- Evaluate potential cultural landscapes within the Park using National Park Service (NPS) guidance on cultural landscapes as outlined in *Protecting Cultural Landscapes*. Prepare Cultural Landscape Reports when deemed appropriate and necessary.
- Consult with the Department's cultural resource specialists when planning the construction of new facilities and uses.
- When new development or improvements to existing facilities are proposed and may impact cultural resources, the Department should consult the Secretary of the Interior's Standards for the Treatment of Historic Properties for guidance and compliance with regulations.

Geology/Soils (RES-G)

The surface landscape and dramatic topography of Pacheco SP are a direct result of the area's subsurface geology and are major contributors to the character and ecology of the site. Underlying geologic formations and soils can be damaged through erosion caused by vehicular use or other disturbance that reduces plant cover.

Goal RES-GI

- Protect, preserve, and document the site's geology and soil types and avoid geotechnical risks to staff and visitors.

Guidelines

- Consider limitations of geological and soil resources when planning and constructing new facilities or allowing visitor use.
- Monitor vehicular access to assess and contain damage.
- Use research efforts to document and educate visitors and Park staff about the possible impacts to geological resources.
- Perform necessary geotechnical investigations prior to siting any new facilities and prevent development in potentially hazardous locations.

Hydrology/Water Quality (RES-WQ)

The quality and quantity of surface water and groundwater and natural hydrological patterns are integral to the Park's physical health. Much of the native flora and fauna depend on the scattered expressions of surface and subsurface waters on the site. Hydrologic function is related not only to activities that take place in the Park but also to surrounding land uses, as the site contributes to the regional watershed and also receives runoff from adjacent parcels.

Goal RES-WQI

- Minimize access to Park wetlands, ponds, springs, and other watercourses to prevent degradation related to trampling, surface runoff, and sedimentation.

Guidelines

- Provide key, well-marked visitor access points to wetlands and ponds and provide interpretive signage to educate visitors about habitat sensitivity.
- Establish minimum buffers and site-specific guidelines for siting future campsites and associated facilities away from wetlands, ponds, and watercourses.
- Minimize trail crossings over springs or riparian corridors, and build bridges over such crossings where essential and practicable.
- With development of horse-related facilities, implement measures to reduce transport of pollutants from animal waste to natural springs, ponds, and other watercourses.
- Provide native plantings for erosion control around degraded pond shores.

Goal RES-WQ2

- Use water effectively and reduce water demand.

Guidelines

- Employ water conserving design and fixtures in new construction, wherever possible.
- Use native plant materials and employ other water conserving techniques for landscaping.

Goal RES-WQ3

- Design, construct, and maintain buildings, roads, trails, campsites, and associated infrastructure to minimize stormwater runoff, promote quality groundwater recharge, and prevent soil erosion.

Guidelines

- Consider seasonal requirements of aquatic plant and wildlife species, and plan any work that would result in streambed alteration or riparian disturbance to avoid adverse impacts on these species where feasible. Follow DFG's and other regulatory requirements for streambed alteration.
- Adhere to water quality protection standards and control measures available in the Basin Plan for the region.
- Consult the Clean Water Act for current stormwater management guidelines and comply with National Pollution Discharge Elimination System (NPDES) requirements where applicable.
- Limit impervious surfaces to minimize runoff; consider the use of permeable materials for new or expanded pedestrian and vehicular surfaces.

Vegetation (RES-V)

Geography and climate contribute to the unique flora of Pacheco SP, “a floristic anomaly in relation to the whole of the Diablo range” (Edminster 1996). Blue oak woodland and savanna and native grasslands constitute the main plant communities found on the site. A large population of coast live oak is found within the blue oak woodland community, “the only place where coast live oak is found on the east face of the Diablo range” (Edminster 1996). In addition to the more common species found on the site, there are also sensitive and special-status species that may inhabit the Park.

Goal RES-VI

- Protect, maintain, and where appropriate, restore the site's locally and regionally important native plant communities.

Guideline

- Prepare a vegetation management plan and map that provides for ongoing inventory of the Park's vegetation, identifies tools and techniques to manage vegetation, and defines areas requiring restoration.

Goal RES-V2

- Document and protect special-status plants and communities and manage for their perpetuation and enhancement.

Guidelines

- Comply with the State and Federal Endangered Species Acts and other applicable regulations aimed at the protection of special-status plant species when planning and implementing Park projects or management programs.
- Enhance existing inventories to further document and map locations of special-status species.
- Encourage the continuation of research and develop partnerships with research institutions and regulatory agencies to protect and enhance special-status species.

Goal RES-V3

- Control invasive and non-native species.

Guidelines

- Avoid planting invasive or non-native species. As a rule, use locally native species that are defined as indigenous to the Park or closely surrounding areas.
- Identify invasive and exotic species on the site and prepare a management plan to control and remove these species over time.

Goal RES-V4

- Preserve the diversity of the Park's native grasslands through the use of monitored grazing or other new or current management tools and best management practices.

Guidelines

- Continue to monitor grazed and ungrazed plots for species composition and other parameters using appropriate methodologies, as long as grazing continues.
- Consult with experts and reports on rangelands and other Department policies for current information on preservation of native grasslands.

Goal RES-V5

- Reduce the threat of and opportunity for wildland fire and the associated danger to human life through measurement and monitoring of vegetative fuel loads using historic data and current techniques outlined by wildland firefighting specialists.

Guidelines

- Monitor vegetative fuel loads using regional fire weather information and other fire ecology data to understand onsite fire danger.
- Devise a program to reduce vegetative fuel loads while supporting the protection of ecologically important and special-status species.

Wildlife (RES-W)

The Park supports a wide range of mammals, avian species, amphibians, and reptiles that rely on the site's unique habitats and location, which is influenced by both the marine and valley environments. Common, sensitive, and special-status species exist on the site and in some instances use the unfragmented open space as a corridor within the larger, regional habitats. Additionally, non-native, wild pig populations have grown unchecked in the region and are causing habitat disturbance at the Park.

Goal RES-W1

- Maintain, protect, and enhance wildlife habitat for common, sensitive, and special-status wildlife species.

Guidelines

- Continue to document and monitor wildlife species and their use patterns across the site.
- Avoid significant impacts and minimize disturbance to critical wildlife habitat areas including blue oak woodlands, native grasslands, and ponds and springs.
- Before construction of facilities and trails, survey site-specific areas of potential impact for the presence of special-status species.
- Reduce wildlife access to human food and garbage by using wildlife-proof trash containers throughout the site including administration and residence areas.
- Ensure that new facilities, land uses, and management activities are planned to avoid habitat fragmentation and comply with local, State, and federal regulations when applicable.
- Explore opportunities that will enhance wildlife movement through such proposals as an underpass at SR 152 and Dinosaur Point Road that is designed in a manner that provides opportunities for terrestrial wildlife to cross SR 152 safely.
- Determine current status of California red-legged frog on the project site through a focused survey for California red-legged frog using USFWS protocol to manage for species protection and the development of a future protection program.
- Avoid and minimize impacts on California red-legged frog through the use of appropriate buffers from occupied or potential habitat.
- Monitor bird mortality at wind turbine sites by developing and implementing a program that documents bird mortality caused by existing and future wind turbines in the LE Zone.
- Avoid direct construction-related impacts on nesting raptors by doing preconstruction surveys when development is located in or near areas of suitable nesting habitat.

Goal RES-W2

- Reduce the numbers of wild and other problematic non-native animals such as wild pigs, particularly those that have a negative effect on the populations of native plant and animal species.

Guidelines

- Monitor the presence of wild pigs and other non-native animals; and where appropriate and feasible, develop a control plan to reduce their numbers consistent with other plan goals.
- Educate Park visitors and the general public about the negative effects of releasing animals and feeding or petting wildlife in the Park.

Visitor Experience and Education (VIS)

Resource management goals encompass all significant natural resource or physical elements found at Pacheco SP. These are the inherent values that make the Park unique, and long-term stewardship is essential to ensure that these resources are sustained and preserved for the future. These have been defined and described in Chapter 2, Existing Conditions, of this document and are presented in this section under the following categories:

- Visitor Facilities (VIS-F)
- Trails (VIS-T)
- Interpretive Themes (VIS-I)
- Concession Opportunities (VIS-C)

Visitor Facilities (VIS-F)

Currently, visitor facilities are limited. There is no visitor center or overnight accommodations, and most visitor use is concentrated along the main entry road and on the extensive trail network on the site. Visitor facilities are intended to complement the site's character and to ensure long-term protection of the resources while allowing for public access and enjoyment. In reviewing the need for and type of visitor facilities appropriate for Pacheco SP, one factor to be considered is the type, intensity, and quantity of recreational facilities in the immediate and local vicinity. The adjacent San Luis Reservoir SRA provides a variety of day-use and overnight land-based recreation opportunities and a host of water-based recreation opportunities. Henry Coe SP located northwest of the Park near Morgan Hill provides extensive hiking and backcountry camping.

Goal VIS-F1

- Provide visitor facilities that enhance enjoyment of the site's history and character and avoid resource degradation.

Guidelines

- Explore the opportunity for a visitor center to orient and educate visitors to the site as well as an increase in other, self-guided interpretive facilities such as weather-proof-displays and signage.
- Plan for recreational opportunities within a regional context and in coordination with other plans (e.g., the joint General Plan and Resource Management Plan with the San Luis Reservoir SRA, plans for Henry Coe SP and Merced and Santa Clara County parks) to ensure that facilities are balanced within the region and are compatible with the location and resources.
- Provide for a variety of day-use activities and overnight camping facilities that celebrate the unique site characteristics and accommodate visitors of varying abilities.
- Prepare a visitor facility management plan that incorporates visitor data, regional demographics, and resource data to support the need for a certain type and intensity of visitor facilities.

Trails (VIS-T)

Trail use by a variety of users is currently the primary form of recreation at the Park. Old ranch roads and cattle trails have left a series of paths winding through the Park, up and down the site's diverse topography. Trails that are being used by horseback riders, hikers, and mountain bikers are located mostly in the western portion of the site and are marked. Other trails exist but currently are not open to the public, and there are no links to adjacent preserved lands. The trail map for the Park does not specify single use or multiuse, thereby making all public trails available to all users.

Goal VIS-T1

- Ensure that trails are designed and used to preserve natural resources and provide the optimum visitor experience.

Guidelines

- Develop and maintain trails for efficient maintenance, to minimize erosion, and based on best management practices in keeping with resource management goals.

Goal VIS-T2

- Provide a variety of trail experiences for a variety of trail users.

Guidelines

- Explore options for short- and long-duration loop trails.
- Based on topography and other constraints, explore the options for ADA compliant trails.
- Provide additional interpretive signage to allow for self-guided educational trails.

- Explore the best locations for linking with adjacent lands at the San Luis Reservoir SRA and DFG lands to the north.

Goal VIS-T3

- Provide an appropriate amount of trails in a variety of locations throughout the park.

Guidelines

- Prepare a Parkwide trails management plan to identify future trail openings and connections and to determine single-use and multiuse options based on visitor experience and resource protection needs.
- Open additional ranch roads for trail use based on location and ecological capacity to support a particular use.
- Review areas of the Park that are currently not open to the public to determine the best location that additional ranch roads can be used to minimize the blazing of new trails.
- Work with ITR to revise the windmill lease to allow for public access in more areas of the Park.
- Maintain and continue a system of multiuse trails to avoid the need for too many trails.

Goal VIS-T4

- Ensure that trails do not contribute to habitat fragmentation or other site degradation.

Guideline

- Map wildlife corridors to minimize or avoid developing trails that bisect these corridors resulting in the fragmentation of habitat.

Interpretive Themes (VIS-I)

Interpretive themes are those that provide public education about specific themes or elements found at the Park; they can be used to relay important messages about resource protection, site history, and other Park topics. Based on the Park's location, history, and previous inhabitants as well as current resources and land uses, there are many theme opportunities that can be implemented. The following is the overall theme that best exemplifies Pacheco SP:

Park Unifying Theme

- Landscape Connectivity—connecting the built and natural environment at Pacheco Pass. The interpretive potential at Pacheco SP embodies the integration of natural and human-made elements and culture. Fusion is defined as a “merging of diverse, distinct, or separate elements into a unified whole.” Interpretation at the Park can encompass many of the following primary and supporting themes inherent at the site while tiering from the overall theme with the ability to “unify the whole.”

Subtheme 1

- Connecting the Coast with the Valley—an exploration of Pacheco Pass as an important linking corridor between coastal and valley inhabitants.

Guidelines

- Interpret the use of the pass over centuries by Native Americans for trade and social interaction.
- Interpret the first crossing of the pass by Europeans on the feast day of San Luis Gonzaga, inspiration for the naming of the ranch.
- Interpret the effect of the Europeans visits on the Native American populations.
- Interpret the use of the pass by Native Americans to attempt escape from the Missions to sanctuary in the valley below, and to conduct raids on rancho livestock herds
- Interpret the use of the pass by Mission vaqueros and ranchers for movement of cattle between the ranchos and the rich valley grasslands.
- Interpret the importance of the Butterfield Stage, carrying passengers and mail over Firebaugh's road, on its run from St. Louis to San Francisco.
- Interpret the views from the top of the pass, as seen through the eyes of early settlers and John Muir, who described the Sierra as a "range of light."
- Interpret the pass as a lifeline between the agricultural valley and the major urban centers of Monterey and San Francisco.

Subtheme 2

- Connecting the Landscape with the Regional Climate—an exploration of how the Park's location and microclimate affect the natural and built environment.

Guidelines

- Interpret the coastal and valley fog's effect on the Park's landscape.
- Interpret the way in which the wind over the pass has pruned many of the old oaks into unusual and graceful forms.
- Interpret the way in which the wind provides the right conditions for windmills to harness clean renewable energy.

Subtheme 3

- Connecting Private and Public Partnerships—an exploration of how private individuals and organizations can work with public agencies to forge better relationships that can benefit the public.

Guidelines

- Interpret the fight of the five generations of the Pacheco family to hold on to their land and ranch and the reasons that just a vestige of the 150,000 acres exists today.
- Further interpret the gift that Paula Fatjo gave to the people of the State of California.

Subtheme 4

- Connecting the Natural Landscape with Visitors. An exploration of the unique flora and fauna of the Park and a celebration of seasonal and historical values not found elsewhere in the region.

Guidelines

- Interpret the presence of spring wildflowers and grasslands and the natural and human-induced factors that affect them including how California native grasslands have been converted to non-native species.
- Interpret the site's wildlife habitat values in context with the region and the importance of undeveloped land in maintaining biodiversity.
- Interpret the needs and requirements of wildlife and the negative effects of feeding and petting wildlife.
- Interpret the cultural landscape values of the ranch structures, fences, and other landscape features that make the Park worthy of preservation.
- Interpret the uniqueness of the plants that inhabit the site based on its location between the coast and the valley.
- Interpret the how grazing and fire have an effect on the Park ecology.

Goal VIS-I

- Provide a variety of interpretive and education programs that celebrate the site and the region's history and unique natural resources.

Guidelines

- Enhance interpretive opportunities with a mix of programs and venues such as guided tours, interpretive signage and outdoor exhibits, campfire sessions, visitor center displays and group gathering areas, lectures, school field trips, or other similar programs led by rangers, interpretive specialists, and volunteers.

Concession Opportunities (VIS-C)

Goal VIS-C I

- Provide concessions that support the purpose and vision for the Park and enhance the visitor experience without compromising resource protection.

Guidelines

- Ensure that any concessions are adding to the capacity of Park staff and clearly implementing desired visitor programs beyond what the Department is capable of achieving.
- With the help of recreational user groups and concessionaires, craft concession plans that serve a viable population to ensure success.
- Choose concessions that best exemplify the Park's character and enhance the Department's ability to provide a quality visitor experience while meeting other General Plan goals.

Local and Regional Planning (REG)

Local and regional planning encompasses coordination and cooperation with landowners, advisory boards, regulatory agencies, and municipalities in the vicinity of the Park. The land around the Park and visitors to the Park and in the region are continually changing and can affect the use and condition of the Park. Issues and topics related to local and regional planning have been defined and described in Chapter 2, Existing Conditions, of this document and are presented in this section under the following categories:

- Interagency Cooperation (REG-C)
- Regional Plans (REG-P)
- Population and Demographics (REG-D)
- Linkages (REG-L)

Interagency Cooperation (REG-C)

Outreach to and cooperation with sister agencies, adjacent landowners, and the Fatjo Board can greatly benefit the Park and its activities. Issues that may be relevant to residents and land use in the Park vicinity, as well as to regulatory requirements, can be clarified early in the process.

Goal REG-LI

- Identify and cooperate with all adjacent landowners, site tenants (ITR, "right of way" users), and local and State agencies to share resources and ensure coordinated implementation of Park management actions.

Guidelines

- Work with DFG, to develop coordinated access to adjacent wildlife area.
- Continue to work with CDF for emergency, rescue, fire, or other incidents requiring mutual aid.
- Identify regulatory requirements and permits needed for Park actions and communicate early with the associated agency to prevent review delays.

Goal REG-L2

- Maintain and enhance a cooperative working relationship with the Fatjo Board.

Guidelines

- Continue the regular forum of information exchange to ensure that the Fatjo Board is aware of all issues and projects in the Park.

Regional Plans (REG-P)

There are many efforts to accommodate the continuing population growth in the region; these are being documented in a variety of plans by local and State agencies. Additionally, many surrounding privately owned ranches are being subdivided and developed. Overlapping planning efforts can cause oversight of important issues relevant to Park planning and surrounding land uses can greatly influence the Park's management and operations.

Goal REG-PI

- Provide information on regional planning initiatives and surrounding development to assist in making them consistent with the Park's purpose and vision.

Guidelines

- Regularly review applications to Merced or Santa Clara County for development in the vicinity of the Park and comment when appropriate.
- Review and comment where applicable on Merced or Santa Clara County General Plan updates and regional projects such as the high-speed rail and low-point improvement project.

Population and Demographics (REG-D)

Lack of detailed visitor attendance data can inhibit the planning of Park facilities and the anticipation of staffing needs and operations. Because of the Park's central location, the Park can serve coastal as well as Central Valley residents with varying recreational desires and abilities. Following the regional and local population and demographic data, documenting this information, and collecting visitor profiles will aid in future management of the Park.

Goal REG-D I

- Incorporate visitor use data and regional population and demographic information in planning and construction projects at the Park.

Guidelines

- Enhance current visitor attendance data collection efforts to include more detail about visitor use, duration, satisfaction, volumes, and seasonality of visitation.

- Follow regional population and demographic reports such as the U.S. Census and countywide projections to ascertain future visitor needs and priorities.

Linkages (REG-L)

There is an opportunity for open-space and recreational linkages between the Park and the adjacent San Luis Reservoir SRA, the nearby DFG lands, and Henry Coe SP. Also, given the land uses on adjacent parcels, there may be an opportunity to connect undeveloped lands with the Park for trail linkages or wildlife corridors.

Goal REG-AI

- Explore the possibility for Park users to connect with adjacent and regional preserved lands, namely the adjacent San Luis Reservoir SRA, San Luis Wildlife Area (DFG), and Henry Coe SP.

Guidelines

- Work with Merced and Santa Clara County planners to plan an interconnected open-space system, where possible, in the vicinity of the Park.
- Coordinate trail planning work with the San Luis Reservoir SRA.

Infrastructure and Operations (OPS)

Infrastructure and operations are at the core of a functional unit and integral to meeting the Park's purpose and vision and managing resources and visitor uses. Because future staffing and management structures may change, interagency and intradistrict cooperation and sharing of personnel and resources can make it easier to ensure efficient operations and up-to-date infrastructure. Existing infrastructure and operations have been defined and described in Chapter 2, Existing Conditions, of this document and are presented in this section under the following categories:

- Park Access and Circulation (OPS-A)
- Leases and Special Agreements (OPS-L)
- Staffing Needs and Facilities (OPS-S)
- Utilities (OPS-U)

Park Access and Circulation (OPS-A)

Public access to the Park is currently limited to one location off SR 152. Windmills Road, also accessible from Dinosaur Point Road traverses the site from north to south and is used by private landowners residing south of the Park and for access to ITR's facilities. Whiskey Flat Road which forms the western boundary of the Park is used by ranchers to herd cattle, private landowners residing west of the Park and by Park staff for patrol and service access. Visitor vehicular access is limited to the entry road and parking area, while Park staff members use some of the internal ranch roads to patrol the site. Access to the ranch buildings and staff work and living quarters is via the extended entry road. Future development should follow the ADA requirements and attempt to provide opportunities for accessibility when feasible.

Staff and visitor access and circulation needs to be coordinated and maintained to optimize efficiency, security, emergency access, and enjoyment of the site while remaining in keeping with the site's character.

Goal OPS-A1

- Ensure safe and well-signed ingress and egress to SR 152.

Guidelines

- Work with Caltrans to identify immediate, short-term safety and signage improvements that can be made and ensure that these are incorporated into regional transportation plans and budgets.
- Review long-term infrastructure requirements needed to handle increased future use of the Park.
- Ensure that signage is adequate for access to the Park from SR 152 and Dinosaur Point Road.

Goal OPS-A2

- Provide for intermodal emergency access to key areas of the Park as necessary.

Guideline

- Work with adjoining landowners to clarify the ownership and location of Whiskey Flat Road and any easements that may exist. Ensure that emergency access for Park staff members and entities such as CDF for wildland fire access and other such uses is permitted.

Goal OPS-A3

- Provide a well-defined, safe Park entry capable of handling all visitors and a variety of vehicles during peak-use days and all seasons.

Guideline

- Prepare a plan of the current entry in its as-built condition and design an up-to-date entry with current and future vehicular and safety needs. The up-to-date entry should respect the site's rustic character, by considering such things as minimizing road widths and using appropriate surfaces as well as the original wooden gate.

Goal OPS-A4

- Ensure well-defined visitor access and use areas with clear signage,

Guidelines

- Work with private property owners to the west of the Park entry to acquire property or an easement, if available, to provide a safer entry alignment and width as well as a buffer if needed.
- Maintain and enhance the existing entry road to maximize efficiency and safety for parking, day use, cattle corrals, and any future facilities.
- Maintain and develop clear signage for visitor access and orientation throughout the Park.
- Provide ADA compliant facilities and recreational use access (e.g., trails) where practicable.

Leases and Special Agreements (OPS-L)

The Park has a variety of legal agreements with different entities. Most of these were in place before Paula Fatjo's death and were inherited by the Department when she bequeathed the property to the State. It is important that these agreements are kept up to date and that they respect the purpose and vision of the Park while honoring any legal requirements.

Goal OPS-L1

- Leases with cattle grazers may be maintained at the Park if they achieve effective and desired results such as native grass preservation, a reduction in fuel loads, and maintenance of clear passage on trails and ranch roads.

Guidelines

- Continue existing monitoring of vegetative species composition in some grazed areas and improve program to include monitoring in other locations as well as for other parameters such as wildlife species composition and effects on habitat values.
- Through review of monitoring reports, adjust enclosures and intensity and frequency of grazing accordingly and based on goals for species composition and other ecological requirements.
- Ensure cattle are not causing environmental degradation particularly at ponds and springs.

Goal OPS-L2

- Work with ITR to ensure that any renewed lease is compatible with the General Plan's goals and guidelines.

Guidelines

- Reduce the leased land area by up to 66% of the current area to more accurately reflect the location of the existing windmills.
- Ensure that the language of the lease fits current ownership and management conditions and allows for appropriate public access.
- Ensure the lease requires that ITR meet regulatory requirements for changes, alterations or additions to any structures as well as all Department policies.

Goal OPS-L3

- Work with the Santa Clara Valley Water District to ensure that maintenance or other work on the water distribution tunnel crossing the Park does not interfere with Park operations or significantly affect resources.

Guideline

- Set up a Memorandum of Agreement (MOA) to ensure a standard operating procedure for future maintenance and implementation of tunnel easement activities.

Goal OPS-L4

- Investigate and seek opportunities for securing easements or parcel additions that are consistent with the goals and guidelines of the Plan and will enhance the functionality of the Park.

Guideline

- If opportunities arise to purchase adjacent parcels for park use, the department should investigate ways to obtain the necessary funding.

Goal OPS-L5

- Ensure that all leases, easements, access agreements, or other legal arrangements are in the best interests of the Park's purpose and vision.

Guideline

- Review all legal agreements regularly and check operating language to ensure compatibility with the Park's mission and operations, and monitor physical effects over time, if any.

Staffing Needs and Facilities (OPS-S)

Efficient Park operations require adequate staffing and associated facilities. Currently staff administration work takes place primarily at the Sector office for the adjacent San Luis Reservoir SRA. Portions of the former Fatjo residence act as Park office and meeting space, staff residences, and maintenance and repair areas. Identifying long-term needs and plans for staff operations will prevent piecemeal development.

Goal OPS-SI

- Provide staff housing opportunities that meet fire safety and functionality according to current building codes.

Guidelines

- Develop a plan to either continue use of the existing ranch buildings for housing to minimize the need for other structures or provide new housing.

- Ensure adequate office space and ranger station to provide self-contained, onsite management while continuing to interpret historical structures.
- Explore opportunities to move staff housing away from the ranch complex and separate from public access areas.

Goal OPS-S2

- Provide adequate, all-weather work space and storage for onsite repairs, and maintenance and associated supply and vehicular storage.

Guideline

- Design multipurpose all-weather work areas for storage of supplies and tools, and work areas in close proximity to vehicle storage and maintenance areas.

Goal OPS-S3

- Centralize and provide adequate operations and administrative functions for the Park.

Guideline

- Provide a headquarters/ranger station to accommodate administrative, enforcement, and management staff needs onsite.

Goal OPS-S4

- Allow and promote opportunities for site-related researchers and seasonal interns.

Guideline

- Identify opportunities for providing housing or other needs that would attract and provide for researchers and seasonal workers.

Goal OPS-S5

- To the extent feasible incorporate principles and practices of sustainability into the park's facilities, improvements, and maintenance and operations.

Guidelines

- To the extent feasible, consider sustainable practices in building and site design and construction and maintenance, and operations. Sustainable principals used in design and management emphasize environmental sensitivity in construction, the use of non-toxic materials and renewable resources, resource conservation, recycling, and energy efficiency.
- Consult programs such as LEEDs (Leadership in Energy and Environmental Design) for development of facilities and site-related construction as a guide to sustainable building practices.

Utilities (OPS-U)

The Park was formerly the residence and ranch of Paula Fatjo. Current and up-to-date utility needs for use as a public Park may require upgrades to existing service and the installation of new service in additional areas of the site. Currently the most constraining limitation is the lack of potable water for public consumption. Current water storage and distribution are limited and expansion is also restricted based on the limited ability to access certain remote portions of the Park.

Goal OPS-LI

- Ensure long-term infrastructure function of the Park.

Guidelines

- Devise a strategic plan for the installation of a potable water supply and distribution of water to the existing ranch buildings and key visitor locations.
- Identify other utility needs and implement utility improvements comprehensively to avoid unnecessary site disturbance and expensive rerouting of utility corridors and junctions over time.
- Develop a long-term utilities plan that is compatible with other Park goals and guidelines.

3.4 RECREATION CARRYING CAPACITY

This section describes the Department's guidance for establishing and measuring carrying capacity for State Park holdings. It also presents examples of environmental quality indicators to be used for monitoring the success of the desired future conditions presented in Section 3.3 as goals and guidelines.

Characterization of Carrying Capacity

Carrying capacity as it relates to recreation has been discussed and defined in a variety of forums at both the State and federal levels. Federal land management and recreation agencies have developed several models for analysis of resource conditions, monitoring, and assessment of the visitor use impacts. In the United States, Limits of Acceptable Change (LAC) was first implemented to address visitor management issues in designated wilderness managed by the U.S. Forest Service (USFS) in the Bob Marshall Wilderness of Montana. NPS uses a derivative system known as the Visitor Experience and Resource Protection (VERP) planning process. *Visitor Capacity on Public Lands and Waters*, a report by the Federal Interagency Task Force on Visitor Capacity on Public Lands, provides another approach to visitor capacity on lands used for recreation. These examples are summarized below for reference.

LAC is a planning tool that assists managers in determining how much recreational impact a particular area can tolerate or how much change can occur before it becomes detrimental. The process requires deciding what kinds of conditions are acceptable through the designation of opportunity classes or management zones, then prescribing actions to protect or achieve those conditions. Measurable indicators and standards of the condition of the class or zone are set up and managers use these to assess conditions and monitor them over time. Management actions are prescribed and adjusted to ensure that change does not exceed acceptable levels.

The VERP framework is one of the adaptations of the LAC process. It is expanded to address a wide variety of resource settings for frontcountry as well as backcountry experiences. It was conceived and designed to be part of the NPS General Management Plan process. The VERP framework is defined as follows (Haas 2001):

A planning and management framework that focuses on visitor use impacts on the visitor experience and the park resources. These impacts are primarily attributable to visitor behavior, use levels, types of use, timing of use, and location of use.

The framework is intended to provide a logic and rationale for carrying capacity decision making. Documenting the rationale for decisions is especially important when those decisions are controversial, such as limiting visitor use or increasing development (Haas 2001).

Visitor Capacity on Public Lands and Waters defines visitor capacity as “supply or prescribed number of appropriate visitor opportunities that will be accommodated in an area.” The report further defines capacity as “the number or numeric range related to the relevant social unit(s) detailed in the management objectives (or desired future conditions) for an area.” An example of capacity expression is 35 designated backcountry campsites. This report suggests a methodology that uses three different levels of analysis depending on the purpose or use of the visitor capacity information and provides a rating system that can be used to gather information and set numeric ranges.

PRC §5019.5 requires the Department to assess carrying capacity for proposed Park plans:

Before any park or recreational area developmental plan is made, the department shall cause to be made a land carrying capacity survey of the proposed park or recreational area, including in such survey such factors as soil, moisture, and natural cover.

PRC §5001.96 further states that:

Attendance at state park system units shall be held within limits established by carrying capacity determined in accordance with Section 5019.5.

The Department’s Planning Handbook provides the following definition:

Recreation carrying capacity can be defined as a prescribed number and type of visitors that an area will accommodate given the desired natural/cultural resource conditions, visitor experiences, and management program.

The Planning Handbook notes that the plan should include established goals and guidelines for visitor use management that will lead to the desired future conditions. It also states that:

Carrying capacity (use limits) may be established for a unit (or individual areas) at the time when more detailed information is made available; more appropriately during the preparation of management plans.

Because this General Plan acknowledges that certain data are unavailable to set use limits, examples of quality indicators are provided. To fully address recreation carrying capacity, the following key components are necessary:

- Data Collection—Chapter 2, Existing Conditions, is a summary of all known data that are available and were collected as part of this planning process. The discussion recognizes that there is not a complete baseline of data for the Park, and that some of the goals defined in this Plan identify the types of future data collection that are still needed.
- Park Purpose—this chapter sets forth the Park's purpose and vision.
- Desired Future Conditions—Section 3.3 in this chapter describes the desired future conditions in the form of goals and guidelines.
- Quality Indicators—these are based on the desired future conditions and suggest when alternative management actions (adaptive management) are needed to ensure that the conditions are being met. Table 14 below summarizes quality indicators for Pacheco SP.
- Plan Implementation—Subsequent planning actions required for implementation of the General Plan are defined in Chapters 1 and 4 as they relate to CEQA compliance.
- Monitoring Plan—A monitoring plan will be prepared as part of this General Plan. The plan will set forth strategies for ensuring that implementation of the General Plan and the desired future conditions are not compromised without an amendment or a revised management plan.

Adaptive Management

Adaptive management is an explicit and analytical process for adjusting management and research decisions to better achieve management objectives; wherever feasible, this process should be quantitative. Adaptive management recognizes that knowledge about natural resource systems is uncertain. Therefore, some management actions are best conducted as experiments in a continuing attempt to reduce the risk arising from that uncertainty. The aim of such experimentation is to find a way to achieve the objectives as quickly as possible while avoiding inadvertent mistakes that could lead to unsatisfactory results. The concept of adaptive management represents the common sense of "learning by doing" (Goodman, Sojda).

Adaptive management is a tool to assist in addressing recreation carrying capacity and is included in this General Plan. Adaptive management is an ongoing, iterative process of determining desired conditions, selecting and monitoring indicators and standards that reflect these desired conditions, and taking management action when the desired conditions are not being realized. If the Department determines that the entire Park or a specific area of the Park is not meeting the desired future conditions set forth herein, then management action would begin. Management action could determine that the violation was caused by natural variation (e.g., by a natural storm event) or by human-induced variables (e.g., trampling associated with hiking). Management actions could include, but are not limited to, the following:

- site management (e.g., facility design, barriers, site hardening, area/facility closure, redirection of visitors to suitable sites);
- regulation (e.g., the number of people, the location or time of visits, permitted activities, or allowable equipment);
- enforcement of regulations (e.g., patrols, notification, citations);

- education (e.g., information signs and exhibits, interpretive programs, visitor center exhibits, brochures and fliers, public meetings, meetings with user groups); and
- altering access (e.g., parking in proximity to sensitive resources, limiting certain types of access such as vehicular access in certain areas).

Management actions should comply with the requirements of CEQA and other applicable regulations.

Environmental Quality Indicators at the Park

Quality indicators will assist Park managers in determining whether desired future conditions are being met. Desired future conditions at Pacheco SP are outlined in the goals and guidelines in Section 3.3. For each of the planning areas, an overall goal is presented in Table 14, and quality indicators and corresponding management actions are shown for specific topics to assist in documenting recreation carrying capacity. Planning areas discussed in Table 14 are as follows:

- Resource Management
- Visitor Experience and Education
- Infrastructure and Operations

**Table 14
Pacheco State Park Recreation Carrying Capacity**

PLANNING AREA	GOAL	QUALITY INDICATORS	MANAGEMENT ACTIONS
Resource Management	Protect and preserve, restore and rehabilitate the Park's physical, cultural, scenic, vegetative, and wildlife resources.		
Scenic/Aesthetic		<ul style="list-style-type: none"> - Scenic vistas are reduced or interrupted with features not compatible with landscape character. - New facilities dominant the landscape. 	<ul style="list-style-type: none"> - Remove incompatible structure or elements.
Cultural/Historic		<ul style="list-style-type: none"> - Cultural resources are damaged or lost during construction. 	<ul style="list-style-type: none"> - Ensure that a qualified archaeologist is present during construction.
Geology/Soils		<ul style="list-style-type: none"> - Erosion is occurring along trails or adjacent areas as evidenced by exposed tree roots and ruts. 	<ul style="list-style-type: none"> - If erosion is caused by visitor use, limit intensity, duration, or type of use accordingly. - Consider trail closure and removal. .
Hydrology		<ul style="list-style-type: none"> - Sedimentation is evident in ponds and springs. 	<ul style="list-style-type: none"> - Ensure adequate plant cover over erodible soils or provide temporary stabilization during construction.
Vegetation		<ul style="list-style-type: none"> - There are reduced occurrences of special-status species. - Invasive species are spreading or new occurrences are becoming evident. 	<ul style="list-style-type: none"> - Restore or reintroduce lost species. - Increase or alter removal program for invasive species. - Revegetate disturbed areas with native species.
Wildlife		<ul style="list-style-type: none"> - Wildlife is disturbed. 	<ul style="list-style-type: none"> Close backcountry campgrounds during nesting seasons.
Visitor Use and Experience	Preserve and enhance optimum and diverse experiences for a wide range of visitors.		

**Table 14
Pacheco State Park Recreation Carrying Capacity**

PLANNING AREA	GOAL	QUALITY INDICATORS	MANAGEMENT ACTIONS
Visitor Facilities		- Visitors complain about lack of necessary facilities or overcrowding.	Limit access during peak times.
Trails		- Conflicts such as accidents occur between users on multiuse paths.	- Consider limiting use of certain trails during peak times.
Interpretive Themes		- Visitors complain about lack of Park information. - Visitors display disrespect toward Park resources.	- Interpretive materials and programs may need to be increased.
Concession Opportunities		- Certain key interpretive programs cannot be fully implemented without concessionaire participation.	- Supplement interpretive activities with seasonal or temporary assistance from concessionaires.
Infrastructure and Operations	Ensure efficient, safe and adequate infrastructure and operations.		
Park Access and Circulation		- Accidents occur at SR 152 accessing the Park.	- Work more vigorously with Caltrans to get improvements funded and implemented.
Staffing Needs and Facilities		- Safety or overcrowded conditions are prevalent. - Summer interns cannot be accommodated.	- Explore feasibility of upgrading existing structures. - Add temporary housing onsite.
Leases and Special Agreements		- The windmill lease prevents public access to a trail linking to the adjacent San Luis Reservoir SRA.	- Work with ITR to amend the lease or reconfigure the leased area.
Utilities		- Lack of sanitary facilities causes environmental degradation.	- Provide chemical or vault toilets in key backcountry locations.

4. *Environmental Analysis*

4.1 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

This Draft EIR has been prepared to provide an environmental assessment of the proposed General Plan for Pacheco SP included in this document. The Department is the agency responsible for preparing the General Plan and is the lead agency for this EIR. This assessment is designed to inform Department decision-makers, responsible agencies, and the public of the environmental consequences of implementation of the General Plan. This General Plan for Pacheco SP, with all of its chapters, addresses all of the points required by Article 9 (§§15120–15132) of the State CEQA Guidelines; therefore, it constitutes an EIR, as required by PRC §§5002.2 and 21000 et seq. As lead agency, the Department has authority over whether to approve the Draft General Plan based on the environmental analysis. This plan will be submitted to the State Parks and Recreation Commission, which has sole authority for the plan's approval and adoption.

The Draft General Plan and EIR are combined herein as one document. Chapter 2, Existing Conditions, serves as the environmental setting for the environmental analysis and Chapter 3, Park Plan, serves as the project description. The plan chapter includes goals and guidelines that set forth the desired future condition for the Park. Combining the preparation of the General Plan with the environmental analysis provides the opportunity to mitigate impacts of the General Plan through the goals and guidelines. For impacts that are identified in this section, the goals and guidelines from Chapter 3 that mitigate them are noted.

Purpose of this Environmental Impact Report

The purpose of this EIR is inform decision-makers and the public about any significant and potentially significant effects that may result from the implementation of the General Plan, mitigation measures to reduce any significant effects, and the level of significance after mitigation. In addition, the document provides information on any significant impacts that cannot be avoided; growth-inducing impacts; effects found not to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects.

This is a Program EIR for the Draft General Plan, and does not contain project-specific analysis of projects recommended in the General Plan. Because the General Plan is a long-range plan, additional management planning, design documentation, schematic design, and construction documentation would be completed as necessary before Park improvements are made. At this time, there is not sufficient information reasonably available to support a project-specific analysis, but future projects will undergo subsequent CEQA review as appropriate. Project-specific environmental compliance documents should tier off and be consistent with the General Plan's Program EIR.

Accordingly, the General Plan and EIR constitute the first tier of environmental review. "Tiering" in an EIR prepared as part of a general plan allows agencies to deal with broad environmental issues at the general planning stage, followed by more detailed examination of actual development projects (that are consistent with the plan) in subsequent EIRs or negative declarations. Later EIRs may incorporate by reference the general discussion from the broader EIR, in this case the General Plan, and concentrate solely on the issues specific to the later projects (PRC §21093, State CEQA Guidelines §15152).

Additionally, permits required for future implementation projects would be secured as part of subsequent planning actions and environmental review.

Focus of the Environmental Impact Report

The Department established the focus of this Draft EIR after considering comments from public agencies and the community regarding the General Plan. The Department completed a Notice of Preparation (NOP) on November 22, 2002 (Appendix A). In addition, a public scoping session on the project was held on January 11, 2003, to inform the public of the General Plan, solicit comments, and identify areas of concern.

The following issues are addressed in this EIR:

- Hydrology and Water Quality
- Air Quality
- Noise
- Biological Resources
- Cultural Resources
- Transportation and Traffic
- Utilities and Public Services
- Aesthetics

Environmental Review Process

Consistent with CEQA requirements, a good-faith effort has been made during the preparation of this EIR to contact and consult with affected agencies, organizations, and persons who may have an interest in this project. This included the circulation of an NOP, which began a 30-day comment period. The purpose of the NOP was to inform agencies and the general public that a General Plan and EIR was being prepared for Pacheco SP, and to invite specific comments on the scope and content of the EIR. Letters and comments were received and are summarized in Item 7 of Appendix A. See Chapter I for a complete summary of the public outreach efforts conducted for this project.

A Notice of Availability of the Draft EIR has been published concurrently with distribution of this document. A 45-day review period (from the date of the Notice of Availability) is provided for the public and other agencies to review and comment on the Draft EIR. The Department will file a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse, when the Draft General Plan and EIR has been completed.

Reviewers of this Draft EIR should focus on the sufficiency of the document in identifying and analyzing the potential environmental impacts of the General Plan. Comments may be made on the Draft EIR in writing before the end of the comment period. Following the close of the public review period, the Department will prepare responses to comments on the content and conclusions of the Draft EIR and will revise the document as necessary to address those comments. The Draft EIR and technical appendices, together with the responses to comments document (Volume II), will constitute the Final EIR.

Written comments on the Draft General Plan and EIR should be sent to:

Mr. Terry Lee, ASLA
Associate Landscape Architect
Central Service Center
21 Lower Ragsdale Road
Monterey, CA 93940
831-657-6349

The Department will review the Final EIR for adequacy and consider it for certification pursuant to the requirements of §15090 of the State CEQA Guidelines. If the Department certifies the Final EIR and decides to approve the General Plan, a Notice of Determination will be prepared and filed with the State Clearinghouse. The Notice of Determination will include a description of the project, the date of approval, and the address where the Final EIR and record of project approval are available for review.

If the Pacheco SP General Plan EIR is certified and the project is approved, subsequent environmental review would be limited to the requirements outlined in the adopted mitigation measures for the project. There also would be subsequent Department review of phasing, siting, and grading plans to ensure that they are consistent with the General Plan. If the Department finds, pursuant to §15162 of the State CEQA Guidelines, that no new effects could occur or no new mitigation measures would be required, the Department can approve the activity as being within the scope of the project covered by this EIR. In such a case, no new environmental documentation would be required. However, if a proposed phase of the project would have effects that were not examined in this EIR, preparation of an additional environmental document would be required (State CEQA Guidelines §15168(c)(1)).

4.2 ENVIRONMENTAL ANALYSIS SUMMARY

Summary of Impacts and Mitigation

The General Plan for Pacheco State Park reflects the Department's dual mandates as the steward of sensitive resources and the provider of recreation opportunities. Chapter 3, Park Plan identifies goals and guidelines for resource management, visitor experience and education, local and regional planning and infrastructure and operations. The goals and guidelines of this General Plan seek to avoid potentially significant effects on the environment.

An evaluation of the potential for significant environmental effects to hydrology and water quality, air quality, noise, biological resources, cultural resources, transportation and traffic, utilities and public services and aesthetics is provided in Section 4.3. The specific guidelines noted in the mitigation section for each environmental topic, would maintain potential environmental impacts at a less-than-significant level when implemented.

The protection and restoration of natural and cultural resources are key components of the General Plan. Much of the Park will remain undeveloped keeping wildlife habitat intact, scenic resources protected, native vegetation preserved, watershed water quality protection and historic and cultural landscape protection and interpretation. Additionally the plan allows for staff and public safety, appropriate infrastructure and operations and coordination with regional planning efforts and initiatives. The plan also identifies conceptual locations for proposed park facilities which would be located in the least

environmentally constrained areas of the park and clustered near existing development, as shown on Alternative maps 6 through 11.

The environmental analysis prepared for the General Plan is programmatic in scope and does not contain project-specific analysis for the facilities recommended in the plan. However, the plan also includes guidelines that will govern project-level environmental review of future projects to avoid or minimize any potential adverse site-specific effects to resources during construction or operations of the facilities. Site specific projects would undergo subsequent CEQA review in the future as appropriate.

Summary of Alternatives Considered

Three concept alternatives were considered during development of the General Plan. Each alternative includes resource management actions to protect the physical resources of the site balanced with different scenarios for visitor facilities and experiences, although all maintaining the Park purpose and vision. In all alternatives, provisions have been made for infrastructure and operations and coordination with local and regional planning agencies and other entities. The goals and guidelines provided in Chapter 3 apply to all alternatives however the Preferred Alternative provides the most balanced scheme to implement these. An environmental evaluation of the three alternatives is provided in Section 4.6. The following summarizes the three alternatives:

Alternative 1: Minimum development plan; passive recreation and resource management based. This alternative represents the minimum actions needed to address existing issues within the park and proposes a lower intensity of facility development than the Preferred Alternative.

Alternative 2: Moderate development plan; balance of future visitor facilities and resource management. This alternative anticipates increased future visitation with a provision for additional facilities, however still concentrates these in and around existing developed areas and ensures optimal resource protection.

Alternative 3: Maximum development plan; more extensive visitor facilities. This alternative envisions a more user intensive concept and therefore provides the most future visitor facilities which consume more areas of the Park.

Section 4.6 includes an analysis of the No Project Alternative, as required by the CEQA Guidelines (Section 15126.6[e]). This alternative evaluates the positive and negative environmental aspects of the proposed General Plan in terms of the conditions that would occur if it was not adopted. Alternative 2 is considered the preferred alternative as it incorporates the features and elements that will best implement the goals and guidelines of the General Plan. It was selected after considering public and responsible agency feedback on the three concept alternatives and to address the environmental concerns of the public and meet resource agency rules and regulations.

Project Description

Chapter 3, Park Plan, constitutes the project description with the Park purpose and vision, a delineation of management zones, and Parkwide goals and guidelines. These describe the General Plan project and its components.

4.3 ENVIRONMENTAL SETTING

Chapter 2, Existing Conditions, is a description of the existing Park environment and significant resource values within the Park and the local and regional vicinity.

4.4 ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require the description and comparative analysis of a range of reasonable alternatives that have been developed to avoid or substantially lessen one or more of the significant effects identified for the project analyzed in the EIR (CEQA Guidelines Section 15126.6 [c]). Although no significant impacts have been identified for the *Preliminary General Plan* (when considering the guidelines that would be implemented with the plan to avoid or limit potential environmental effects to a less-than-significant level), the following discussion is intended to inform the public and decision-makers of project alternatives that could be implemented and the positive and negative aspects of those alternatives. This section also includes an analysis of the No Project Alternative, as required by the CEQA Guidelines (Section 15126.6[e]).

Three concept alternatives were presented to the public for comment at the second public meeting held at the Four Rivers Sector office on May 27, 2003. A summary of the three alternatives is presented in Table 15. The Department considered the local community input received at this public meeting and in comment letters received before and after the meeting when selecting the preferred alternative. The Department also considered statewide interests, the park's purpose and vision, environmental constraints, and resource agency rules and regulations. The Preferred Alternative is a combination of features from the three concept alternatives.

An environmental evaluation of the three concept alternatives considered during development of this General Plan, and the No Project Alternative, is provided below. For each alternative, a brief discussion of its principal characteristics is followed by an analysis of the alternative. The emphasis of the analysis is on the alternative's relative environmental effects compared to the proposed General Plan and a determination as to whether or not the alternative would reduce, eliminate, or create new significant impacts.

No Project Alternative

Description

As required by the CEQA Guidelines (Section 15120.6[e]), the No Project Alternative is to be analyzed in an EIR to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. If the General Plan for Pacheco SP were not approved, the existing situation would continue with respect to park use, operation, and resource management. Development within the park would be restricted to projects that address public health and safety issues; repair, replace, or rehabilitate an existing facility; provide a temporary facility, so long as no permanent commitment of resources is made; or emergency measures for the immediate protection of public health and safety or a natural or cultural resource (Public Resources Code 5002.2[c]). None of the park facilities proposed in the General Plan would be developed. Additionally, environmental enhancements and restoration programs that may require additional funding sources may not be implemented.

**Table 15
Pacheco State Park Alternatives Summary**

PLANNING AREA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
Resource Management			
Cultural/Historic	Same as Alternative 2.	<ul style="list-style-type: none"> - Develop and implement a program of site stabilization and protection. - Continue current program of inventory and monitoring of cultural, historic, and prehistoric resources. - Conduct additional research on historic resources. - Provide for additional public display of improved storage and collections facilities. 	<ul style="list-style-type: none"> - Develop and implement a program of site stabilization and protection. - Continue current program of inventory and monitoring of cultural, historic, and prehistoric resources. - Restore/protect historic and culturally significant structures in place (e.g. adobe house). -Develop an active research program, including interns.
Vegetation	<ul style="list-style-type: none"> - Develop and implement a program for the restoration of natural ecosystems using best management practices. - Develop a fire management plan. - Maintain monitored grazing for resource management purposes. 	<ul style="list-style-type: none"> - Develop and implement a program for the restoration of natural ecosystems using best management practices. - Develop a fire management plan. - Conduct additional inventory and mapping of vegetation. - Evaluate stock ponds and adjacent dams for removal, maintenance, or restoration. - Maintain monitored grazing for resource management purposes. 	<ul style="list-style-type: none"> - Develop and implement a program for the restoration of natural ecosystems using best management practices. - Develop a fire management plan. - Expand grazing as needed, based on resource management goals.
Wildlife	<ul style="list-style-type: none"> - Continue wild pig depredation program (by permit). - Conduct additional wildlife surveys. 	<ul style="list-style-type: none"> - Establish an aggressive wild pig management program, but avoid fencing park boundary. - Maintain red-legged frog habitat. - Carry out habitat improvement programs in the park. - Develop a comprehensive wildlife management plan. - Monitor bird mortality at wind turbine sites. 	<ul style="list-style-type: none"> - Increase wild pig eradication efforts and completely eradicate from the park (this may include fencing park perimeter).
Visitor Use and Experience			

**Table 15
Pacheco State Park Alternatives Summary**

PLANNING AREA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
Visitor Facilities	<ul style="list-style-type: none"> - Provide shade and additional picnic tables for day use. - Maintain and expand multi-use trails. - Develop a history trail. - Separate parking for autos and vehicles with horse trailers (20 trailer spaces). - Develop a horse camp for up to 20 horses and 30 people. - Develop backpacker campsites in frontcountry with access for all users. - Utilize existing buildings for visitor's center. 	<ul style="list-style-type: none"> - Construct flush toilets in frontcountry and vault toilets in backcountry. - Provide shade and additional picnic tables for day use. - Maintain and expand multi-use trails. - Develop a camping area in the park to accommodate tents and self-contained RVs, with a maximum of 20 campsites. - Develop a group/horse camp for up to 40 people. - Develop backpacker's campgrounds with compost toilets in backcountry for hikers and equestrian access. - Utilize existing buildings for visitor's center. 	<p>Provide shade and additional picnic tables for day use</p> <p>Maintain and expand multi-use trails</p> <p>Develop 80+ campsites with RV hookups</p> <p>Develop horse trailer parking for 60 spaces and overflow vehicle parking (unimproved grassy area)</p> <p>Develop multi-purpose building with visitors center</p>
Trails	<ul style="list-style-type: none"> - Maintain existing trails and uses. - Develop a trail connecting the Park to the nearby SRA. - Convert some existing ranch roads into trails for public use. - Consolidate trails to provide loops. 	<ul style="list-style-type: none"> - Prepare a trail management plan and remove or add existing trails accordingly - Construct an "Interpretive Vista" multi-use loop trail with views to SRA and the possibility of future trail to the SRA for all user groups. - Develop a trail linking the Park to nearby DFG lands. - Convert some existing ranch roads into additional trails for public use. - Consolidate some trails to provide loops. 	<ul style="list-style-type: none"> - Maintain existing trails and uses. - Develop a trail connecting the Park to the nearby SRA. - Convert some existing ranch roads into trails for public use. - Consolidate trails to provide loops. - Explore possible link to Henry Coe State Park.
Interpretive Themes	<ul style="list-style-type: none"> - Develop additional wayside panels, brochures, and interpretive panels. - Construct a campfire center. - Continue existing services and expand self-guided opportunities. 	<ul style="list-style-type: none"> - Develop additional wayside panels, brochures, and interpretive panels. - Construct a campfire center. - Construct an all-weather shelter for group gatherings and interpretive and educational supply storage. - Continue existing services and expand self-guided opportunities. 	<ul style="list-style-type: none"> - Develop additional wayside panels, brochures, and interpretive panels - Construct a campfire center. - Construct an interpretive bunk house, with the possibility of overnight programs.

**Table 15
Pacheco State Park Alternatives Summary**

PLANNING AREA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
Concession Opportunities	Same as Alternative 2.	- Explore opportunities for equestrian and other site related concessions based on resources.	Same as Alternative 2.
Infrastructure and Operations			
Park Access and Circulation	<ul style="list-style-type: none"> - Extend turning lanes off SR 152. - Improve park entrance road as necessary for future development. 	<ul style="list-style-type: none"> - Extend turning lanes off SR 152. - Consult with Caltrans to improve signage along SR and 152 and make other safety improvements. - Realign and improve park entrance road as necessary for future development. - Improve signage along SR 152 prior to turn - Relocate park entrance sign to a more visible location. - Improve park entrance road as necessary for future development. 	<ul style="list-style-type: none"> - Extend turning lanes off SR 152. - Improve park entrance road as necessary for future development. - Explore construction of overpass/underpass at SR 152.
Staffing Needs and Facilities	<ul style="list-style-type: none"> - Adapt a portion of the existing main building for use as a visitor's center, group space, and collections exhibit. - Construct one intern housing unit. - Maintain staff housing and construct new housing as needed. - Re-locate cattle corrals to south of entry road. 	<ul style="list-style-type: none"> - Adapt a portion of the existing main building for use as a visitor's center, group space, and collections exhibit. - Explore relocation of staff housing away from ranch complex. - Construct facilities for maintenance work, equipment storage, away from ranch complex - Relocate park offices away from ranch complex. - Construct a ranger station. 	<ul style="list-style-type: none"> - Construct 3-6 intern housing units. - Maintain staff housing and construct new housing as needed. - Construct a new visitor center, including group meeting area, research area, and collections exhibits/museum.
Leases and Special Agreements	Same as Alternative 2	<ul style="list-style-type: none"> - Maintain lease for wind turbines but utilize smaller geographical area than present. - Utilize cattle grazing for resource management purposes only/discontinue lease if grazing determined to be detrimental to 	Same as Alternative 2

**Table 15
Pacheco State Park Alternatives Summary**

PLANNING AREA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
		natural resources.	
Utilities	Same as Alternative 2	<ul style="list-style-type: none"> - Develop potable water supply and distribution throughout primary use areas. - Provide utilities as necessary for new facilities. 	Same as Alternative 2

Evaluation

The limitations and lack of existing facilities would continue if the General Plan were not adopted. Without the facility improvements to accommodate the existing visitor demand as well as the projected increase in visitor use, the visitor experience would be diminished. Under the No Project Alternative, public use, over time, could be expected to degrade sensitive natural and cultural resource areas.

Visitation to Pacheco SP is increasing every year, and there is public pressure to expand some facilities at the park. However, without a General Plan, the Department would not have the authority to develop or enhance facilities to respond to this demand. Funding for recreation and interpretation improvements to enhance the visitor experience may be difficult to obtain. Recreational and interpretive improvements that could enhance the visitor experience at the park's current level of use or anticipated future needs would not be developed.

Under the No Project Alternative, development of the park's trail system would generally be limited to routine maintenance and rehabilitation. Because projects would be limited to existing trails, new trail connections between adjacent public lands and in areas currently not open to the public would not be developed. Thus, opportunities to create a higher quality visitor experience in the backcountry and the ability to provide for a greater range of visitor abilities through the creation of smaller loop trails for instance, could be missed. Increased visitor use to existing multi-use trails could exacerbate user conflicts and compromise public health and safety.

Traffic and circulation improvements may not be accomplished with the No Project Alternative. Safety improvements to the entry would not be made and improvements to informational and directional signage would not occur. A coordinated plan to work with Caltrans to incorporate safety improvements to SR 152 would be delayed and difficult to implement without a clear purpose and need which the General Plan provides.

The existing visual character of the park could not be improved or enhanced in a significant way, and protection of existing scenic vistas by acquisition or conservation agreement may not be provided under the No Project Alternative. The light conflicts between the large group camp and the observatory would remain, and thus the use of the large group camp would be restricted for much of the year.

Without an organized land use plan, management plans, or development guidelines for the park, incremental cumulative impacts may adversely affect the park in the future. Under the No Project Alternative, the park's natural and cultural resources may not receive an increased level of protection. Parkwide policies for resource management, visitor experience and education, local and regional planning and infrastructure and operations would not be developed comprehensively resulting in piecemeal and incremental development of the Park over time. This would prevent the ability to reach desired future conditions in a systematic manner and inhibits the ability to set environmental indicators to understand the recreation carrying capacity.

Alternative 1

Description

Alternative 1 is similar to the preferred plan, with many of the same themes for proposed facilities however with less overall visitor access and facility diversity. General locations of new facilities and

primary features of Alternative 1 can be found on Maps 6 and 7. A general description and differences between Alternative 1 and the preferred alternative is summarized as per the planning areas identified in the opportunities and constraints section of the Plan and Chapter 3:

- **Resource Management:** Alternative 1 proposes the fewest physical additions and modifications geared towards visitor accommodation in the park. Alternative 1 would incorporate many of the elements in the preferred alternative to protect and enhance existing vegetation. Alternative 1 differs from the preferred alternative with respect to management of wild pigs, additional resource surveys and cultural research on historic resources. Alternative 1 would continue to manage wild pigs using the same methods currently used (i.e., depredation permit) but would not establish a comprehensive management program as proposed by the preferred alternative. Vegetation management under Alternative 1 would not include additional inventorying and mapping or evaluation of stock ponds and adjacent dams for removal, maintenance, or restoration, as included in the preferred alternative. In addition, restoration projects would continue at their current level and grazing would be discontinued under Alternative 1.
- **Visitor Experience and Education:** Alternative 1 proposes less campsite development than the proposed plan, specifically a smaller horse camp and the development of primitive backpacker campsites in the FC Zone rather than fully developed campsites. The construction of a horse camp and associated horse trailer parking, a camp fire center and continued utilization of existing Fatjo ranch buildings for the park-related activities will all occur in the vicinity of the park entrance and headquarters. In addition, Alternative 1 does not propose the development of a group camp or backpacker campsites in the BC zone.

Alternative 1 does not propose the construction of an all-weather shelter for group gatherings and interpretive supply and storage. Alternative 1 proposes use of the Fatjo residence as an exhibit area or visitor center, similar to the preferred alternative. Trail improvements are also similar to the preferred alternative including the maintenance of existing trails and their uses, the development of a trail to connect Pacheco SP to the adjacent San Luis Reservoir SRA and the conversion of some ranch roads into trails for public use. Finally, Alternative 1 proposes separation of parking for automobiles and for vehicles with horse trailers.

- **Local and Regional Planning:** All three alternatives would implement the goals and guidelines for this planning area in the same manner.
- **Infrastructure and Operations:** Alternative 1 proposes fewer projects associated with infrastructure and Park operations than the preferred alternative. Improvements to SR 152 would include the extension of turning lanes for safety purposes. Alternative 1 and the preferred alternative differ in proposed staff needs and use of buildings. Alternative 1 and the preferred alternative propose that a visitor center be provided utilizing portions of the existing buildings. Additional staff housing is included in both Alternatives 1 and 2 however 1 includes a provision for the addition of one intern housing unit for on-site research. The preferred plan includes the construction of maintenance and equipment storage facilities and construction of a Park ranger station, neither of which are included in Alternative 1. It also includes relocation of the existing cattle corrals to south of the entry road to separate this activity from visitor entry and associated land uses. Utility improvements would be similar for

all three alternatives however in relation to the facilities proposed and Vault toilets are proposed in the backcountry in all three scenarios.

Evaluation

Alternative 1 minimizes the number of new or expanded facilities that would be constructed within the park and, as such, there would be fewer potential project-specific effects to sensitive resources related to construction or use in previously undeveloped areas of the Park. Under Alternative 1, the creation of a backpacker's camp in the frontcountry zone, new trails and connections with adjacent public lands and the provision for vault toilets in the backcountry would be the only actions that would bring activity into previously undeveloped areas within the park. However, based on the goals and guidelines would be used to develop these facilities and there would still be large expanses of undeveloped land within the Park

Other than the relocated Pacheco adobe and a single wood county boundary post (not formally recorded), there are no documented cultural resources that would be directly impacted by the proposed development in Alternative 1. In addition to the lack of known prehistoric and historic resources in the area where the proposed developments would take place, the fairly low level of new visitor accommodations could minimize the number of park visitors. Fewer park users would, over time, result in fewer potential incidences of site looting and unintentional visitor-induced impacts. Without an aggressive program for wild pig management, greater damage to existing vegetation under Alternative 1, particularly in riparian and wetland habitats where wild pigs tend to frequent could occur.

Under Alternative 1, the park would not be well positioned to take on more visitors without future impacts. Alternative 1 proposes minimal visitor facilities and would not allow for future visitor increases expected from changing demographics in user populations for recreation or interpretive programs. Because Alternative 1 does not address the existing demand for recreation, it would exacerbate ongoing environmental damage by not planning for increased visitor use.

Alternative 2 – Preferred Alternative

Description

The primary components of the preferred Alternative are similar to those in Alternative 1, however, Alternative 2 proposes additional development to accommodate visitor use and staff and intern programs and housing, as well as more aggressive resource management efforts. General locations of new facilities and primary features of Alternative 2 can be found on Maps 8 and 9. A general description of the preferred alternative is summarized as per the planning areas identified in the opportunities and constraints section of the Plan and Chapter 3:

Resource Management: Alternative 2 proposes much greater resource management efforts than the proposed plan, including restoration and protection of historic structures in place, development of an active cultural and historic resource management program, expansion of grazing as needed based on vegetation management goals, complete eradication of wild pigs, and a program to acquire additional Park lands and surrounding viewshed lands.

- **Visitor Experience and Education:** Alternative 2 proposes a new camping area with a maximum of 60 sites in the FC to accommodate tents and self-contained RVs, a group camp

in the FC to accommodate up to 50 people, a horse camp in the FC to accommodate up to 50 horses and 75 people and campsites in the backcountry for hikers and equestrian access. Alternative 2 proposes similar trail expansion as proposed in Alternative 1. It also proposes the construction of an interpretive bunk house within the Park that would serve as an all-weather shelter for group gatherings and an interpretive and educational storage facility as well as and continuation and expansion of existing self-guided opportunities. Additional unimproved overflow parking is proposed as well as flush toilets in the frontcountry zone in the preferred alternative. The use of concessions is to be explored equally as per the goals and guidelines for each of the alternatives.

Interpretive programs and facilities are similar in all three alternatives however Alternative 2 proposes the construction of an all-weather shelter for group gatherings interpretive storage and supplies. The wind turbine lease area is to be reduced in all three alternatives allowing for greater public access to the Park and to reduce the ability of turbine construction in areas beyond where they exist now.

- **Local and Regional Planning:** All three alternatives would implement the goals and guidelines for this planning area in the same manner.
- **Infrastructure and Operations:** Alternative 2 differs from Alternative 1 in that it proposes the extension of turning lanes on SR 152 at Dinosaur Point Road as well other signage and safety improvements and realignment and improvement of the Park entrance road as necessary to accommodate current and future uses and vehicles. All three alternatives propose that flush toilets be added to the frontcountry zone as well as a provision for a potable water supply and distribution.

Evaluation

As with Alternative 1, the actions and developments proposed under Alternative 2 would be restricted primarily to the area around the park headquarters and entrance. There are no documented cultural resources within or in the vicinity of these developments other than the Pacheco adobe and the previously mentioned county line marker. However, due to the increased emphasis on visitor accommodations, Alternative 2 could result in a potential increase in indirect impacts to documented and unrecorded cultural resources throughout the park. By encouraging increased visitor use of the park, there is an increased chance that looting of known resources will occur and that accidental damage may occur to sites and features.

Increased visitor use of the park facilities could also impact presently undocumented cultural resources as well. Only a very small portion of the park has been subjected to a systematic archaeological survey but if the results of that investigation are any indication, numerous prehistoric and historic sites, features, and artifacts could be found throughout the park. Should visitor use increase and continue at elevated levels over time, there could be greater impacts to undocumented resources. This possibility stresses the need for continued cultural resource surveys of the park in order to better document and manage the numerous sites that likely exist but have yet to be encountered and recorded. Visitors utilizing new campsites could trample and otherwise adversely effect existing vegetation. Visitor activities that would be expected to have the greatest adverse impact on vegetation include horseback riding and off-road cycling. The degree of impact on vegetation would be largely determined by the proximity of campsite and trails to habitats susceptible to degradation from recreational use (e.g., wetlands) and special-status species populations.

The Preferred Alternative includes elements directed at protecting and enhancing wildlife resources in the Park. The General Plan would include development of a coherent wildlife management plan. In an attempt to control wild pigs, an aggressive eradication program would be developed that does not include fencing the park boundary. A wildlife management plan and wild pig eradication program could both contribute to the long-term protection of wildlife resources at the Park. Without fencing the Park, it may not be feasible to eradicate wild pigs but it would be possible to reduce their numbers to a level which allows habitat currently degraded by their use to recover. Restoration of sensitive habitat including stock ponds would also be more feasible if pig numbers were lowered. Restoration and natural recovery of vegetation wetland vegetation could substantially improve habitat for California red-legged frog and other native wildlife species. Collectively, these measures could minimize potential impacts on wildlife and enhance existing wildlife habitat.

The preferred alternative allows for the future recreation demands that may be needed. While current visitation has been steadily increasing, much is still unknown about the future demand for camping at this location and the types of users. Alternative 2 allows for a mix of campsites that can be built out as needed. Likewise, utilities and other infrastructure would coincide with these facilities.

Alternative 3

Description

Alternative 3 proposes the most development to accommodate visitor use and some, more aggressive resource management initiatives than Alternatives 1 and 2. This is the primary difference between it and the other alternatives. General locations of new facilities and primary features of Alternative 3 can be found on Maps 10 and 11. A general description of the preferred alternative is summarized as per the planning areas identified in the opportunities and constraints section of the Plan and Chapter 3:

- **Resource Management:** Alternative 3 is similar to 1 and 2 in resource management however 3 proposes a more aggressive approach to protect cultural resources through the development of a program for site stabilization and an active research program, specifically for cultural resources. This alternative also allows for the expansion of grazing into other areas of the Park as may be deemed necessary for vegetation management. As for wild pig eradication this alternative allows for the fencing of the Park boundary. Alternative 3 also recognizes that it may be necessary to purchase additional lands to protect the viewsheds and allows for actively seeking opportunities to increase the Park acreage.
- **Visitor Experience and Education:** Alternative 3 differs from the preferred alternative by proposing 20 additional campsites with RV hookups, horse trailer parking for 60 vehicles with trailers, and additional unimproved overflow parking. It also proposes a separate, new visitor center with a group meeting area, research area and collections facility for exhibits as well as the construction of an interpretive bunk house to allow for overnight programs and additional intern housing units. Trail improvements are more aggressive in Alternative 3 with the provision for paving and widening certain trails, pursuant to a trails management plan.
- **Local and Regional Planning:** All three alternatives would implement the goals and guidelines for this planning area in the same manner.
- **Infrastructure and Operations:** Alternative 3 is similar to Alternative 1 in proposed improvements to SR 152. Due to the additional visitor facilities proposed in Alternative 3,

additional utilities would be needed to service these, however, in the absence of these facilities, Alternative 3 would require sanitary facilities similar to those proposed in the preferred alternative.

Evaluation

Most of the developments proposed under Alternative 3 would occur in the same areas as those discussed under alternatives 1 and 2; near the park headquarters in the vicinity of the Fatjo ranch buildings and the park entrance. This alternative proposes greater levels of visitor accommodation with increased campsites and the construction of a multi-purpose building and visitor's center adjacent to the horse trailer parking.

Alternative 3 would result in great levels of visitation to the park. As the proposed projects would all be constructed within the ranch headquarters and entrance areas, Alternative 3 would have no further direct effect on documented cultural resources in and near those locations than alternatives 1 or 2. In the absence of accurate per-alternative park visitor calculations, Alternative 3 would likely result in impacts similar to those discussed under Alternative 2. Alternative 3 differs from the preferred alternative with respect to development of campsites, management of wild pigs, and management of livestock grazing. This alternative proposes the largest most developed campsite; one that would include 80+ sites and RV hookups. Because a large horse camp is also proposed, impacts on existing vegetation in the vicinity of the campgrounds could be significant. Alternative 3 also proposes to eradicate wild pigs from the Park using methods that could include fencing the Park perimeter. Fencing the Park perimeter could reduce impacts on existing vegetation more effectively than wild pig control methods included as part of the other alternatives; however, fencing the perimeter would limit movement by other terrestrial wildlife species. The direction provided by Alternative 3 on future grazing would allow greater flexibility by Parks to expand grazing as needed, based on vegetation management goals.

Alternative 3 generally provides for more aggressive facility development which may be harder to realize due to staff and financial limitations, however if developed, could eliminate the need to retrofit existing buildings for public use which can result in unforeseen and costly improvements. Alternative 3 allows for the additional campsites with RV hook-ups which will require additional sanitary system infrastructure and generally increase all utility usage. The more aggressive use of trails and their improvements provided for in Alternative 3 along with the additional visitor facilities could alter the landscape character at the Park through a change in the scale of buildings and campsites, from what currently exists, the addition of paved surfaces and the ability to handle additional cars. Overall, Alternative 3 will allow more visitors to the Park exacerbating the protection of physical resources.

4.5 ENVIRONMENTAL IMPACTS

The purpose of this section is to identify impacts of the project that have the potential for significance. These impacts will require more detailed analysis when management plans and area development plans are prepared.

According to §15382 of the State CEQA Guidelines, a significant impact on the environment refers to:

a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance.

Significant environmental impacts may be associated with visitor use, facility construction or rehabilitation, or development projects. Adverse impacts can range from negative visual impacts to degradation of water quality to the disturbance or loss of cultural and natural resources.

The term “threshold” is used to describe levels of impact. Thresholds are standards used to determine whether an activity or project will cause, or potentially cause, a substantial adverse physical change. If the project or activity could exceed a threshold, the impact is considered to be potentially significant. If appropriate mitigation can reduce the impact to below the threshold, the impact is then considered less than significant. “Mitigation” is defined as an action or actions that will:

- Avoid the impact altogether by not taking a certain action or parts of an action;
- Minimize impacts by limiting the degree or magnitude of the action and its implementation;
- Rectify the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; or
- Compensate for the impact by replacing or providing substitute resources or environments (State CEQA Guidelines §15370).

As discussed above, this General Plan is the first phase of a tiered EIR; as such, proposed development and associated mitigation are general in nature. Many of the proposed mitigation measures are contained in the General Plan’s goals and guidelines. The following potential impacts and associated mitigation measures refer to proposals planned within the existing Park boundaries.

Hydrology and Water Quality

Thresholds of Significance

The water quality analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant impact on hydrology, water quality, or floodplains if it would:

- Violate any water quality standard or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect floodflows; or
- Expose people or structures to significant risk of loss, injury, or death involving flooding, including that due to dam or levee failures, seiche, tsunami, and mudflow.

Impacts

With implementation of the General Plan, impacts on hydrology and water quality would be avoided through sensitive design and siting of facilities and other land uses. In addition, goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

Developments provided for under this General Plan have the potential to adversely affect hydrology, water quality, and groundwater supplies within Pacheco SP. The development of proposed facilities and paving of unpaved roads and parking areas would increase the impermeable surface area within the Park, thereby resulting in an increase in runoff—and potential polluted runoff—in developed areas. Moreover, increases in vehicle traffic within the Park associated with new facilities and the anticipated increase in visitor use would increase vehicle-related pollution in runoff, including rubber, oil, and gasoline, and other vehicle-related chemicals. Finally, development of a potable water supply for visitor use has the potential to rely on groundwater supplies. Reliance on groundwater supplies has the potential to result in groundwater depletion, which would constitute a significant impact on hydrology. Development under the General Plan therefore has the potential to adversely affect both hydrology and water quality in the Park.

Construction activities associated with development under this General Plan, including digging, grading, filling, and paving, also have the potential to adversely affect hydrology and water quality by increasing erosion, sedimentation, and polluted runoff. Construction activities would expose loose soils, potentially increasing erosion and siltation. In addition, a variety of types of construction equipment and related chemicals would be used during construction, potentially resulting in the release of vehicle- and construction-related chemicals into surface water, groundwater, or runoff. Construction activities therefore have the potential to result in further significant impacts on water quality within and downstream of the Park. Because the Park includes few floodprone areas and development is not proposed in these areas, this General Plan would have no impact associated with flooding and floodplains.

Mitigation

The goals (RES-WQ1 through RES-WQ3) and associated guidelines found in Chapter 3 will serve to minimize or eliminate the potential for impacts on hydrology, water quality, and floodplains associated with General Plan implementation. Additionally, design, siting, and construction of facilities, including structures, campgrounds, trails, roads, and parking areas, shall consider such practices as those listed below:

- Develop and implement a stormwater pollution prevention plan to control erosion and sedimentation both during and after construction, thereby reducing water pollution.
- Place construction debris in refuse containers at least daily.
- Dispose of refuse at least weekly; burning or burying refuse inside the Park is prohibited.
- When feasible, schedule construction activities— particularly those resulting in substantial soil disturbance—during periods of low precipitation and low groundwater to reduce the risk of accidental hydrocarbon leaks or spills reaching surface water and/or groundwater, reduce the potential for soil contamination, and minimize erosion of loose materials in construction areas.
- Dispose of volatile wastes and oils in approved containers for removal from construction sites to avoid contamination of soils, drainages, and watercourses.
- Inspect equipment for hydraulic and oil leaks before it is used on construction sites, and implement inspection schedules to prevent contamination of soil and water.
- Maintain absorbent pads, booms, and other materials onsite when heavy equipment is used, so as to contain oil, hydraulic fluid, and solvents.

Air Quality

Thresholds of Significance

The air quality analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant air quality impact if the proposed action would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Impacts

With implementation of the General Plan, impacts on air quality would be avoided by following the BAAQMD's CEQA Guidelines and the SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts; therefore, air quality impacts resulting from this project would be less than significant.

Environmental Evaluation

The General Plan does not propose the introduction of stationary sources of air pollution into the Park; however, it does provide for increased visitor use and associated vehicle travel, as well as the construction

or reconstruction of both visitor-use and operations and maintenance facilities. By providing additional facilities and attracting additional visitors, implementation of the General Plan would result in increased vehicle traffic to and from the Park, as well as on roadways within the Park. Because vehicles emit numerous air pollutants, including ozone precursors, carbon monoxide, NO_x, oxides of sulfur (SO_x), and particulate matter, this would present a potential impact on air quality. However, the increase in vehicle traffic in the project region associated with implementation of this General Plan would result in only a minor increase in total vehicle emissions in the area. In addition, the Department would continue to comply with all local, State, and federal regulations regarding air quality. Similarly, activities and motor-driven equipment used during construction or reconstruction of Park facilities, including digging, grading, and paving, would generate additional ozone precursors, carbon monoxide, NO_x, SO_x, and particulate matter.

Mitigation

Mitigation measures to be followed for planning, implementation, and construction are detailed in the BAAQMD CEQA Guidelines and the SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts and are as follows:

- Provide pedestrian/transit oriented design elements where appropriate and feasible.
- Provide traffic flow improvements for areas adversely affected by plan proposals, where practicable.
- Cover or water (at least twice daily) all active construction areas, disturbed areas, stock piles, and trucks hauling soil, sand, and other loose materials.
- Water (twice daily) or pave all access roads, parking areas, and staging areas.
- Through watering or presoaking, control fugitive dust emissions from clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities.
- Sweep paved areas and roads to remove the accumulation of mud or dirt.
- Complete hydroseeding or apply nontoxic soil stabilizers to inactive construction areas, and replant vegetation in disturbed areas as quickly as possible.
- Limit traffic speeds on unpaved roads to 15 mph and minimize idling by construction vehicles.
- Install sandbags or other erosion control measures to prevent runoff of silt to public roadways.

Noise

Thresholds of Significance

The noise analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant noise impact if the proposed action would:

- Generate or expose persons to noise levels in excess of standards established in the local general plan or noise ordinance, specific plan, or other land use plan;

- Generate or expose persons to excessive groundborne vibration or noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above existing levels; or
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels.

Impact

With implementation of the General Plan, impacts on noise would be less than significant.

Environmental Evaluation

This General Plan proposes development of new facilities, which has the potential to result in increased visitor use. An increase in visitor use would be accompanied by an increase in vehicle- and visitor-related noise in the Park. Implementation of the General Plan would not introduce new types of noise into the Park, and increased vehicle- and visitor-related noise would occur primarily within the FC and AO zones, where higher ambient noise levels are most compatible.

In addition to vehicle- and visitor-related noise, this General Plan proposes maintaining leases for use of portions of the Park for wind turbines. The number of turbines would not change significantly under this General Plan; however, the geographical area of the lease would be reduced, thereby concentrating any turbine-related noise generation to a smaller area of the Park. Noise generated by wind turbines is generally 65 A-weighted decibels (dBA) or less at the base of the turbine and 40–50 dBA at a distance of 250 meters. Noise associated with wind turbines would not increase under the proposed plan and noise from turbines would not be noticeable in the FC Zone or most of the BC zone. The proposed action would therefore have no impact associated with noise from wind turbines. Lastly, implementation of this General Plan would result in construction-related noise during construction activities. Such noise would be temporary and localized.

Mitigation

Impacts associated with construction-related noise would be minimized through the implementation of standard noise abatement measures, such as the development of a construction schedule that minimizes impacts on Park visitors and residents; use of best-available noise control techniques wherever feasible, including techniques to control noise from vehicles and construction equipment; use of hydraulically or electrically powered impact tools when feasible; and location of stationary noise sources as far from sensitive uses as possible.

Biological Resources

Thresholds of Significance

The biological analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant biological impact if the proposed action would:

- Have a substantial adverse effect, either directly or indirectly 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 DFG or USFWS;
- Have a substantial adverse effect on any riparian or other sensitive natural community identified in local or regional plans, policies, or regulations or by DFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

Vegetation

Impacts

With implementation of the General Plan, impacts on vegetation would be avoided through sensitive design and siting of facilities and other land uses. In addition, goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

There are a number of vegetation types in the Park, the most common of which are grassland, blue oak woodland, and blue oak savanna. The Park also includes riparian woodland, mesic herbaceous vegetation, coast live oak woodland, chaparral, and scrub. All of these vegetation types provide important habitat for native plant and wildlife species. Mesic herbaceous and riparian vegetation are considered sensitive and are regulated under State and federal law. The Park also provides habitat for at least five special-status plant species. Construction and maintenance of Park facilities could result in the loss, permanent alteration, and/or temporary disturbance of vegetation, including special-status plant species. Construction and post construction impacts on vegetation could also include the introduction of invasive plant species. Impacts on vegetation that would result in a substantial loss of native vegetation types, sensitive habitats, special-status plant species, or the introduction of invasive plant species are considered potentially significant.

Actions with the potential for direct impacts on vegetation would include development of trails and campgrounds, construction of wind turbines, realignment of the entrance road, and construction of housing facilities for Park staff members and other facilities for Park visitors. The impacts of these actions would be limited primarily to the AO and FC Zones. Direct impacts in the BC would be limited to those resulting from construction of backpacker camps and new trails, and other projects that would require only minor soil disturbance. Direct impacts in the LE Zone would result from construction of new wind turbines and development of new trails. None of the proposed facilities would require large-scale

grading. Nonetheless, direct removal of vegetation is considered a potentially significant impact because all of the vegetation types in the Park have been determined to represent important resource values. Any activity that results in soil disturbance could introduce or contribute to the spread of invasive weeds, which would be considered a potentially significant impact. Impacts on sensitive habitats (including wetland and riparian habitats subject to the regulatory authority of USACE, under §404 of the Clean Water Act, and DFG, under §1600 of the California Fish and Game Code) would also be considered potentially significant.

Development of Park facilities could also have adverse effects on special-status plant species. Special-status plant species known to occur or with potential to occur in the Park include Hospital Canyon larkspur, four-angled spikerush, round-leaved filaree, Napa western flax, and Hall's bush mallow. However, because intensive rare-plant surveys have never been conducted in the Park, the distribution and abundance of these species is largely unknown. Removal of occupied habitat for these species would be considered a potentially significant impact.

Indirect impacts on vegetation are expected to be associated mostly with the anticipated increase in visitor use. As with direct impacts, secondary impacts are expected to be concentrated in the AO and FC Zones. Construction of backpacker campgrounds and development of trails would result in greater visitor use of the BC and LE zones, and thus greater potential for impacts on existing vegetation. Visitors using new campsites could trample and otherwise adversely effect existing vegetation. Of the three predominant visitor activities at the Park, horseback riding would be expected to have the greatest adverse impact on vegetation with hiking and off-road cycling having less impact. The degree of impact on vegetation would be determined largely by the proximity of campsites and trails to habitats susceptible to degradation from recreational use (e.g., wetlands) and to populations of special-status species.

Mitigation

Goals and guidelines that describe the desired future condition of the Park require that efforts be made to minimize impacts on biological resources when future facilities are sited. With proper precautions, it is likely that the large majority of the proposed facilities could be sited and constructed in a way that would not result in substantial impacts on existing vegetation. Most facilities could be developed without loss or disturbance of trees, sensitive habitat, or special-status plants. In addition to all goals and guidelines that take vegetation into consideration, goals RES-V1 through RES-V5 serve as mitigation for impacts on vegetation.

Wildlife

Impacts

With implementation of the General Plan, impacts on wildlife would be avoided through sensitive design and siting of facilities and other land uses. In addition, goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

The Park supports an impressive diversity of wildlife that can be attributed to the varied terrain and habitat types, and the relatively undisturbed conditions found throughout much of the area. Most of the animals present are regionally common, but at least 25 special-status wildlife species have been recorded

in the Park or its vicinity. Construction and maintenance of Park facilities and anticipated public use of new and existing facilities could result in loss and/or disturbance of wildlife habitat and could reduce the number of individuals of some species. These impacts are not expected to substantially affect the distribution or abundance of any common wildlife species. However, impacts on some special-status wildlife species are considered potentially significant.

Impacts on most wildlife species found in the Park would be less than significant because construction of the proposed facilities would require a relatively small amount of ground disturbance. None of the proposed facilities would remove large tracts of wildlife habitat and none would substantially reduce opportunities for wildlife movement. It is assumed that impacts on most special-status wildlife species can be minimized or avoided by restricting development of facilities in areas known to support, or with the potential to support, special-status species. However, the potential for significant direct impacts on special-status wildlife species does exist.

The California red-legged frog is a species considered to be at risk of significant impacts. This species, which is federally listed as Threatened, could be adversely affected by removal and maintenance of stock ponds and adjacent dams if this was deemed necessary based on an engineering analysis of these features. California red-legged frog has been documented recently in seven stock ponds in the Park, and it could be found elsewhere where there is seasonal and permanent surface water. Many of the ponds are believed to be breeding sites for California red-legged frogs. Park visitors are unlikely to encounter red-legged frogs in uplands, but the frogs are expected to regularly move across uplands between areas of suitable aquatic habitat. Based on further analysis, if maintenance and restoration of the ponds is deemed appropriate, it could have long-term benefits for the red-legged frog, but the potential short-term impacts, including direct mortality of adults and larvae, are considered potentially significant.

Impacts associated with operation of new wind turbines may include bird mortality from collisions from operational turbines, noise disturbance, and fragmentation of wildlife habitat in the BC and LE Zones. The impact of wind plants on raptors has been raised as an issue nationally, and it is known that collisions with wind turbines are a cause of raptor mortality. However, the effects of wind plants on raptors are not entirely understood. To date, the only known wind-development location in the United States that has experienced significant avian mortality is California's Altamont Pass (NWCC 2002). No specific information has been collected about mortality of raptors or other avian species associated with the wind turbines at the Park. Although development of additional wind turbines would be permissible under the General Plan, all new development would require additional project-level CEQA review. If project-level review determines that development of the proposed wind turbines would result in significant effects on wildlife, feasible mitigation measures would need to be developed. Nonetheless, because wind turbines could result in the death or injury of avian species, including golden eagle and other raptors, this impact is considered significant.

Implementation of the General Plan would not have substantial adverse effects on wildlife movement because the large majority of land in the Park would remain undeveloped. However, preserving and enhancing movement opportunities through the Park for the San Joaquin kit fox has been identified as a concern of USFWS (Harvey, pers. comm., 2003).

General Plan implementation would not conflict with any approved HCPs or NCCPs, as no such plans have been approved in the region. The Santa Nella Community Specific Plan, which covers approximately 150 acres east of O'Neill Forebay and is anticipated to provide authorization for incidental

take of San Joaquin kit fox, could be approved by the end of 2004. USFWS is also in the early planning stages of initiating an HCP effort that will cover much of western Merced County (Harvey, pers. comm., 2003).

As with direct impacts, indirect impacts on most wildlife species would be minor. Potentially significant impacts would be limited to impacts on a few special-status species inhabiting areas sensitive to disturbance, including stock ponds, riparian areas, and wetlands.

Stock ponds that provide habitat for the California red-legged frog could be adversely affected by visitors, horses, wild pigs, and cattle. Several of the proposed trails would bring visitors in close proximity to ponds occupied by red-legged frogs. Visitors on horses using the pond to drink could degrade the shoreline environment and the water quality. The degree of impact would be generally proportional to the increase in visitors. Cattle using the ponds could also substantially degrade habitat for red-legged frog. However, wild pigs present far greater risks to red-legged frog than either livestock or horses, as evidence of degradation caused by pigs is evident at nearly all of the stock ponds in the Park.

There could be impacts on other special-status wildlife species; however, the potential for significant effects on these species is somewhat lower because California red-legged frog is the only threatened or endangered species that can be encountered regularly at numerous Park locations. Other special-status species that could be adversely affected include western pond turtle, California tiger salamander, valley elderberry longhorn beetle, and San Joaquin kit fox. The known distribution of western pond turtle in the Park is limited to Mammoth Lake and a pond adjacent to San Luis Reservoir south of Dinosaur Point. Increases in visitor use of these areas are expected to be relatively minor, and western pond turtles are locally common in suitable habitat; therefore, impacts on this species are not expected to be significant. California tiger salamander, valley elderberry longhorn beetle, and San Joaquin kit fox have not been documented as occurring in the Park, but they have been documented in the project vicinity. Because these species are listed as threatened or endangered, or are candidates for listing, any adverse effect on individuals or their habitat would be considered significant.

Mitigation

The General Plan includes elements directed at protecting and enhancing wildlife resources in the Park; these elements are specifically outlined in goals RES-W1 and RES-W2. In an attempt to control wild pigs, a management program would be developed that would not include fencing the Park boundary. A wildlife management plan and wild pig eradication program could both contribute to the long-term protection of the Park's wildlife resources. It may not be feasible to eradicate wild pigs without fencing the park, but it would be possible to reduce their numbers to a level that allows recovery of habitat currently degraded by the pigs. Restoration of sensitive habitat, including stock ponds, would also be more feasible if pig numbers were lowered. Restoration and natural recovery of wetland vegetation could substantially improve habitat for California red-legged frog and other native wildlife species. Collectively, these measures could minimize potential impacts on wildlife and enhance existing wildlife habitat. However, like the measures for protection of Park vegetation, these measures lack the specificity and performance standards necessary to ensure that they would help to achieve the stated objectives.

Cultural Resources

Thresholds of Significance

The cultural analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant cultural impact if the proposed action would:

- Cause a substantial adverse change in the significance of a historical resources (as defined in CEQA Guidelines Section 15064.5);
- Cause a substantial adverse change in the significance of an archaeological resource (pursuant to CEQA Guidelines Section 15064.5);
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Impacts

With implementation of the General Plan, impacts on cultural resources would be avoided through sensitive design and siting of facilities and other land uses. In addition, goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

A total of 14 prehistoric and historic cultural resources have been formally recorded within Pacheco SP, although others are known to exist but have not been fully documented. The majority of these resources are related to the ranching operations that have occurred within the Park since the middle of the 19th century. These include spring developments, fences, and the remains of a windmill. Other historic-period sites include sections of the old Pacheco Pass Highway, the relocated ca. 1844 Pacheco adobe, and a rock cairn of undetermined use. Historic features not yet fully documented include a number of wooden county-boundary markers along the western extent of the Park.

Prehistoric sites include several midden sites and bedrock mortars. Although very few traces of early Native American habitation and activities have yet to be found within the Park, only small sections have been surveyed, and similar resources no doubt exist in more sensitive areas within the Park. These areas can include level ground or terraces in the vicinity of perennial streams, seasonal drainages, and springs.

Because of their comparatively recent age, the Fatjo ranch buildings that now constitute the Pacheco SP headquarters are not considered historical resources in and of themselves. However, because of the important role of Paula Fatjo in the formation of the Park, this ranching complex may eventually need complete documentation as a significant cultural resource.

There are various actions that have the potential to adversely affect cultural resources. The construction of a horse camp, associated horse trailer parking, and a camp fire center and the continued use of existing Fatjo ranch buildings for Park-related activities would all occur in the vicinity of the Park entrance and headquarters. Other than the relocated Pacheco adobe and a single wooden county-boundary marker

(not formally recorded), there are no documented cultural resources in this area that would be directly affected by the proposed developments. Depending on the extent of visitor facilities in the future, fewer Park users would result in fewer potential incidences of site looting and unintentional visitor-induced impacts over time.

Most new development would be restricted primarily to the area around the Park headquarters and entrance. There are no documented cultural resources within or in the vicinity of these developments other than the Pacheco adobe and the previously mentioned county line marker. However, because of the potential increase in visitor accommodations, there could be an increase in indirect impacts on documented and unrecorded cultural resources throughout the Park. Encouraging increased visitor use of the Park would increase the chance of looting of known resources and accidental damage to sites and features.

Increased visitor use of the Park facilities could also affect presently undocumented cultural resources. Only a very small portion of the Park has been subjected to a systematic archaeological survey. If the results of that investigation are any indication, however, numerous prehistoric and historic sites, features, and artifacts could be found throughout the Park. Should visitor use increase and continue at elevated levels over time, there could be greater impacts on undocumented resources. This possibility stresses the need for continued surveys of the Park's cultural resources, to enable better documentation and management of the numerous sites that likely exist but have yet to be encountered and recorded.

Mitigation

The General Plan incorporates various actions designed to mitigate potentially adverse impacts on cultural resources resulting from the proposed construction, maintenance, and use of recreational facilities. Goal RES-C1 and its associated guidelines serve to mitigate impacts on cultural resources.

Additionally, the cultural resources provisions of CEQA will guide the standards of prehistoric- and historic-resource studies conducted within Pacheco SP. A cultural resources investigation must be conducted for any proposed undertaking within the Park that would incorporate ground-disturbing activities. Qualified archaeologists shall identify and record prehistoric or historic sites, features, and artifacts that could be adversely affected by implementation of individual projects. In addition to the findings of any CEQA-compliant studies, archaeologists shall monitor any ground-disturbing activities to ensure that undocumented surface or subsurface cultural manifestations are not adversely affected. If previously unknown resources are encountered during project implementation, the potential significance of the resource must be determined, and the archaeologists will devise treatment options in consultation with Park managers.

Transportation and Traffic

Thresholds of Significance

The transportation analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant transportation impact if the proposed action would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system;

- Exceed, either individually or cumulatively, an LOS standard established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards as a result of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Impacts

With implementation of the General Plan, impacts on transportation and traffic would be minimized, as goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

Implementation of this General Plan has the potential to substantially increase visitor use of and associated traffic at Pacheco SP by providing for additional Park facilities, uses, and programs and by increasing signage along SR 152 and in other areas outside of the Park. In addition, Park visitation is expected to increase as a result of population growth in the region and the increasing popularity of outdoor recreation (DPR 1998, California Department of Finance 2001). Increased visitor use would result in additional vehicle trips both to and within the Park. As a result, overall traffic levels and the existing congestion on SR 152 would increase. There would be additional hazards associated with the intersection of SR 152 and Dinosaur Point Road, and there could be parking shortages within the Park.

The preferred alternative to implement the General Plan calls for development of up to 40 additional parking spaces, as well as vehicle parking associated with up to 20 campsites and one group/horse camp for up to 40 people for a total of 215 parking spaces including the existing parking area for 75 spaces. Making the conservative assumption that each parking space is used by one vehicle during the course of the day, the Park would generate a minimum of 215 trips to and from the Park during peak use months. This would represent an increase in vehicle trips during peak-use periods equal to 1-2 percent of the average daily trips on SR 152. It would substantially increase the number of vehicles turning from SR 152 onto Dinosaur Point Road and from Dinosaur Point Road onto SR 152. The actions proposed in this General Plan therefore have the potential to lower the LOS on SR 152 at its junction with Dinosaur Point Road, resulting in significant impacts on circulation and traffic both within the Park and in its vicinity.

Mitigation

Although the General Plan would result in impacts on traffic and circulation, proposed improvements to Park roads and parking areas and the encouragement of improvements to area roads and highways, particularly SR 152, would alleviate these impacts. Realignment and surface improvements of the Park entrance road would improve Park access and overall circulation to accommodate the anticipated

increase in visitation, development, and associated traffic. Defining individual parking spaces would allow for the accommodation of additional vehicles by maximizing the efficient use of parking areas. In addition, the extension of turning and acceleration lanes or the construction by Caltrans of an overpass or underpass at the junction of SR 152 and Dinosaur Point Road would reduce traffic and increase safety at this intersection. Furthermore, although improving signage along SR 152 and at the Park entrance would attract additional visitors to the Park, it would also improve traffic flow by improving directions to the Park entrance.

Traffic on SR 152 currently exceeds capacity during peak hours, and additional development has been approved in the region that would further increase automobile and truck traffic along SR 152 through Pacheco Pass. Increased visitor use associated with this General Plan would not substantially increase traffic on SR 152 in relation to existing and projected traffic levels or the overall capacity of the roadway. Finally, an efficient circulation and parking design would be incorporated into the design and operation of campgrounds, facilities, and other projects under this General Plan to minimize traffic and congestion within the Park. Implementation of these components of this General Plan would address and offset the anticipated circulation and traffic concerns, reducing potential impacts to less than significant. Plan mitigation measures are outlined in goals OPS-A1 through OPS-A4 and associated guidelines.

Utilities and Public Services

Thresholds of Significance

The utilities and public services analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have a significant impact on utilities and public services if the proposed action would:

- Exceed wastewater treatment requirements of the RWQCB;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Lack sufficient water supplies available to serve the project from existing entitlements and resources;
- Result in the determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's demand in addition to the provider's existing commitments;
- Result in an increased demand for police protection and fire and emergency services exceeding existing or planned staffing levels;
- Result in response times to calls for police protection and fire and emergency services exceeding existing levels or established performance standards;
- Substantially increase demand for neighborhood parks, regional parks, or recreational facilities such that their physical deterioration would accelerate, or the quality of facilities or users' experience would decrease; or

- Result in the removal of a neighborhood park or open-space area.

Impacts

With implementation of the General Plan, impacts on utilities and public services would be minimized, as goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

This General Plan proposes a number of actions that have the potential to both directly and indirectly affect utilities and public services in Pacheco SP and the surrounding vicinity. Development of the proposed buildings and facilities, including the development of a potable water supply and distribution system throughout primary use areas and the installation of flush toilets in the FC Zone, would directly affect Park utilities. Proposed developments would create visitor demand for these utilities where none currently exists, as none of these services is currently provided for Park visitors. Furthermore, the Park's non-potable water supply is currently limited to four wells within the Park used only for Park staff members, and the Park's wastewater treatment system currently consists of two septic tanks and one gray water sump. Implementation of the proposed General Plan may therefore require construction of additional water and wastewater treatment facilities and the development of additional water supply, or the installation of water and wastewater connections to the nearest mains. Although project-level analysis will be required to determine the extent of impacts, this increase in demand for utilities and related infrastructure would have a potentially significant impact on utilities in Pacheco SP. Moreover, developing additional flush toilets without an additional wastewater treatment facility has the potential to exceed wastewater treatment requirements as defined by the RWQCB, presenting another potentially significant impact.

In addition, the development and improvement of recreational facilities and uses under the proposed General Plan has the potential to increase visitor use and associated utility demand. The proposed facilities (campsites, horse camp, staff housing, ranger station and Park maintenance building, all-weather shelter for group gatherings, interpretive and educational storage facility, and Park concessions) would require associated water, wastewater, and electrical connections. Furthermore, the addition of vault and chemical toilets would require increased maintenance and service by Park staff members. The anticipated increase in visitor use and the use of such facilities would increase demand on utilities. Development under the proposed General Plan therefore has the potential to adversely affect existing utility infrastructure and demand, require additional water and wastewater treatment facilities, and require additional water supply. The proposed General Plan therefore has the potential to significantly adversely affect utilities.

In addition to adversely affecting utilities, the proposed plan has the potential to adversely affect public services at Pacheco SP. The anticipated increase in Park use and the proposed development of overnight uses would result in an increased need for patrols, as well as a potential need for increased fire and emergency services. Because security and law enforcement efforts in the Park have been minimal, increased and overnight use would require additional efforts. Furthermore, the introduction of camping, including stoves and campfires, has the potential to increase the demand for fire and emergency services. The significance of this increased demand, however, depends on the facilities developed, the size and nature of the facilities, and the associated increase in visitor use.

Development of additional staff housing would result in decreased response time by Park staff members, currently the primary providers of law enforcement and Park security. Furthermore, the proposed improvement of Park roads and facilities has the potential to reduce response times by CDF, volunteer search and rescue teams, and other State and local emergency response agencies. Therefore, while the proposed General Plan has the potential to increase demand for law enforcement and fire and emergency services within Pacheco SP, resulting in a significant adverse effect on such services, new facilities and services would not be planned without the appropriate staff to manage such resources. Lastly, although visitor use is anticipated to increase with the development of facilities proposed under this General Plan, this increase is not expected to accelerate the physical deterioration of existing or proposed facilities or decrease the quality of facilities or users' experience.

Mitigation

Specific measures to mitigate impacts on utilities and public services cannot be developed at the program level; however, goal OPS-U1 and associated guidelines and other General Plan goals are provided to prevent impacts on utilities and public services. Project-level review of proposed developments shall include further analysis of potential impacts on public services and utilities associated with demand, supply, and infrastructure.

Aesthetics

Thresholds of Significance

The aesthetics analysis uses criteria from Appendix G of the State CEQA Guidelines. Pursuant to these criteria, implementation of the General Plan would have significant aesthetic impacts if the proposed action would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impacts

With implementation of the General Plan, impacts on aesthetics would be minimized, as goals and guidelines would be in effect to avoid any potential impacts or limit them to a less-than-significant level.

Environmental Evaluation

The proposed General Plan includes the development of additional day-use, overnight, parking, maintenance, and housing facilities in the Park. The development of currently undeveloped areas has the potential to significantly adversely affect the Park's existing scenic quality and character by intruding on its scenic vistas and open landscape character. In addition, new facilities have the potential to create new

sources of light or glare, which could affect day or nighttime views in the area. The General Plan calls for a reduction in the acreage leased for wind power generation, but the wind turbines would remain visible from many areas of the Park. Because new wind turbines may be taller and have larger blades than existing turbines, the potential replacement of wind turbines may make these facilities more visible from areas within and outside of the Park. The proposed General Plan therefore has the potential to significantly adversely affect aesthetics within the Park.

Mitigation

The proposed General Plan specifies that intrusion on aesthetics is to be minimized by limiting development within scenic viewsheds. Moreover, the majority of the development in the Park would be in the FC and AO zones, which currently hold the majority of the Park's developed facilities. The potential for proposed facilities to intrude on undeveloped areas is least in these areas, and development in these areas would be out of the majority of the Park's scenic vistas. Furthermore, the proposed General Plan calls for maintenance of historic and unique buildings within the Park. Implementation of the proposed scenic viewshed protection and the design of proposed facilities to incorporate styles, features, materials, and architectural mass appropriate to the Park's scenic character would reduce the potential for impacts on aesthetics and visual resources. Specific mitigation measures are outlined in goals RES-S1 through RES-S5 and their associated guidelines.

4.6 CEQA-REQUIRED ANALYSIS

As required by CEQA, this section presents discussions related to environmental effects found not to be significant, unavoidable significant effects on the environment, significant irreversible environmental effects, growth-inducing impacts, and cumulative impacts associated with the Pacheco SP General Plan.

Environmental Effects Found Not to Be Significant

As a first tier of planning and environmental analysis, some topical issues were found not to be significant and were not evaluated further in this EIR. These topical issues are identified and briefly discussed in this section. If the General Plan is amended in the future or conditions as presented herein change, these effects will have to be re-evaluated to ensure that they are still deemed not to be significant.

Agricultural Resources

Implementation of the General Plan would not convert farmland to nonagricultural use. Pacheco SP is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Thus, the proposed General Plan would not have a substantial adverse effect on the environment.

Geology and Soils

While Pacheco SP is geologically significant and active, the General Plan does not permit development of permanent facilities in known risk areas and requires geologic studies before development. It also requires site-specific geotechnical investigations for siting and design of permanent structures, campgrounds, roads, and trails to mitigate potential damage from unstable soil, landslides, and earthquakes. The risk related to a seismic event would not increase from current conditions as a result of the implementation of the General Plan.

Hazards and Hazardous Materials

Implementation of the General Plan would not result in the release of hazardous substances, create a health hazard, expose people to any existing sources of health hazards, or increase a fire hazard. Implementation of the General Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, as no unusual use of hazardous materials is anticipated. Use of hazardous materials, as defined by and regulated through the California Code of Regulations, is expected to be limited to the periodic use of pesticides and herbicides in conjunction with maintenance of the landscaping and control of invasive plants, and use of motor oils, gas, etc., for employee vehicles and maintenance equipment. Application and storage of these substances in accordance with the manufacturers' specifications would not pose any significant hazards. This use would not cause a significant hazard to the public, or result in a foreseeable upset or accident condition. Phase I assessments should be conducted when any areas of the Park are suspected of potential contamination, and before future acquisitions or securing of easements. Future projects would be subject to further, more detailed review. Should any hazardous substances or other health hazards be identified, appropriate warning and protective methods would be developed and implemented.

Land Use and Planning

The General Plan provides guidelines for future land use and development and is consistent with the Merced and Santa Clara County General Plans. The General Plan would not physically divide an established community or conflict with any HCP or NCCP; therefore, it would not cause an adverse change in the environment related to land use and planning.

Energy and Mineral Resources

The General Plan policies encourage resource conservation and recreational uses for Pacheco SP. The potential development and improvements recommended in the General Plan would require minimal amounts of energy, would not require additional energy capacity to serve the Park, and would not adversely affect peak- and base-period demands for electricity.

The General Plan includes the protection of large expanses of undeveloped land and would Department regulations would not permit the development of any mineral resources if found in the future. Therefore, the proposed General Plan would not have an adverse impact on the environment related to mineral resources.

Population, Employment, and Housing

Implementation of the General Plan would not result in impacts related to population, employment, or housing. The General Plan would not induce substantial population growth in the area, as it does not propose any substantial new housing or businesses nor does it require the extension of community roads or infrastructure outside the boundaries of the Park. The General Plan would not displace any people or housing, necessitating the construction of housing elsewhere. Implementation of the General Plan could result in an increased need for staff, but it is unlikely that the number of new jobs generated would be significant or exceed the projected job growth in the area.

Unavoidable Significant Effects on the Environment

The proposed General Plan would not result in any unavoidable significant effects, as discussed in Section 4.4, Environmental Impacts of this EIR. Evaluation at the specificity of this first-tier review indicates that the potential effects of projects proposed in this General Plan can be reduced to a less-than-significant level with the implementation of resource management programs, and the development of specific mitigation measures noted.

Until the uses, location, and scope of facilities or management plans are specific, the actual level of impact, whether individual or cumulative, cannot be determined. However, all projects are required to be in compliance with local, State, and federal permitting and regulatory requirements and subject to subsequent-tier CEQA review and project-specific mitigation.

Significant Irreversible Environmental Effects

No significant irreversible changes to the natural environment are anticipated from the adoption and implementation of this General Plan. While any facilities development, including structures, roads, and trails, may be considered a long-term commitment of resources, impacts can be reversed through removal of facilities and discontinued use. The Department does remove, replace, or realign facilities, such as trails and campsites, or close areas on a seasonal or temporary basis until conditions can improve where impacts have become unacceptable either from excessive use or from a change in environmental conditions.

The construction and operation of facilities may require the use of non-renewable resources. This impact would be minor due to the limited number of facilities planned for development and to the consideration of sustainable practices in site design, construction, maintenance, and operations as proposed in the General Plan. Sustainable principals used in design and management emphasize environmental sensitivity in construction, the use of non-toxic materials and renewable resources, resource conservation, recycling, and energy efficiency. Many cultural resources are considered unique and nonrenewable. Destruction of any significant cultural resource may be considered a significant irreversible effect. To avoid this impact, proposed development sites will be surveyed for cultural resources; all site and facilities designs shall incorporate methods for protecting and preserving significant cultural resources; and human activities will be monitored to protect cultural resources.

Growth Inducing Impacts

An EIR must discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment (State CEQA Guidelines §15126.2(d)). Projects that would remove obstacles to population growth, such as an expansion of a wastewater treatment plant, are also considered when discussing growth inducement. Increases in population may also tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Implementation of the General Plan would likely result in an increase in visitation to the Park. The General Plan recommends new visitor facilities thereby increasing its capacity for visitors. Providing increased awareness to the Park through improved signage and other infrastructure improvements will attract more visitors to the Park. Improving trail connections between the Park and adjacent and nearby

public lands, may contribute to the potential for increased overnight use in areas of the Park that currently lack these opportunities.

The increased capacity may result in the need for an increased number of permanent and seasonal staff. The General Plan also recommends consideration of additional seasonal staff housing and improvements to existing staff housing. These proposals would result in a very minimal direct population growth impact on the area. Improvements to the Park's utilities including the addition of a potable water supply and future sanitary systems will be self-contained for Park-use only, therefore would not encourage population growth in the surrounding area.

Increased visitation to the Park may create additional tourism and the need for tourist services in the adjacent communities and surrounding region. The General Plan could potentially foster economic growth in the region by encouraging an increase in supporting recreation and tourist services, such as recreation equipment, supplies, food and related facilities.

However, the protection of the Pacheco State Park land for resource protection and visitor experience through its donation in Paula Fatjo's will, prevents extensive, smaller lot residential development from occurring on this 6,900 acre tract. The build-out of this parcel had it not been protected, would greatly contribute growth inducing impacts in this area far beyond impacts that will result from increased visitor use to this Park. Additionally, although population growth in the state and region will continue to create an increased use and demand for recreational opportunities at Pacheco SP, these will not have permanent, irreversible impacts in the region.

Cumulative Impacts

"Cumulative impacts" refers to two or more individual effects that are considerable when considered together, or that compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact of several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines §15355).

Merced and Santa Clara counties are experiencing tremendous population growth. New development is planned in Santa Nella, Hollister, Los Banos, and Gustine and on many of the surrounding ranch properties near Pacheco SP. This development includes residential subdivisions and commercial uses, as well as the expansion of government buildings and learning institutions. To the extent that the loss of biological, cultural, and visual resources is occurring in the region, any loss, disturbance, or degradation of these resources would contribute to cumulative impacts. The General Plan proposes a number of mitigation measures to avoid or minimize impacts on these resources. In addition, the protection of large expanses of unfragmented open space and protection of wildlife habitat and corridors will further reduce the cumulative effects that the General Plan would contribute to the region.

5. References

5.1 LITERATURE CITED

- Adler, P., and W. Wheelock. 1965. *Walker's Railroad Routes—1853*. La Siesta Press. Glendale, CA.
- Barr, C. B. 1991. *The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle (Desmocerus Californicus Dimorphus)*. U.S. Fish and Wildlife Service. Sacramento, CA.
- Bimbaum, C. A. 1994 (September). *Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*. Preservation Brief 36, Technical Preservation Services, National Park Service. Washington, DC.
- Breschini, G. S., T. H. Haversat, and R. P. Hampson. 1983. *A Cultural Resources Overview of the Coast and Coast-Valley Study Areas*. Prepared by Archaeological Consulting, Salinas, CA, for the U.S. Bureau of Land Management.
- Breschini, G. S., and T. H. Haversat. 1987. *Archaeological Investigations at CA-Fre-1333, in the White Creek Drainage, Western Fresno County, California*. Coyote Press. Salinas, CA.
- California Department of Finance (DOF). 2001. *Interim County Population Projections: Estimated July 1, 2000 and Projections for 2005, 2010, 2015, and 2020*. June 2001.
- California Department of Fish and Game (DFG). 1997. *Survey Protocol for California Tiger Salamander: Inland Fisheries—Information Leaflet No. 44*. Sacramento, CA.
- California Department of Parks and Recreation (DPR). 1973. *Resource Inventory: San Luis Reservoir State Recreation Area*. Sacramento, CA.
- California Department of Parks and Recreation (DPR). 1996. *Resource Summary, Fatjo Project*. Four Rivers District. Gustine, CA.
- California Department of Parks and Recreation (DPR). 2001. *Draft Preliminary Scoping Document for Pacheco State Park*. Four Rivers District. Gustine, CA.
- California Department of Parks and Recreation (DPR). 2002. *California Recreational Trails Plan Phase One*. Planning Division, Statewide Trails Office. Sacramento, CA.
- California Department of Parks and Recreation (DPR). 2002. *California State Parks Planning Handbook*. Sacramento, CA.
- California Department of Transportation (Caltrans). 2001 (June). *State Route 152 Transportation Concept Report*. Caltrans District 10 Office of System Planning. June 2001.
- California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA.

- California Native Plant Society (CNPS). 2002. California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants. Sacramento, CA.
- California Natural Diversity Database (CNDDB). 2002. Electronic version. Query of Crevison Peak, Gustine, Howard Ranch, Ingomar, Los Banos, Los Banos Valley, Mariposa Peak, Mustang Peak, Newman, Orestimba Peak, Ortigalita Peak, Ortigalita Peak NW, Pacheco Pass, Pacheco Peak, Quien Sabe Valley, Ruby Canyon, San Luis Dam, San Luis Ranch, Three Sisters, and Volta quadrangles. Natural Heritage Division, California Department of Fish and Game. Sacramento, CA.
- City of Hollister. 1995 (November 6). *Hollister General Plan 1995-2010*. Adopted November 6, 1995. Hollister, CA.
- City of Los Banos. 1999. *City of Los Banos General Plan*. Adopted May, 1999. Los Banos, CA.
- Cook, S. F. 1960. Colonial Expeditions to the Interior of California: Central Valley, 1800-1820. *University of California Anthropological Records* 16(6):239-292. Berkeley, CA.
- Crosby, Anthony, Allen, Rebecca, Baxter, Scott R. 2003. *Gonzaga Adobe Stabilization Study, Cultural Stewardship Project (CSP021-02) Pacheco State Park, Santa Clara County, California*. Denver CO. and Richmond, VA.
- Davis, J. T. 1961. Trade Routes and Economic Exchange Among the Indians of California. *University of California Archaeological Survey Reports* 54:1-71. Berkeley, CA.
- Edminster, Robert 1996. *Floristic Considerations on the Fatjo Ranch*. Los Banos, CA.
- Eldredge, Z. S. 1915. *History of California*, Vol. 4. The Century History Company. New York, NY.
- Emst, W. G. 1993. Geology of the Pacheco Pass Quadrangle, Central California Coast Ranges. Geological Society of America, Map and Chart Series MCH078. School of Earth Sciences, Stanford University, Stanford, CA.
- Fatjo, Paula Marie, 1992. Last Will. Dinosaur Point, CA.
- Haas, G. 2001. *Visitor Capacity on Public Lands and Waters*. A draft report of the Federal Interagency Task Force on Visitor Capacity on Public Lands.
- Hill, S., T. Neeley, M. Stokes, and C. Dooley. 1996. *Fatjo Project, Resource Summary*. California Department of Parks and Recreation. Sacramento, CA.
- Jennings, M. R., and M. P. Hayes. 1994. *Amphibians and Reptile Species of Special Concern in California*. Final report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA, under Contract 8023.
- Johnson, J. R., T. W. Stafford, H. O. Ajie, and D. P. Morris. 2000. *Arlington Springs Revisited*. Abstracts, Society for California Archaeology Annual Meeting. Riverside, CA.

- Kit Fox Planning and Conservation Team (KFPACT). 2002. *A Conservation Strategy for the San Joaquin Kit Fox in the Santa Nella Area of Merced County, California. A Companion Document for the Recovery Plan for Upland Species of the San Joaquin Valley, California.* Unpublished draft report.
- Kroeber, A. A. 1907. The Yokuts Language of South Central California. *University of California Publications in American Archaeology and Ethnology* 2(5):233-249. Berkeley, CA.
- Kroeber, A. A. 1925. *Handbook of the Indians of California.* Bureau of American Ethnology, Bulletin 78. Washington, DC.
- Kyle, D. E. 2002. *Historic Spots in California* (Fifth Edition). Stanford University Press. Palo Alto, CA.
- Latta, F. F. 1949. *Handbook of the Yokuts Indians.* Bear State Books. Oildale, CA.
- Latta, F. F. 1980. *Joaquin Murieta and his Horse Gangs.* Bear State Books. Santa Cruz, CA.
- Levy, R. 1978. Costanoan. In R. F. Heizer (ed.), *Handbook of North American Indians, Vol. 8: California.* Smithsonian Institution. Washington, DC.
- Merced County. 1990. *Year 2000 General Plan.* Merced, CA.
- Merced County Association of Governments (MCAG). 2001 (July). *2001 Regional Transportation Plan for Merced County.* Merced, CA.
- Merced County Association of Governments. 2002a. *Regional Housing Needs Plan, Revised Draft.* Adopted November 21, 2002. Merced, CA.
- Merced County Association of Governments. 2002b (June). *Merced County's 20-Year Transportation Expenditure Plan.* Merced, CA.
- Merced County Planning Department. 2000 (May 5). *Santa Nella Community Specific Plan Recirculated Program Environmental Impact Report.* Merced, CA.
- Moratto, M. J. 1984. *California Archaeology.* Academic Press. New York, NY.
- Metropolitan Transportation Commission (MTC). 2001 (December). *Regional Transportation Plan for the San Francisco Bay Area.* Adopted December 2001, amended November 2002. Oakland, CA.
- MWH and Jones & Stokes. 2003 (June). *San Luis Reservoir Low Point Improvement Project Draft Alternatives Screening Report.* Sacramento, CA. Prepared for Santa Clara Valley Water District, San Jose, CA.
- National Wind Coordinating Committee (NWCC). 2002. *Avian/Wind Turbine Interaction: A Short Summary of Research Results and Remaining Questions.* Washington, DC.
- Nissley, C. 1975. *Archaeological Investigations at CA-MER-27: Phase II.* U.S. Bureau of Reclamation, Sacramento, CA.

- Olsen, W. H., and L. A. Payen. 1968. *Archaeology of the Little Panoche Reservoir; Fresno County, California*. California Department of Parks and Recreation, Archaeological Report No. 11. Sacramento, CA.
- Olsen, W. H., and L. A. Payen. 1969. *Archaeology of the Grayson Site, Merced County, California*. California Department of Parks and Recreation, Archaeological Report No. 12. Sacramento, CA.
- Olsen, W. H., and L. A. Payen. 1983. *Papers on Merced County Prehistory*. California Department of Parks and Recreation, Archaeological Report No. 21. Sacramento, CA.
- Orr, P. C. 1962a. Arlington Spring Man. *Science* 135:219.
- Orr, P. C. 1962b. The Arlington Site, Santa Rosa Island, California. *American Antiquity* 27(3):417-419.
- Parsons Transportation Group. 2001a. *California High Speed Train Draft Program Environmental Impact Report/Environmental Impact Statement*. Prepared for the California High-Speed Rail Authority, U.S. Department of Transportation, Federal Railroad Administration. San Francisco, CA.
- Parsons Transportation Group. 2001b. *High-Speed Train Alignments/Stations Screening Evaluation Summary*. San Francisco, CA.
- Pilling, A. R. 1955. Relationships of Prehistoric Cultures of Coastal Monterey County, California. *Kroeber Anthropological Society Papers* 12:70-94. Berkeley, CA.
- Pritchard, W. E. 1966. *The Archaeology of Lower Los Banos Creek*. California Department of Parks and Recreation, Sacramento, CA.
- Pritchard, W. E. 1970. *Archaeology of the Menjoulet Site, Merced County, California*. California Department of Parks and Recreation, Archaeological Report No. 13. Sacramento, CA.
- Pritchard, W. E. 1983. Archaeological Testing of Three Kahwathwah Yokuts Swelling Structures at the San Luis Forebay Site (CA-Mer-119), Merced County, California. *Papers on Merced County Prehistory*. California Archaeological Report No. 2. Sacramento, CA.
- Riddell, F. A. 1970. *Proceedings of the Symposium on the Culture Sequence of the Kawatchwa Yokuts Area: The Archaeology of the Western San Joaquin Valley*.
- Riddell, F. A., and W. H. Olsen. 1965. *Archaeology of Mer-14, Merced County, California*. Manuscript on file with the California Department of Parks and Recreation. Sacramento, CA.
- Romoli, D., and J. W. Ruby. 1963. *Field Records of the Archaeological Investigations at San Luis Dam Site (Mer-14), Merced County, California*. Archaeological Survey, University of California, Los Angeles. Los Angeles, CA.
- Santa Clara, County of. 1994 (December). *Santa Clara County General Plan, Charting a Course for the County's Future, 1995-2010*. Adopted December 20, 1994. San Jose, CA.
- Sawyer, J. O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. Sacramento, CA.

- Shumate, A. 1977. *Francisco Pacheco of Pacheco Pass*. University of the Pacific. Stockton, CA.
- Treganza, A. E. 1960. *Archaeological Investigations in the San Luis Reservoir Area, Merced County, California*. Report to the California Department of Parks and Recreation. Sacramento, CA.
- U.S. Department of the Interior, National Park Service. 1995. *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. Washington, DC.
- U.S. Department of the Interior, National Park Service. 1997. *The Visitor Experience and Resource Protection (VERP) Framework. A Handbook for Planners and Managers*. Denver, CO.
- U.S. Fish and Wildlife Service (USFWS). 1980. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. *Federal Register* 45:52803-52807.
- U.S. Fish and Wildlife Service (USFWS). 1998. *Recovery Plan for Upland Species of the San Joaquin Valley, California*. Region I. Portland, OR.
- U.S. Fish and Wildlife Service (USFWS). 2001. Endangered and Threatened Wildlife and Plants: Final Determination of Critical Habitat for the California Red-legged Frog (*Rana Aurora Draytonii*). *Federal Register* 66:14626-14674.
- U.S. Fish and Wildlife Service (USFWS). 2002. *Recovery Plan for the California Red-legged Frog (Rana Aurora Draytonii)*. Region I. Portland, OR.
- Wallace, W. J. 1978. Southern Valley Yokuts. In R. F. Heizer (ed.), *Handbook of North American Indians, Vol. 8: California*. Smithsonian Institution. Washington, DC.
- Whatford, J. 1996. Department of Parks and Recreation Series 523 Forms and Field Notes Related to Archaeological Surveys Conducted under the Fatjo Project. California Department of Parks and Recreation. Sacramento, CA.

5.2 WEBSITES ACCESSED

- American Wind Energy Association (AWEA). Is Noise a Problem for Wind Turbines? <<http://www.awea.org/faq/noisefaq.html>>. Accessed October 4, 2003.
- California Department of Parks and Recreation (DPR). Cultural Resources Division. http://www.parks.ca.gov/default.asp?page_id=22500. Accessed October 2003.
- Environmental Protection Agency (EPA). Surf Your Watershed. http://cfpub.epa.gov/surf/huc.cfm?huc_code=18040014. Accessed January 2003.
- Montana State University. Applying Advanced Technologies for Adaptive Management and Decision Support in Natural Resources. http://www.esg.montana.edu/esg/adaptive_mgmt_1.html. Accessed October 20, 2003.

National Wind Coordinating Committee (NWCC). Wind Energy Environmental Issues. NWCC Wind Energy Issue Brief No. 2, January 1997. <<http://www.nationalwind.org/pubs/wes/ibrief02.htm>>. Accessed October 4, 2003.

Desert Research Institute (DRI). Western Regional Climate Center. Los Banos Weather Station. <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?calosb+nca>. Accessed December 15, 2003.

U.S. Green Building Council. Leadership in Energy and Environmental Design. http://www.usgbc.org/leed/leed_main.asp. Accessed November 2003.

5.3 PERSONAL COMMUNICATIONS

Berry, Sean. Herpetologist. October 11, 2002—personal communication with Anne King of EDAW.

Edminster, Robert. Knowledgeable local expert. September 2002—personal communication with Clint Kellner of EDAW.

Fitzpatrick, Benjamin. University of California, Davis, Davis, CA. September 30, 2002—personal communication with Leo Edson of EDAW.

Harvey, Karen. Biologist. U.S. Fish and Wildlife Service, Sacramento, CA. September 23, 2003—personal communication with Leo Edson of EDAW regarding habitat conservation planning efforts in Merced County.

Steinmetz, Lee. Principal. Bellinger, Foster, and Steinmetz, Monterey, CA. December 4, 2002—personal communication with Corrina Kweskin of EDAW.

6. Glossary of Terms and Acronyms

6.1 TERMS

Aesthetics: The visual, audible, and other sensory factors within the park setting and its surrounding landscapes that, taken together, establish character or sense of place.

Active fault: A fault that has moved recently and which is likely to move again. For planning purposes, an “active fault” is usually defined as one that shows movement within the last 11,000 years and can be expected to move within the next 100 years.

Ambient air quality: The atmospheric concentration (amount in specified volume of air) of a specific compound as actually experienced at a particular geographic location that may be some distance from the source of the relevant pollutant emissions.

Ambient noise level: The composite of noise from all sources near and far.

Archaeological: Pertaining to the material remains of past human life, culture, or activities.

Best Available Control Technology (BACT): The most stringent emission limit or control technique that has been achieved in practice that is applicable to a particular emission source.

Best Management Practices (BMP): The most current methods, treatments, or actions in regard to environmental mitigation responses.

Biodiversity: Biological diversity in an environment as indicated by numbers of different species of plants and animals, as well as the relative abundance of all the species within a given area.

Buffer: Land that protects natural and/or cultural values of a resource or park from adverse effects arising outside the buffer.

California State Parks and Recreation Commission: A commission established in 1927 to advise the Director of the California Department of Parks and Recreation on the recreational needs of the people of California. In 1928 it gathered support for the first State Park bond issue. The commission schedules public hearings to consider classification or reclassification and the approval of the Department’s general plan (and amendments) for each park.

California Environmental Quality Act (CEQA): A state law (PRC §21000 et seq.) requiring state and local agencies to take actions on projects with consideration for environmental protection. If a proposed activity may result in a significant adverse effect on the environment, an EIR must be prepared. General plans require a “program EIR” and park development projects require a project environmental document.

Clean Water Act: A law enacted in 1972 to create a basic framework for current programs to control water pollution; provides statutory authority for the National Pollutant Discharge Elimination System (NPDES).

Concession: A contract with persons, corporations, partnerships, or associations for the provision of products, facilities, programs, and management and visitor services that will provide for the enhancement of park visitor use, enjoyment, safety, and convenience. Concession developments, programs, and services must be compatible with a park's classification and general plan provisions.

Conservation easement: Acquisition of rights and interests to a property to protect identified conservation or resource values using a reserved interest deed. Easements may apply to entire parcels of land or to specific parts of the property. Most are permanent, although term easements pose restrictions for a limited number of years. Land protected by a conservation easement remains on the tax rolls and is privately owned and managed; landowners who donate conservation easements are generally entitled to tax benefits.

Cultural landscape: A geographic area (including both the cultural and natural resources) associated with a historic event, activity, or person or exhibiting cultural or aesthetic values. This type is a landscape that evolved through use by people whose activities or occupancy shaped it.

Cultural resource: A resource that exists because of human activities. Cultural resources can be prehistoric (dating from before European settlement) or historic (post-European contact).

Cumulative impact: As defined by the State CEQA Guidelines (§15355), two or more individual effects that are considerable when considered together, or that compound or increase other environmental impacts.

Degradation: The reduction of environmental quality in an area through a lessening of diversity, the creation of growth anomalies, or the supplanting of native species by non-native plant and animal species.

Demographic: Having to do with a particular characteristic of a segment of the public at large; may be connected to the group's age, the region where the group resides, a particular recreational interest, economic status, etc.

Effect/impact: An environmental change; as defined by State CEQA Guidelines §15358: (1) Direct or primary effects are caused by the project and occur at the same time and place; (2) Indirect or secondary effects that are caused by the project and are late in time or farther removed in distance, but still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water quality and other natural systems, including ecosystems.

Endangered species: A species of animal or plant whose prospects for survival and reproduction are in immediate jeopardy from one or more causes. The U.S. Fish and Wildlife Service and/or the California Department of Fish and Game make this designation.

Environment: As defined in State CEQA Guidelines §15360, “the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, mineral, flora, fauna, noise, and objects of historical and aesthetic significance.”

Environmental impact report (EIR): A report required by CEQA that assesses all the environmental characteristics of an area and determines what effects of impacts will result if the area is altered or disturbed by a proposed action. If a proposed activity may result in a significant adverse effect on the environment, an EIR must be prepared. General plans require the preparation of a “program” EIR appropriate to its level of specificity.

Environmentally sensitive: An area in which plant or animal life or their habitats are either rare or especially valuable because of their role in an ecosystem. Such areas can be easily disturbed or degraded by human activities and developments.

Exotic species: A species occurring in an area outside of its historically known natural range that has been intentionally introduced to or has inadvertently infiltrated into the system. Also known as non-native, ornamental, or introduced species. Exotic animals prey upon native species and compete with them for food and habitat. Exotic plant species can convert native ecosystems into a non-native dominated system that provides little benefit to other species in the ecosystem.

Floodplain: A lowland or relatively flat area adjoining inland or coastal waters that is subject to a one or greater chance of flooding in any given year (i.e., 100-year flood).

Geology: The scientific study of the origin, history, and structure of the earth.

General Plan: A legal planning document that provides guidelines for the development, management, and operation of a unit of the State Park system. A general plan evaluates and defines land uses, resource management, facilities, interpretation, concessions, and operations of a park and addresses environmental impacts in a programmatic manner. A park must have an approved general plan before any major development project is implemented.

Grade: The degree of rise or descent of a sloping surface.

Habitat: The physical location or type of environment, in which an organism or biological population lives or occurs. It involves an environment of a particular kind, defined by characteristics such as climate, terrain, elevation, soil type, and vegetation. Habitat typically includes shelter and/or sustenance.

Hazardous material: Any substance that, because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. Lead-based paint is an example of a hazardous material.

Historic character: The sum of all visual aspects, features, materials, and species associated with a structure or cultural landscape’s history, i.e., the original configuration together with losses and later changes. These qualities are often referred to as character defining.

Hydrology: Pertaining to the study of water on the surface of the land, in the soil and underlying geology, and in the air.

Impervious surface: Any material that reduces or prevents absorption of water into land.

Infrastructure: Public services and facilities, such as sewage-disposal systems, water supply systems, other utility systems, and road and site access systems.

Interpretation: A communication process designed to reveal meanings and relationships of our cultural and natural heritage through involvement with objects, artifacts, landscapes, sites, and oral histories.

Kilowatt: A measure of the rate of electrical flow equal to 1,000 watts.

Kilowatt-hour: A measure of quantity of electrical consumption equal to the power of 1 kilowatt acting for 1 hour.

Landform: Configuration of land surface (topography).

Mean sea level: The average altitude of sea surface for all tidal stages.

Mitigation measure: A measure proposed that would eliminate, avoid, rectify, compensate for, or reduce significant environmental effects (see State CEQA Guidelines §15370).

National Register of Historic Places (NRHP): The official federal list of buildings, structures, objects, sites, and districts worthy of historic preservation. The register recognizes resources of local, State, and national significance. The register lists only those properties that have retained enough physical integrity to accurately convey their appearance during their period of significance.

Native species: A plant or animal that is historically indigenous to a specific site area.

Open space: An area with few or no paved surfaces or buildings, which may be primarily in its natural state or improved for use as a park.

Public Resources Code (PRC): California code addressing natural, cultural, aesthetic, and recreation resources of the State.

Riparian habitat: The vegetative and wildlife areas that are adjacent to perennial and intermittent streams and are delineated by the existence of plant species normally found near fresh water.

Runoff: That portion of rainfall or surplus water that does not percolate into the ground and flows overland and is discharged into surface drainages or bodies of water.

Septic system: An onsite sewage treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of oxygen. Septic systems are often used where a municipal sewer system is not available.

Significant effect on the environment: As defined by State CEQA Guidelines §15382, a substantial or potentially substantial, adverse change on any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to physical change may be considered in determining whether the physical change is significant.

Special-status species: Plant or animal species that are typically listed (State and federal) as endangered, rare, and threatened, plus those species considered by the scientific community to be deserving of such listing.

Threatened species: An animal or plant species that is considered likely to become endangered throughout a significant portion of its range within the foreseeable future because its prospects for survival and reproduction are in jeopardy from one or more causes. The U.S. Fish and Wildlife Service and/or the California Department of Fish and Game make this designation.

Topography: Graphic representation of the surface features of a place or region on a map, indicating their relative positions and elevations.

Trailhead: The beginning of a trail, usually marked by information signs.

Viewshed: The area that can be seen from a specified location.

Watershed: The total area above a given point on a watercourse that contributes water to the flow of the watercourse; entire region drained by a watercourse.

Wetland: The environment of subtidal, mudflats, tidal salt marsh, periodically inundated or brackish marsh, diked marshland, associated upland, and freshwater marsh.

6.2 ACRONYMS

ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
af	acre-feet
AO	Administration and Operations Zone
AUM	animal unit month
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Water Quality Control Plan
BC	Backcountry Zone
BP	Before Present

BRM	bedrock mortar
CALFED	CALFED Bay-Delta Program
Caltrans	California Department of Transportation
CDF	California Department of Forestry and Fire Protection
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System
CLR	cultural landscape report
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CVP	Central Valley Project
dBA	A-weighted decibel
DFG	State of California, Department of Fish and Game
DWR	State of California, Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	federal Endangered Species Act
FC	Frontcountry Zone
FEMA	Federal Emergency Management Agency
Gilroy General Plan	<i>Gilroy 2002-2020 General Plan</i>
HCP	Habitat Conservation Plan
Hollister General Plan	<i>Hollister General Plan 1995-2010</i>
I-	Interstate
IRRS	Interregional Road System
ITR	International Turbine Research, Inc.
km	kilometer

kWh	Kilowatt-Hour
LAC	Limits of Acceptable Change
LAFCO	Local Agency Formation Commission
LOS	Level of Service
Los Banos General Plan	<i>The City of Los Banos General Plan</i>
LE	Leased Zone
MCAG	Merced County Association of Governments
Merced County General Plan	<i>Merced County Year 2000 General Plan</i>
mph	miles per hour
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NCCP	Natural Communities Conservation Program
NO _x	oxides of nitrogen
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
PG&E	Pacific Gas and Electric Company
PM ₁₀	particulate matter with a diameter of 10 micrometers or less
PRC	Public Resources Code
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
Santa Clara County General Plan	<i>Santa Clara County General Plan, Charting a Course for the County's Future, 1995-2010</i>
SCS	U.S. Soil Conservation Service

SCVWD	Santa Clara Valley Water District
SFBAAB	San Francisco Bay Air Basin
SJVAB	San Joaquin Valley Air Basin
SJVUAPCD	San Joaquin Valley Unified Air Pollution Control District
SOP	standard operating procedures
SO _x	oxides of sulfur
SP	State Park
SR	State Route
SRA	State Recreation Area
SWP	State Water Project
SWRCB	State Water Resources Control Board
TCR	Transportation Concept Report
the Department the Park	State of California, Department of Parks and Recreation Pacheco State Park
UC Merced	University of California, Merced
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
US 101	U.S. Highway 101
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTC	Ultimate Transportation Corridor
VERP	Visitor Experience and Resource Protection

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