

RECLAMATION

Managing Water in the West

**Final Resource Management Plan and
Final Environmental Impact Statement**

Contra Loma Reservoir and Recreation Area



Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Contra Loma Reservoir and Recreation Area Final Resource Management Plan/Final Environmental Impact Statement

The Bureau of Reclamation (Reclamation) has prepared a Resource Management Plan (RMP) and Environmental Impact Statement (EIS) for the Contra Loma Reservoir and Recreation Area (Contra Loma) located in Contra Costa County, California. The 741-acre Recreation Area consists of the 80-acre Contra Loma Reservoir and approximately 661 acres of surrounding land, including the Contra Loma Regional Park and the Antioch Community Park. Contra Loma Reservoir was constructed in 1967 as part of the Central Valley Project and is managed by Reclamation's Mid-Pacific Region's South-Central California Area Office. The Contra Costa Water District operates and maintains the reservoir under contract with Reclamation. East Bay Regional Park District (EBRPD) currently manages recreation on the reservoir and the recreational lands surrounding the reservoir as the Contra Loma Regional Park pursuant to an agreement with Reclamation. Under a separate agreement with EBRPD, the City of Antioch operates and manages the Community Park located in the northeastern portion of Contra Loma.

The Contra Loma RMP is a long-term (25-year) plan to guide management of the resources on the federal lands of the reservoir and recreation areas. The primary emphasis of the RMP is to protect the water supply and quality of Contra Loma Reservoir while balancing the management of natural and cultural resources with enhancements to recreational uses within Contra Loma.

Reclamation has considered comments on the Draft RMP/EIS during the public review period that concluded on July 2, 2014, and included a public hearing on May 19, 2014. The Final RMP/EIS includes editorial and technical changes, factual corrections, and clarifications made in response to public comments. Changes that are not minor editorial changes are indicated by lines on the left side of the margin. Reclamation has identified the Expanded Recreation and Facilities Alternative (Alternative 3) as the Preferred Alternative. A Record of Decision (ROD) will not be prepared until 30 days after the release of the Final EIS and notice in the Federal Register. The ROD will state the action to be implemented and will discuss factors leading to the decision.

Prepared by:
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Executive Summary

Introduction

The Bureau of Reclamation (Reclamation) has prepared a Resource Management Plan (RMP) for the Contra Loma Reservoir and Recreation Area (Contra Loma) located in Antioch, Contra Costa County, California (Figure ES-1). The Contra Loma RMP is a long-term plan to guide management of the resources on the Federal lands within the reservoir and recreation areas. The RMP is being developed in accordance with Reclamation's 2003 *Resource Management Plan Guidebook, Planning for the Future*, and is based on a comprehensive inventory of environmental resources and facilities as well as input from the East Bay Regional Park District (EBRPD), the City of Antioch (City), the Contra Costa Water District (CCWD), and the public. The primary emphasis of the RMP is to protect the water supply and quality of Contra Loma Reservoir, while balancing the management of natural and cultural resources with enhancements to recreational uses within Contra Loma.

Contra Loma consists of the 80-acre Contra Loma Reservoir and approximately 661 acres of surrounding land, including the Contra Loma Regional Park (Regional Park) and the Antioch Community Park (Community Park; Figure ES-2). Contra Loma Reservoir was constructed in 1967 as part of the Central Valley Project (CVP) and is managed by Reclamation's Mid-Pacific Region's South-Central California Area Office. CCWD operates and maintains the reservoir under contract with Reclamation. The reservoir receives and stores water from the Contra Costa Canal. The reservoir is primarily used as a regulating reservoir for peak or short-term municipal water supplies for CCWD customers, for emergency storage, and as a backup water supply during maintenance of upstream facilities. The recreation area was opened to the public in 1968 with few developed recreational facilities.

On September 18, 1972, a management agreement between Reclamation and EBRPD transferred responsibility for land use management and development, construction, and maintenance of public recreational facilities to EBRPD (Bureau of Reclamation 1972). This agreement clarifies that the rights of EBRPD under this agreement are subordinate to the rights of the United States relating to the use of the lands and water areas for water regulation and other project purposes. EBRPD continues to manage the recreational lands surrounding the reservoir. The City operates and manages the Community Park in the northeastern portion of Contra Loma under a Reclamation-approved license agreement granted by EBRPD in 1985 and amended in 1990.

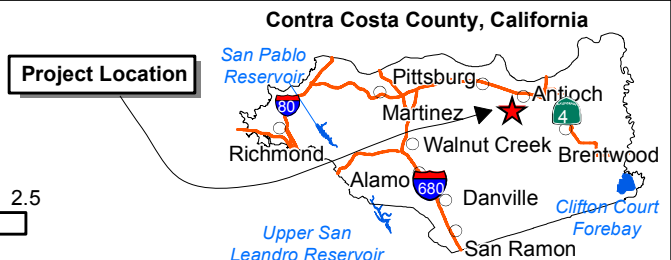
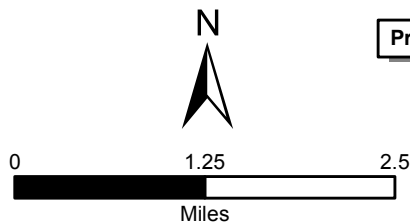
The 1972 management agreement between Reclamation and EBRPD and the license agreement between EBRPD and the City were both scheduled to expire in December 2010. While the RMP process is on-going, Reclamation issued EBRPD an extension of the management agreement. EBRPD has expressed interest in renewing the management agreement with Reclamation. After completion of the RMP process, Reclamation will negotiate a new long-term management agreement with one or more local managing partner(s).

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Public Land Survey:
Township: 1N & 2N
Range: 1E
Sections: 1, 2 & 35, 36

USGS 7.5 Quad:
Antioch South - 1980



G:\Projects\30019 Contra Loma\GIS\Working Mxds\Resource Inventory Report\30019 Figure 1 2 Park Land Facilities.mxd Created: 2011-05-25 edouglas revised: 2013-05-29 tmooney



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Decisions directing current management of the recreation area are based on the Reservoir Area Management Plan (RAMP; East Bay Regional Park District 1975a) and the Land Use–Development Plan (LUDP; East Bay Regional Park District 1975b). Both planning documents were prepared by EBRPD in 1975. Reclamation’s new RMP will be incorporated by reference in the new long-term management agreement with its local managing partner(s) and is intended to supersede the RAMP and the LUDP once adopted by the new local managing partner(s). Importantly, the RMP will facilitate public understanding of the recreation area and provide consistent and integrated land use planning decisions.

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA; PL 91-190, 42 U.S.C. 4321-4347), and in accordance with the Council on Environmental Quality (40 CFR 1500-1508) and U.S. Department of the Interior (43 CFR Part 46) regulations for implementing NEPA, Reclamation has prepared an Environmental Impact Statement (EIS) to evaluate and disclose the potential direct, indirect, and cumulative environmental effects of implementing the Contra Loma RMP. Because of the similarities between the requirements for an RMP and an EIS, Reclamation has decided to combine the RMP and EIS into a single document, hereafter referred to as the RMP/EIS. The Final RMP/EIS includes editorial and technical changes, factual corrections, and clarifications made in response to public comments. Changes that are not minor editorial changes are indicated by lines on the left side of the margin.

Purpose and Need

The Reclamation Recreation Management Act of 1992 (Public Law [PL] 102-575, Title 28 [2805(c)(1)(A)]) directs Reclamation to “provide for the development, use, conservation, enhancement, and management of resources on Reclamation lands.” The Contra Loma RAMP currently guides EBRPD in administering, operating, planning, and developing Contra Loma. The RAMP was prepared in 1975 and some features of the RAMP are either outdated or no longer relevant. In addition, the types of recreational facilities requested by the public and the infrastructure required to operate the recreation area have changed since the RAMP was prepared. Finally, environmental conditions at the recreation area have changed since 1975. These changes have created a need for Reclamation to evaluate resource and recreation management practices at Contra Loma and to prepare an RMP that meets evolving public demand and infrastructure needs.

The Contra Loma RMP has a planning horizon of 25 years. The planning horizon will begin when new management agreement(s) are reached between Reclamation and local managing partner(s). The RMP is needed to provide management guidance to Reclamation and the local agencies and to ensure effective protection and management of Contra Loma’s resources, particularly the reservoir. The RMP will also provide guidance on the allowed uses and desired future conditions at Contra Loma and establish the framework for the new management agreement(s).

The purpose of the RMP is to establish a set of management objectives, goals, and actions to be implemented by Reclamation, either directly or through its management agreement(s) that would:

- establish uniform policy and land management guidelines that promote organized use, development, and management of recreation area lands in a way that is compatible with applicable federal and state laws;
- protect the water supply and quality of Contra Loma Reservoir;
- manage natural and cultural resources in and around the reservoir in a way that is consistent with federal law and Reclamation policies;
- provide additional recreational opportunities and facilities requested by the public; and
- provide guidance for future decision making.

Primary Issue Areas

Reclamation conducted public outreach in 2010 and 2011 to explain the scope and objectives of the Contra Loma RMP and to encourage comments from the public and stakeholders, including EBRPD, the City, and CCWD, about the issues that should be addressed in the RMP and evaluated in the EIS. During that time, Reclamation held a public scoping meeting, two public workshops, and solicited written public and stakeholder comments. Based on the comments received and its own review of the issues, Reclamation identified the following primary issue areas to be addressed in the RMP:

- Recreational facilities and opportunities at the Regional Park
- Infrastructure and administrative facilities at the Regional Park
- Facility management at the Regional Park
- Recreational facilities and opportunities at the Community Park
- Facility management at the Community Park
- Reservoir water quality
- Pasture vegetation management at the Regional Park

Reclamation also identified the following environmental and planning topics to be addressed in the EIS:

- Land use and management
- Recreation
- Visitor access and circulation
- Utilities
- Public health and safety
- Water resources

- Vegetation
- Wildlife
- Fisheries
- Geology and soils
- Climate and air quality
- Noise
- Visual resources
- Hazards
- Cultural resources
- Socioeconomics
- Environmental justice

Public Involvement

Public involvement is a critical element in developing a RMP. Reclamation's goal is to gain input from a cross section of the user public and stakeholders, including the current local managing partners. Reclamation held a public scoping meeting and two public workshops in 2010 and 2011 to solicit issues and concerns and to develop alternatives to be analyzed in the RMP. In addition, Reclamation developed a mailing list (and accompanying database), produced and distributed flyers and public notices, and posted project updates and information on Reclamation's Contra Loma RMP/EIS website and the EBRPD website.

A Notice of Intent to prepare the RMP/EIS was published in the *Federal Register* on November 12, 2009. Reclamation held a scoping meeting for the Contra Loma RMP/EIS on February 8, 2010, at the Nick Rodriguez Community Center in Antioch. Reclamation also held a public workshop on August 4, 2010, at Sutter Elementary School in Antioch to seek ideas, concerns, and comments to inform development of the RMP/EIS. Written scoping comments were solicited by Reclamation from February 8 through 22, 2010, and from August 4 through 31, 2010. On March 3, 2011, Reclamation held a second public workshop at Prewett Family Park & Community Center in Antioch to solicit comments on the conceptual draft packages of RMP actions and alternatives.

Reclamation prepared an Issues and Opportunities Report summarizing the public comments and issues raised during the scoping meeting and the first public workshop in August 2010. The report is included as Appendix A and provides a summary of written and verbal comments provided by agencies, organizations, and individuals (Bureau of Reclamation 2010).

Reclamation posted the Draft RMP/EIS for a 60-day public review period to solicit written comments, beginning on May 2 and ending on July 2, 2014. Reclamation also held a public meeting on May 19, 2014, to receive public comments on the Draft RMP/EIS and plan alternatives. Comments received and responses to public comments are included in Appendix G.

Reclamation has identified the Expanded Recreation and Facilities Alternative (Alternative 3) as the Preferred Alternative in the Final EIS. Reclamation will prepare a Record of Decision (ROD) that will identify the selected alternative.

Management Alternatives

Alternatives Evaluated in the RMP/EIS

Reclamation's intent is to develop a broad range of management actions to evaluate alternatives that would represent the varied interests pertaining to Contra Loma. Reclamation identified and evaluated three RMP alternatives, which are designed to address the planning issues, opportunities, and constraints at Contra Loma. The three alternatives evaluated in the Draft RMP/EIS include a No Action Alternative and two action alternatives, as summarized below. The management actions and alternatives are discussed in more detail in Chapter 2. Reclamation has selected Alternative 3 as its preferred alternative.

No Action (Alternative 1 – Status Quo)

The objective of this alternative is to continue the current resource and recreation management direction and practices at Contra Loma.

Under this alternative, the current resource and recreation management direction and practices at Contra Loma would continue unchanged, and would be generally consistent with EBRPD's current RAMP (East Bay Regional Park District 1975a), the Regional Park LUDP (East Bay Regional Park District 1975b), the current management agreement between Reclamation and EBRPD, the license agreement between EBRPD and the City, and the EBRPD land use plans pertaining to Contra Loma. Some features of the RAMP, however, would not be implemented. For example, the Community Park is now located where the RAMP and LUDP had envisioned a day camp recreation zone. Therefore, the Day Camp recreation zone would not be implemented under the No Action Alternative. Also, the RAMP and LUDP had envisioned a picnic meadow cluster to the east of the reservoir that has not yet been built and might not be built under this alternative.

The local managing partner(s) would implement and manage the administrative and operational activities listed in Section 2.5 and Appendix B. The managing partner(s) would implement many of these activities, including those that may require permits or environmental review under NEPA or California Environmental Quality Act or authorization by Reclamation or CCWD. This alternative addresses certain public comments requesting no further substantive change in management direction or intensity be made at Contra Loma. The No Action Alternative provides the appropriate basis by which all other alternatives can be compared. It meets all the primary goals of the Contra Loma RMP except for provision of enhanced or new recreational uses and facilities.

Enhanced Recreation and Facilities (Alternative 2)

The objective of this alternative is to enhance current recreational uses and facilities at Contra Loma to fulfill the evolving needs of the public who recreate at Contra Loma and to implement several basic infrastructure improvements while minimizing changes to Contra Loma's recreation setting and adverse effects on natural resources.

Under this alternative, the management direction would be shifted toward enhancement of current recreational uses and facilities. This alternative includes management actions to enhance, replace, or upgrade existing recreational uses and facilities and installation of new facilities to expand or complement existing uses and facilities. Examples include upgrades to restrooms, the swim lagoon, fishing piers, the trail system, the boat launch, and administrative buildings. Examples also include new facilities such as additional restrooms, sewer lines, picnic sites, parking areas, and habitat restoration activities. Alternative 2 involves no major expansion of recreational facilities. This alternative also includes boundary adjustments between the Regional Park and the Community Park.

Expanded Recreation and Facilities (Alternative 3)

The objective of this alternative is to expand recreational uses and facilities to accommodate increasing demand, especially for additional all-weather sports fields.

Under this alternative, the management direction would be shifted toward expansion of recreational uses and facilities. This alternative includes the management actions listed under Alternative 2 (Enhanced Recreation and Facilities) and provides additional management actions to expand existing recreational uses and facilities and to install new facilities that expand recreational opportunities. Examples include construction of a fishermen's shelter, a playground structure, a disc golf course, and new multi-use sports fields, and expansion of the swim lagoon and the trail system. Other examples include planting of shade trees, installation of shade structures and solar panels, and fish habitat improvements to increase fish populations. This alternative may also include overnight group camping.

Environmental Analysis

The Contra Loma RMP is a programmatic, planning-level document that provides management direction at a broad scale and is not intended to provide project-level detail of future management actions or projects. For this reason, the EIS evaluates the environmental impacts of each RMP alternative in a programmatic manner. Future actions carried out under the purview of the RMP beyond the programmatic analysis presented in the EIS would be subject to project-level NEPA analysis and compliance.

Chapter 4 (Environmental Consequences) evaluates the environmental impacts of implementing each of the alternatives. The chapter is organized in sections by resource topic. Each resource section begins with a brief description of the resources addressed within the section and the types of activities that could affect the resource. Impact thresholds are then defined and are expressed as beneficial impacts, no impacts, minor adverse impacts, or major adverse impacts. A list of assumptions upon which the analysis is based follows. The impacts of activities common to all of the alternatives are then discussed, followed by a discussion of impacts and mitigation measures unique to each alternative. Where appropriate and feasible, mitigation measures are discussed that would avoid or minimize impacts to the affected resource. Therefore, no unavoidable adverse impacts would occur under any of the alternatives. Cumulative impacts are discussed at the end of each resource.

Comparison and Summary of Alternatives and Environmental Consequences

This section provides a summary of the key differences of the environmental effects between the three alternatives. Because this discussion is intended to present the key differences between the alternatives, it does not address all of the effects of the proposed management actions. A full discussion of the environmental effects attributable to each alternative is provided in Chapter 4.

One important characteristic of the alternatives is that the management actions are additive under each successive alternative. The Enhanced Recreation and Facilities Alternative includes all of the management actions that would be included in the No Action Alternative, and the Expanded Recreation and Facilities Alternative includes all of the management actions that would be included in the other two alternatives. Therefore, the Enhanced Recreation and Facilities Alternative would include more new or improved facilities than the No Action Alternative and the Expanded Recreation and Facilities Alternative would include more new or improved facilities than the other two alternatives. Therefore the intensity of development would be more intense under each successive alternative.

Another important, but related, characteristic of the alternatives is the relative increase in visitation to Contra Loma that is expected under each alternative. Visitor use is expected to increase under all of the RMP alternatives; however, the two action alternatives would include more new or expanded recreational opportunities and administrative facilities than the No Action Alternative and would, therefore, result in more visitation than the No Action Alternative. The Expanded Recreation and Facilities Alternative would include more new recreational opportunities than the other two alternatives and, therefore, would generate the highest increase in visitation.

Land Use

Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would increase the potential for conflicts among user groups. The Expanded Recreation and Facilities Alternative would generate the most visitors and would, therefore, have the most potential for such conflicts.

The two action alternatives would include new, enhanced, expanded, or renovated facilities to enhance or expand recreation and improve operations. These facilities are expected to be designed and located in order to promote compatibility with existing land uses, however, some new land use compatibility conflicts could occur under the two action alternatives. The Expanded Recreation and Facilities Alternative would include the most improvements and, therefore, would have the most potential for such conflicts.

Recreation

The No Action Alternative would not alter the recreational opportunities available within Contra Loma. The two action alternatives, however, would include new, enhanced, or expanded recreational opportunities and administrative facilities that would have a beneficial impact on recreation. Examples include an Americans with Disabilities Act facility retrofit program, various trail improvements, additional picnic sites, improvements to the swim lagoon, additional

sports fields, improved fishing and boat launch facilities, a disc golf course, and improvements to various administrative facilities. During construction of these improvements, some existing recreational opportunities may be temporarily unavailable for use resulting in short-term minor adverse recreation impacts. However, these recreational improvements would result in long-term beneficial impacts on recreation. Because the Expanded Recreation and Facilities Alternative would include the most recreational opportunities and improvements, it would have the greatest long-term beneficial impact on recreation.

Increased visitation would incrementally increase the need for routine maintenance activities which could incrementally increase the frequency of temporary restriction or impairment of public use and recreation access. Because the two action alternatives would include new, enhanced, expanded, or renovated facilities to enhance or expand recreation, they would require more routine maintenance activities which could increase the frequency of temporary restriction or impairment of public use and recreation access. Also, because the action alternatives would include more enhanced recreation opportunities than the No Action Alternative, they could result in more visitor use and require incrementally more maintenance. Therefore, these alternatives could result in more frequent occurrences of temporary restriction or impairment of public use and recreation access than the No Action Alternative. Because the Expanded Recreation and Facilities Alternative would have the most new facilities and would generate the most visitors, it would have the most potential for this type of effect. Maintenance activities would have a minor impact on recreation under all of the alternatives.

Visitor Access and Circulation

The increased visitation expected under all of the alternatives would increase the number of vehicles using park roads and parking areas and would increase the number of vehicles using public roads to access Contra Loma. The internal roads and parking areas would be expected to accommodate increased visitation on most days; however, gate closures to vehicles when road and parking capacity is reached could occur more frequently than current conditions. Increased vehicle trips to Contra Loma would represent a small proportion of the existing traffic on local roads serving Contra Loma. These trips would increase average daily traffic from 2 to 6 percent of the current traffic volumes and would be expected to cause a similar increase in volume-to-capacity ratios. It appears that these roads would be sufficient to accommodate increased visitation. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would generate more vehicle trips to Contra Loma. The Expanded Recreation and Facilities Alternative would generate the most visitors and vehicle trips. Under all of the alternatives, however, increased human use would cause a minor impact on visitor access and circulation within Contra Loma and on the capacity of local roads serving Contra Loma.

Increased visitation would incrementally increase the need for routine maintenance activities which could incrementally increase the frequency of temporary road and trail closures. Because the two action alternatives would include facility improvements and could result in more visitor use, they may generate the need for incrementally more maintenance. The Expanded Recreation and Facilities Alternative would likely generate the most need for maintenance. Under all of the alternatives, however, road or trail closures during maintenance activities would be short term and the impact on visitor access and circulation would be minor.

The two action alternatives would include trail improvements that would have a beneficial impact on visitor access and circulation within Contra Loma. The Expanded Recreation and Facilities Alternative may include construction of new trails and connections that would result in more benefits to visitor access and circulation than the Enhanced Recreation and Facilities Alternative.

The two action alternatives would also include new, enhanced, expanded, or renovated facilities. These facilities could attract more visitors to Contra Loma than the No Action Alternative. The Expanded Recreation and Facilities Alternative would include more new facilities than the other alternatives. The existing roads and parking areas at both the Regional Park and the Community Park are anticipated to be capable of providing an adequate level of service to accommodate increased visitor traffic, although some existing gravel parking areas might be paved and overflow parking at the Regional Park might be expanded, if it becomes necessary to accommodate more vehicles. Facility improvements would not result in any permanent impacts on visitor access or circulation. However, road or trail closures, if needed during construction, could result in temporary, minor impacts on visitor access and circulation. The Expanded Recreation and Facilities Alternative would have the most potential for such temporary, minor impacts.

Utilities

The increased visitation expected under all of the alternatives would increase demand for publicly available utilities such as restrooms, potable water, electricity, and litter and waste disposal. Because the two action alternatives would result in higher visitor use than the No Action Alternative and because these alternatives could increase the volume of water pumped from the reservoir to irrigate the Regional Park, they would generate more demand for utilities than the No Action Alternative. The Expanded Recreation and Facilities Alternative would generate the most demand. Under all of the alternatives, however, increased human use would cause a minor impact on utilities.

The two action alternatives may include new permanent restrooms to replace the existing portable chemical toilets. This would be a beneficial impact that would not occur under the No Action Alternative.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. The Expanded Recreation and Facilities Alternative would include more new facilities and would, therefore, generate more new demand for utilities than the Enhanced Recreation and Facilities Alternative. The new facilities would increase demand for utilities; however, the increased demand would result in a minor adverse impact under both action alternatives.

To help meet the increased demand for energy, the Expanded Recreation and Facilities Alternative would include installation of solar panels on shade structures or buildings in the Regional Park. Energy derived from these solar panels would be used to supplement the Regional Park's energy needs, decreasing its dependency on commercial electricity. This would result in a beneficial impact that would not occur under the other two alternatives.

Public Health and Safety

The increased visitation expected under all of the alternatives would generate more solid and sanitary waste, which could create public health and safety issues. Increased facility use could result in greater potential for unsanitary conditions, among other concerns. Increased visitation could also increase the amount of solid waste, discarded food, and other attractants for unwanted pests (such as rodents or wasps), and could increase the potential for accidental fires. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would have a higher potential for such issues to occur. The Expanded Recreation and Facilities Alternative would generate the most visitors and would, therefore, have the most potential for such issues to occur. Under all of the alternatives, however, the managing partner(s) would provide adequate sanitary and solid waste services, would continue to implement integrated pest management plans to control pests, and would continue to reduce fire hazards by mowing and grazing the grassland areas such that these public health and safety issues would be minor.

The two action alternatives may include replacing the existing portable chemical toilets with permanent restrooms and new or upgraded sewer lines to connect future permanent restrooms to the City's sewer and wastewater system. These improvements would reduce the potential for inadvertent spills from the portable restrooms, resulting in a beneficial impact on public health and safety that would not occur under the No Action Alternative.

The increased visitation expected under all of the alternatives would increase demand for emergency services, including fire and police, as well as the number of rescues and assistance responses performed by lifeguards at the swim lagoon and possibly the reservoir. Use of existing and expanded emergency and safety services, and the development and implementation of emergency preparedness plans would ensure that increased visitor use of Contra Loma would have no impact on the public health and safety of park users.

All of the alternatives include continuation of routine maintenance and repair activities that could affect visitor health and safety. Increased visitation could incrementally increase the amount of facility maintenance required, thereby incrementally increasing the potential risk to visitors. Because the two action alternatives would result in higher visitor use than the No Action Alternative and would also include new facilities requiring maintenance, they would have a higher potential for such issues to occur. Because the Expanded Recreation and Facilities Alternative would generate the most visitors and would include the most new facilities, it would have the most potential for such issues to occur. Under all of the alternatives, however, facility maintenance would have a minor adverse impact on public health and safety because the managing partner(s) would be expected to perform maintenance and repair activities in a manner that meets the RMP goal of protecting public health and safety.

The two action alternatives would include renovations to the existing administrative facilities intended to better provide for public service and safety. These renovations would result in a beneficial impact on public health and safety that would not occur under the No Action Alternative.

The two action alternatives may include fishing dock improvements to provide anglers with safe, reliable fishing opportunities. They may also include a "safe swim" area or splash pad that would

improve swim safety for small children. These improvements would result in a beneficial impact on public safety that would not occur under the No Action Alternative.

The Expanded Recreation and Facilities Alternative would include expanded recreational facilities and opportunities beyond those of the other alternatives that could increase the potential for visitor injuries. However, the managing partner(s) would ensure that adequate staff and emergency plans are available to effectively accommodate the increased risk to public health and safety related to expanded recreational facilities resulting in a minor impact.

The two action alternatives may include a new radio communications tower that would enhance emergency response and preparedness and may include call boxes and/or security cameras at the Community Park. These improvements would have a beneficial impact on public safety that would not occur under the No Action Alternative.

Water Resources

The increased visitation expected under all of the alternatives would increase the potential for human-related impairment of water quality. Increased visitation could increase the potential for unauthorized human contact with the reservoir, increasing the potential for human-borne pathogens and viruses to affect reservoir water quality. An increased volume of solid, human, and domestic animal (e.g., dogs and horses) waste could also affect reservoir water quality. Increased boating activity could increase the potential for reservoir infestation by zebra and quagga mussels and other non-native species. Increased trail use could increase localized erosion, and the resulting sediment could be transported to the reservoir by surface runoff.

Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would have a higher potential to impair water quality. The Expanded Recreation and Facilities Alternative would generate the most visitors and would, therefore, have the most potential for water quality impairment. Under all of the alternatives, however, the local managing partner(s) would continue to implement restrictions on body contact with the reservoir, and would continue programs for litter and waste reduction, regular restroom maintenance and inspection, prevention of zebra and quagga mussel infestation, and trail maintenance. Under all of the alternatives, these potential water quality issues would be minor.

The two action alternatives may include new permanent restrooms to replace the existing portable chemical toilets. This improvement would reduce the potential for inadvertent spills from the portable restrooms, resulting in a beneficial impact on water resources that would not occur under the No Action Alternative.

The Expanded Recreation and Facilities Alternative may include overnight group camping on a discretionary basis as part of the current day camp programs or other special events. Because camping would be discretionary and would receive oversight from the Regional Park's local managing partner, and because body contact restrictions would continue to be enforced, adverse impacts to water quality from overnight group camping would be minor.

The two action alternatives may include a new storm water retention basin to improve the quality of water carried by the Regional Park's storm drain system before it reaches the reservoir. This

would have a beneficial impact on reservoir water quality that would not occur under the No Action Alternative.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. Construction activities and drainage improvements could affect water quality through erosion and sedimentation, a temporary increase in reservoir turbidity due to runoff from construction areas, or inadvertent spilling of construction-related chemicals. The Expanded Recreation and Facilities Alternative would include more new facilities and would, therefore, increase the potential for construction-related water quality impacts. However, both action alternatives include a management action requiring a focused site-specific assessment of any potential impact on water quality when specific construction activities are proposed, preparation of a stormwater pollution prevention plan, and implementation of Best Management Practices, if needed, to protect water quality from construction activities. This management action would ensure that construction activities and drainage improvements would result in minor adverse effects on water quality.

Vegetation

The increased visitation expected under all of the alternatives would increase the potential for visitors to damage vegetation. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would have a higher potential for damage. Under the No Action Alternative and the Enhanced Recreation and Facilities Alternative, this impact would be minor. Because the Expanded Recreation and Facilities Alternative would generate the most visitors and may include expansion of the trail system, however, it would have the most potential for damage and could result in a major adverse impact on vegetation. Mitigation Measure Vegetation-3 would incorporate signage along equestrian and bicycle trails to prevent horses and bicycles from leaving trails and Mitigation Measure Vegetation-4 would route any new trails to avoid sensitive vegetation communities, and provide for an educational leaflet program. These measures would ensure that this impact is minor.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. New construction can cause impacts to vegetation from vegetation removal on the structure footprint, from ground disturbance due to equipment operations, or from covering due to spoils deposition or erosion. The Expanded Recreation and Facilities Alternative would include more new facilities and would, therefore, increase the potential for construction-related vegetation impacts. Most of the affected vegetation is expected to be non-native annual grassland; however, impacts to more sensitive vegetation communities could also occur. New construction could result in a major adverse impact on vegetation. Mitigation Measure Vegetation-1 would require the local managing partner(s) to perform a focused impact assessment on vegetation resources when proposing specific construction activities. Feasible wetland or riparian mitigation such as avoidance, minimization or compensatory measures would be required for temporary and permanent losses of wetlands or riparian vegetation communities. Mitigation Measure Vegetation-2 would require the local managing partner(s) to perform a focused impact assessment on vegetation resources. Feasible wetland or riparian mitigation such as avoidance, minimization, or compensatory measures would be required for temporary and permanent losses of special-status plants. These measures would ensure that construction-related vegetation impacts are minor.

The Expanded Recreation and Facilities Alternative may include increased withdrawal of reservoir water for irrigation. Increased irrigation may have a beneficial impact on vegetation resources in developed areas of Contra Loma, including managed landscaping. However, the additional reservoir drawdown would cause a small decrease in the reservoir's wetted perimeter adjacent to existing wetland vegetation at the reservoir high water mark, resulting in a minor impact to wetland vegetation resources.

Wildlife

The increased visitation expected under all of the alternatives would increase the potential for visitors to disturb wildlife. Increased visitation would also increase the need for operation and maintenance activities by the managing partners, which can also adversely affect wildlife. Because the two action alternatives would result in higher visitor use and require more maintenance than the No Action Alternative, they would have a higher potential for disturbance. Because the Expanded Recreation and Facilities Alternative would generate the most visitors and would require the most maintenance, it would have the most potential for wildlife disturbance. Under all alternatives, the potential for wildlife disturbance would be minor.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. New construction and related ground disturbing activity can cause impacts to wildlife from direct mortality, habitat removal, habitat fragmentation, or disruption of wildlife corridors. The Expanded Recreation and Facilities Alternative would include more new facilities and would, therefore, increase the potential for construction-related wildlife impacts. New construction could result in major short-term and long-term adverse impacts on wildlife. Mitigation Measures Wildlife-1 and Wildlife-2 would require the local managing partner(s) to perform a focused impact assessment on avian wildlife resources and special status wildlife when proposing specific construction activities. Feasible mitigation such as avoidance, minimization, or compensatory measures would be required to ensure that the activity does not lead to take of migratory birds or special status wildlife. These measures would ensure that construction-related wildlife impacts are minor.

The Expanded Recreation and Facilities Alternative may also expand Contra Loma's trail system, which could cause unexpected stress to wildlife species. New trails routed too close to sensitive habitats could also result in an increased tendency for humans to venture into sensitive habitats, causing stress to wildlife. This could result in a major adverse impact on wildlife that would not occur under the other alternatives. Mitigation Measure Wildlife-3 would incorporate signage along equestrian and bicycle trails to prevent horses and bicycles from leaving trails in order to minimize this potential impact.

The two action alternatives may include increased withdrawal of reservoir water for irrigation. The additional irrigation would have a positive impact on the urban habitat component in developed areas of Contra Loma, and may have a small positive impact on wildlife there. The additional irrigation of managed landscaping may also help maintain the hydrology of certain wetland and stream corridor wildlife habitats that receive runoff from the landscaped areas. Conversely, fertilizers and pesticides applied to non-native landscape plantings could be transported to aquatic habitats by the additional landscape irrigation and cause a minor adverse effect on wildlife and aquatic resources. The additional reservoir drawdown would cause a small decrease in the reservoir's wetted perimeter adjacent to existing wetland vegetation at the

reservoir high water mark, resulting in a minor impact to wetland habitat and the wildlife supported by that habitat.

Fisheries

The increased visitation expected under all of the alternatives would increase pressure on Contra Loma's recreational fisheries. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would result in greater fishing pressure. Because the Expanded Recreation and Facilities Alternative would generate the most visitors, it would create the most fishing pressure. Under all alternatives, however, the impact of increased pressure on the fishery resources of Contra Loma would be minor.

Under all alternatives, the risk of introducing exotic species, such as zebra or quagga mussels, baitfish, or crayfish into the reservoir would be minor. Two action alternatives would generate more visitor use and, therefore, would present a greater risk of introduction of these species.

Fall and winter reservoir drawdown can limit access for fishermen because existing fishing and boat launch docks are not seasonally extended, and weed beds which are normally submerged or suppressed at higher levels may limit fishing access to open water during lower levels. The two action alternatives may include modification, reconstruction, or replacement of the existing fishing piers to allow safe, continuous fishing during reservoir drawdowns. They would also include more fishing piers if needed to accommodate increased demand and other fishing and boat launch improvements to partially compensate for the existing adverse effects on the angler experience during fall and winter low water conditions. These improvements would have a beneficial impact on fishing that would not occur under the No Action Alternative.

The Expanded Recreation and Facilities Alternative may include creation or modification of fish habitat if desirable to increase fish populations. If implemented, this management action would serve to partially compensate for the existing adverse effects on the angler experience during fall and winter low water conditions and would have a beneficial impact that would not occur under the other two alternatives.

The two action alternatives may include modification, reconstruction, or replacement of existing fishing piers, installation of additional fishing piers, and several improvements at the boat launch area. Some of the new or rehabilitated piers and docks may require new pilings. Construction activities of this type may cause temporary impacts on lake water quality, may adversely affect fish resources (especially young panfish and bass), and may temporarily inconvenience anglers. This would cause minor adverse impacts on fishery resources.

Geologic and Soil Resources

The two action alternatives would include all-season surfacing of several trails near the reservoir. These improvements would reduce the potential for soil erosion and for the resulting sediment to reach the reservoir. This would be a beneficial impact that would not occur under the No Action Alternative.

The two action alternatives may include construction of new or expanded buildings and facilities. All new buildings and facilities would meet applicable building code standards pertaining to

geologic hazards and stability. Therefore, these facility improvements would have a minor impact with respect to geologic and soil resources.

The Expanded Recreation and Facilities Alternative may also include construction of a disc golf course in the Regional Park, potentially in a location with steep unstable terrain. Construction of the tee pads would not require any major ground disturbance associated with heavy equipment use; therefore, the impact on geologic stability would be minor.

The Expanded Recreation and Facilities Alternative may include expansion of bicycle use on unpaved trails, which could slightly increase the potential for erosion. This would be a minor impact that would not occur under the other alternatives.

Climate and Air Quality

The increased visitation expected under all of the alternatives would increase the number of vehicles traveling to and from Contra Loma, thereby increasing the volume of air pollutants including greenhouse gases (GHGs) generated by visitors' vehicles. The two action alternatives would generate more pollutants than the No Action Alternative; the Expanded Recreation and Facilities Alternative would generate the most. These increases are not likely to result in levels of park visitation high enough to cause exceedance of National Ambient Air Quality Standards for any alternative. Reclamation would also implement Mitigation Measure Air Quality-2 to reduce GHG emissions from park operations.

Increased visitation would also increase the amount of particulate matter (i.e., PM_{2.5} and PM₁₀) generated by vehicle travel on unpaved roads and by visitor use of trails, barbecue grills, and the Community Park ball fields. The two action alternatives would generate more particulate matter than the No Action Alternative; the Expanded Recreation and Facilities Alternative would generate the most. With implementation of Mitigation Measure Air Quality-1, the volume of particulate matter generated would not be substantial, resulting in a minor impact for all of the alternatives.

Increased visitation would incrementally increase the need for routine maintenance activities which could incrementally increase the amount of air pollutants, including particulate matter and GHGs, generated by maintenance activities. Because the two action alternatives would include new, enhanced, expanded, or renovated facilities to enhance or expand recreation, they would require more routine maintenance and, therefore, generate more air pollutants. The Expanded Recreation and Facilities Alternative would require the most maintenance. Under all alternatives, however, maintenance activities would have a minor impact on air quality and climate change.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. Construction activities can temporarily generate air pollutants, including particulate matter and GHGs. Because the Expanded Recreation and Facilities Alternative would include the most new facilities it would generate the most construction-related emissions. Under all alternatives, however, construction activities would have a minor impact on air quality and climate change.

The Expanded Recreation and Facilities Alternative would include installation of solar panels to supplement the Regional Park's energy needs. Solar panels would reduce the Regional Park's

demand for conventionally generated electricity, thereby slightly reducing air pollutant emissions generated at the power plants that serve Contra Loma. This would be a beneficial impact that would not occur under the other two alternatives.

Noise

The increased visitation expected under all of the alternatives would increase the amount of noise generated by recreationists and their vehicles. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would generate more noise. Because the Expanded Recreation and Facilities Alternative would generate the most visitors, it would generate the most noise. Noise level increases from human use and visitor vehicle noise are not expected to be noticeable; therefore, noise impacts resulting from increased visitation would be minor under all alternatives.

Increased visitation would incrementally increase the need for routine maintenance activities which could incrementally increase noise generated within Contra Loma. Because the two action alternatives would include new, enhanced, expanded, or renovated facilities to enhance or expand recreation, they would require more routine maintenance and, therefore, generate more noise. The Expanded Recreation and Facilities Alternative would require the most maintenance. Under all alternatives, however, maintenance activities would have a minor noise impact.

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities. Construction activities can temporarily increase noise levels within Contra Loma, which could be distracting to some park visitors. Construction noise may also be audible from some offsite areas, depending on the location and the nature of the construction activity. Because the Expanded Recreation and Facilities Alternative would include the most new facilities it would generate the most construction noise. However, construction activities would be short-term. Also, the managing partner(s) can limit construction activities to days and times that reduce noise-related effects on visitors and on sensitive receptors near Contra Loma. Under all alternatives, construction activities would have a minor noise impact.

The Expanded Recreation and Facilities Alternative may include the addition of two new sports fields and increased parking capacity in the Community Park. The sports fields would have floodlights to allow evening use in addition to those currently used within sports fields 1, 2, and 3. Therefore, this alternative may expand sports field use, including evening league play, at the Community Park. Noise generated at the new sports fields could be noticeable to some residents near the eastern portion of the Community Park. When considering the context and intensity of additional noise generated by new sports fields, the new fields would have a minor noise impact. In addition, the local managing partner(s) for the Community Park would have the ability to adjust the hours of use to accommodate the needs of nearby residents.

Use of the other facilities constructed under the two action alternatives could increase ambient noise levels within the Regional Park at certain times. The Expanded Recreation and Facilities Alternative would include the most new facilities and would, therefore, generate the most noise. However, the impact would occur over limited time periods, would typically occur in areas of concentrated human use such as the swim lagoon and south shore of the reservoir, and would not occur near noise-sensitive land uses located outside Contra Loma. In addition, such noises are

generally an accepted part of the ambient noise levels experienced by park visitors; therefore, noise level increases from these improvements are not expected to be noticeable.

Visual Resources

The two action alternatives would include new, enhanced, expanded, or renovated administrative and recreational facilities that could affect visual resources within Contra Loma. Because the Expanded Recreation and Facilities Alternative would include the most new facilities, it would have the most potential to affect visual resources within Contra Loma.

Some of the new or renovated facilities would improve the visual quality within the Regional Park. Examples include new permanent restroom facilities to replace portable chemical toilets and renovated fishing docks to replace deteriorating docks. Such improvements would result in a beneficial impact on localized views in the vicinity of these improvements. Some of the proposed improvements would represent noticeable changes to the visual environment but would not impair the visual quality or character of the Contra Loma because they would be consistent with the existing visual character of Contra Loma. For example, park visitors are accustomed to seeing picnic areas, shade structures, trail signs, and restrooms when visiting Contra Loma, and consider such facilities to be important components of their recreational experience. Such improvements, therefore, would have no impact on visual resources.

Other proposed improvements, however, have the potential to impair visual resources. These include the larger and more prominent improvements that would be visible from various locations within Contra Loma and may be visible from offsite locations. Because the specific designs and locations of these facilities are not yet known, the potential impact on visual resources could vary in intensity. Improvements that are designed to blend well with the visual environment would result in minor adverse impacts. Alternatively, improvements that appear inconsistent with the visual environment could impair the visual character of Contra Loma from viewpoints within the recreation area and from viewpoints outside the recreation area, resulting in major adverse impacts. When feasible and appropriate, the proposed activity would be modified or design measures would be implemented to reduce the visual impacts of the new improvements, as described in Mitigation Measure Visual-1. This measure would ensure that potential impacts are minor.

The Expanded Recreation and Facilities Alternative may include the addition of two new sports fields and increased parking capacity in the Community Park. The sports fields would have floodlights to allow evening use in addition to those currently used within sports fields 1, 2, and 3. The new sports fields would be approximately 800 feet away from the nearest residences, located on the north site of James Donlon Boulevard, and would be screened by vegetation and topography. At night, glare or general skyglow from the floodlights may be visible from some residences. When considering the context and intensity of the new lighting, the sports field lights would result in a minor adverse impact on visual resources. In addition, the lights would be shut off each night after their use, and the local managing partner(s) for the Community Park would have the ability to adjust the hours of use to accommodate the needs of nearby residents.

Hazards

All of the RMP alternatives include continuation of routine maintenance and repair activities that sometimes require the use of potentially hazardous materials (e.g., cleaning solutions, petroleum

products). Increased visitation could incrementally increase the amount of facility maintenance required. Because the two action alternatives would result in higher visitor use than the No Action Alternative and would include new or expanded facilities, they would require more maintenance. Because the Expanded Recreation and Facilities Alternative would generate the most visitors and would include the most new facilities, it would require the most maintenance. Continued use of potentially hazardous materials for maintenance, although at a slightly greater level, would result in a minor impact with respect to hazards under all alternatives.

The two action alternatives may include construction of a new fueling station and fuel storage tank for use by managing partner(s) personnel to refuel equipment and vehicles used for Regional Park operations. The risk that an inadvertent spill would cause an environmental hazard is expected to be relatively low for several reasons. The facility would be designed with fuel containment devices to protect public health and safety and prevent spilled fuel from creating an environmental hazard. Also, the fueling station would not be available for public use and would only be operated by trained managing partner staff. In addition, the local managing partners(s) will be required to prepare a hazardous waste/spill prevention plan subject to review and approval by Reclamation.

Cultural Resources

Approximately 25 percent of the Area of Potential Effects (APE) has been disturbed by dam/reservoir and recreation-associated developments. Small intact sites, isolated artifacts, or sparse scatters of archaeological materials may still exist in these developed areas. However, in general, any larger or potentially significant (per National Register of Historic Places [NRHP] criteria) cultural resources in these areas likely would have been destroyed or at least damaged by construction activities. Portions of the APE (approximately 170.62 acres [about 23 percent]) have been subjected to surface archaeological surveys including those conducted in 2011 for this EIS.

A total of ten cultural resources investigations have been conducted within Contra Loma. These studies included surface archaeological survey, reviews of historic mapping, and an examination of Reclamation documents and other sources. This research indicates that 12 prehistoric and historic-era sites and features have been identified within or immediately adjacent to Contra Loma. These sites represent early Native American use of the landscape and historic-era activities such as ranching, transportation, and water storage and conveyance in and around Contra Loma. The surface archaeological surveys conducted in 2011 for this EIS identified three of these resources; CA-CCo-572, Contra Loma Dam/Reservoir, and the Contra Costa Canal which is situated outside but immediately adjacent to the northern edge of the APE.

Outreach with Native American Tribes did not yield any specific information about traditional cultural properties or other pertinent Native American cultural interests in the immediate area.

None of the prehistoric and historic-era sites and features have been assessed as to NRHP listing eligibility. However, the Contra Loma Dam and Reservoir is an important element in the Delta Division of the CVP system. Reclamation considers and treats the CVP as eligible for NRHP listing because of its national and local economic contribution to the development of California. Therefore, the dam may be determined eligible for NRHP listing as a contributing property to the

CVP (Perry, pers. comm. 2014). Additional sites, features, and artifacts associated with prehistoric and historic-era activities may be present in un-surveyed portions of the APE.

If any unidentified historic properties are located within Contra Loma, visitors could affect them through inadvertent trampling or unauthorized collecting. Because the two action alternatives would result in higher visitor use than the No Action Alternative, they would increase the potential for effects to unidentified historic properties. The Expanded Recreation and Facilities Alternative would generate the most visitors and would, therefore, have the most potential for such effects.

The two action alternatives would include new, enhanced, expanded, or renovated facilities to enhance or expand recreation and improve operations. Under the Enhanced Recreation and Facilities Alternative, most construction or renovation activities would occur within the footprint of existing buildings or structures where there would be no impacts on unidentified historic properties. However, some new construction activities could occur in areas that have not been surveyed for cultural resources and could affect unidentified historic properties, if any are present.

The Expanded Recreation and Facilities Alternative would include construction of new or expanded recreation facilities in addition to those that would be built under the Enhanced Recreation and Facilities Alternative; therefore, this alternative would have more potential to affect unidentified historic properties than the other two alternatives.

When specific construction activities are proposed, site-specific environmental analyses would be conducted that include a more focused assessment of any potential impact on historic properties. If impacts are identified, the proposed activities may be modified or other mitigation measures may be implemented to eliminate these impacts when possible (see Section 4.16.8, Mitigation Measure Cultural-1). Reclamation would follow the process for complying with Section 106 of the National Historic Preservation Act as outlined in 36 CFR, Part 800. These impacts would not occur under the No Action Alternative.

Cultural resources and human remains are also protected according to the provisions of the Archaeological Resources Protection Act of 1979 and the Native American Graves Protection and Repatriation Act.

Socioeconomics

Visitation is expected to increase under all of the alternatives. This would have a net beneficial socioeconomic impact for all of the alternatives, although increasing use fees could impair the affordability of some uses for members of low-income populations.

Continuation of the recreational fishing program and management of fish populations through fish planting (i.e., stocking) programs would continue to contribute to the local economy, resulting in a beneficial socioeconomic impact for all of the alternatives.

Increased visitation would incrementally increase the need for routine maintenance activities. Because the two action alternatives would include facility improvements and could result in more visitor use, they may generate the need for incrementally more maintenance. The Expanded

Recreation and Facilities Alternative would likely generate the most need for maintenance. Increased facility maintenance could have a minor beneficial socioeconomic impact on the region under all of the alternatives, because the managing partner(s) would need to purchase additional supplies and services.

The two action alternatives would include facility improvements for the purpose of improving operation and enjoyment of Contra Loma. The Expanded Recreation and Facilities Alternative would include the most improvements. The facility improvements would create temporary construction-related jobs and increase the amount the services and supplies purchased by the local managing partner(s). Facility improvements would contribute to the local and regional economies, resulting in temporary beneficial socioeconomic impacts. None of these impacts would occur under the No Action Alternative.

The two action alternatives would include a management action to increase the frequency of fish stocking in the reservoir from current levels in order to meet demand. Increasing fisheries resources would benefit the local economy by increasing the desirability of the reservoir as a fishing destination, resulting in a beneficial socioeconomic impact that would not occur under the No Action Alternative.

Environmental Justice

Although some residents in the general vicinity of Contra Loma have incomes below the poverty level, the proportion of low-income households within the community is not high enough to be considered a low-income population. Therefore, none of the alternatives would disproportionately affect low-income populations.

Although the population in the general vicinity of Contra Loma includes a relatively high proportion of minorities, none of the alternatives would cause dislocation, adverse changes in employment, or increase flood, drought, or disease and none would disproportionately impact economically disadvantaged or minority populations in an adverse manner.

All of the alternatives have the potential to increase employment and business opportunities within Contra Loma and in the surrounding communities. None of the alternatives would reduce or eliminate employment opportunities.

All of the alternatives would include management actions that encourage continued use of Contra Loma's recreational facilities by low-income groups (e.g., low-income youth swimming programs), thereby benefiting low-income individuals.

Summary Table

The impacts of each alternative to each resource topic are summarized in Table ES-1.

Unresolved or Controversial Issues

No controversial or unresolved issues have been identified.

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Land Use (Section 4.2)				
Conflicts among user groups	Minor	Minor	Minor	N/A
Land use conflicts from livestock grazing	Minor	Minor	Minor	N/A
Land use compatibility	Minor	Minor	Minor	N/A
Impacts on fishing	N/A	N/A	Beneficial	N/A
Recreation (Section 4.3)				
Impacts to recreation from facilities management	No to Inconsequential Impact	No to Inconsequential Impact	No to Inconsequential Impact	N/A
Impacts to recreation from routine maintenance	No to Inconsequential Impact	No to Inconsequential Impact	No to Inconsequential Impact	N/A
Impacts to recreation from resource management	Minor	Minor	Minor	N/A

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Recreation conflicts from livestock grazing	Minor	Minor	Minor	N/A
Impacts to recreation from facility improvements	Short-term Minor, Long-Term Beneficial	Short-term Minor, Long-Term Beneficial	Short-term Minor, Long-Term Beneficial	N/A
Visitor Access (Section 4.4)				
Increased demand on internal road and parking facilities	Minor	Minor	Minor	N/A
Increase vehicle trips on local roads	Minor	Minor	Minor	N/A
Temporary road and trail closure for routine maintenance and operation	Minor	Minor	Minor	N/A
Impacts on visitor access and circulation from natural and cultural resource management and protection	Minor	Minor	Minor	N/A
Impacts on visitor access and circulation from trail improvements	Short-term Minor, Long-Term Beneficial	Short-term Minor, Long-Term Beneficial	Short-term Minor, Long-Term Beneficial	N/A
Impacts on visitor access and circulation from facility improvements	Short-term Minor	Short-term Minor	Short-term Minor	N/A
Utilities (Section 4.5)				
Increased demand caused by increased visitation	Minor	Minor	Minor	N/A
Replacement of portable chemical toilets	N/A	Beneficial	Beneficial	N/A
Increased utility demand from facility improvements	Minor	Minor	Minor	N/A
Installation of solar panels to reduce demand for commercial electricity	Minor	Minor	Minor	N/A
Water demand for livestock grazing	N/A	N/A	Beneficial	N/A

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Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Public Health and Safety (Section 4.6)				
Increased potential for unsanitary conditions from increased visitation	Minor	Minor	Minor	N/A
Increased potential for unwanted pests from increased visitation	Minor	Minor	Minor	N/A
Increased demand for emergency preparedness	Minor	Minor	Minor	N/A
Increased potential for health and safety issues from routine maintenance	Minor	Minor	Minor	N/A
Renovation of existing administrative facilities	N/A	Beneficial	Beneficial	N/A
Impacts from safety-related recreational improvements	N/A	Beneficial	Beneficial	N/A
Impacts from other recreational improvements	N/A	Minor	Minor	N/A
Water Resources (Section 4.7)				
Water quality impacts from increased visitation	Minor	Minor	Minor	N/A
Water quality impacts from replacement of portable chemical toilets	N/A	Beneficial	Beneficial	N/A
Water quality impacts from new fueling station and fuel storage tank	N/A	No Impact	No Impact	N/A
Water quality impacts from group camping	N/A	N/A	Minor	N/A
Water quality impacts from grazing	No Impact	No Impact	No Impact	N/A
Water quality impacts from construction activities	N/A	Minor to Major	Minor to Major	N/A

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Impacts from increased withdrawal of reservoir water	N/A	N/A	Minor	N/A
Vegetation (Section 4.8)				
Impact of occasional grassland fire on noxious weeds	Beneficial	Beneficial	Beneficial	N/A
Risk of catastrophic wildland fire on vegetation	Minor	Minor	Minor	N/A
Impacts on special status plant from conservation and protection actions	Beneficial	Beneficial	Beneficial	N/A
Damage to vegetation from increased visitation	Minor	Minor	Minor to Major	<p><i>Mitigation Measure Vegetation-3: Incorporate signage along equestrian and bicycle trails to prevent horses and bicycles from leaving trails.</i></p> <p>All new or expanded trails proposed under the Expanded Recreation and Facilities Alternative, and any expansion of equestrian or bicycle use on existing trails as proposed under this alternative, shall incorporate signage at reasonable intervals (subject to Reclamation approval) prescribing no equestrian or bicycle use off established trails.</p> <p><i>Mitigation Measure Vegetation-4: Route any new trails to avoid sensitive vegetation communities, and provide for an educational leaflet program.</i></p> <p>All new trails or trail connectors proposed under the Expanded Recreation and Facilities Alternative shall be routed to provide a minimum 50 foot buffer from wetland and riparian communities, quail restoration areas, and known rare plant communities. Additionally, if new trails, trail connectors, or expanded facilities are proposed within 100 feet of such vegetation communities, an educational leaflet program will be developed to provide information to the public</p>

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Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				on the sensitive nature of the vegetation communities adjacent to the proposed trail or improvement and to encourage users to limit human disturbance within and adjacent to such sensitive areas. The leaflets will be available at each visitor kiosk at the park entrances and from leaflet stands where trails leave parking areas, and adjacent to wetland and riparian vegetation communities.
Impacts on vegetation from livestock grazing	No Impact	No Impact	No Impact	N/A
Introduction of invasive species	Minor	Minor	Minor	N/A
Impacts on vegetation from construction activities	N/A	Minor to Major	Minor to Major	<p><i>Mitigation Measure Vegetation-1: Perform wetland delineations for construction related impacts to wetland and riparian vegetation communities.</i></p> <p>When specific construction activities are proposed, site-specific environmental analysis would be conducted that would include a more focused assessment of any potential impact on vegetation resources. If deemed necessary by Reclamation, the local managing partner(s) proposing a construction activity will perform a delineation of wetland and riparian vegetation of all areas potentially affected by temporary or permanent construction-related activities. The delineation will fully describe all areas classified as Waters of the U.S. (Federal Clean Water Act). Feasible mitigation shall be proposed for any temporary or permanent losses of wetlands or for any wetland or riparian vegetation communities impacted. Such project-specific mitigation could</p>

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				<p>include impact avoidance, minimization or compensatory measures, or a combination thereof. All projects would be designed to avoid waters of the United States, to the extent practicable, but if impacts are identified, a Section 404 Clean Water Act permit may be necessary and appropriate mitigation measures will be identified to offset impacts (e.g., payment into a mitigation bank, on-site restoration or enhancement of wetlands). The type of permit will be dependent on the nature and extent of impacts, although most projects are expected to fall under Nationwide Permits.</p> <p><i>Mitigation Measure Vegetation-2: Perform protocol level surveys for presence of special-status plants.</i></p> <p>When specific construction activities are proposed, site-specific environmental analysis would be conducted that would include a more focused assessment of any potential impact on vegetation resources. If deemed necessary by Reclamation, the local managing partner(s) proposing a construction activity will perform protocol level surveys for the presence of special-status plants. The surveys will follow protocols as directed by Reclamation, which may elect to use standardized protocols, and may include those developed by CDFW. Focused plant surveys shall be used to propose feasible means of avoiding or minimizing any temporary or permanent losses of special-status plants. Such project-specific measures could include restoration or re-routing of trails to avoid sensitive vegetation (as described below for Mitigation Measure Vegetation-4) where applicable; transplantation; or a combination thereof.</p>

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Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Impacts to non-reservoir vegetation from increased irrigation	Beneficial	Beneficial	Beneficial	N/A
Impacts to reservoir vegetation from increased withdrawals	N/A	N/A	Minor	N/A
Wildlife (Section 4.9)				
Impact of occasional grassland fire on wildlife	Beneficial	Beneficial	Beneficial	N/A
Risk of catastrophic wildland fire on wildlife	Minor	Minor	Minor	N/A
Wildlife disturbance from increased visitation	Minor	Minor	Minor	<p>Mitigation Measure Wildlife-3: Incorporate signage along equestrian and bicycle trails to prevent horses and bicycles from leaving trails.</p> <p>To protect special status wildlife species, all new or expanded trails and any expansion of equestrian or bicycle use on existing trails shall incorporate signage adjacent to sensitive wildlife habitats at reasonable intervals, subject to Reclamation approval, prescribing no equestrian or bicycle use off established trails.</p>
Wildlife disturbance from routine maintenance	Minor	Minor	Minor	N/A
Impacts on wildlife from livestock grazing	No Impact	No Impact	No Impact	N/A
Impacts on wildlife from construction activities	N/A	Minor to Major	Minor to Major	<p>Mitigation Measure Wildlife-1: Perform nest surveys for construction related impacts to special status birds within riparian, wetland, woodland, or grassland wildlife habitats or their margins.</p> <p>When specific construction activities are proposed, a site-specific environmental analysis would be conducted that includes a more focused assessment of the activity's impact on special status avian wildlife resources. If deemed</p>

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				<p>necessary by Reclamation, the local managing partner(s) proposing a construction activity will perform surveys for special status bird nests or burrows in all areas potentially affected by temporary or permanent construction related activities. The surveys will be conducted at times selected to target all special status bird species potentially affected by a construction activity and shall propose feasible mitigation for any temporary or permanent impacts to special status wildlife or reproductive success. Such project-specific mitigation could include impact avoidance (which could include removal of nest materials prior to the applicable reproductive cycle), minimization (which could include appropriate buffers), compensatory measures, or a combination thereof that does not lead to take of migratory birds. Specific measures will be identified in coordination with USFWS and CDFW on a project-by-project basis depending on the species that could be affected.</p> <p><i>Mitigation Measure Wildlife-2: Perform protocol level surveys for presence of special status wildlife species.</i></p> <p>When specific construction activities are proposed, a site-specific environmental analysis would be conducted that includes a more focused assessment of the activity's impact on special status wildlife resources. If deemed necessary by Reclamation, the local managing partner(s) proposing a construction activity will perform protocol level surveys for presence of special status wildlife species. The surveys shall propose feasible mitigation for any temporary or permanent losses of special status wildlife species or their habitat. Such project-specific mitigation would require input from USFWS</p>

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Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				and/or CDFW on specific measures to achieve no or minor impacts.
Impacts on wildlife from expanding the trail system	N/A	Minor to Major	Minor to Major	See Mitigation Measure 3 above.
Impacts to wildlife from increased irrigation	Minor	Minor	Minor	N/A
Impacts to wildlife from increased reservoir withdrawals	N/A	N/A	No Impact	N/A
Fisheries (Section 4.10)				
Increased fishing pressure	Minor	Minor	Minor	N/A
Increased risk of introducing invasive or exotic species to the reservoir	Minor	Minor	Minor	N/A
Fishing access during reservoir drawdowns	Minor	Beneficial	Beneficial	N/A
Creation or improvement of fish habitat	N/A	N/A	Beneficial	N/A
Impacts from in-water construction activities	Minor	Minor	Minor	N/A
Geologic and Soil Resources (Section 4.11)				
Impacts on soil erosion from maintenance activities	Beneficial	Beneficial	Beneficial	N/A
Impacts on erosion from fire suppression	No Impact	No Impact	No Impact	N/A
Impacts on soil erosion from trail improvements	N/A	Beneficial	Beneficial	N/A
Geologic hazards from new facilities	N/A	Minor	Minor	N/A
Impacts on erosion from expanded bicycle use on unpaved trails	N/A	N/A	Minor	N/A

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Climate and Air Quality (Section 4.12)				
Increased emissions from visitor vehicles	Minor	Minor	Minor	<p><i>Mitigation Measure Air Quality-2: Implement measures to reduce GHG emissions.</i></p> <p>The following lists present some examples of feasible measures that could be implemented to reduce CO₂ emissions from vehicles and related sources. The measures are categorized as passenger vehicles and park maintenance and infrastructure. These measures would be evaluated for applicability as each project gets funded and planned and could be included as mitigation at the project-level analysis.</p> <p>Passenger Vehicles</p> <ul style="list-style-type: none">▪ Limit trailhead access by vehicle▪ Limit parking expansion to the existing parking areas▪ Prohibit motorized dirt bikes▪ Give reservation preference to visitors with hybrid or high fuel economy vehicles▪ Improve vehicle access/alleviate congestion near park entrances▪ Add dedicated lane for existing campers returning to camp <p>Park Maintenance and Infrastructure</p> <ul style="list-style-type: none">▪ High-efficiency lighting▪ Tank-less water heaters▪ Solar panels for power▪ Clean park maintenance fleet vehicles (electric vehicles, golf carts, or CNG)▪ Use electric-powered landscaping/maintenance equipment <p>If funding is available, several energy-saving measures currently in use in “green” buildings and housing could be implemented in the park infrastructure to reduce GHG emissions. High-</p>

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				efficiency lighting could replace incandescent bulbs, tank-less water heaters would reduce energy loss from conventional hot water tanks, and solar panels could be constructed for power needs within the park. In addition, park maintenance vehicles could be electric, use compressed natural gas fuel, or be gas-electric hybrids.
Increased generation of particulate matter	Minor	Minor	Minor	See Mitigation Measure Air Quality-2 above.
Increased emissions from routine maintenance	Minor	Minor	Minor	See Mitigation Measure Air Quality-2 above.
Increased emissions from construction activity	Minor	Minor	Minor	<p><i>Mitigation Measure Air Quality-1: Implement fugitive dust and emission control measures during construction activities.</i></p> <p>When specific projects or actions are identified for Alternatives 2 and 3, a site-specific environmental analysis would be conducted to quantify air quality impacts and identify appropriate mitigation measures to comply with the Clean Air Act and BAAQMD rules and regulations. Construction activities for individual projects will comply with the required BAAQMD rules and regulations to mitigate for short-term construction emissions involving earthmoving, regardless of the project size and duration. The following mitigation measures are recommended by BAAQMD and may be implemented on a project-by-project basis:</p> <ul style="list-style-type: none"> ▪ Water all active construction sites at least twice daily. ▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard. ▪ Apply water three times daily or apply non-toxic soil stabilizers on all unpaved

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				<p>access roads, parking areas, and staging areas at construction sites.</p> <ul style="list-style-type: none"> ▪ Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. ▪ Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. ▪ Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously disturbed areas inactive for 10 days or more). ▪ Enclose, cover, and water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). ▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways. ▪ Replant vegetation in disturbed areas as quickly as possible. ▪ Suspend excavation and grading activity when winds (instantaneous gusts) exceed 20 miles per hour. ▪ Minimize idling time to 5 minutes or less. ▪ Maintain properly tuned equipment.
Reduced emissions from installation of solar panels	N/A	N/A	Beneficial	N/A
Noise (Section 4.13)				
Noise from increased visitation	Minor	Minor	Minor	N/A
Noise from increased maintenance	Minor	Minor	Minor	N/A
Noise from recreational use of new facilities	Minor	Minor	Minor	N/A
Noise from construction activity	Minor	Minor	Minor	N/A

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Visual Resources (Section 4.14)				
Visual impacts from increased visitation	Minor	Minor	Minor	N/A
Visual impacts of new facilities	N/A	Minor to Major	Minor to Major	
Visual impacts of new lighted sports fields	N/A	N/A	Minor	<p><i>Mitigation Measure Visual-1: Implement design measures to reduce visual impacts from new development.</i></p> <p>When a specific project is proposed, a site-specific environmental analysis would be conducted that includes a more focused assessment of the potential impact on visual resources. When feasible and appropriate, the proposed activity would be modified to reduce impacts on visual resources. Such modifications may include, but are not limited to:</p> <ul style="list-style-type: none">▪ Design all new development to be visually compatible with Contra Loma's visual character and quality.▪ Use building materials that are visually compatible with Contra Loma's natural setting.▪ Avoid removal of native vegetation to the extent possible.▪ Minimize grading of slopes to the extent possible.▪ Revegetate cut and fill slopes with native plants.▪ Avoid the placement of infrastructure, including communications facilities, on ridges and peaks in order to maintain open viewsheds.
Hazards (Section 4.15)				
Increased potential for hazards from routine maintenance	Minor	Minor	Minor	N/A
Fire hazard reduction from grazing	No Impact	No Impact	No Impact	N/A

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
Impacts from fire and emergency preparedness plans	No Impact	No Impact	No Impact	N/A
Hazard from new fueling station	N/A	Minor	Minor	N/A
Cultural Resources (Section 4.16)				
Impacts to known historic properties	No Impact	No Impact	No Impact	N/A
Impacts to unidentified historic properties from routine maintenance activities	No Impact	No Impact	No Impact	N/A
Impacts to unidentified historic properties from human use	Minor	Minor	Minor	N/A
Impacts to unidentified historic properties from grazing	Minor	Minor	Minor	N/A
Impacts to unidentified historic properties from facility improvements	Minor	Minor	Minor	<p><i>Mitigation Measure Cultural-1: Implement measures to protect unidentified historic properties during construction activities.</i></p> <p>Prior to the implementation of undertakings incorporating potential ground-disturbing activities in un-surveyed areas of Contra Loma, Reclamation and the local managing partner(s) proposing the activity will follow the Section 106 process as outlined in 36 CFR, Part 800. These regulations, which describe implementation of Section 106 of the NHPA, call for consultation with the State Historic Preservation Officer, Indian Tribes, and interested members of the public throughout the Section 106 compliance process. The four principal steps are:</p> <ul style="list-style-type: none"> ▪ initiate the Section 106 process (36 CFR, Part 800.3), ▪ identify historic properties (36 CFR, Part 800.4), ▪ assess the effects of the undertaking on historic properties within the APE (36 CFR, Part 800.5), and

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				<ul style="list-style-type: none"> resolve adverse effects (36 CFR, Part 800.6). <p>The identification step would consist of a cultural resources inventory to document any historic properties that could be affected by the proposed activities. Reclamation is responsible for Native American community and public consultation and will modify undertakings if possible to avoid historic properties and make every effort to avoid other cultural resources. In addition, Reclamation, in cooperation with local managing partner(s) will ensure compliance with Section 106 of the NHPA prior to undertaking authorization.</p> <p>Cultural resources and human remains are also protected according to the provisions of the Archaeological Resources Protection Act of 1979 (ARPA) and the Native American Graves Protection and Repatriation Act (NAGPRA). The ARPA strengthened the permitting procedures required for conducting archeological fieldwork on federal lands, originally mandated by the Antiquities Act of 1906. It also establishes rigorous fines and penalties for unauthorized excavation on or the removal of archaeological materials from federal land.</p> <p>ARPA is important from the standpoint of managing archeological collections because it:</p> <ul style="list-style-type: none"> acknowledges federal ownership of objects excavated from federal lands; calls for the preservation of objects and associated records in a "suitable" institution and, prohibits public disclosure of information concerning the nature and location of archeological resources that require a permit or other permission under ARPA for their excavation or removal.

Impacts	Impact Magnitude of Alternatives			Mitigation Measures
	No-Action	Enhanced Recreation and Facilities	Expanded Recreation and Facilities	
				NAGPRA requires federal agencies and institutions that receive federal funding to return Native American "cultural items" to lineal descendants and culturally affiliated Indian tribes and Native organizations. NAGPRA also establishes procedures for the inadvertent discovery or planned excavation of Native American cultural items and human remains on federal or tribal lands. While these provisions do not apply to discoveries or excavations on private or state lands, the collection provisions of NAGPRA may apply to Native American cultural items if they come under the control of an institution that receives federal funding. In addition, NAGPRA makes it a criminal offense to traffic in Native American human remains without right of possession or in Native American cultural items obtained in violation of NAGPRA.
Socioeconomics (Section 4.17)				
Impacts from increased visitation	Beneficial	Beneficial	Beneficial	N/A
Impacts from recreational fishing	Beneficial	Beneficial	Beneficial	N/A
Impacts from facility maintenance	Beneficial	Beneficial	Beneficial	N/A
Impacts of livestock grazing	No Impact	No Impact	No Impact	N/A
Increased attractiveness to visitors by facility improvements	Beneficial	Beneficial	Beneficial	N/A
Impacts on local and regional economies from facility improvements	Beneficial	Beneficial	Beneficial	N/A
Impacts from increased fish stocking	Beneficial	Beneficial	Beneficial	N/A
Environmental Justice (Section 4.18)				
Impacts to low-income and/or minority populations	No Impact	No Impact	No Impact	N/A

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Abbreviations and Acronyms

ADA	Americans with Disabilities Act
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act of 1979
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BMPs	best management practices
Cal Fire	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CAP	Bay Area 2010 Clean Air Plan
CCCYPD	Contra Costa County Fire Protection District
CCWD	Contra Costa Water District
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
City	City of Antioch
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Community Park	Antioch Community Park
Contra Loma	Contra Loma Reservoir and Recreation Area
Corps	Army Corps of Engineers
CVP	Central Valley Project
CWHR	California Wildlife Habitat Relationship
DDSD	Delta Diablo Sanitation District
Delta	Sacramento-San Joaquin Delta
DOHS	California Department of Health Services
DOI	Department of the Interior
EBRPD	East Bay Regional Park District

Contra Loma Reservoir and Recreation Area
Resource Management Plan/Environmental Impact Statement

EIS	Environmental Impact Statement
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ESU	Evolutionarily Significant Unit
°F	degrees Fahrenheit
GHG	greenhouse gases
GIS	Geographic Information System
HEC-HMS	Army Corps of Engineers' Hydraulic Modeling Software
I-	Interstate
IPM	integrated pest management
ITA	Indian Trust Asset
LUDP	Land Use Development Plan
MCL	maximum contaminant level
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO _x	nitrogen oxides
NRHP	National Register of Historic Places
NSR	North State Resources, Inc.
PG&E	Pacific Gas and Electric Company
PGA	Peak Ground Acceleration
PL	Public Law
PM	particulate matter
RAMP	Reservoir Area Management Plan
Reclamation	United States Department of the Interior, Bureau of Reclamation

Regional Park	Contra Loma Regional Park
RMP	Resource Management Plan
ROG	reactive organic gases
RPR	Rare Plant Rank
RRMA	Reclamation Recreation Management Act
RWQCB	Regional Water Quality Control Board
SCS	Soil Conservation Service
SDWA	Safe Drinking Water Act
SR	State Route
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	Geological Survey
USTs	Underground Storage Tanks
WALROS	Water and Land Recreation Opportunity Spectrum
WROS	Water Recreation Opportunity Spectrum

Chapter 1. Introduction

1.1 Background Information

The Bureau of Reclamation (Reclamation) prepared a Resource Management Plan (RMP) for the Contra Loma Reservoir and Recreation Area (Contra Loma) located in Antioch, Contra Costa County, California (Figure 1-1). The RMP was developed in accordance with Reclamation's 2003 *Resource Management Plan Guidebook, Planning for the Future*, and was based on a comprehensive inventory of environmental resources and facilities as well as input from the East Bay Regional Park District (EBRPD), the City of Antioch (City), the Contra Costa Water District (CCWD), and the public. The Contra Loma RMP is a long-term plan to guide management of the resources on the Federal lands within the reservoir and recreation areas. The primary emphasis of the RMP is to protect the water supply and quality of Contra Loma Reservoir while balancing the management of natural and cultural resources with enhancements to recreational uses within Contra Loma.

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA; PL 91-190, 42 U.S.C. 4321-4347), and in accordance with the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500-1508) and U.S. Department of the Interior (DOI; 43 CFR Part 46) regulations for implementing NEPA, Reclamation prepared an Environmental Impact Statement (EIS) to evaluate and disclose the potential direct, indirect, and cumulative environmental effects of implementing the Contra Loma RMP. Because of the similarities between the requirements for an RMP and an EIS, Reclamation combined the RMP and EIS into a single document, hereafter referred to as the RMP/EIS. The Final RMP/EIS includes editorial and technical changes, factual corrections, and clarifications made in response to public comments. Changes that are not minor editorial changes are indicated by lines on the left side of the margin.

1.2 Overview and History of Contra Loma Reservoir and Recreation Area

Contra Loma consists of the 80-acre Contra Loma Reservoir and approximately 661 acres of surrounding land, including the Contra Loma Regional Park (Regional Park; Figure 1-2) and the Antioch Community Park (Community Park; Figure 1-3). Contra Loma Reservoir was constructed in 1967 as part of the Central Valley Project (CVP) and is managed by Reclamation's Mid-Pacific Region's South-Central California Area Office. CCWD operates and maintains the reservoir under contract with Reclamation. The reservoir receives and stores CVP water from the Contra Costa Canal until it is released back to the canal via gravity flow.

The reservoir is primarily used as a regulating reservoir for peak or short-term municipal water supplies for CCWD customers, for emergency storage, and as a backup water supply during maintenance of upstream facilities. The recreation area was opened to the public in 1968 with few developed recreational facilities.

GIS\Projects\30019_Contra_Loma\GIS\Working_Maps\Resource Inventory_Report\30019_Figure_1_Location.mxd 2010-05-19 edouglas Source: ESR



Figure 1-1
Project Location and Vicinity Map

G:\Projects\30019 Contra Loma\GIS\Working Mxds\Resource Inventory Report\30019 Figure 1-2 Park Land Facilities.mxd Created: 2011-05-25 edouglas revised: 2013-05-29 tmooney



Figure 1-2
Regional Park Land Use and Facilities



G:\Projects\30019 Contra Loma RMP EIS\GIS\30019 Figure 1-3 Antioch Community Park.mxd Created: 2011-05-25 edouglas Revised: 2013-05-29 tmooney

Figure 1-3
Antioch Community Park

On September 18, 1972, a management agreement between Reclamation and EBRPD transferred responsibility for land use management and development, construction, and maintenance of public recreational facilities to EBRPD (Bureau of Reclamation 1972). EBRPD continues to manage the recreational lands surrounding the reservoir.

In 1985, EBRPD transferred management of approximately 48 acres in the northwestern portion of Contra Loma to the City under a Reclamation-approved license agreement that allowed for the creation of the Community Park. The City is currently responsible for management and maintenance of the Community Park. The license agreement was amended in 1990. The license agreement was scheduled to expire in December 2010; however, Reclamation has authorized extension of the license agreement.

The 1972 management agreement between Reclamation and EBRPD and the license agreement between EBRPD and the City were both scheduled to expire in December 2010. While the RMP process is on-going, Reclamation issued EBRPD an extension of the management agreement. EBRPD has expressed interest in renewing the management agreement with Reclamation. After completion of the RMP process, Reclamation will negotiate a new long-term management agreement with one or more local managing partner(s).

1.3 Purpose and Need

The Reclamation Recreation Management Act (RRMA) of 1992 (Public Law [PL] 102-575, Title 28 [2805(c)(1)(A)]) directs Reclamation to “provide for the development, use, conservation, enhancement, and management of resources on Reclamation lands.” An RMP is a guide for future land resources management to ensure land and waters of the United States (U.S.) are maintained and protected as provided for under the authorizing purposes over a given period of time. The Contra Loma Regional Park Reservoir Area Management Plan (RAMP; East Bay Regional Park District 1975a) currently guides EBRPD in administering, operating, planning, and developing Contra Loma. The RAMP was prepared in 1975 and some features of the RAMP are either outdated or no longer relevant. For example, the Community Park is now located where the RAMP had envisioned a Day Camp recreation zone. Also, the RAMP’s Picnic Meadow zone, located east of the reservoir, has not been developed. In addition, the types of recreational facilities requested by the public (e.g., new multi-use sports fields) and the infrastructure required to operate the recreation area have changed since the RAMP was prepared. Finally, environmental conditions at the recreation area have changed since 1975. These changes have created a need for Reclamation to compile a current inventory of Contra Loma’s resources.

The Contra Loma RMP has a planning horizon of 25 years. The planning horizon will begin when new management agreement(s) are reached between Reclamation and local managing partner(s). The RMP is needed to provide management guidance to Reclamation and local managing partner(s) in order to ensure effective protection and management of Contra Loma’s resources, particularly the reservoir. The RMP will also provide guidance on the allowed uses and desired future conditions at Contra Loma and establish the framework for new management agreement(s).

The purpose of the RMP is to establish updated management objectives, goals, and actions consistent with the authorized purposes of the lands associated with Contra Loma Reservoir. The RMP shall be implemented by Reclamation, either directly or through its management agreement(s) that would:

- establish uniform policy and land management guidelines that promote organized use, development, and management of recreation area lands in a way that is compatible with applicable Federal and state laws;
- protect the water supply and quality of Contra Loma Reservoir;
- manage natural and cultural resources in and around the reservoir in a way that is consistent with Federal law and Reclamation policies;
- provide additional recreational opportunities and facilities requested by the public; and
- provide guidance for future decision making.

1.4 Project Authority

The authority to establish and implement the Contra Loma RMP rests in a series of Federal legislation and guidance. The key Federal authorities are identified in this section. Additional information about the Federal regulations, laws, and planning policies relevant to each environmental topic is provided in Appendix C.

Reclamation's authority to operate water projects is vested in the authority of the Reclamation Act of 1902 (Chapter 1093, 32 Stat. 388) and the Reclamation Project Act of 1939 (Chapter 418, 53 Stat. 1187).

Reclamation's authority to prepare RMPs is derived from the authority of the Reclamation Act of 1902; the Reclamation Project Act of 1939; the Federal Water Project Recreation Act (PL 89-72, 79 Stat. 213); and, more specifically, the RRMA. Water or power operations or water service contracts are outside the scope of an RMP and either have been or would be covered under separate actions and environmental review. Contra Loma Reservoir is operated as a component of the CVP. Management of the land surrounding the reservoir is secondary to operation of the CVP and is required to support Reclamation's core mission of managing, developing, and protecting water and related resources in an environmentally and economically sound manner.

The Federal Water Project Recreation Act of 1965, PL 89-72, as amended, was enacted in part to help Reclamation utilize non-Federal public entities in managing Federal land and to provide a means for cost-sharing assistance with non-Federal managing partners for planning, constructing, and managing recreation facilities, opportunities, and programs.

The Reclamation Manual Directives and Standards (RCD TRMR-15) is a series of Policies, Directives, and Standards and Delegations of Authority that collectively assign program

responsibility and authority and document Reclamation-wide methods of carrying out its responsibilities (Bureau of Reclamation 1998).

1.5 Organization of the RMP/EIS

The format and content of the RMP/EIS are as follows:

- **Cover Sheet** – provides an abstract of the RMP/EIS, list of responsible agencies, state and county of the action location, and contact information of the person at Reclamation who can supply additional information.
- **Executive Summary** – provides a brief overview of the RMP/EIS, including the purpose and need for the project, planning issues, public involvement, management alternatives, a summary of environmental impacts (including a summary table of the impacts for each alternative), and unresolved or controversial issues.
- **Chapter 1, Introduction** – provides background information and describes the purpose and need for the project, project authority, organization of the RMP/EIS, project history, existing management documents, RMP/EIS development, and the public involvement process.
- **Chapter 2, Resource Management Plan and Alternatives** – provides the goals and policies that are proposed to guide future management of Contra Loma for the next 25 years, and identifies the potential resource management opportunities and constraints for resolving the planning issues addressed in the RMP. Chapter 2 presents three alternatives that provide a range of management options. Each RMP alternative was evaluated.
- **Chapter 3, Affected Environment** – provides information about the existing regional and local conditions for each environmental topic area being evaluated.
- **Chapter 4, Environmental Consequences** – provides a programmatic analysis of environmental effects for each environmental topic area.
- **Chapter 5, Consultation and Coordination** – identifies the agencies, organizations, and stakeholders with which Reclamation has consulted or coordinated during preparation of the RMP/EIS.
- **Chapter 6, List of Preparers** – identifies the agency and consulting staff members who have prepared or contributed to the RMP/EIS.
- **Chapter 7, References** – contains bibliographic information about each document, website, or individual that serves as a reference source for this document.
- **Chapter 8, Index** – list and directory of specific information in the RMP/EIS.
- **Appendices** – included to provide more detailed technical and regulatory information.

1.6 Existing Regulatory and Management Guidance

Currently, management guidance for Contra Loma is derived from Federal, State, and local laws, regulations, policies, and planning documents. A complete list of Federal regulations applicable to the RMP is found in Appendix C. The primary land use and management documents currently applicable to Contra Loma are as follows:

- **Reclamation Manual** – The Reclamation Manual (RCD TRMR-15) consists of a series of Policies, Directives, and Standards and Delegations of Authority, which collectively assign program responsibility and authority and document Reclamation-wide methods of carrying out its responsibilities. All requirements in the Reclamation Manual are mandatory and constitute official Reclamation management direction. The Reclamation Manual also serves as a link to Reclamation’s supplements to the DOI and government-wide regulations, such as the Federal Acquisition Regulations.
- **Management agreement between Reclamation and EBRPD** – The management agreement between Reclamation and EBRPD (Bureau of Reclamation 1972) transfers responsibility from Reclamation to EBRPD for development, construction, administration, operation, and maintenance of public recreation, recreation facilities, and other purposes within Contra Loma, including the water surface area of the reservoir. The management agreement was amended in 1977, 1981, and 1989. While the RMP process is on-going, Reclamation issued EBRPD an extension of the management agreement.
- **Master Plan** – EBRPD’s Master Plan 2013 (East Bay Regional Park District 2013) defines EBRPD’s vision, mission, and priorities for the future. The Master Plan establishes policies for conserving natural and cultural resources; providing recreational opportunities; and balancing the distribution, acquisition, protection, restoration, management, and development of the regional parks. It also describes the future physical growth and expansion of EBRPD.
- **Contra Loma Regional Park Reservoir Area Management Plan** – The RAMP (East Bay Regional Park District 1975a) is designed to guide EBRPD in administering, operating, planning, and developing Contra Loma. The RAMP was prepared in accordance with the 1972 management agreement between Reclamation and EBRPD.
- **Contra Loma Regional Park Land Use-Development Plan** – The purpose of the Land Use-Development Plan (LUDP; East Bay Regional Park District 1975b) is to direct future park development by outlining expected levels of use and development, delineating general park character, planning access and circulation, and locating areas of preserves and recreational development.
- **City of Antioch General Plan** – The City’s General Plan (City of Antioch 2003) is a comprehensive strategy for achieving the community’s goals and enhancing the quality of life for the City’s residents. As the City’s lead policy document, the General Plan outlines how the City will manage its future and how the City expects to coordinate its activities with those of other agencies. Planning directives are provided in the form of goals, objectives, and policies.

1.7 Public Involvement

Public involvement is a critical element in developing the RMP. Reclamation's goal is to gain input from a cross section of the user public and stakeholders, including the current local managing partners. Reclamation held a public scoping meeting and two public workshops in 2010 and 2011 to solicit issues and concerns and to develop alternatives to be analyzed in the RMP. In addition, Reclamation developed a mailing list (and accompanying database), produced and distributed newsletters, and provided notices and project updates on Reclamation's Contra Loma RMP/EIS website and the EBRPD website.

A Notice of Intent to prepare the RMP/EIS was published in the *Federal Register* on November 12, 2009. Reclamation held a scoping meeting for the Contra Loma RMP/EIS on February 8, 2010, at the Nick Rodriguez Community Center in Antioch. Reclamation held a public workshop on August 4, 2010, at Sutter Elementary School in Antioch to seek ideas, concerns, and comments to inform development of the RMP/EIS. Reclamation also solicited written scoping comments between February 8 and 22, 2010, and solicited written comments from August 4 through 31, 2010. On March 3, 2011, Reclamation held a public workshop at Prewett Family Park & Community Center in Antioch to solicit comments on the conceptual draft packages of RMP actions and alternatives.

Attendance at the three public meetings/workshops totaled 59 participants: 20 people attended the scoping meeting, 26 attended the August 4, 2010 workshop, and 13 people attended the March 3, 2011 workshop. Some participants attended more than one meeting or workshop. Some attendees at the scoping meeting and the March 3, 2011 workshop provided verbal comments, which were recorded by hand and are summarized in Appendix D. Written comments were received from the following public agencies and elected officials:

- The Office of U.S. Congressman John Garamendi
- The Office of Contra Costa County (County) Supervisor Federal D. Glover
- EBRPD
- CCWD
- Antioch City Council
- Antioch Parks and Recreation Commission
- City of Antioch Recreation Department

Comments were received from the following nongovernmental organizations or representatives of such organizations:

- Delta Youth Soccer League
- Turf and Track Group
- St. Anthony Church

- Village Community Resource Center

Reclamation prepared an Issues and Opportunities Report summarizing the public comments and issues raised during the scoping meeting and the first public workshop in August 2010. The report is included as Appendix A and provides a summary of written and verbal comments provided by agencies, organizations, and individuals (Bureau of Reclamation 2010). A summary of the March 2011 workshop was also prepared and is included as Appendix D.

Reclamation held a public meeting on May 19, 2014, to receive public comments on the Draft RMP/EIS. Comments received and responses to public comments are included in Appendix G.

1.8 RMP/EIS Development

As described above, Reclamation prepared an Issues and Opportunities Report (Appendix A) which provided an overview of the facilities and the natural and cultural resources to be addressed in the RMP/EIS. The report also identified potential issues, constraints, and opportunities relating to management of these resources and summarized input provided to Reclamation by the current local managing partners, stakeholders, and the public early in the RMP/EIS development process on topics and issues of concern.

In addition, Reclamation drafted planning criteria that helped establish the sideboards and parameters for development of the RMP/EIS and helped highlight major areas of concern and management objectives for the RMP. From this, Reclamation drafted three conceptual RMP alternatives. Reclamation then sought technical comments from EBRPD, the City, and CCWD (i.e., the current managing partners) on the draft planning criteria, draft management objectives, draft goals, and the conceptual draft alternatives before presenting them to the public at a workshop in March 2011. After receiving comments from the managing partners and the public, Reclamation developed the draft alternatives in more detail. The conceptual draft alternatives are attached to this EIS as Appendix E.

These initial documents assisted Reclamation in identifying issues of concern and developing the Draft RMP/EIS.

1.9 Programmatic Environmental Impact Analysis

RMPs are programmatic, planning-level documents that provide management direction at a broad scale and are not intended to provide project-level detail of future management actions or projects. For this reason, the EIS evaluates the environmental impacts of each RMP alternative in a programmatic manner. Any future actions carried out under the purview of the RMP beyond the programmatic analysis presented in the EIS would be subject to project-level NEPA analysis and compliance.

Chapter 2. Resource Management Plan and Alternatives

As described in the RMP Guidebook (Bureau of Reclamation 2003), an RMP is a document that provides management direction consistent with authorized Reclamation project purposes while recognizing the rights and interests of existing contracts, legislation, and other entities for an identified land area that is under the jurisdiction of Reclamation. An RMP identifies measures necessary to achieve a desired future condition of the resources within a management unit covered by the RMP. Management direction is set forth in the form of goals and objectives that provide overall guidance for the RMP to be implemented by Reclamation, either directly or through its management agreement(s). The management direction can be general in nature covering the entire management unit (area wide), or unique to a portion of the management unit (site specific).

2.1 Section Organization

This chapter first describes the planning process and planning influences that led to the formulation of alternatives for the Contra Loma RMP. Then the No Action Alternative and two action alternatives developed for this RMP are identified and described (Sections 2.6 through 2.8).

The planning process for the Contra Loma RMP involves the integration of issues, opportunities and constraints, management actions, and management zones. As discussed in Chapter 1, the RMP follows the guidance of Federal planning mandates by considering management actions that balance recreation opportunities with natural and cultural resource stewardship. These planning process elements are discussed in Section 2.2.

The goals identified in Section 2.3 will provide overall guidance for the RMP management direction and actions. A variety of planning influences were considered in the planning process that lead to the formulation of alternatives. These influences include public input (addressed in Section 1.7), opportunities and constraints (addressed in Section 2.2.3), and the roles of Reclamation and the managing partner(s) (addressed in Section 2.4.3). The management actions common to all the RMP alternatives are described in Section 2.5 and the three RMP alternatives are described in Sections 2.6 through 2.8.

2.2 Planning Process

The following are the basic elements of the RMP planning process:

- define the overall goals and objectives,
- describe the resource categories that group the issues,

- identify the issues, opportunities, and constraints,
- determine management actions to address the issues, and
- define the management zones for Contra Loma.

More specifically, the development of the RMP alternatives followed the RMP planning process steps outlined in Reclamation's RMP Guidebook. The steps in this process are described below.

- **Step 1: Identify Issues.** This step involved the identification of various resource and management issues at Contra Loma. These issues might involve resource problems needing corrections or adjustment or resources needing special protection. Management issues might also include unrealized opportunities, unresolved conflicts or problems, or development of new programs to address changing regulations or values that may be impaired.
- **Step 2: Identify Opportunities and Constraints.** This step involved the identification of opportunities and constraints at Contra Loma. Opportunities can include resources, programs, and management frameworks that can facilitate the implementation of the RMP. Constraints can include laws, regulations, budgets, staffing, and environmental limitations. Reclamation conducted a public involvement program early in the Contra Loma RMP planning process to seek input from the public, EBRPD, the City, CCWD, and resource agencies about issues, opportunities, and constraints.
- **Step 3: Develop RMP Goals.** Reclamation developed RMP goals based on the issues identified in Step 1 and in consideration of the purpose of an RMP. These goals represent broad statements that provide overall guidance to the management direction and actions in the RMP alternatives. The management direction embodies an overall approach or strategy for managing resources and recreation.
- **Step 4: Planning Criteria.** Reclamation developed planning criteria, which are short and concise statements that establish the "sideboards" and parameters for the development of the RMP alternatives. These planning principals were then used in formulating and selecting management actions to be considered in the RMP alternatives.
- **Step 5: Gather and Analyze Resource Information.** In this step, Reclamation collected information about the physical, biological, and cultural resources of the Federal property. In addition, information about the recreation and land use was also gathered. These data were compiled into a Geographic Information System (GIS) to facilitate a display and analysis of multidisciplinary considerations. This step involved literature review, field studies, and coordination with EBRPD, City, and CCWD staff.
- **Step 6: Formulate RMP Alternatives.** This step involved the formulation of multiple RMP alternatives. Three alternatives were developed that provide a range of varying degrees of resource protection and recreational opportunities. The alternatives were designed to meet the overall RMP goals, although the extent to which they meet each goal varies.

- **Step 7: Conduct Environmental Impact Assessment.** Adoption of an RMP represents a Federal discretionary action subject to NEPA's environmental review requirements. Under this step, Reclamation evaluates the environmental impacts of the RMP alternatives in a comparative manner. The results provide the basis for Reclamation to identify tradeoffs amongst various environmental resources, and between recreation and environmental resources.
- **Step 8: Issue Draft RMP and EIS for Public Review.** Reclamation is currently in this step of the planning process. This Draft RMP/EIS is being circulated to the public to provide an opportunity to review the Draft RMP alternatives, including a comparison of how well they meet the RMP goals and their environmental impacts.
- **Step 9: Prepare Final RMP and EIS.** After a review and consideration of public comments, Reclamation will prepare a Final RMP/EIS that addresses any comments received on the RMP/EIS and identify Reclamation's Preferred Alternative. The Final RMP/EIS will be circulated to the public for 30-days.
- **Step 10: Prepare Record of Decision.** A Record of Decision will also be prepared based on the Final EIS that identifies Reclamation's decision regarding the RMP and the basis for that decision.
- **Step 11: Implement the RMP.** This step involves implementing the RMP actions in accordance with the guidance described in the RMP. Implementing the actions identified in the RMP will be the responsibility of the local managing partner(s), although actions not covered in the RMP/EIS will require Reclamation approval and additional environmental review.

2.2.1 Primary Issue Areas

Reclamation conducted public outreach in 2010 and 2011 to explain the scope and objectives of the Contra Loma RMP and to encourage comments from the public and stakeholders, including EBRPD, the City, and CCWD, about the issues that should be addressed in the RMP and evaluated in the EIS. During that time, Reclamation held a public scoping meeting, two public workshops, and solicited written public and stakeholder comments as described in Section 1.7. Based on the comments received and its own review of the issues, Reclamation identified the following primary issue areas to be addressed in the RMP:

- Recreational facilities and opportunities at Contra Loma Regional Park
- Infrastructure and administrative facilities at Contra Loma Regional Park
- Facility management at Contra Loma Regional Park
- Recreational facilities and opportunities at the Community Park
- Facility management at the Community Park
- Reservoir management and reservoir water quality
- Pasture vegetation management at the Regional Park

Reclamation also identified the following environmental and planning topics to be addressed in the EIS:

- Land use and management
- Recreation
- Visitor access and circulation
- Utilities
- Public health and safety
- Water resources
- Vegetation
- Wildlife
- Fisheries
- Geology and soils
- Climate and air quality
- Noise
- Visual resources
- Hazards
- Cultural resources
- Socioeconomics
- Environmental justice

2.2.2 Planning Criteria

Reclamation has drafted the following planning criteria for the Contra Loma RMP. Each RMP alternative must be consistent with all of the following planning criteria:

- Protect the water supply and water quality of the reservoir.
- Protect and enhance natural resources.
- Manage cultural resources.
- Recognize community concerns and values about Contra Loma.
- Encourage a range of recreational uses that accommodate public demand within the parameters of the Water and Land Recreation Opportunity Spectrum (WALROS) setting.
- Ensure compliance with Federal policies, laws, and regulations.

- Protect public health and safety.
- Limit alternatives to those with reasonable certainty that:
 - the management actions can be implemented within the 25-year planning period;
 - Reclamation or managing partner(s) can fund the management actions; and
 - Reclamation or managing partner(s) are committed to seeking financial, program, and staffing resources necessary to implement the management actions.

2.2.3 Opportunities and Constraints

During the planning process, Reclamation identified potential resource management opportunities and constraints for resolving the operational, natural resources management, land use, cultural, recreational, and socioeconomic issues that fall under the primary issue areas listed in Section 2.2.1 above.

Opportunities

The primary opportunities at Contra Loma include the following:

- Available space could be used to expand recreational and administrative facilities in the vicinity of the reservoir.
- Existing sports fields, including the two soccer fields, could be reconfigured to accommodate additional types of sports.
- Relatively underutilized shoreline area.
- Availability of fishing stocks
- Fish habitat could be created or modified.
- Availability of existing utility services at park boundary.
- The expansive natural areas might be suitable for additional quail habitat restoration.
- Opportunities for interpretation and education.
- Natural resources such as plants of importance to local Native American groups could be promoted as areas of interest to the general public through the use of signs, or could be protected and made available for practitioners of traditional tribal practices.

Constraints

The primary constraints at Contra Loma include the following:

- Compliance with applicable laws, regulations, policies, WALROS settings and local zoning.

- Compliance with existing contracts/agreements with CCWD about reservoir operations.
- Protection and maintenance of the water quality of the reservoir.
- Protection of the reservoir's water supply function.
- Avoidance/protection of special-status species.
- Avoidance/protection of existing California quail habitat enhancement and restoration projects.
- Avoidance/protection of wetland and riparian habitat.
- Steep slopes across much of the recreation area that inhibit construction of structures and roads.
- Clay soils having high degrees of shrink-swell that can be susceptible to erosion and slumping.
- Clay soils that have high runoff potential.
- Lighting, noise, traffic, and parking compatibility with nearby land uses.
- Consistency with the rural open space character of a regional park.
- Management of cultural resources.
- Funding availability for implementing management actions by local managing partner(s).
- Potential language barriers to non-English speaking park users.

2.2.4 Management Zones

Reclamation uses WALROS as a management tool for classifying water and land use zones in terms of recreational experience. In 2009, the WALROS system replaced its predecessor, the Water Recreation Opportunity Spectrum (WROS), which placed more emphasis on water-based recreation than land-based recreation. The WALROS system is discussed in more detail in Section 3.2 (Recreation).

Two distinct management zones based on the WROS system have been identified for Contra Loma Reservoir. The southern half of the reservoir is classified as Suburban (S) and the northern half of the reservoir is classified as Rural Developed (RD) (Figure 1-2). These zones are similar, though not identical, to the S and RD zones under the WALROS system. None of the RMP alternatives include adjustments to the WROS classification zones. Therefore, the management actions proposed for the RMP alternatives are intended to be consistent with the existing WROS classifications.

2.3 Goals

Reclamation has developed the following primary goals of the Contra Loma RMP to provide overall guidance for the RMP management direction and actions. The degree to which the RMP alternatives meet these goals are described in Sections 2.6 through 2.8 below.

- Promote responsible stewardship of Federal land and water resources for the public benefit.
- Protect and maintain water quality.
- Protect and enhance the natural resources at Contra Loma.
- Manage the cultural resources at Contra Loma.
- Protect public health and safety
- Protect and maintain existing recreational uses and educational opportunities.
- Provide for enhanced or new recreational uses and facilities that are compatible with other RMP goals.
- Maintain the social and natural setting of Contra Loma as described in the WALROS.
- Promote continued compatibility with nearby land uses.

2.4 Formulation of Alternatives

2.4.1 Introduction

This section briefly describes the RMP alternatives designed to address the planning issues, opportunities, and constraints at Contra Loma and Reclamation's process for identifying the alternatives. This section also describes the roles of Reclamation and the local managing partner(s), and describes Reclamation's approach for implementing and amending the RMP after its adoption.

2.4.2 Alternatives Development

Reclamation's first step in developing the RMP alternatives included public outreach to seek the opinions of the public and the current local managing partners about Contra Loma's existing recreational uses and facilities and to identify possible management actions and opportunities to improve the management of resources at Contra Loma. After considering the input received, Reclamation began developing management actions and screening them against the RMP goals and planning criteria to ensure consistency. Reclamation then grouped the management actions into sets that represent a range of alternatives that address the varied interests pertaining to Contra Loma. Reclamation then circulated the conceptual draft alternatives to the public for review and comment. The process resulted in the development of the following three alternatives:

- **No Action (Alternative 1 – Status Quo)** This alternative manages land and activities with the continuation of current management practice.
- **Enhanced Recreation and Facilities (Alternative 2)** This alternative enhances recreation opportunities and existing facilities, but limits expansion of recreation and facilities to minimize changes to park character and adverse effects on natural resources.
- **Expanded Recreation and Facilities (Alternative 3)** This alternative emphasizes expanded recreation opportunities and facilities and has been identified as Reclamation's Preferred Alternative.

2.4.3 Roles of Reclamation and Local Managing Partner(s)

Reclamation intends to negotiate a long-term agreement with one or more local managing partner(s) for Contra Loma. The local managing partner(s) will have overall responsibility for managing, operating, and maintaining public access, recreation, infrastructure, public services (including public safety and law enforcement), and natural resources in Contra Loma, excluding the dam. Responsibilities for dam and reservoir operations are subject to a separate contract between Reclamation and CCWD; therefore, these operations would not be affected by the RMP. The RMP will provide the overall resource and recreation management direction and framework for Contra Loma. It will be a guidance document for the local managing partner(s) for day-to-day operations and long-range planning.

Reclamation will have overall responsibility for ensuring that all actions in Contra Loma by Reclamation and its managing partner(s) are consistent with the RMP. The managing partner(s) must ensure that its actions in managing Contra Loma and associated land and natural resources, recreation facilities, and infrastructure, are consistent with the RMP.

The agreement with the managing partner(s) will require them to use the RMP as the primary land use, natural resource, recreation, and facility management guidance document to be followed during the management of Contra Loma. A long term management agreement will recognize the RMP as a document that can effectively assist Reclamation and the managing partner(s) in planning, decision-making, and implementing actions and activities affecting the resources in Contra Loma. The purpose of the RMP is to chart the desired future condition for the area in question. The RMP will be implemented through recommendations for specific management actions and improvement projects.

If an agreement cannot be reached with any managing partner(s), Reclamation will manage Contra Loma and its associated land and natural resources, recreation facilities, and infrastructure in a manner consistent with the RMP.

Management Actions and Projects

The RMP includes recommendations for various resource management actions and facility improvement projects. These are specific actions that may be implemented at Contra Loma to meet the RMP goals. These management actions and projects are defined at a conceptual or programmatic level in the RMP. More detailed descriptions of the actions and projects will be developed during the planning horizon of the RMP. The responsibility for funding, designing,

and implementing (or constructing) the management actions and improvement projects will be specified in financial assistance agreements with the local managing partner(s).

It should be noted that the RMP will require the local managing partner(s) to implement some of the management actions, but not all of the actions. Required management actions are indicated by the term “will,” whereas optional management actions are indicated by the term “may.” The local managing partner(s) will have the option of implementing the optional management actions and improvements based on considerations of the following factors: (1) sufficient public demand, (2) sufficient staffing and funding to manage any new or modified facilities in accordance with the RMP, and (3) potential for increased public benefits and use. New facilities or activities allowed under the RMP may also be discontinued in the future at the discretion of the local managing partner(s) if demand decreases, the activity is not economically viable, new security or safety considerations arise, and/or unforeseen significant environmental impacts occur that are irreparable or cannot be effectively mitigated.

Should the local managing partner(s) choose to implement management actions that involve new or expanded recreational activities or facilities identified in the RMP, such as new fishing docks in the reservoir or new sewer lines to connect the Regional Park sanitary facilities to the City’s wastewater treatment system, they would be required to conduct an appropriate site specific environmental review. The local managing partner(s) would need to receive Reclamation approval and project-specific environmental documentation would be prepared to meet NEPA and other Federal environmental requirements. In addition, local managing partner(s) will need to satisfy California Environmental Quality Act (CEQA) requirements.

Amendments to the RMP

The RMP can be amended by Reclamation, or by the managing partner(s) with Reclamation’s approval, if the need arises. Conditions that may require an amendment could include, but are not limited to, (1) changed environmental conditions; (2) unforeseen events; (3) changes in policies and land use plans that have been determined to be infeasible, impractical, or have undesirable consequences; (4) change in applicable laws and regulations; (5) changes in visitor needs or demands, including recreation; (6) changes needed to accommodate operation and management of the reservoir; or (7) changes to accommodate projects or activities that were not included in the RMP, provided they meet the RMP planning criteria. Reclamation would initiate the RMP amendment process, which would include appropriate NEPA environmental review tiered from this EIS and may include public meetings if warranted.

2.4.4 Concurrent Projects by the Current Local Managing Partners

During the course of the Contra Loma RMP process, Reclamation received proposals from the current local managing partners for improvements within the Regional and Community Park.

In September 2012, Reclamation completed an Environmental Assessment for the City’s proposed modernizations of the two multi-use sports fields in the eastern portion of the Community Park, identified as sports fields 4 and 5 on Figure 1-3. Reclamation subsequently approved the project. The improvements include removing the grass from the surface of the sports fields, constructing the base for the new synthetic turf fields, and installing furnishings, perimeter fencing, concrete paving, an electrical/storage building, sports field lighting, perimeter irrigation and landscaping, drainage structures, pavement, and new synthetic turf. The City has

undertaken these improvements. This project is not proposed in the RMP and is, therefore, not evaluated in the EIS as such. Rather, this project is considered in the cumulative impacts analysis as an action with the potential to cumulatively affect the resources discussed in this EIS.

In September 2013, EBRPD requested funding and approval from Reclamation for upgrades to the restroom and fish cleaning facility located in the boat launch marina. Reclamation is currently preparing site-specific environmental documentation for this proposal. EBRPD is also seeking grant funding from the California Department of Boating and Waterways to implement several additional improvements to the Regional Park's boat launch area and fishing docks (see Figure 1-2). The proposed improvements include reconfiguring and repaving the boat launch parking lot, reconstructing the boat ramp, replacing the existing boat dock with a new articulated dock, building a new Americans with Disabilities Act (ADA)-compliant picnic site near the boat launch, rehabilitating the existing ADA-compliant fishing pier, rehabilitating the existing west side fishing pier, building a new east side fishing pier and restroom with ADA-compliant parking, installing concrete trails around the boat launch area, replacing the existing drinking fountains, and installing additional landscaping. Some of the new or rehabilitated docks would require new pilings. Management Action 44 would allow for these improvements. At this time, Reclamation has not received a request for approval of these additional improvements. Should a request be received, Reclamation would conduct site-specific environmental analysis prior to approval.

2.5 Common Management Actions for All Alternatives

Each alternative has different components and management actions that would achieve the objectives of that alternative. However, several components and management actions are common to all alternatives. These are consistent with the current resource and recreation management direction and practices at Contra Loma and are listed in this section. The remaining management actions are listed as they apply to each alternative in Section 2.6 through 2.8.

2.5.1 Facilities Management at Contra Loma Regional Park

Litter and Waste

MA 1: The local managing partners(s) for the Regional Park will continue implementing a litter and waste reduction program to effectively meet demand. Elements of this program will include staff outreach and public education, routine litter and nuisance pickup and removal, litter removal along the shoreline and within the reservoir, and availability of sufficient litter cans and dog feces bag stations. The program may also include organization of local volunteers to assist in cleanup. Elements of this program may be modified or expanded as necessary.

Other Facility Management

MA 2: The local managing partners(s) for the Regional Park will perform ongoing routine maintenance activities and repairs of the existing facilities that would not involve ground-disturbance or otherwise have the potential to cause significant environmental effects. These are the same activities that

have been and are being implemented by EBRPD under its existing management agreements. Examples of ongoing maintenance activities include mowing of the grassland areas to reduce fire hazard; mowing, trimming, and irrigation of vegetation within the landscaped areas; painting and repair of existing buildings and structures; pavement repair; striping of roads and parking lots; installation, replacement, and repair of car stops in parking areas; sign maintenance; cleaning and repair of dock surfaces; repair of dock floats; and pump out of waste from the restrooms and fish cleaning station.

- MA 3: The local managing partners(s) for the Regional Park will support and complement CCWD's programs to prevent introduction of zebra and quagga mussels into the reservoir. Management actions may include a continuation of pre-launch boat inspections by trained staff and the continued prohibition against wet boats or gear entering the reservoir. Elements of this program may be modified or expanded as necessary to improve the program's effectiveness in preventing mussel infestation and/or to include other invasive aquatic pest species (e.g., milfoil) that pose a risk to the dam or to the reservoir's water quality or recreational attributes.
- MA 4: The local managing partners(s) for the Regional Park will prepare non-aquatic pesticide management plans and integrated pest management plans for weeds and other pests (e.g., rodents, wasps). The plans will be consistent with those to be prepared for the Community Park, will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.
- MA 5: The local managing partners(s) for the Regional Park will develop and implement a plan(s) for fire and emergency preparedness and to provide public safety with police and fire services. These services may be operated by the local managing partners(s) or the services may be contracted with other local agencies that provide police or fire services. Management actions may include continued operation of the existing police substation and fire station at the Regional Park and will include continued provision of lifeguard services at the swim lagoon with emergency response capability at Contra Loma reservoir. Management actions may also include bicycle patrols of the trail system. The plan(s) will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.
- MA 6: The local managing partners(s) for the Regional Park will be responsible for performing management activities, such as collection of entrance fees, regulation of park uses (e.g., reservoir recreation), opening and closing park gates for daily operation, administration of concession contracts, issuance of permits for special events, and human waste management.

- MA 7: The local managing partners(s) for the Regional Park will prepare a grazing management plan specifically for Contra Loma to address current and future grazing practices within the Regional Park. The grazing management plan may incorporate applicable components of the Wildland Management Policies and Guidelines document prepared by the current managing partner for the Regional Park (East Bay Regional Park District 2001). The plan will describe all grazing-related maintenance activities to be carried out by the local managing partners(s) for the Regional Park. The plan(s) will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.
- MA 8: The local managing partners(s) for the Regional Park will prepare a hazardous waste/spill prevention plan. The plan will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.

2.5.2 Facilities Management at Antioch Community Park

Litter, Waste, and Graffiti

- MA 9: The local managing partners(s) for the Community Park will implement a litter, waste, and graffiti reduction program to effectively meet demand. Elements of this program may include staff outreach and public education, routine litter pickup and removal, availability of sufficient litter cans and dog feces bag stations, and prompt graffiti removal. The program may also include organization of local volunteers to assist in cleanup. Elements of this program may be modified or expanded as necessary.

Public Safety

- MA 10: The local managing partners(s) for the Community Park may be required to implement routine police patrols or other operational measures needed to provide sufficient security.
- MA 11: The local managing partners(s) for the Community Park will develop and implement a plan(s) for fire and emergency preparedness and to provide public safety with police and fire services. These services may be operated by the local managing partners(s) or the services may be contracted with other local agencies that provide police or fire services. The plan(s) will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.

Other Facility Management

- MA 12: The local managing partners(s) for the Community Park will perform ongoing routine maintenance activities and repairs of the existing facilities that would not involve ground-disturbance or otherwise have the potential to cause significant environmental effects. These are the same activities that have been and are being implemented by the City under its existing license in addition to routine maintenance activities for the sports field

improvements performed in 2013. Examples of ongoing maintenance activities include mowing, trimming, irrigation, aeration, fertilization, and replacement of vegetation within the landscaped areas, cleanout and repair of storm drain facilities, maintenance of sports fields and restrooms, pest control (e.g., gophers, snails), painting, and damage repair. The local managing partners(s) for the Community Park will prepare non-aquatic pesticide management plans and integrated pest management plans for weeds and other pests (e.g., rodents, wasps). The plans will be consistent with those to be prepared for the Regional Park. The plan(s) will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.

MA 13: The local managing partners(s) for the Community Park will be responsible for performing management activities, such as regulation of park uses, opening and closing park gates for daily operation, administration of concession stands, issuance of permits for use of the group picnic area, implementing a reservation system for use of the sports fields, and human waste management.

MA 14: The local managing partners(s) for the Community Park will prepare a hazardous waste/spill prevention plan. The plan will comply with Reclamation Manual directives, standards, and policies and will require Reclamation approval before implementation.

2.5.3 Recreational Facilities and Opportunities at Contra Loma Regional Park

Swim Lagoon

MA 15: The local managing partners(s) for the Regional Park will operate and maintain the swim lagoon and all the associated facilities (e.g., ADA-compliant pool lift, showers, changing rooms etc.) for public recreation, including the grass area adjacent to the lagoon and within the lagoon area fence.

Fishing

MA 16: The local managing partners(s) for the Regional Park will provide a recreational fishing program in the reservoir and to manage fish populations through fish planting (i.e., stocking) programs. Management activities may include monitoring of fish populations and provision of educational information to the public. Management activities may also include catch-and-release practices for certain fish species, tracking of stocking rates and angler permit sales, periodic evaluation and adjustment of stocking rates to maximize angler success and experience, and restrictions on the use of certain live baits.

MA 17: The local managing partners(s) for the Regional Park will enforce State and local fishing regulations in cooperation with the California Department of

Fish and Wildlife, including regulations prohibiting unauthorized fishing (i.e., poaching).

Other Recreation

MA 18: Windsurfing and limited boating use will be allowed on the reservoir in a manner that minimizes body contact with the reservoir to protect the reservoir's domestic water supply from pathogens such as *Cryptosporidium*. Windsurfing and the use of self-bailing kayaks represent the only authorized activities with the potential for limited or indirect body contact with the reservoir. Water quality protection measures will include a requirement for windsurfers and paddlers using self-bailing kayaks to shower before entering the water and to wear wet suits while on the reservoir. Visitors may use kayaks, canoes, and small boats (up to 17 feet) with electric motors only. No gasoline-powered engines will be allowed on the reservoir in order to protect water quality.

MA 19: The existing Regional Park trail system will be operated, managed, and maintained for hiking, equestrian, and bicycle use. Trail maintenance activities may include placing gravel and rocks on fire trails to maintain all-weather access for emergency vehicles, annual grading of fire roads and trails with machinery and hand tools to maintain the quality of the trail surface and maintain proper drainage, trimming and mowing of vegetation and spray application of herbicides to maintain a clear path for trail users, and maintenance and repair of existing retaining walls and culverts, and installation of wattles and straw netting to control erosion when needed. Specific herbicides will be identified on a project-by-project basis in coordination with Reclamation.

MA 20: The Regional Park will provide opportunities for wildlife viewing, photography, and painting.

MA 21: The Regional Park may continue to provide recreation programs such as low-income youth swim programs, junior lifeguard programs, Girl Scout and Boy Scout events, fishing derbies, outdoor and environmental education experiences for children, cross-country running meets, fundraiser events, youth day camps, and similar programs.

2.5.4 Natural Resource Management and Protection

MA 22: The local managing partner(s) for the Regional Park may perform periodic biological surveys to inventory and assess special-status plant and wildlife species.

MA 23: The local managing partner(s) for the Regional Park may develop programs to protect special-status species likely to occur at the park. Such species may include burrowing owl, loggerhead shrike, California tiger salamander, San Joaquin kit fox, tri-colored blackbird, white-tailed kite, and stinkbells.

MA 24: All operations and maintenance activities will be consistent with Federal and state laws and regulations that govern the protection of natural, cultural, and paleontological resources within Contra Loma.

MA 25: All operations and maintenance activities within the Regional Park may endeavor to be consistent with existing habitat restoration projects.

2.6 Management Actions for No Action Alternative (Alternative 1 - Status Quo)

2.6.1 Objective

The objective of this alternative is to continue the current resource and recreation management direction and practices at Contra Loma.

2.6.2 Description

Under this alternative, the current resource and recreation management direction and practices at Contra Loma would continue unchanged, and would be generally consistent with EBRPD's current RAMP (East Bay Regional Park District 1975a) the Contra Loma Regional Park LUDP (East Bay Regional Park District 1975b), the current management agreement between Reclamation and EBRPD, the license agreement between EBRPD and the City, and the EBRPD land use plans pertaining to Contra Loma. Some features of the RAMP, however, would not be implemented. For example, the Community Park is now located where the RAMP and LUDP had envisioned a day camp recreation zone. Therefore, the Day Camp recreation zone would not be implemented under the No Action Alternative. Also, the RAMP and LUDP had envisioned a picnic meadow cluster to the east of the reservoir that has not yet been built and might not be built under this alternative.

The local managing partner(s) would implement and manage the administrative and operational activities listed in Section 2.5 and Appendix B. The managing partner(s) would implement many of these activities, including those that may require permits or environmental review under NEPA or CEQA or authorization by Reclamation or CCWD. This alternative addresses certain public comments requesting no further substantive change in management direction or intensity be made at Contra Loma. The No Action Alternative provides the appropriate basis by which all other alternatives can be compared. It meets all the primary goals of the Contra Loma RMP except for provision of enhanced or new recreational uses and facilities.

2.7 Management Actions for Enhanced Recreation and Facilities (Alternative 2)

2.7.1 Objective

The objective of this alternative is to enhance current recreational uses and facilities at Contra Loma to fulfill the evolving needs of the public who recreate at Contra Loma and to implement several basic infrastructure improvements while minimizing changes to Contra Loma's recreation setting and adverse effects on natural resources.

2.7.2 Description

Under this alternative, the management direction would be shifted toward enhancement of current recreational uses and facilities. This alternative includes management actions to enhance, replace, or upgrade existing recreational uses and facilities and installation of new facilities to expand or complement existing uses and facilities. Examples include upgrades to restrooms, the swim lagoon, fishing piers, the trail system, the boat launch, and administrative buildings. Examples also include new facilities such as additional restrooms, sewer lines, picnic sites, parking areas, and habitat restoration activities. Alternative 2 involves no major expansion of recreational facilities. This alternative also includes boundary adjustments between the Regional Park and the Community Park.

2.7.3 Management Actions

Infrastructure Improvements at Contra Loma Regional Park

Restrooms The restrooms at the Regional Park office and the restrooms and showers near the swim lagoon are connected to the City's sewer and wastewater treatment system. The remaining restrooms are portable chemical toilets. According to EBRPD staff, the chemical toilets are not sufficient for the current level of use. Under this alternative the portable restroom facilities would be upgraded to permanent restrooms and additional restrooms would be built to accommodate user demand.

MA 26: The existing portable chemical toilets may be replaced with permanent restrooms served by vault systems, septic tanks that are periodically pumped, or the City's sewer system. Additional restrooms may be built to accommodate existing and future user needs. New permanent restroom facilities may be built near the fishing dock on the northwest shore of the reservoir and near the parking lot on the east shore. All of the new restroom facilities would be ADA-compliant. Leach fields will not be allowed.

MA 27: New or upgraded sewer lines may be built to connect future permanent restrooms to the City's sewer and wastewater system.

Buildings and Structures This alternative would allow for expansion or renovation of some existing buildings and structures, and construction of new facilities for the purpose of improving Regional Park operations. One new facility would be a residence for park staff to replace the former park residence that was converted to a police substation for the current local managing partner.

MA 28: The existing park offices, the police substation, the secondary storage yard, and the buildings near the swim lagoon may be expanded or renovated to better provide for public service and safety.

MA 29: Structures and facilities for classes, including swim and safety lessons, may be built near the swim lagoon.

MA 30: A new park residence may be built near the park office to replace the former park residence that was converted to a police substation for the current local managing partner.

- MA 31: The gravel/overflow parking area may be expanded and some existing gravel parking areas may be paved.
- MA 32: A fueling station and fuel storage tank may be built in or near the service yard and materials storage area located 500 feet west of the park office. The fueling station would be used for Regional Park vehicles and equipment and for public safety officers. Only staff trained to safely use the station would be allowed to operate it, thereby reducing the potential for spills caused by improper use. This facility must be designed with fuel containment devices to protect public health and safety and to prevent any spilled fuel from reaching the natural ground surface (i.e., soil), entering the reservoir, impairing surface water or groundwater quality, or creating an environmental hazard. This facility must also be designed and operated in a manner that minimizes its impact on air quality. This facility may only be built and operated in compliance with applicable federal and federally-mandated laws, regulations, and permits. As a condition of Reclamation's approval of this facility, the local managing partner(s) will ensure that fire, public safety, spill prevention, and decommissioning plans are prepared or amended to address operation and eventual decommissioning of this facility.

Other Infrastructure

This alternative would include other infrastructure improvements at the Regional Park.

- MA 33: A radio communication tower may be built to improve communications for the local managing partner(s) and public service providers. This tower must be sited and designed in a manner that minimizes impacts to the Regional Park's aesthetic character.
- MA 34: Water infrastructure (e.g., water lines, spigots, pumps, troughs) may be built to support new, expanded, or renovated facilities and livestock grazing.
- MA 35: A storm water retention basin may be built to improve the quality of water carried by the Regional Park's storm drain system before it reaches the reservoir.
- MA 36: Future improvements at the Regional Park must comply with ADA accessibility requirements. The local managing partner(s) may implement an ADA facility retrofit program that includes replacing, retrofitting, and restructuring many of the park facilities to meet current ADA requirements. Some improvements would include ground-disturbing activities, such as installation of ADA-compliant water fountains, picnic facilities, and restrooms.
- MA 37: Call boxes and/or security cameras may be installed in the Regional Park if needed for public safety and to protect Regional Park property.
- MA 38: New donation boxes for walk-in users may be installed at key entry locations.

Recreational Facilities and Opportunities at Contra Loma Regional Park

Swim Lagoon This alternative would include some improvements and operational changes at the swim lagoon to improve public safety and enjoyment.

MA 39: A “safe swim” area or splash pad may be built for small children and other physical improvements could be made to the swim lagoon to accommodate public needs. Expansion of the pumping and filtration facility may also be required.

MA 40: More shade structures may be built on the swim lagoon lawn. The new structures would likely be similar to the existing 15’x 15’ umbrella-shaped structures that are cemented into the ground.

MA 41: Benches may be added to the swim lagoon area.

Fishing and Boating The reservoir currently has two fishing docks, one on the south shore and one on the west shore. The fishing docks and the boat launch dock are nearing the end of their designed lifecycle and require repair or reconstruction. The fishing docks float on the reservoir and are unusable (and closed) during large reservoir drawdowns either because the access ramps become too steep for safe passage or because the docks are resting directly on the sloped, exposed lakebed. When the fishing docks are unusable some anglers choose to fish from the boat launch dock, which can cause congestion on the boat dock and interfere with boater access. Also, fishing from the boat dock could pose safety issues for boaters who are using the dock to launch and are not paying attention to nearby anglers casting fish hooks and lures. This alternative would enhance fishing access at the reservoir. Boating is also a popular activity. This alternative includes several improvements at the boat launch area to enhance boating access.

MA 42: Existing fishing docks may be modified or reconstructed to allow safe, continuous fishing use during reservoir drawdowns, and aging fishing docks may be replaced.

MA 43: More fishing docks may be added if needed to accommodate increased demand. Possible locations include the south shore near the boat launch and the east shore which currently has no fishing docks.

MA 44: Several improvements may be implemented at the boat launch area to enhance boating and fishing access. The improvements may include reconfiguring and repaving the parking lot, reconstructing the boat ramp, replacing the existing boat dock with a new articulated dock, building a new ADA-compliant picnic site, rehabilitating the existing ADA-compliant fishing pier, installing concrete trails, replacing the existing drinking fountains, and installing additional landscaping. Some of the new or rehabilitated docks may require new pilings.

MA 45: Fish stocking may be increased from current levels as needed to meet demand.

Trail System The trail system within the Regional Park includes about 0.75 mile of paved trails along the east and south shores of the reservoir and the trails across the dam and along the west shore have a gravel surface. This alternative would include paving the gravel sections of the shoreline trail system to provide all-season surfaces along the entire loop. This alternative would also enhance signage along the trail system.

MA 46: Unpaved portions of the East Shore Trail, the West Shore Trail, and the trail across the dam may be improved to provide paved surfaces along the entire shoreline loop.

MA 47: Additional signs may be posted along the trail system that provide trail names, distances, and direction information.

Other Recreation Many individual and group picnic sites are located along the south shore of the reservoir. All sites include picnic tables and trash cans, and some sites include barbeque grills and water faucets. The picnic sites are very popular on summer and holiday weekends. This alternative would provide additional picnic sites as needed.

MA 48: Additional picnic sites may be constructed where useful and appropriate to meet demand. Potential locations include the south shore of the reservoir where most day use occurs and the east shore, which has parking lots and restrooms but no picnic sites. Additional turf may also be planted if sufficient irrigation water is available.

Placement of New Permanent Facilities

CCWD has expressed interest in a future increase of the reservoir operating level from the current level of 205 feet to the spillway elevation of 211 feet. Some Regional Park facilities are currently located between the 205-foot elevation and the 211-foot elevation. This alternative would include a management action encouraging the managing partner for the Regional Park to minimize the placement of new facilities below the 211 elevation to avoid having to replace such facilities should Reclamation authorize a higher reservoir operating level in the future.

MA 49: The managing partner for the Regional Park is encouraged to minimize placement of new facilities below the 211 elevation (i.e., the spillway elevation) within the watershed of the reservoir to avoid having to replace such facilities should Reclamation authorize a higher reservoir operating level in the future.

Recreational Facilities and Opportunities at Antioch Community Park

Sports Fields The Community Park has five sports fields, as shown on Figure 1-3. The three multi-use sports fields in the western half of the park are used for softball, baseball, football, soccer, and kickball. The southernmost of these fields (labeled as sports field 3 on Figure 1-3) is located adjacent to an intermittent stream and riparian zone. Some members of the public have stated that the field sometimes develops wet, saturated surface conditions that inhibit its utility. This alternative would improve the drainage of sports field 3, if necessary, to enhance its utility during wet conditions.

- MA 50: Drainage for the southernmost sports field in the western half of the Community Park (sports field 3 on Figure 1-3) may be improved in a manner that increases its utility during wet conditions but that minimizes effects on the adjacent riparian habitat caused by placement of fill, removal of vegetation, transport of chemicals and fertilizers, or changes in hydrology.

Boundary Adjustments between Contra Loma Regional Park and Antioch Community Park

The boundary line between the Regional Park and the Community Park would be adjusted to improve land and resource management by the local managing partner(s). Under this alternative, an 8.4-acre portion of the Community Park would be managed as part of the Regional Park. This area is located in the southwest corner of the Community Park, near the reservoir and the Regional Park's recreational facilities (Figure 2-1). This area supports a large stand of valley foothill riparian habitat but includes no recreational facilities. Due to its lack of recreational facilities and its proximity to the Regional Park, this land is better suited for inclusion in the Regional Park.

In addition, 6.6 acres of land at the northeast corner of the Regional Park would no longer be included in the Regional Park (Figure 2-1). A 2.7-acre portion of this land is owned by the U.S. Government and is part of Contra Loma. Due to its distance from the Regional Park's office and recreational facilities, this land is better suited for inclusion in the Community Park than the Regional Park. Therefore, this area would be managed as part of the Community Park instead of the Regional Park. The remaining 3.9 acres of this land is owned by the City and had previously been leased to EBRPD by the City for Regional Park use. Because this 3.9-acre parcel is owned by the City, it is not part of Contra Loma and is not subject to this RMP. The City has the discretion to decide whether to manage its 3.9-acre parcel as part of the Community Park.

- MA 51: The boundary line between the Regional Park and the Community Park may be adjusted as shown in Figure 2-1. Approximately 8.4 acres of land in the southwest corner of the Community Park may be managed as part of the Regional Park. This area is currently fenced on the south, east, and west sides. The local managing partner(s) for the Regional Park may install exclusionary fencing along the north side of this 8.4-acre area to protect the riparian habitat within the area from inadvertent trampling by the public. The local managing partner(s) for the Regional Park may also begin grazing livestock on approximately 3 acres of annual grassland in this area for fire suppression after receiving Reclamation's approval of a grazing management plan. If livestock are grazed in this area, the local managing partner(s) for the Regional Park would install and maintain exclusionary fencing around the riparian habitat and a protective buffer of annual grassland. In addition, 2.7 acres of land in the northeast corner of Contra Loma may be managed as part of the Community Park instead of the Regional Park (Figure 2-1). This area would no longer be grazed if included in the Community Park.



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Figure 2-1
Possible Community/Regional Park Boundary Change (Enhanced Recreation and Facilities Alternative)

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Natural Resource Management and Protection

- MA 52: The local managing partner(s) for the Regional Park may continue to implement habitat restoration and improvement activities such as quail habitat enhancement projects and installation of bat houses and avian nest boxes. The local managing partner(s) for the Regional Park will monitor avian boxes to ensure that the boxes do not enable the spread of exotic invasive avian species such as starlings.
- MA 53: All future improvements should be consistent with laws and regulations that govern the protection of natural, cultural, and paleontological resources within Contra Loma.
- MA 54: All future improvements within the Regional Park will be consistent with future habitat restoration projects.
- MA 55: When specific construction activities are proposed, the local managing partner(s) will conduct a focused assessment of the activity's impact on water quality. If required by Federal regulations, the local managing partner(s) proposing a construction activity will submit a plan that identifies the sources of sediment and other pollutants on site and ensures the reduction of such pollutants in stormwater discharged from the construction site. The plan will provide descriptions of best management practices (BMPs) selected to control erosion, sediment discharge, turbidity, and other pollutant sources during construction. If needed, appropriate BMPs would be implemented prior to construction and would be continued through the duration of construction activities. The plan may include the following methods for protecting water quality:
- Limit site disturbance such as clearing, grubbing, and grading to between April 15 and October 15, unless special authorization is provided by Reclamation.
 - Prohibit heavy construction equipment from operating within 100 feet of the reservoir or any creek during periods when soils are saturated from rain.
 - Implement temporary measures for controlling seasonal runoff and stormwater flows from the construction area, including all staging areas and any other area where site disturbance will occur during construction.
 - Use temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) in disturbed areas, and ensure no disturbed surfaces are left without erosion control measures in place during the rainy season.
 - Retain sediment on site by a system of sediment basins, traps, or other appropriate measures.

- Develop a spill prevention and countermeasure plan to identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on site.
- Implement soil conservation practices to reduce erosion from storm water runoff, and retain existing vegetation where possible.
- Control surface water runoff by directing flowing water away from surface waters and by reducing runoff velocity.
- Store and treat topsoil removed during construction as an important resource, and place berms around topsoil stockpiles to prevent runoff during storm events.
- Establish fuel and vehicle maintenance areas away from all surface water features and design these areas to control runoff.
- Revegetate disturbed areas after completion of construction activities.

MA 56: When specific construction activities are proposed that involve new ground disturbance in the portion of the Regional Park underlain by Cierbo Sandstone (i.e., the southernmost portion of Contra Loma), the local managing partner(s) will prepare a plan describing the measures they will implement to manage any paleontological resources encountered during construction. The plan will be submitted to Reclamation for review and approval. The plan will describe measures for evaluating the importance of the resource, performing recovery excavations, museum curation, preparation of a report documenting the find, and/or development of public outreach or educational materials or displays. These measures outlined in the plan would only be implemented to the extent warranted by the importance of the resource.

Operations and Maintenance

MA 57: The local managing partner(s) will be responsible for operations and maintenance of any new recreation or infrastructure improvements that they implement. All proposals submitted to Reclamation by the managing partner(s) for new improvements will clearly describe the activities needed to operate and maintain the improvements.

2.8 Management Actions for Alternative 3: Expanded Recreation and Facilities (Preferred Alternative)

2.8.1 Objective

The objective of this alternative is to expand recreational uses and facilities to accommodate increasing demand, especially for additional all-weather sports fields.

2.8.2 Description

Under this alternative, the management direction would be shifted toward expansion of recreational uses and facilities. This alternative includes the management actions listed under Alternative 2 (Enhanced Recreation and Facilities) and provides additional management actions to expand existing recreational uses and facilities and to install new facilities that expand recreational opportunities. Examples include construction of a fishermen's shelter, a playground structure, a disc golf course, new multi-use sports fields, and expansion of the swim lagoon and the trail system. Other examples include planting of shade trees, installation of shade structures and solar panels, and fish habitat improvements to increase fish populations. This alternative may also include overnight group camping.

2.8.3 Management Actions

Recreational Facilities and Opportunities at Contra Loma Regional Park

Swim lagoon The swim lagoon is a very popular facility during the warm weather months. This alternative would allow for expansion of the swim lagoon if needed to accommodate a sufficient increase in future demand.

MA 58: The size and capacity of the swim lagoon may be expanded if needed to accommodate increased future demand.

Fishing Fishing continues to be a very popular recreational activity at the reservoir. The LUDP anticipated future development of a fishermen's shelter in an unidentified location along the south shore, but the shelter has not yet been built. This alternative would include construction of a fishermen's shelter along the south or east shore and would improve fish habitat to increase fish populations.

MA 59: A fishermen's shelter may be constructed along the south or east shore.

MA 60: Fish habitat may be created or modified if desirable to increase fish populations.

Trail System A trail system provides access to most areas of the Regional Park and connections with other trail systems outside Contra Loma. Horses may be ridden on most trails within the Regional Park. Bicycles are allowed on many trails, but are not currently allowed to be ridden on many narrow (i.e., single track) trails and trails that are marked "No Bicycles." Trees provide shade to a very small percentage of the trail system. This alternative would increase mountain biking opportunities within the Regional Park and increase shade along some trails. This alternative would also include a new fitness course with outdoor exercise stations built along the shoreline trail loop.

MA 61: The number and length of trails and the number of loop trail opportunities available for mountain biking may be increased by constructing new trails open to bicycles and/or by allowing bicycles access to portions of the trail system that are not currently open to bicycles.

MA 62: New multi-use trail connectors may be built in several locations.

MA 63: Shade trees may be planted along some trail segments if desirable and if sufficient irrigation is available. Trees planted along trails outside the landscaped areas will be endemic native species. The local managing partner(s) for the Regional Park is encouraged to plant native trees along trails in the landscaped areas of the Regional Park (i.e., south shore), but may plant species similar to the existing ornamental trees.

MA 64: A new fitness course may be established by installing outdoor exercise stations with stationary equipment and signage along the shoreline trail loop.

Other Recreation This alternative includes management actions that recognize other recreational opportunities at the Regional Park. The temperature at Contra Loma can be quite hot in the summer. Trees and structures only offer shade in some areas of the Regional Park, primarily in the developed recreational areas along the south side of the reservoir. The Regional Park does not have playground structures, although structures are provided at the Community Park. No disc golf courses are located near Contra Loma; the nearest course is located in Moraga, 32 miles away. No camping facilities are available at the Regional Park and overnight camping is not currently allowed in the park. This alternative would increase the amount of shade available to park users, provide a playground structure at the Regional Park, provide a disc golf course, and allow overnight group camping subject to event-specific authorization, oversight, and regulation.

MA 65: Shade trees may be planted and shade structures may be installed to support recreational uses and to provide shade in parking and picnic areas.

MA 66: A playground structure may be built in the developed recreational areas along the south side of the reservoir.

MA 67: Overnight group camping may be allowed on a discretionary basis as part of the current day camp programs or other special events. Group camping will require event-specific authorization, oversight, and regulation by the Regional Park's local managing partner to ensure protection of the park's natural resources and facilities. No campground facilities may be built, although some modification of existing day use facilities might be needed to serve group campers. Modifications may include installation of additional picnic tables, wash basins, and electrical outlets.

MA 68: A disc golf course may be built in a suitable location that minimizes conflicts with other park uses. Potential locations may include the gently rolling land east of the reservoir, gently sloping land near the southwest corner of the reservoir, and the southeast portion of the Regional Park directly north of Frederickson Lane.

Recreational Facilities and Opportunities at Antioch Community Park

Sports Fields The Community Park has five sports fields. The three multi-use sports fields in the western half of the park are used for softball, baseball, football, soccer, and kickball. The two sports fields in the eastern half of the Community Park are used primarily for soccer, but are also

used for baseball, softball, football, rugby, and outdoor volleyball. League sports including soccer, softball, football, and kickball are popular activities at the Community Park. This alternative would include two new lighted sports fields south of the two existing soccer fields if needed to accommodate demand and would increase parking capacity if needed to meet additional demand.

MA 69: Additional multi-use sports fields may be built directly south of the two existing sports fields on the east side of the Community Park. The sports fields would have floodlights to allow evening use. The additional fields would require expansion of the Community Park boundaries south into the Regional Park by approximately 15 acres. The expansion would also require adjustment of the boundaries between the two parks (see Figure 2-2) by future managing partner(s). If the adjustment is made, the existing grazing fence would also be relocated to follow the adjusted boundary line and lands currently in the Regional Park would no longer be grazed. Also, a portion of the Regional Park trail (Old Ranch Loop Trail) that currently follows the south side of the boundary line between the two parks would be relocated to follow the adjusted boundary line.

MA 70: If additional multi-use sports fields are built, additional parking capacity may be developed if needed to accommodate increased parking demand.

Other Recreation This alternative includes management actions that recognize other recreational opportunities at the Community Park. This alternative would expand the trail system and create a botanical garden.

MA 71: The Community Park trail system may be expanded to include new trails and to improve interconnection between trail systems.

MA 72: A botanical garden may be created within the Community Park. Possible locations may include the undeveloped land north of the eastern sports fields or the undeveloped land in the southwestern portion of the park.

Interpretive Opportunities Contra Loma's history and natural resources provide opportunities for interpretation and education. This alternative would increase interpretive signage and programs.

MA 73: Interpretive signage and/or kiosks may be built and programs may be provided that offer visitors educational experiences intended to instill or enhance their appreciation of the region's natural and cultural resources. Informational walks and presentations may be provided by volunteer docents. Interpretive opportunities could also focus on historic areas within Contra Loma.

Infrastructure Improvements at Contra Loma Regional Park

Solar Panels This alternative would allow the managing partner(s) for the Regional Park to install solar panels on shade structures or buildings to supplement the park's energy needs, including the energy needed to power the water pumps for the swim lagoon.

MA 74: Solar panels may be installed on parking or picnic area shade structures and on buildings to supplement the Regional Park's energy needs, including the energy needed to power the water pumps for the swim lagoon.

Irrigation Water This alternative would allow additional reservoir water to be purchased from CCWD if available.

MA 75: Some future facility improvements such as the planting of additional shade trees could increase demand for irrigation water by about 50 acre-feet per year. If additional reservoir water is needed for irrigation, the local managing partner(s) would need to purchase the water from CCWD if the requested water is available. CCWD would be responsible for review and approval of the request for additional water.

2.9 Alternatives Considered but Eliminated from Detailed Analysis

The following alternatives were eliminated from detailed analysis because they did not meet the purpose and need for the RMP or were outside of the technical, legal, or policy constraints of developing a land use plan for public land resources and uses.

2.9.1 Exclusive Use

The concessions management policy (LND 04-02) of the Reclamation Manual Policy and Directives and Standards requires new, renewed, or modified management agreements and concession contracts to include clauses that prohibit exclusive use. For this reason, alternatives and general management options proposing exclusive use for profit or benefit of a private entity were not considered. This includes operation of part or all of Contra Loma as a private reservoir or private recreation area.

2.9.2 Management for Only One Authorized Purpose

Alternatives and general management options proposing maximum development, production, or protection of one use or resource at the expense of other uses and resources were not considered. Reclamation is subject to the Congressional mandate that "in investigating and planning any Federal...water resource project, full consideration shall be given to the opportunities, if any, which the project affords for outdoor recreation and for fish and wildlife enhancement" (PL 89-72, 79 Stat. 213-218).

2.9.3 Reduction or Elimination of Existing Recreational Uses from Contra Loma

Alternatives reducing or eliminating existing recreation uses would not meet the purpose and need for the proposed project. Currently, resource conditions do not warrant reduction or elimination of any particular recreational use. Therefore, none of the alternatives include reduction or elimination of these existing uses.



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Figure 2-2
Possible Sports Field Expansion (Expanded Recreation and Facilities Alternative)

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2.9.4 Reservoir Operations and Maintenance

Alternatives addressing water or power operations or water service contracts are not considered, because such actions are outside the scope of the RMP and would be covered under separate actions and environmental review. Contra Loma Reservoir is operated and managed by CCWD under contract to Reclamation and is a component of Reclamation's CVP. Management of the land surrounding the reservoir is secondary to operation of the CVP and is required to support Reclamation's core mission of delivering water and generating power.

2.9.5 Specific Management Actions Eliminated from Detailed Analysis

Most of the management actions suggested by the public were included in one or more of the alternatives. However, some management actions suggested by the public were not included in any of the alternatives and have been eliminated from detailed analysis.

One public commenter suggested removing the swim lagoon to restore the character of Contra Loma to a more natural state. The swim lagoon was constructed at great financial expense for the purpose of protecting the reservoir's water quality from human-borne viruses and pathogens while serving a public recreation need. Removing the swim lagoon would require substantial additional financial expenditure, and the public would cease to benefit from the expenditure invested to build the lagoon. Also, the swim lagoon is a very popular facility during the hot summer months. As stated in Section 2.9.3 above, alternatives reducing or eliminating existing recreation uses would not meet the purpose and need for the proposed project. Therefore, this suggested management action has been eliminated from further consideration.

Some commenters suggested controlling or removing vegetation within the reservoir and along the shoreline to improve fishing access. Much of this vegetation, however, provides rearing habitat for fish or provides important habitat for wildlife. These suggested management actions would not be consistent with the primary goals of the Contra Loma RMP of protecting and enhancing natural resources. Therefore, this suggested management action has been eliminated from further consideration. It should be noted, however, that several management actions that would enhance fishing access are included in the RMP.

Another commenter suggested enforcement of self-pay entrance fees. The local managing partner for the Regional Park currently has the authority to enforce self-pay entrance fees for vehicles. With respect to walk-ins, it would be impractical to enforce payment of self-pay fees because once in the park, walk-in visitors are indistinguishable from visitors who have arrived in vehicles and paid for entry. Therefore, this suggested management action is not considered.

One public commenter suggested better coordination for advertising of public events at Contra Loma and another provided suggestions about the types of products that should be available for purchase at the snack bar. Another commenter suggested that smoking should be prohibited within the fenced swim lagoon area and that smoking areas should be designated outside the fence and down-wind from swimmers. Other commenters suggested that the local managing partners for the Regional Park consider increasing the presence of multi-lingual staff during high use periods to assist non-English speaking park users. While these suggestions may have merit, they are not directly related to resource management and fall outside the scope and purpose of an RMP. These management actions would remain within the purview of the responsible local managing partner(s) to implement if they choose to.

