COUNTY OF SAN LUIS OBISPO
DRAFT INITIAL STUDY SUMMARY - ENVIRONMENTAL CHECKLIST

Project Title & No. Arroyo Grande Creek Habitat Conservation Plan (HCP); ED03-365

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The proposed project could have a "Potentially Significant Impact" for at least one of the environmental factors checked below. Please refer to the attached pages for discussion on mitigation measures or project revisions to either reduce these impacts to less than significant levels or require further study.

❑ Aesthetics	☒ Geology and Soils	☒ Recreation
❑ Agricultural Resources	❑ Hazards/Hazardous Materials	☒ Transportation/Circulation.
☒ Air Quality	❑ Noise	☒ Wastewater
☒ Biological Resources	❑ Population/Housing	☒ Water
☒ Cultural Resources	❑ Public Services/Utilities	❑ Land Use
Mandatory Findings of Significance		

DETERMINATION:

On the basis of this initial evaluation, the Environmental Coordinator finds that:

❑ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

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

❑ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

❑ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

❑ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____

Prepared by (Print) Signature Date

_____ _____

Reviewed by (Print) Signature (for) Date

Project Environmental Analysis

The County's environmental review process incorporates all of the requirements for completing the Initial Study as required by the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study includes staff's on-site inspection of the project site and surroundings and a detailed review of the information in the file for the project. In addition, available background information is reviewed for each project. Relevant information regarding soil types and characteristics, geologic information, significant vegetation and/or wildlife resources, water availability, wastewater disposal services, existing land uses and surrounding land use categories and other information relevant to the environmental review process are evaluated for each project. Exhibit A includes the references used, as well as the agencies or groups that were contacted as a part of the Initial Study. The Environmental Division uses the checklist to summarize the results of the research accomplished during the initial environmental review of the project.

Persons, agencies or organizations interested in obtaining more information regarding the environmental review process for a project should contact the County of San Luis Obispo Environmental Division, Rm. 310, County Government Center, San Luis Obispo, CA, 93408-2040 or call (805) 781-5600.

A. PROJECT

The Project is a proposal by the San Luis Obispo County Food Control and Water Conservation District (Zone 3) to implement a Habitat Conservation Plan (HCP) to protect and enhance habitat conditions within Arroyo Grande Creek for southern anadromous steelhead and California red-legged frogs pursuant to the requirements of the Federal Endangered Species Act. The HCP addresses the operation of Lopez Dam with respect to water flows in Arroyo Grande Creek from the dam downstream to the Pacific Ocean, a distance of approximately 13.5 miles. The HCP also includes the implementation of habitat restoration activities between the dam and Fair Oaks Boulevard, a distance of approximately 10 miles. The HCP duration would be from 2005 through 2025. The HCP would comply with the Endangered Species Act, provide incidental take authorization for steelhead and red-legged frogs resulting from District operations and maintenance activities affecting Arroyo Grande Creek, and provide enhanced habitat conditions and protection for both red-legged frogs and southern steelhead.

Introduction

San Luis Obispo County Flood Control and Water Conservation District Zone 3 (District) operates and maintains Lopez Lake, in the Arroyo Grande Creek watershed, for municipal and agricultural water supplies. The Arroyo Grande Creek watershed downstream of Lopez Dam also provides habitat for a variety of fish and wildlife species including southern anadromous steelhead (*Oncorhynchus mykiss*) inhabiting the South-Central California Coast Evolutionary Significant Unit (ESA) and California red-legged frogs (*Rana aurora draytonii*). Both steelhead and red-legged frogs are threatened species under the Federal Endangered Species Act. Operation of the reservoir and associated releases into Arroyo Grande Creek, in addition to other operations and maintenance activities performed by the District associated with the project, affect the quality and availability of habitat for steelhead and red-legged frogs, and may result in direct or indirect incidental take of these protected species.

Section 10(a)(1)(B) of the Endangered Species Act permits a non-federal entity (such as the San Luis Obispo County Flood Control and Water Conservation District) to obtain incidental take authorization for protected species as a result of covered activities through development of a Habitat Conservation Plan (HCP). The District has developed a draft HCP, describing commitments and assurances associated with implementation of measures to avoid, minimize, and mitigate impacts of District activities on steelhead and red-legged frogs. The HCP would also serve as the basis for compliance with the California Endangered Species Act (California Fish and Game Code 2080.1) in the event that

either covered species is subsequently listed by the state.

Overview/Background

The Arroyo Grande Creek watershed is on the Central California Coast in an arid region with highly variable rainfall, precipitation and stormwater runoff. Anadromous steelhead inhabit Arroyo Grande Creek for spawning and egg incubation and as a juvenile rearing habitat. The watershed also supports permanent agricultural crops (e.g., citrus orchards and wine grapes) and seasonal row crops. The permanent populations of nearby communities, including Arroyo Grande, Pismo Beach, Avila Beach, Grover Beach and Oceano, have increased substantially over the past decades, and the area has become a tourist destination. The Lopez Project supplies drinking water to these communities. The District completed construction of Lopez Dam in May 1968, to provide a reliable water supply for agricultural and municipal needs. Lopez Lake stores stormwater runoff during the winter and early spring, and provides managed releases throughout the year to meet downstream demand, as well as diversions from the reservoir through a three-mile pipeline to a water treatment plant which provides treated water to the municipalities listed above. Lopez Lake operations affect the seasonal timing and magnitude of stream flows in Arroyo Grande Creek and thereby affect habitat quality and availability for steelhead and red-legged frogs. However, modifications to reservoir operations to improve instream flow or habitat conditions for steelhead could adversely affect habitat quality and availability for red-legged frogs that also inhabit the watershed.

Concerns about adverse effects of Lopez Lake operations on steelhead resulted in a water right complaint against the District by the California Sport fishing Protection Alliance (CalSPA) in 1994. The water right complaint claims District operation and maintenance of the Lopez Project adversely impacts aquatic habitat in Arroyo Grande Creek. For example, reduced releases from Lopez Lake in winter 1996 dewatered part of Arroyo Grande Creek. And, in the winter of 1998-1999, two adult steelhead were found stranded in a dry portion of the creek. To address these fishery issues, the District commissioned investigations of steelhead and red-legged frogs and their habitat in the lower reaches of Arroyo Grande Creek (Alley 1996, 1997). The District initially agreed to maintain an interim minimum release from Lopez Lake of 7.7 cfs (5 mgd). Subsequently, after completion of a series of stream studies and discussions with the California Department of Fish and Game (CDFG) and the national marine Fisheries Service (NOAA Fisheries), the release rate was adjusted to 6.2 cfs (4 mgd) to protect the steelhead habitat and to support the scientific data collection for the HCP.

During 1999-2000, several studies were performed on the District's behalf to provide information for the HCP. Habitat surveys were conducted as part of an experimental stream flow study to evaluate changes in habitat conditions as a function of stream flow during the juvenile steelhead summer rearing period. Water and air temperatures were monitored along Arroyo Grande Creek downstream of Lopez Lake. Water quality surveys documented diel (within a day: daytime vs. night) variation in water quality parameters such as dissolved oxygen concentrations, and concentrations of various chemical constituents. Hydrologic data from the Arroyo Grande gauging station was used to determine stream flow before and after construction of Lopez Dam. Seasonal and interannual (between years) changes in Lopez Lake storage, reservoir inflow, and reservoir evaporation losses were determined. A computer simulation model was developed, using a monthly time-step, to evaluate changes in Lopez Lake storage under alternative reservoir release schedules to provide steelhead habitat, while meeting downstream agricultural and municipal water supply commitments. Habitat surveys characterized vegetation along the stream corridor and habitat conditions for red-legged frogs.

During 2001-2002, additional field studies were undertaken to evaluate reservoir storage capacity and the potential to adversely affect red-legged frogs or other protected species as a result of fluctuations

in the elevation of Lopez Lake as a consequence of actions implemented in the HCP. Results of the wildlife and habitat surveys conducted around the periphery of Lopez Lake were used to assess and evaluate the potential effects of changes in reservoir storage operations on species and their habitat.

Bathymetric surveys were conducted as part of these investigations to determine changes in reservoir storage capacity that may have resulted from siltation and sediment deposition. Results of the reservoir survey documented a reduction in storage capacity that was subsequently used in the HCP hydrologic modeling to refine estimates of the effects of instream flow releases on reservoir storage and water supply availability. Results of these investigations were used to further analyze and evaluate alternative operational strategies and environmental consequences as part of the development of the HCP.

Information from these investigations, and from previous studies, is the best scientific and commercial data available for use in developing the HCP. Based on information from these surveys and analyses, the District evaluated alternative strategies for habitat protection and enhancement as part of the HCP. Accordingly, the District developed a conservation strategy that includes the following commitments:

- Modifications to operations and maintenance of Lopez Dam involving an instream flow schedule for steelhead;

- Removal of the Arroyo Grande stream flow gage that has been identified as a significant passage impediment to steelhead migration; and

- Funding for habitat enhancement, such as removal of fish passage impediments; improvements to instream habitat structures for steelhead spawning and juvenile rearing; development of habitat for red-legged frogs; and protection and improvement of wetland and riparian areas along the stream corridor.

In connection with the HCP, the District has requested authorization for incidental take of steelhead and red-legged frogs under the Federal Endangered Species Act, and (in the event these species are listed) under the California Endangered Species Act (California Fish and Game Code 2080.1), resulting from activities covered under the HCP. The HCP addresses issues raised by the CalSPA complaint and environmental review requirements of the Lopez Project water rights permit amendment process.

The District is committed to an adaptive management process for identifying and evaluating potential management actions as part of the HCP. Management actions will be considered in context with other activities influencing steelhead and red-legged frog populations and their habitat in the Arroyo Grande Creek watershed. As a result of (1) uncertainties associated with future management actions, (2) identification of actions that provide adaptive or synergistic benefit with other habitat enhancement programs, and (3) the availability of State and federal funding allocations to augment the financial commitments of the District identified in the HCP, the proposed adaptive management process is appropriate for implementing the habitat enhancement elements of the HCP. The HCP provides the necessary framework, and commitment to funding required to identify, implement, and monitor performance of the habitat enhancement actions. State and federal resource agencies will continue to play an active role in working with the District to help ensure that the HCP meets these objectives.

Prioritization of HCP Actions

Priorities for management actions under the HCP are as follows. First, modify the instream flow schedule for Arroyo Grande Creek using managed releases from Lopez Lake to:

- Enhance instream habitat for various life stages of steelhead;
- Reduce or avoid adverse impacts from stranding or dewatering steelhead habitat; and
- Reduce or avoid adverse impacts of instream flow releases on red-legged frog habitat.

Second, implement habitat improvement or other actions to reduce or avoid impacts and enhance environmental conditions to benefit steelhead and/or red-legged frogs, as associated with land and facilities owned and operated by the District within the Arroyo Grande Creek designated HCP boundaries. Third, implement habitat improvements or other actions to reduce or avoid impacts and enhance environmental conditions to benefit steelhead and/or red-legged frogs, as associated with land or facilities within the designated HCP boundaries, which are not owned or managed by the District, with concurrence and approval of willing private landowners and other responsible parties. The HCP includes a proposed education and outreach element to provide information to local landowners and other interested parties on opportunities for enhancing and protecting habitat for sensitive species within the Arroyo Grande Creek watershed. A variety of habitat enhancement measures can be considered under the HCP, but first priority will be given to projects directly benefiting the covered species, and addressing impacts of operations or maintenance activities on Arroyo Grande Creek and the adjacent watershed under the direct authority of the District. Since specific habitat enhancement projects have not been identified for implementation as part of the HCP at this time, the environmental assessment is programmatic. Individual habitat enhancement projects proposed for implementation under the HCP will be subject to separate critical review by the HCP technical committee and state and federal permitting and approvals.

Decisions about future actions funded under the HCP will be evaluated under the Adaptive Management Program (Section 6.2 of the draft HCP). Consideration will be given to maximizing benefits for covered species within the designated HCP boundaries. Although the HCP commits the District to fund the identified conservation actions, consideration will also be given to opportunities for funding augmentation through State, federal, or other fishery restoration programs.

Species Covered by Permit

A wide variety of native fish, wildlife, and plant species inhabit the Arroyo Grande Creek watershed, but species covered by the incidental take permit associated with the HCP are limited to anadromous southern steelhead *(Oncorhynchus mykiss)*, and California red-legged frog *(Rana aurora draytonii)*. Steelhead and California red-legged frog are listed as threatened species under the Federal Endangered Species Act.

Neither steelhead nor California red-legged frogs are currently listed for protection under the California Endangered Species Act. However, these species are identified as species of special concern and may be listed in the future. For the HCP, both steelhead and California red-legged frogs have been identified as covered species, and the District has requested incidental take authorization under the California Endangered Species Act. Incidental take authorization requested under the HCP, and the associated implementation agreement, would provide authorization by appropriate state and federal agencies for incidental take for currently listed steelhead and red-legged frog. The HCP would also provide the conservation framework for authorizing incidental take of future listed species under each agency's respective authority under California or Federal Endangered Species Acts.

Activities Covered Under the HCP

The District has requested authorization for incidental take of steelhead and red-legged frog within the HCP boundaries associated with:

- Reservoir storage: collecting water in Lopez Lake that would otherwise flow through Arroyo Grande Creek to the Ocean;

- Uncontrolled spills and managed instream flow releases: the uncontrolled flow of water over the spillway when the lake is full along with a program of releasing water from the reservoir into the creek at planned and prescribed levels;

- Municipal water treatment and supply, including backwash water disposal and water sampling activities: The diversion of water from the reservoir through the Lopez water treatment plant for delivery to local communities along with the associated activities of water quality sampling in the stream and reservoir and the release of backwash water from the water treatment plant into the creek (Note that the release of backwash water is conducted pursuant to a water quality permit issued by the Regional Water Quality Control Board.);

- Water releases for irrigated agriculture: The release of water from the reservoir into the creek for the express purpose of recharging the aquifer that is tapped by agricultural irrigation wells;

- Rainfall and stream gauging: Programs operated by the district to measure rainfall and creek flow rates, including the installation, maintenance, and operation of stream gages and weather stations;

- Dam, stream channel, and facility maintenance by the District in Arroyo Grande Creek: The routine maintenance activities needed to keep the facilities in good repair, such as, stabilization of creek banks at pipeline crossings, repair of the water treatment plant outfall pipeline, repair of the erosion control facilities on the face of the dam, etc.;

- Lopez Dam and Lake operations: The day to day activities associated with operating a man-made water reservoir, including conducting visual inspections of all parts of the facilities, opening and closing water valves, raising and lowering the lake level, measuring water release rates, etc.;

- Arroyo Grande stream gage removal and replacement and other habitat enhancement actions implemented as part of the HCP: Removal of the existing antiquated Arroyo Grande Stream gage structure and the implementation of a program to identify and carry out habitat enhancement actions; and

- Instream flow releases exceeding flows established by the HCP; The ability to release more water into the creek than mandated by the HCP in order to properly manage lake levels.

Objectives of the HCP

Objectives of the HCP are to (1) reduce mortality and enhance habitat for steelhead and red-legged frogs within Arroyo Grande Creek between Lopez Dam and Fair Oaks Boulevard; and (2) promote recovery of steelhead and red-legged frogs. The HCP proposes a conservation strategy, which will:

- Minimize and avoid adverse impacts that would jeopardize the species;

- Provide habitat enhancements to compensate for unavoidable losses; and

- Implement actions to protect covered species and promote their recovery.

Specific objectives of the HCP are:

- Modify instream flows in Arroyo Grande Creek, using managed releases from Lopez Lake to (1) enhance instream habitat for steelhead; (2) reduce or avoid adverse impacts from dewatering steelhead habitat; and (3) reduce or avoid adverse impacts of instream flows on red-legged frog habitat;

- Implement habitat improvement and actions to reduce or avoid impacts and enhance habitat conditions to benefit steelhead and/or red-legged frogs;

- Avoid, minimize, and mitigate adverse impacts on covered species, from facility operations and maintenance activities under the direct authority of the District;

- Releases from Lopez Lake to Arroyo Grande Creek, varying with inter- and intra-annual hydrologic conditions, to protect and enhance habitat for various life stages of steelhead;

- Provide for improvements in steelhead migration;

- Provide opportunities for habitat enhancement for covered species;

- Provide assurances to the District consistent with the USFWS "No Surprises Rule"; and

- Provide incidental take authorization for the District impacts to covered species included as part of the HCP.

Proposed HCP Actions (Project Description)

To accomplish the goals and objectives outlined above, the HCP evaluated alternative conservation strategies. A proposed (preferred) alternative was selected and is comprised of:

- Releases from Lopez Dam to improve habitat quality and availability for various life stages of steelhead, including:

    - Spawning and egg incubation flows between January 1 – April 30: release 6 cubic feet per second (cfs) if December 31 reservoir storage is greater than 30,000 AF. If reservoir storage is less than 30,000 AF, but greater than 25,000 AF, release 3 cfs or the average inflow over the previous 14 days, whichever is less. If reservoir storage is less than 25,000 AF, the Technical Committee would be consulted to establish instream flow releases;
    - Steelhead passage and attraction flows between February 1 through April 30: consecutive five (5) day release of 20 cfs each month if reservoir storage is greater than 30,000 AF. If possible, passage flow releases would coincide with increased stream flow from runoff within the watershed. To the extent that naturally occurring stream flow at Lopez Dam (e.g., reservoir spill) meets the 20 cfs passage criteria, no additional releases would be required from Lopez Lake to meet requirements of an individual passage event. Releases from Lopez Lake may be required to supplement naturally occurring flows, both in magnitude and duration, to achieve the passage criteria;
    - Juvenile steelhead rearing flows between May 1 to June 30 and September 1 to December 31: release 3 cfs if April 30 reservoir storage is greater than 30,000 AF. If

reservoir storage is less than 30,000 AF, but greater than 25,000 AF, release 3 cfs or a flow equal to average inflow over the previous 14 days, whichever is less. If reservoir storage is less than 25,000 AF, the Technical Committee would be consulted to establish instream flow releases;
    - Juvenile steelhead rearing flows between July 1 to August 31: release reservoir inflow or 3 cfs, whichever is greater.

- Manage reductions in reservoir releases below 100 cfs in accordance with an established ramping rate schedule;

- Manage increases in reservoir releases, to the extent practical, at a ramping rate not to exceed 10 cfs per hour to protect red-legged frogs;

- Remove the existing Arroyo Grande stream gage, which has been identified as a significant passage impediment, to facilitate steelhead migration;

- Fund the Arroyo Grande HCP Conservation Account with a total contribution over the 20-year duration of the HCP of $1,000,000. Allocations to the Conservation Account would be $50,000 per year. The HCP Technical Committee, representing the USFWS, NOAA Fisheries, CDFG, and the District, would recommend habitat improvement projects funded by the Conservation Account. Funding for habitat enhancement actions provided through the HCP Conservation Account may be augmented with grant funds from state, federal, private, or other sources. Non-flow habitat enhancement projects funded through the Conservation Account may include, but would not be limited to:

    - Steelhead spawning gravel augmentation and/or gravel cleaning;
    - Improvements in fish passage at the low-flow road crossing located within the flood control reach and culverts at the Cecchetti Road crossing;
    - In-channel habitat improvement projects to improve summer rearing habitat and cover for juvenile steelhead, and steelhead spawning areas;
    - Solicit and secure environmental easements and right-of-way agreements from willing private landowners along the Arroyo Grande Creek to improve channel bank stability and reduce erosion, and for riparian vegetation planting;
    - Design and construct in-channel backwater areas and/or off-channel ponds to provide shelter, rearing, and breeding habitat for red-legged frogs.

- Develop and implement Best Management Practices (BMPs) for habitat enhancement project construction, stream maintenance and vegetation control; and

- Develop and implement a public education/awareness program.

Monitoring performance of project elements implemented under the HCP, and overall performance of the HCP in enhancing habitat for steelhead and red-legged frogs, is an integral part of the program. As part of the HCP, the District will commit $50,000 per year, or equivalent in-kind services, over the 20-year duration of the HCP, for monitoring and performance evaluation in Arroyo Grande Creek. The financial commitment to the monitoring account will support (1) water quality/temperature and hydrologic monitoring in Arroyo Grande Creek; (2) monitoring of species abundance, geographic distribution, habitat use, habitat condition, and sources of mortality to steelhead and red-legged frogs; (3) monitoring of incidental take for covered species; (4) monitoring and performance evaluations for habitat enhancement actions implemented under the HCP; and (5) compilation of monitoring results from other watersheds in the region useful for evaluating the status and trends of covered species. Monitoring performed as part of the HCP will also support an adaptive management decision-making

process and provide scientific information for use by the interagency HCP Technical Committee in identifying priority actions for implementation as part of the HCP, in addition to modifying and refining actions based on the monitoring results and evaluation of performance of the HCP program.

Analysis of the proposed (preferred) alternative showed that the actions identified within the framework of the draft HCP would improve the quality and availability of habitat within Arroyo Grande Creek for steelhead and red-legged frogs. The activities would also reduce incidental take to steelhead and red-legged frogs from operation and maintenance of the Lopez project, and releases to Arroyo Grande Creek. The proposed alternative would, however, contribute to other adverse environmental consequences including reductions in reservoir storage and water surface elevation within Lake Lopez that would (1) impact water supply availability; (2) potentially impact recreation within the lake, including boating, water skiing, and angling; (3) impact historic archeological sites within the lake; (3) potentially impact spawning success and habitat availability for warm water fish species inhabiting the reservoir. Implementation of the HCP would not result in an increase in water supply availability for municipal or other use (i.e., would not contribute to growth inducement within the region), but would reduce reservoir storage and water supply availability in some years. Construction activity associated with fish passage facility improvements (e.g., removal of the existing stream gage) and installation of non-flow habitat enhancement projects would also result in temporary, localized, increases in turbidity and suspended sediment concentrations. The proposed (preferred) alternative would also increase water rates charged by the District to fund activities identified in the HCP.

Habitat enhancement and protective measures identified within the HCP are within the direct control and authority of the District. The effectiveness and biological benefits resulting from these actions, however, may be influenced or modified by non-District actions that affect habitat conditions for steelhead and red-legged frogs within and along the Arroyo Grande Creek corridor. Activities such as riparian water diversions, changes in land use, accelerated channel erosion, limitations and constraints on access by the District for performing non-flow habitat enhancement actions, and other natural and human-induced changes may all affect the biological success of the proposed HCP program, but are outside the control and authority of the District.

The draft HCP concluded that the preferred alternative is feasible and can be implemented by the District. It was further concluded that the preferred alternative would provide environmental benefits, enhanced protection, and improvements in habitat quality and availability within Arroyo Grande Creek for steelhead and red-legged frogs. Covered activities by the District, however, would result in potential incidental take of steelhead and/or red-legged frogs, identified in the HCP and addressed through incidental take authorization by USFWS and NOAA Fisheries in compliance with Sections 9 and 10 of the Endangered Species Act.

In accordance with the guidelines for Habitat Conservation Plans (USFWS and NMFS 1996, and subsequent amendments and revisions), this document has been developed as a joint Environmental Assessment/Initial Study (EA/IS). The joint EA/IS, based on the environmental checklist analysis presented below, provides the environmental documentation necessary for compliance with the California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA). The document complies with provisions of the California and Federal Endangered Species Acts and environmental documentation requirements of NEPA and CEQA. In compliance with the requirements of NEPA and CEQA, this document provides a CEQA environmental checklist and lists the NEPA environmental consequences for the proposed project. The environmental checklist discusses land use and planning; population, employment, and housing; geology, soils, and seismicity; hydrology and water quality, including agricultural return flows an storm drain returns; biological resources; cultural and historical resources; traffic and transportation; visual quality and esthetics; air quality; noise and vibration; utilities and infrastructure; public services; energy; hazardous materials; recreation; socioeconomic effects; and mandatory findings of significance. The

preferred alternative in the HCP is consistent with flood plains and sites in the National Trails and National Inventory of Rivers (Presidential directive, August 2, 1979), the Advisory Council on Historic Preservation (36 CFR800), National Marine Fisheries Service Habitat Conservation Policies, the Environmental and Health Impact on Low-Income and Minority Populations, the American Indian Religious Freedom Act, and the California and Federal Endangered Species Acts. The proposed project would have no adverse effects under National Marine Sanctuaries or Coastal Zone Management Plans. The environmental analysis addresses Indian Trust Assets, Environmental Justice, and socioeconomic impact of the proposed project. The District is the State Lead Agency for CEQA compliance. The U.S. Fish and Wildlife Service and NOAA Fisheries are the Federal Co-Lead Agencies for NEPA compliance.

Duration of the HCP

The proposed duration of the HCP and the associated incidental take permit is 20 years from HCP approval. The anticipated HCP duration is from 2005 through 2025 depending on HCP approvals. The actual initiation of the HCP will be based on final approvals of the plan and authorization of the incidental take permit.

B. EXISTING SETTING

PLANNING AREA: Huasna/Lopez and San Luis Bay (Inland)

LAND USE CATEGORIES: Agriculture; Recreation, Residential Multi-family; Industrial, Public Facilities

COMBINING DESIGNATIONS: Sensitive Resource Area (Lopez Lake), Geologic Study Area, Flood Hazard, Airport Review, Local Coastal Plan, Environmentally Sensitive Habitat Area (Wetlands),

EXISTING USES: Cultivated fields and open farmland are on either side of Arroyo Grande Creek from Lopez Dam to Huasna Road. Lopez Road comes close to the creek at Biddle Park, the Filtration Plant and the point where Lopez Road becomes Huasna Road. From Huasna Road to Strother Park in the City of Arroyo Grande, Arroyo Grande Creek continues through cultivated fields and enters developed residential neighborhoods as it nears Strother Park. Downstream of Strother Park, Arroyo Grande Creek travels through residential neighborhoods and the downtown business section of Arroyo Grande. At the intersection of Highway 101 and Arroyo Grande Creek, the creek passes through cultivated fields and residential neighborhoods until it reaches a channelized section (bounded by levees) beginning about 2.6 miles from the ocean. Except for the final 2 miles through Pismo Dunes State Preserve, the channelized portion of the creek passes through agriculture land and varies in width from 50-80 feet, with levees approximately 10-12 feet high.

TOPOGRAPHY: Terrain near Arroyo Grande Creek varies from hilly to level, ranging in elevation from 522.6 feet (1986 datum) at Lopez Dam to sea level where the creek enters the ocean at Pismo Dunes State Preserve.

VEGETATION: Riparian woodland corridors dominated by willows and freshwater marsh.

PARCEL SIZE: N/A

SURROUNDING LAND USE CATEGORIES AND USES:

North side of creek, within the City of Arroyo Grande: Fully urbanized commercial and residential development	*East (East of the City of Arroyo Grande, both north and south of the creek):* Agriculture/Rural Lands – Scattered Residences, Undeveloped
South side of creek within the City of Arroyo Grande: Fully urbanized commercial and residential development	*West (East of the City of Arroyo Grande, both north and south of the creek):* Agriculture/ Residential Multi-family/Public Facilities - Oceano Dunes State Park, community of Oceano, Oceano Airport, South County Wastewater Treatment Plant, irrigated row crops, Pacific Ocean

C. ENVIRONMENTAL ANALYSIS

During the Initial Study process, several issues were identified as having potentially significant environmental effects (see following Initial Study). Those potentially significant items associated with the proposed uses can be minimized to less than significant levels.

Purpose and Need

Operations of Lopez Lake and resulting changes in instream flows downstream in Arroyo Grande Creek may result in direct losses of juvenile or adult steelhead from stranding or dewatering redds (incubating steelhead eggs) by flow reductions, and may also affect availability and quality of instream habitat. In addition, facilities owned or managed by the District, such as the Arroyo Grande stream gage, are impediments to steelhead migration.

Lopez Dam was completed in May 1968. Historical flow records from the Arroyo Grande gage for 1940 through 1996 show that, before completion of Lopez Dam (1940-1967), stream flow would sometimes cease. After completion of Lopez Dam (1969-1996), stream flow was generally maintained above 1 cubic foot per second (cfs).

Stream flow at Arroyo Grande is reduced by reservoir operation and diversion in winter and spring, but augmented by releases from reservoir storage in summer. The flow alteration is most prominent in dry years. During dry years, stream flow at Arroyo Grande would diminish to near zero between June and August if Lopez Dam had not been constructed. With the Lopez Project in place, flow augmentation by releases from reservoir storage allows summer flow to be maintained at a higher and more stable rate than if the dam was not present. On average, total flow augmentation is about 500 acre-feet in a below average year and about 800 acre-feet in a dry year.

Reservoir operations affect spawning gravel recruitment to the lower reaches of Arroyo Grande Creek, and flow regulation affect channel conditions and geomorphic processes influencing habitat diversity and characteristics including sediment deposition and erosion, extent of pools and riffles, and other instream habitat features. Changes in instream flows and other operations and maintenance practices may also affect availability and quality of habitat for California red-legged frogs. Red-legged frogs have been observed within Arroyo Grande Creek downstream of Lopez Lake by Alley (1996) within the vicinity of the gravel pit pool, the spillway pool, and downstream of the Ceccheti Road crossing. Essex Environmental conducted surveys in the vicinity of Rodriguez Bridge during January 1998 where a red-legged frog was observed. SAIC conducted surveys in 1999, as part of the Lopez Dam seismic remediation program, in the area downstream of the reservoir, including the spillway pool, outlet works pool and channel, and the abandoned trout farm ponds, however, no red-legged

frogs were observed during these surveys. SAIC reported observing two red-legged frogs in October 2000 within the Arroyo Grande Creek channel immediately downstream of the Dam outlet structure while conducting snorkel surveys for juvenile steelhead trout.

Fishery monitoring has shown that adult and juvenile steelhead inhabit the creek. Juvenile steelhead have been observed and/or collected within Arroyo Grande Creek during fishery surveys conducted by Alley (1997), CDFG (2000), and Hanson Environmental, Inc. (unpublished data). Adult steelhead are also known to have occurred within Arroyo Grande Creek where they were vulnerable to stranding as a result of fluctuations in instream flow levels.

To comply with the Endangered Species Act, and provide incidental take authorization for protected species for impacts resulting from District operations and maintenance activities affecting Arroyo Grande Creek, there is a need for additional protection of steelhead and California red-legged frogs and incidental take authorization for covered activities. The purpose of the HCP is to authorize the District for incidental take from current and anticipated operations of the Lopez project, while providing protection for steelhead and California red-legged frogs.

Environmental Setting, Impacts, and Mitigation

This section presents information on the environmental setting, impacts, and mitigation for the proposed Arroyo Grande Creek Habitat Conservation Plan (HCP). The section has been formatted to be consistent with the CEQA environmental checklist, developed by the Governor's Office of Planning and Research. The section has also been formatted to include information on the affected environment and environmental consequences of the proposed project to be consistent with provisions of NEPA. The topics and issues discussed in this section include:

1. Aesthetics
2. Agricultural Resources and Land Use
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Geology and Soils
7. Hazards and Hazardous Materials
8. Noise
9. Population/Housing
10. Public Service/Utilities
11. Recreation
12. Transportation/Circulation
13. Wastewater/Water Quality
14. Water

15. Land Use

16. Mandatory Findings of Significance

This section has been organized to present the findings of the environmental checklist, followed by a discussion of the affected environment (setting), criteria for determining impact significance, a discussion of the environmental consequences, and the responses for each element of the environmental checklist as it relates to the proposed project. Mitigation measures are identified where appropriate. The section includes a discussion of the no-project alternative.

COUNTY OF SAN LUIS OBISPO
INITIAL STUDY CHECKLIST

1. AESTHETICS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Create an aesthetically incompatible site open to public view?			**X**	
b) Introduce a use within a scenic view open to public view?			**X**	
c) Change the visual character of an area?			**X**	
d) Create glare or night lighting which may affect surrounding areas?				**X**
e) Impact unique geological or physical features?			**X**	

Setting

The visual landscape in the vicinity of the Arroyo Grande Creek is composed primarily of row crops, permanent crops, riparian vegetation along the stream corridor, residential and urban structures, and a leveed flood control reach bordered on the downstream portion by sand dunes and beach. With the exception of the levees, the land immediately adjacent to the stream corridor is generally flat. The stream channel is incised over much of the area and not visible from the majority of primary roads or residences. The HCP habitat enhancement projects would generally not be visible to the public from local roads or residences. The Arroyo Grande stream gage, which is proposed to be removed as part of the HCP project, is visible only by accessing the incised steam channel immediately adjacent to the gage. The modified stream flow would result in small increases in flows at some times compared to baseline conditions but would not contribute to a visual impact but rather they would benefit the aesthetic qualities of the creek.

Impact

Criteria for Determining Impact Significance. According to the State CEQA Guidelines, visual resource impacts are considered significant if a project has a "substantial demonstrable negative aesthetic effect". Based on professional standards and practices, a project will normally be considered to have a significant impact if it would:

- Conflict with adopted visual resource policies;
- Substantially reduce the vividness, intactness, or unity of high-quality views; or
- Introduce a substantial source of light and glare into the view shed.

Discussion of Environmental Consequences

- The HCP project would not conflict with known protection requirements or design criteria of federal, state and local agencies for scenic resources along the creek corridor.

- The visual effect of the habitat enhancement projects and removal of the stream gage would be consistent with the natural riparian vegetation and character of the stream channel. These habitat features would generally not be visible to the general public on local access roads or residences. The changes in stream flow would contribute positively to aesthetic conditions within the creek. Impacts are considered less than significant.

- The habitat enhancement projects would be similar to the existing habitat features within and along the creek.

- The potential increase in riparian vegetation growing along the creek channel would create additional shadows. The increase in riparian vegetation and cover would benefit fish and wildlife inhabiting the creek corridor and would be consistent with local habitat conditions. This impact is considered less than significant.

Mitigation/Conclusion

No mitigation measures are required.

No-Project Alternative

Because visual impacts were judged less than significant with the proposed project, visual impacts of the No-Project Alternative would be the same as the proposed project. The proposed project would be expected to benefit aesthetics along the creek compared to the No-Project Alternative.

2. AGRICULTURAL RESOURCES AND LAND USE- *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Convert prime agricultural land to non-agricultural use?				**X**
b) Impair agricultural use of other property or result in conversion to other uses?				**X**
c) Conflict with existing zoning or Williamson Act program?				**X**
d) Conflict with adopted land use plans or policies?				**X**

Setting

With the exception of the City of Arroyo Grande, the southern fringe of the community of Oceano, and

the Lopez, Biddle Park, and Oceano Dunes recreational areas, land use in the project area is predominantly agricultural or undeveloped. Row crops, orchards, and vineyards dominate the agricultural landscape. Scattered rural homes, many associated with agricultural development, are located adjacent to the creek corridor.

Impact

Criteria for Determining Impact Significance. Agricultural impacts were considered potentially significant if the proposed project would result in the loss of substantial areas of agricultural land, result in the conversion of substantial areas of agricultural land to non-agricultural uses, or would substantially impede the use of agricultural land for production agricultural uses

Discussion of Environmental Consequences

- Implementation of the HCP actions would not reduce the amount of water available for downstream agricultural users because the proposed release schedule for fisheries is not exclusive of the current release schedule needed to maintain downstream agricultural aquifers. That is, both release schedules vary by seasons; in order to comply with both schedules water would be released at the highest rate of the two requirements at any particular time.

- The project would not require cancellation of Williamson Act Agricultural contracts because it would not require the conversion of agricultural land to other uses.

- Implementation of the increased flows required to "flush" sediments out of the streambed (partly simulating natural high flows) could result in instances of bank erosion and loss of adjacent agricultural land. Although the majority of the creek in agricultural areas is bounded by a well-developed riparian corridor that should serve to stabilize the creek banks, some loss of adjacent uplands could occur through the life span of the proposed project.

Mitigation/Conclusion

The HCP includes an extensive annual monitoring program along with a habitat enhancement program. The habitat enhancement program, to be administered by a technical advisory committee, includes, among other activities, the protection and improvement of riparian areas along the stream corridor. These two elements of the project will ensure that eroding bank areas are identified quickly, and that bank stabilization measures are both funded and applied. Therefore, any bank erosion that threatens agricultural uses will be repaired, limiting the effects on agriculture to a less than significant level.

No-Project Alternative

Current operations of the Lopez Project do not result in substantial impacts to agriculture. Therefore, impacts of the No-Project Alternative would be less than significant.

3. AIR QUALITY - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) ***Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by County Air Pollution Control District?***			**X**	
b) Expose any sensitive receptor to substantial air pollutant concentrations?			**X**	
c) Create or subject individuals to objectionable odors?		**X**		
d) Be inconsistent with the District's Clean Air Plan?			**X**	

Setting

Air Quality Pollutants and Existing Air Quality Conditions: The pollutants of greatest concern in the project area are ozone, including oxides of nitrogen (NO_x), inhalable particulate matter (PM10), and potentially, naturally occurring asbestos. Ozone is not emitted directly into the air, but instead is formed by photochemical reactions in the atmosphere. Ozone precursors, reactive organic gases (ROG) and oxides of nitrogen (NO_x) react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. PM10 emissions are generated by a variety of sources, including agricultural activities, construction, and traffic. Naturally-occurring asbestos has been identified by the state Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common in the state and may contain naturally occurring asbestos. Although the project is not within this type of geologic formation, sediments forming the bed and banks of Arroyo Grande Creek may have formed from the erosion of serpentine rocks located in the upper watershed. Carbon monoxide concentrations are generally elevated near heavily traveled intersections. Because the habitat enhancement activities would primarily occur in rural agricultural areas and areas having light traffic loads, carbon monoxide is not a concern.

Air Quality Conformity: The EPA has promulgated a rule requiring that all federal actions in federally designated non-attainment areas comply with applicable state implementation plans (SIPs) (40 Code of Federal Regulations [CFR] Parts 6, 51, and 93). However, because San Luis Obispo County is not a federal attainment area, this rule would not apply to the project.

Impact

Criteria for Determining Impact Significance. The following criteria, used to determine the level of significance of air quality impacts, were developed based on State CEQA Guidelines. The project would result in a significant impact if it would:

- Violate any ambient air quality standard;

- Contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in substantial air emissions or deterioration of air quality
- Create objectionable odors; or

Discussion of Environmental Consequences

- Implementation of the project would result in short-term emissions due to habitat enhancement construction activities such as removal of the Arroyo Grande stream gage. These emissions would result from small scale, localized grading and earthmoving, as well as from equipment exhaust. The construction emissions of greatest concern are PM10, ROG, and NO_x. This impact is considered less-than-significant because the standard design specifications for County construction projects require using best management practices for air quality, including dust suppression, use of well maintained equipment, and limiting disturbed areas as part of the project construction activities.

- Construction activity under the HCP would not be expected to result in violation of any ordinance or policies regarding local air quality.

- As described above, the project would not result in emissions exceeding any of the established parameters for ROG, NO_x, or carbon monoxide.

- The project would not generate any toxic air contaminant emissions.

- The project would not require any removal or demolition of building components other than removal of the Arroyo Grande stream gage, or the excavation of serpentine rock. Asbestos, if present in stream sediments, would be present in small amounts and controlled through standard dust-suppression techniques. If serpentine rock were encountered during enhancement activities the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations would be applied. The ACTM requires a geologic investigation to determine the presence of naturally-occurring asbestos. If naturally occurring asbestos is found at the site, the project must comply with all requirements outlined in the Asbestos ATCM before earth moving begins. These requirements may include, but are not limited to, 1) preparation of an “Asbestos Dust Mitigation Plan”, which must be approved by APCD before grading begins; 2) an “Asbestos Health and Safety Program”, as determined necessary by APCD.

- The habitat enhancement projects would be located along the Arroyo Grande Creek corridor primarily in rural areas characterized by riparian vegetation, permanent orchards, and row crops. Some habitat enhancement may also occur within the creek passing through the City of Arroyo Grande. As part of developing proposed habitat enhancement projects state and federal permits and approvals would be required that will address issues such as air and water quality, potential disturbance of existing substrate, and risk of contamination. The HCP specifies that projects that would result in unacceptable adverse impacts would not be approved as part of the HCP activities. That is, it is intended that the federal permits for implementation of the HCP would not include authorization to conduct enhancement activities that would otherwise result in environmental impacts that would be considered significant by either CEQA (California Environmental Quality Act) or NEPA 9national Environmental Policy Act). Such projects, if deemed necessary, would require separate permitting and additional

CEQA and NEPA review Therefore, it is not expected that the project would result in the removal or movement of any contaminated soil.

- The proposed habitat enhancement project construction activity and removal of the stream gage would result in temporary short-term concentrations of vehicles and construction equipment at specific project sites. The number of vehicles involved in habitat projects is small and would only occur in the area during construction activity. These activities would not result in significant congestion or the concentration of vehicles in an area on a long-term basis. This small number of trips would not result in violations of the carbon monoxide standard.

- The HCP habitat enhancement projects are not expected to produce any odor or other air quality problems that would create a public nuisance. The mitigation measure identified below would reduce the potential air quality impacts that may result from wind blown dust resulting from habitat construction or hazardous material spills to less that significant levels.

Mitigation/Conclusion

Mitigation Measure AQ-1. The District and their contractors will construct habitat enhancement projects using best management practices, including dust suppression and emergency response plans in the event of a chemical spill to avoid and minimize adverse impacts on air quality. (Emergency Response Plans are required when the activity involves the use of hazardous materials)

Responsible Party: The District will be responsible for overseeing that best management practices are employed during construction of HCP habitat enhancement projects and removal of the Arroyo Grande stream gage.

Timing: The best management practices plan will be prepared in advance of on-site construction activity, will be specified in contractor bid documents and contracts, and will be in effect throughout the period of construction of each HCP project.

Monitoring Program: Visual inspections will periodically be made by District staff to insure implementation of the best management practices.

Standards for Success: Wind-blown dust, odors, and emissions originating at the HCP habitat enhancement project site will be minimal and not result in a nuisance or potential health risk in the area.

No-Project Alternative

Implementation of the No-Project Alternative would avoid air quality impacts associated with short-term construction activity of the proposed HCP habitat enhancement projects and removal of the Arroyo Grande stream gage, but would not achieve the project objectives.

4. BIOLOGICAL RESOURCES - Will *the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Result in a loss of unique or special status species or their habitats?			X	
b) Reduce the extent, diversity or quality of native or other important vegetation?		X		
c) Impact wetland or riparian habitat?		X		
d) Introduce barriers to movement of resident or migratory fish or wildlife species, or factors which could hinder the normal activities of wildlife?		X		

Setting

The affected environment within and adjacent to Arroyo Grande Creek provides habitat for various plant, wildlife, and fish species. Biological resources within the HCP area are discussed in Sections 3.6 through 3.9 of the draft HCP. The following sections briefly describe biological resources in the area.

Special-Status Plants

Searches of CNDDB (1999) and CNPS rare plant database (Skinner and Pavlik 1994; electronic update 1999) identified numerous rare plant species with potential to occur in the vicinity of Arroyo Grande Creek. This is due to the many specialized habitats in the region, most of which are associated with unique soils or geologic formations. In addition, many of the rare plants have very limited ranges, often restricted to San Luis Obispo County or even the ten-mile radius around Arroyo Grande Creek. Again, this is due to the restricted extent of the unique soils and geologic formations supporting the rare plants.

The open dunes and dune scrub habitats (active coastal dunes - ACD), central fore dunes (CFD), and central dune scrub (CDS)) along the immediate coast provide potential habitat for several rare plants including surf thistle, branching beach aster, dune larkspur, beach spectaclepod, Blochman's leafy daisy, Nipomo Mesa lupine, crisp monardella, San Luis Obispo monardella, and black-flowered figwort. These species have potential to occur in the dune complexes and dune scrub habitat in the westernmost portion of the study area. During the reconnaissance field survey, crisp monardella was observed on a dune ridge in the study area approximately 500 feet south of Arroyo Grande Creek and approximately 0.75 miles inland from the coast.

In some back dune areas, there are dune lakes (also called dune slack ponds). These unique and rare wetland habitats provide potential habitat for several rare plants including marsh sandwort, La Grasiosa thistle, and Gambel's watercress. Most recorded occurrences for these species in the region are around the dune lakes a few miles south of Arroyo Grande Creek such as Jack Lake, Lettuce Lake, Oso Flaco Lake, Black Lake, and others. The dune ponds and lakes immediately north

and south of Arroyo Grande Creek appear to be artificially created or enhanced by levees, but provide low to moderate potential habitat for these rare plants. Within the study corridor, a recorded population of La Grasiosa thistle is along the eastern shore of the Oceano Lagoon.

Inland from the coast, are ancient dune formations, old sand hills, and consolidated sandstone and shale outcrops providing potential habitat for several rare plants including Santa Margarita manzanita, sand mesa manzanita, Well's manzanita, Pismo clarkia, Indian Knob mountain balm, mesa horkelia, Kellogg's horkelia, and San Luis Obispo County lupine. These unique soil types and rock outcrops extend from near the coast to beyond Lopez Lake. Sand mesa manzanita, Well's manzanita, Pismo clarkia, and Kellogg's horkelia occur near the coast around Arroyo Grande. Indian Knob mountain balm, Mesa horkelia and San Luis Obispo County lupine occur farther inland. Santa Margarita manzanita, associated with shale outcrops, has CNDDB occurrences near the coast and farther inland just east of Lopez Lake. Of these species, Well's manzanita and Pismo clarkia have recorded CNDDB occurrences in or adjacent to the study corridor and numerous additional occurrences north and south of the study corridor. Potential habitat in the study area for all the species listed above occurs on hillsides bordering the Arroyo Grande Creek Valley where sandstone outcrops and sandy soils exist. These species would not occur on the 100-year floodplain terraces bordering Arroyo Grande Creek since these are alluvial soils deposited from upstream rather than sandy soils deposited along the coast and uplifted through time.

Scattered serpentine outcrops areas with serpentine-derived or heavy clay soils near Arroyo Grande Creek provide potential habitat for several rare plants including San Luis mariposa lily, Brewer's spine flower, Chorro Creek bog thistle, San Luis Obispo dudleya, Blochman's dudleya, Jones' layia, and adobe sanicle. Only San Luis mariposa lily and Brewer's spine flower have CNDDB occurrence records in the vicinity, both concentrated north of the project area. Potential habitat for these species in the study area occurs on hillsides bordering Arroyo Grande Creek Valley where serpentine outcrops exist. These species would not occur on the 100-year floodplain terraces bordering Arroyo Grande Creek since these are non-serpentine alluvial soils.

The non-native annual grasslands provide potential habitat for one rare plant species, Obispo Indian paintbrush. This species is restricted to San Luis Obispo County between Arroyo Grande and San Luis Obispo across an elevation range of 30 to 1,200 feet. There are no CNDDB occurrence records for this species but the annual grassland habitats on hillsides in the project vicinity, especially those north of Arroyo Grande Creek, provide potential habitat for this species.

Wildlife

Lopez Lake and Arroyo Grande Creek support a diverse assemblage of wildlife species (SAIC 2000). Wildlife species in the area, particularly in the less developed upper watershed, include mule deer, coyote, gray fox, striped skunk, raccoon, and bobcat, cottontail rabbit, dusky-footed wood rat, deer mouse, and California pocket mouse. Other species in upland areas near Lopez Lake include California quail, California towhee, California thrasher, and wren tit, western toad, coastal western whiptail, California horned lizard, and California legless lizard. Oak woodlands in the area provide habitat for salamanders, Pacific tree frogs, acorn woodpecker, western scrub jay, house wren, red-tailed hawk, red-shouldered hawk, Cooper's hawk, and American kestrel. Pocket gophers and ground squirrels are common in surrounding grasslands.

Lopez Lake provides habitat for wintering water birds such as the common loon, eared grebe, Western grebe, double-crested cormorant, mallard, gadwall, pied-billed grebe, American coot, green-winged teal, bufflehead, ruddy duck, great blue heron, green heron, black-crowned night heron, snowy egret, and great egret (SAIC 2000). Several of these species breed on the lake as well,

including pied-billed grebes, American coot, mallards, and ruddy ducks. The osprey and bald eagle are also regular winter visitors to the lake but their numbers are low.

Riparian woodlands and other habitats along Arroyo Grande Creek downstream of Lopez Dam provide habitat for many of the same species observed in the upland habitat including mule deer, coyote, bobcat, cottontail rabbit, raccoon, gray squirrel, deer mouse, muskrat and California pocket mouse. Arroyo Grande Creek, particularly the reach from Biddle Park upstream to Lopez Dam, supports a population of beaver. The Arroyo Grande Creek corridor also provides habitat for a variety of songbirds and raptors. Further downstream near the lagoon, wading birds (e.g., herons and egrets), shorebirds (black-necked stilts and American avocets), and gulls have been observed. Reptiles and amphibians in the Arroyo Grande Creek corridor include the Southwestern pond turtle, gopher snake, western terrestrial garter snake, Pacific tree frog, western toad, California red-legged frog and bullfrogs.

A search of the California Natural Diversity Database within a five and 10-mile radius of Arroyo Grande Creek showed the presence of a variety of sensitive plant and wildlife species within the area. Both the California red-legged frog, listed for protection under the Federal Endangered Species Act as a threatened species, and steelhead trout, listed for protection as a threatened species under the Federal Endangered Species Act, were identified in the database search and have been documented within Arroyo Grande Creek. Surveys of Arroyo Grande Creek in 1996 documented California red-legged frogs near Lopez Dam and at Cecchetti Road (Alley 1996).

Fish

A variety of resident fish species inhabit Lopez Lake and Arroyo Grande Creek, in addition to migratory steelhead, which spawn and rear within the creek downstream of Lopez Dam. Lopez Lake provides habitat for channel and white catfish, brown bullhead, smallmouth and largemouth bass, black crappie, bluegill, red ear and green sunfish. CDFG stocks Lopez Lake each winter with catchable trout from the CDFG Fillmore Hatchery, and the reservoir supports an active recreational fishery.

Fishery studies conducted within Arroyo Grande Creek downstream of Lopez Dam include electro-fishing surveys by Alley (1997), and the California Department of Fish and Game (2000). These electro fishing surveys showed that steelhead, speckled dace, prickly sculpin, stickleback, California roach, brown bullhead, largemouth bass, and bluegill inhabit Arroyo Grande Creek. Additional fishery surveys, using direct observation by snorkeling, were conducted during the fall 2000 as part of the Lopez Dam Seismic Remediation Project (SAIC 2000). The snorkeling surveys (SAIC 2000) showed that both young-of-the-year and yearling steelhead were inhabiting the creek, although the estimated density varied substantially among reaches and habitat units surveyed. Steelhead densities observed during the snorkel surveys were substantially greater in several habitats surveyed between the gravel pit pool and dam, than further downstream within Arroyo Grande Creek.

Electro fishing surveys within the creek found young-of-the-year (less than 75 mm) and older (greater than 75 mm) steelhead. The presence of young-of-the-year steelhead demonstrates that successful spawning and reproduction has occurred within the creek in recent years. Adult steelhead have also been observed within Arroyo Grande Creek, and have been caught within the creek in recent years by recreational anglers. CDFG recovered two steelhead in Arroyo Grande Creek in early 1999 when portions of the stream were dewatered for the Lopez Dam earthquake stabilization project. The intensive electro fishing survey in September 1996 by Alley (1997) provided information on juvenile steelhead densities within various reaches of the creek. The density of steelhead smolts (greater than 75 mm), during the September 1996 surveys, ranged from 0 to 8.3 steelhead per 100 feet of creek.

Based upon observations of steelhead densities in other creek systems (e.g., Pajaro, Soquel, and San Lorenzo creeks and smaller coastal streams in Santa Cruz County), Smith (1982) as reported by Alley (1997) identified criteria for classifying steelhead smolt densities. Based on these criteria and the smolt-sized steelhead densities observed during September 1996, steelhead abundance for fish less than 75 mm within Arroyo Grande Creek ranges from very poor to good. Densities of yearling size juvenile steelhead (> 75 mm) ranged from very poor to fair.

These electro fishing surveys are consistent with habitat quality ratings and with the observation that quality and availability of suitable habitat for steelhead spawning and juvenile rearing limit abundance of steelhead within Arroyo Grande Creek. These observations are also consistent with the finding that adult steelhead migrate into Arroyo Grande Creek and successfully spawn, although hatching success and juvenile survival of steelhead have not been determined for the creek.

Tidewater goby, an endangered species under the Federal Endangered Species Act, occur in a number of lagoons along the Central California coast. Tidewater goby were not identified in the California Natural Diversity Database within Arroyo Grande Creek. Tidewater goby have been collected in Pismo Creek and in the past from San Luis Obispo Creek. Tidewater goby were not collected from Arroyo Grande Creek in September 1996 by Alley (1997).

Impact

Criteria for Determining Impact Significance. Impacts on vegetation, wildlife, and fishery resources are considered significant if they would result in the following:

Vegetation and Wildlife

- Direct mortality or the permanent loss of existing or potential habitat for species which are federally or State listed, or proposed for listing, as threatened or endangered;
- Loss or disturbance of substantial portions of local populations of candidate species or Species of Special Concern;
- Adverse effects on a substantial portion of a vegetation type (including sensitive natural communities) in a local region;
- Temporary loss of habitat that may result in increased mortality or lower reproductive success of special-status wildlife species; or
- Avoidance by wildlife of biologically important habitats for substantial periods with risk of increased mortality or lowered reproductive success.

Fish

- Directly or indirectly reduce the growth, survival, or reproductive success of individuals of species listed, or proposed for listing, as threatened or endangered under the State or federal Endangered Species Acts;
- Directly or indirectly reduce the growth, survival, or reproductive success of substantial portions of candidate species populations, Species of Special Concern, or regionally important commercial or game species; or

- Substantially reduce the quality and quantity of important habitat for fish species or their prey.

Discussion of Environmental Consequences

Potential impacts associated with construction of habitat enhancement projects, removal of the Arroyo Grande stream gage, and modifications to instream flows and reservoir operations on plants, wildlife, and fish have been evaluated. The evaluation was based on consideration of (1) construction activities associated with localized habitat enhancement and stream gage removal, (2) habitat conditions currently existing within and adjacent to Arroyo Grande Creek, (3) known or presumed occurrence of plant, wildlife, and fish species in the area, and (4) long-term biological benefits expected to result from the physical and operational modifications that would affect habitat quality and availability for steelhead, red- legged frogs, and other wildlife inhabiting the creek corridor. In preparing the Environmental Assessment/Initial Study, background information on special-status species was obtained from a search of the CDFG's Natural Diversity Data Base in combination with the USFWS and California Native Plant Society's Inventory. A list of State- and federally-protected species and special-status species known or expected to occur in the area adjacent to Arroyo Grande Creek was compiled and reviewed in addition to conducting the field surveys. Habitat requirements and the closest known locations of special-status plant and animal species were also reviewed based on available information from the scientific literature, database searches, and field surveys.

Information used in developing this Environmental Assessment/Initial Study includes basic habitat characteristics within the creek corridor. Additional information, complementing the data base searches, was obtained during site visits and field surveys of the instream habitat for steelhead and vegetation and wildlife surveys along the creek corridor and areas surrounding Lopez Lake. These surveys included consideration of plant and wildlife species, and their potential occurrence based on habitat conditions in the area. Fishery studies have also been conducted as part of the HCP preparation and previously by Alley (1997) and CDFG (2000), which provide a basis for evaluating adverse impacts and environmental benefits of the proposed HCP actions on fishery resources.

Vegetation and Wildlife

- The proposed project would comply with environmental laws and State and federal permit requirements. As part of this Environmental Assessment/Initial Study potential impacts on plant, wildlife, and fishery populations were evaluated as a result of both short-term habitat enhancement construction activities and long-term operation of the reservoir and downstream releases. The assessment concluded that the proposed project would not result in significant adverse impacts to threatened, endangered, or candidate species of plants and wildlife. The assessment concluded that short-term, localized increases in turbidity and suspended sediment concentrations within Arroyo Grande Creek would occur during site preparation and installation of habitat enhancement projects and removal of the existing Arroyo Grande stream gage. The assessment concluded that the overall biological benefits resulting from habitat improvement, specifically for steelhead and red-legged frog, but benefiting a variety of wildlife and aquatic species, would mitigate for any short-term impacts attributable to localized habitat construction activity. The USFWS will be asked to concur that the proposed actions are not likely to adversely affect the federally listed species identified in the project area. NOAA Fisheries will also be asked to concur that short-term construction-related impacts to listed steelhead would be more than offset by the long-term benefits to fish. Permit conditions would be issued by both state and federal resource agencies, outlining the terms and conditions for construction activity. The District or their contractor would be required to comply with all permit conditions and

applicable laws and regulations. As a result of the small area affected by construction, the avoidance and minimization efforts to reduce habitat impacts, revegetation, and compliance with existing permits, laws, and regulations, the proposed HCP project would not have any significant long-term effects on vegetation or wildlife.

- The proposed project would not directly harm sensitive species or cause a significant loss of available habitat. Mitigation measures, described below, have been incorporated into the proposed project to reduce and avoid significant adverse impacts to vegetation and wildlife habitat, and to mitigate unavoidable losses to less-than-significant levels.

- Interference with the movement of resident or migratory species, resulting from the proposed project, is considered to be less-than-significant. The proposed habitat enhancement projects would not permanently disrupt or impact migration of fish or wildlife. Habitat enhancement projects implemented under the HCP would be designed to benefit wildlife and fish inhabiting the Arroyo Grande Creek corridor. Removal of the Arroyo Grande stream gage is specifically intended to improve migration and movement of adult and juvenile steelhead. Impacts to the movement and migration by wildlife are expected to be less than significant.

- The project would not cause any fish or wildlife population to drop below self-sustaining levels. Mitigation measures have been included in the project to avoid and minimize impacts to vegetation and wildlife. Much of the habitat area affected by the project is already disturbed, and not considered to be unique. The purpose of the project is to benefit steelhead and red-legged frogs through habitat enhancement, habitat management, creation, and maintenance including removal of a significant impediment to steelhead migration within the creek and providing instream flow to support various life stages of steelhead and red-legged frogs. The HCP actions also include the construction and management of additional wetland habitat to benefit red-legged frogs. As a result, it is concluded that the project would have no impact on the ability of any species to support self-sustaining populations.

- Actions implemented as part of the proposed HCP are intended to benefit fish and wildlife. The potential loss of riparian lands, wetlands or marshes as a result of these actions is considered to be less than significant based on the mitigation actions included as part of project planning to identify and avoid impacts to sensitive species and their habitat. Depending on the location and design of habitat enhancement actions localized disturbance to existing vegetation would occur. Development of proposed habitat enhancement projects would include review by resource agencies participating in the HCP Technical Committee and identification of project design and construction methods to minimize or avoid impacts to sensitive habitat. Habitat enhancement for red-legged frogs would include the expansion and improved management of wetland habitat adjacent to the creek. Impacts to riparian vegetation that provides fishery habitat benefits along Arroyo Grande Creek will be avoided and minimized through project siting and design in combination with mitigation of unavoidable losses through revegetation if needed. As a result of these measures, impacts of the proposed project on existing habitat are expected to be reduced to less than significant.

- The proposed project would not result in the loss of any “specimen tree” or tree with historic value. To the extent possible, the location and alignment of specific habitat enhancement projects for either steelhead or red-legged frogs would be selected to avoid and minimize impacts on mature trees.

Fish

- Resident fish species, in addition to migratory steelhead, inhabit Arroyo Grande Creek. These species would be susceptible to short-term, localized exposure to increased turbidity and suspended sediment concentrations resulting from site preparation and construction of habitat enhancement projects and the removal of the Arroyo Grande stream gage. These adverse effects would be temporary and localized to the immediate area where habitat enhancement occurs. Project siting, design, and construction methods would be used to avoid and minimize adverse impacts to sensitive species and their habitat. These potential impacts were considered less-than-significant. The USFWS will be asked to concur that the proposed action is not likely to adversely affect the federally listed species identified in the project area. NOAA Fisheries will be asked to concur that short-term construction related impacts to steelhead would be more than offset by the long-term benefits to the fish. There will be no long-term adverse affects on federally listed, proposed, or candidate fish species, or species of special concern. Long-term effects of the actions undertaken as part of the HCP are intended to protect and promote the recovery of Central Coast steelhead. Due to the long-term protection of steelhead and resident fish species inhabiting Arroyo Grande Creek expected to result from actions implemented as part of the proposed HCP, no mitigation is necessary for the short-term localized impacts associated with habitat enhancement projects or removal of the Arroyo Grande stream gage other than compliance with the terms and conditions of project-specific permits issued for the actions.

- The proposed project would not result in a long-term decline in steelhead growth rates, survival, or reproductive success. The purpose of the HCP is, in part, to protect and enhance habitat conditions within the creek to benefit steelhead migration, spawning and egg incubation, and juvenile rearing. The HCP is intended to have a long-term environmental benefit by improving reproductive success and juvenile survival. The long-term benefit of improved survival rates for steelhead would compensate and mitigate for any short-term impacts resulting from construction of the habitat enhancement projects or stream gage removal. The project would not result in long-term declines in steelhead or other aquatic species, and therefore is considered to have no adverse impact on these populations.

- The project would result in an incremental increase in the fluctuation in water surface elevations within Lopez Lake that would potentially affect warm water fish reproduction (e.g., bass) within the reservoir. The magnitude of fluctuation is dependant upon future hydrologic conditions that cannot be predicted. In the event that reservoir storage fluctuation is identified as a significant factor affecting warm water fish spawning, mitigation can be provided in the form of habitat enhancement projects within the reservoir. Reservoir surface levels fluctuate considerably under No-Project operations (Section 5.1 of the draft HCP) and therefore the HCP actions would contribute to an unknown incremental increase in future reservoir storage and elevations. The HCP includes funding allocations for habitat enhancement that could be used, at the discretion of the HCP Technical Committee, to install brush piles or other actions to benefit warm water fish species impacted by reservoir drawdown resulting from stream flow releases to the creek in support of the HCP. Potential impacts to warm water fish within Lopez Lake are considered to be a less-than-significant.

Mitigation/Conclusion

Mitigation Measure BR-1. As part of the planning and permitting for habitat projects to be implemented under the HCP, site selection would include an assessment of potential impacts to sensitive vegetation, wildlife, and fishery resources and their habitat in the proposed area. A qualified biologist would survey the immediate area for a proposed habitat project to determine potential impacts and appropriate mitigation. Results of the surveys would be included as part of the project design and permit applications to State and federal resource and regulatory agencies. In the event that these planning level surveys identify significant adverse impacts that cannot be avoided or mitigated to acceptable levels, the proposed project would not be approved by the HCP Technical Committee for any further consideration.

> ***Responsible Party:*** The District would insure that potential project sites are surveyed for sensitive vegetation, wildlife, and fish by a qualified biologist as part of project planning.
>
> ***Mitigation:*** In the event that sensitive vegetation, wildlife, or fish are identified to occur at a proposed habitat enhancement site, the District, working in cooperation with resource agencies participating on the HCP Technical Committee, will evaluate avoidance and minimization actions. These actions could include developing buffer areas around the project site to protect sensitive species, the seasonal timing of construction, alternative methods of construction, curtailing further consideration of the proposed project and site, or other appropriate actions.
>
> ***Timing:*** The site-specific surveys, database search, and other analyses needed to assess the potential for adverse impacts to sensitive species will be completed and documented for inclusion in permit applications, biological assessments, and review by the HCP Technical Committee prior to recommendation for project approval and funding as part of the HCP.
>
> ***Standards for Success:*** Proposed HCP habitat enhancement projects will be authorized for funding only under the condition that all significant impacts to sensitive vegetation, wildlife, and fish can be avoided or fully mitigated.

No-Project Alternative

Implementation of the No-Project Alternative would avoid the impacts and disturbance to the existing vegetation, wildlife, and fishery habitat present at proposed habitat enhancement sites and as a result of the removal of the Arroyo Grande stream gage. Implementation of the No-Project Alternative would not, however, achieve the goal of protecting and enhancing habitat conditions to benefit steelhead and red-legged frogs within the project area. The environmental benefits resulting from HCP actions, including improved passage and stream flows for steelhead inhabiting Arroyo Grande Creek would not be realized with the No-Project Alternative.

5. CULTURAL RESOURCES - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Disturb pre-historic resources?		**X**		
b) Disturb historic resources?		**X**		
c) Disturb paleontological resources?		**X**		

Setting

The Arroyo Grande Creek corridor and adjacent lands are known to have been inhabited by prehistoric and ethnographic populations. The San Luis Obispo area and the Arroyo Grande Creek watershed are the northernmost parts of the south central coast region of California historically occupied by the Chumash. The prehistory of the region can be divided into four periods based on changes in economy and technology, social organization, and population size (King 1990; Rogers 1929; Wallace 1955; Warren 1968). The earliest documented remains are associated with Paleoindians (12,000-9,000 years ago). Paleoindian sites in coastal California contain flaked stone tools but lack the milling stones common in later periods. Dates of 9,000 years before present (B.P.) have been obtained from several sites in San Luis Obispo County. CA-SL0-2 at Diablo Canyon also contains a paleocoastal component (Greenwood 1978; Morratto 1984).

Later period sites are more common, reflecting better preservation and increasing population size. Milling stone sites (9,000-5,000 years ago) indicate more reliance on gathered resources, such as seeds and shellfish than on fishing and hunting. Mortars and pestles, projectile points, and diverse land and sea-animal remains became prevalent in sites of 5,000-2,000 years ago. About 2,500 years ago, sites gradually began to reflect the sophisticated and fully maritime culture of the coastal Chumash (Erlandson 1993). The Chumash of this period lived in well-organized towns of up to 1,000 people. Their culture featured hierarchical social organization, occupational specialization, a money-based economy, extensive trade, use of plank boats, and many kinds of material goods (Applied EarthWorks 1998).

Unrecorded prehistoric and/or ethnographic resources may be located within the project area. Construction activity associated with implementing non-flow elements of the HCP (e.g., riparian planting, vegetation control, construction of instream habitat, removal of the stream gage, etc.) would potentially expose archaeological sites. In the event that an archaeological site is discovered, specific mitigation actions and protocols have been developed as outlined below to avoid and mitigate potential damage and disruption to the site. These avoidance and mitigation actions are included as part of the HCP program.

Actions associated with the HCP have the potential to affect sensitive cultural or archeological resources. Actions that could disrupt historical resources include removal or modification of fish passage impediments, construction of instream habitat improvement projects, placement of gravels, channel bank modification or stabilization, or changes in flow conditions and lake levels that would inundate or dewater areas having sensitive archeological resources. To address impacts associated with implementation of the HCP on cultural resources, a cultural resource survey was performed along the Arroyo Grande Creek corridor. Results of the survey are briefly documented below.

Record and Literature Search

In July 1999 a record search at the California Historical Resources Information System (CHRIS), Central Coastal Information Center at the University of California, Santa Barbara (UCSB) was conducted to identify known cultural resource sites and previous archaeological surveys undertaken within one mile of Arroyo Grande Creek downstream from Lopez Dam and the Lopez Lake area. Eighty-four previous cultural resource surveys had been conducted within the area of the record search.

Thirty-two known archaeological sites are one-half mile or less from Arroyo Grande Creek. Six of the archaeological sites are found north of the dam in the immediate vicinity of Lopez Lake. Twelve sites are in developed residential neighborhoods approximately 1,000 feet from the channelized portion of the creek and would not be impacted by the project. Of the remaining 14 archaeological sites, only three were relocated during the survey conducted for this project (see below). No resources currently listed on the National Register of Historic Places occur in the project area.

Native American Heritage Commission Consultation

The Native American Heritage Commission (NAHC) in Sacramento was contacted by letter with a description of the proposed HCP and a request for a list of local, interested Native American Representatives, and information on traditional or sacred lands in the project area. Gail McNulty from the Native American Heritage Commission responded to the request, noting that a search of the sacred lands file failed to indicate the presence of Native American cultural resources in the immediate project area. The County is currently coordinating with local, interested Native American groups to obtain their input and any concerns regarding cultural sites potentially affected by the proposed project.

Survey Methods and Results

In accordance with CEQA Sections 15064.5 and 15126.4, the length of Arroyo Grande Creek from Lopez Dam to the Pacific Ocean was assessed to evaluate project impacts on cultural resources. A field survey of portions of this area was conducted on March 28-30, 2000. In those areas subject to pedestrian survey, a maximum survey interval of 100 feet or less was used. The field survey involved intensive surveys in sensitive areas known to contain sites, and cursory surveys in developed/residential areas, cultivated fields, farmland, and densely overgrown/poison oak covered terrain. Steep hillsides and overgrown creek bottoms were not surveyed. Areas of steep terrain or dense vegetation/poison oak along Arroyo Grande Creek were visually inspected, as conditions permitted. Information regarding sites buried under or found around the perimeter of Lopez Lake was obtained by reviewing Robert Gibson's *Inventory of Archaeological Values, Lopez Lake Recreation Area* (1983). One site, CA-SLO-373/1050, was re-surveyed and mapped by County staff in 2003. An updated site record form was also completed. 

Ground visibility was fair to poor due to marsh, thick vegetation, and weed or riparian plant growth. Trowel or foot clearing was used to displace vegetation at regular intervals to improve ground visibility. All visible ground surfaces, gopher burrows, and other exposed soil were examined for the presence of historic or prehistoric site indicators. Indicators of prehistoric activity include charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, and pockets of dark, friable soils. Historic resources include glass, metal, ceramics, brick, wood and similar debris.

Archaeological Resources above Lopez Dam

Six archaeological sites have been recorded in the Lopez Lake area during five surveys and/or subsurface testing activities conducted between 1949 and 1983 (Osborne 1949, Wallace 1962, Desautels 1967, Fenega and Baker 1967, and Gibson 1983). Of these six sites, three were destroyed during dam construction, one is located under the lake, one is located partially below the lake, and one is located above the lake level.

CA-SLO-234 was destroyed during dam construction. The site was recorded by Wallace in 1958 as a large campsite on a crescent-shaped knoll overlooking Lopez Canyon and Arroyo Grande Creeks. The site was rich with artifacts including mortar and metate fragments, chert cores and tools, and hammerstones. The site was minimally excavated in 1967 by auguring six holes using three and eight-inch augurs.

CA-SLO-235 was also destroyed during dam construction and was recorded by Wallace in 1958. It was a large sandstone outcrop about 6 meters above Lopez Canyon Creek, 200 meters northwest of Santa Manuela School, and 500 meters west of the Lopez Canyon Creek/Arroyo Grande Creek junction. The outcrop contained nine bedrock mortars and was possibly associated with site SLO-234.

CA-SLO-236 was the third site destroyed by the construction of the Lopez Dam. It was described as a small campsite containing a mano fragment, two hammerstones, and chipping detritus by Wallace in 1958.

CA-SLO-82/372/1051 (Madonna #2) has been recorded numerous times under different site numbers. There has been substantial confusion about where the site is located and none of the site record maps match the official map at UCSB. SAIC (1998) has prepared a thorough discussion about this site and that information will not be repeated here. Most importantly, this large site is located under the lake and will not be impacted by the proposed release schedule.

CA-SLO-373/1050 (Madonna #1) was first recorded by Desautels in 1967 as Madonna #1. Again, multiple site records were filled out for this site using different identifiers and documenting different artifacts found. Artifacts listed by Golder of Cabrillo College in 1981 include projectile points, a steatite pipe fragment, a basalt scraper, hammerstones, chert scrapers, metate and pestle fragments, chipping debris, tubular shell beads, an *Olivella* shell bead, polished pebbles, fire affected rock, and a chert drill. At that time, the site was also described as being under water.

Robert Gibson revisited the site in the late 1970's when it was reported that wave action (the site was partially above water at this time) had caused erosion uncovering some fragments of human bone. At that time, under direction of the Central Coast Indian Council of Paso Robles, the bones were removed for subsequent reburial. Gibson found that the site was consistent with the description made by Desautels. .

The primary impact to the site as a result of the proposed releases is exposing the site for longer periods of time to collectors. For example, from 1976-1978, an additional five to six elevation feet of site would have been exposed under the proposed release schedule. Of particular note, the burial locations would have been exposed for one additional year during that three year period (three years instead of two years). From 1969-2000, the burial area would have been exposed for five additional years (16% of the total time) than actually occurred.

Because this site may be impacted by the rise and fall of lake levels over time, this site was re-visited by the County staff archaeologist and a survey crew in October 2003. Surface indications of the site were skewed due to presence of lake-deposited gravel and freshwater clam shells at all the lower-lying elevations, and especially in the saddles between hilltops. The mapped site based on 2003 data measures approximately 130 meters north-south by 100 meters east-west. Artifacts noted corresponded with Gibson's site description; however, one sandstone bowl mortar fragment was observed (no groundstone had been previously reported).

Camp French Site 1 was described during Gibson's inventory of Lopez resources. He completed a site record form in 1983 but the site did not appear in SAIC's site record search in 1998 of the Lopez Lake area. This site would not be affected by the proposed flow release program.

Archaeological Resources downstream of Lopez Dam

One known historic/prehistoric site and two known prehistoric sites were relocated during the survey (Table 3-14). The Schulenburg site, ***CA-San Luis Obispo-1675***, a ranch complex containing historic trash deposits, also includes parts of a prehistoric midden complex with a light lithic scatter. The site is on a secondary river terrace approximately 200 feet east of the creek. The Arroyo Grande Creek drainage channel is approximately 20-30 feet deep near the site vicinity. Impacts to this site from changes in stream flow are not anticipated.

Although destroyed by construction of a local high school, the recorded location of ***CA-San Luis Obispo-107*** was found approximately 600 feet from the creek. Dispersed shell fragments were observed near the tennis court. The site was recorded in 1950 by Pilling and described as "a large village site." Impacts to this site from changes in stream flow are not anticipated.

CA- San Luis Obispo-393 was relocated on a rise, approximately 100 feet west of Arroyo Grande Creek. Situated next to a residential neighborhood, the area is now a public park with a large surficial expression of shell fragments. Recorded in 1958, this prehistoric site is described as a large village on rise overlooking Arroyo Grande Creek. At this point the creek's drainage channel is approximately 40 feet deep and 50 feet wide. Impacts to this site from changes in stream flow are not anticipated.

None of the remaining eleven known archaeological sites in the Arroyo Grande drainage could be relocated during this assessment. Descriptive data on each site is provided below.

CA-San Luis Obispo-236 was reported destroyed during dam construction (Applied EarthWorks 1998). The site was originally recorded by Wallace in 1958 as a small campsite approximately, 100 x 150 feet in size, at the mouth of Lopez Canyon and Arroyo Grande Creek about 330 feet southwest of the old Santa Manuela School. The school has been moved and is now located near the marina (Applied EarthWorks 1998).

CA-San Luis Obispo-410 is 1.6 miles from Lopez Dam in the Biddle Park section of Arroyo Grande Creek. Recorded in 1958 as a large workshop and campsite, this site was not relocated during these surveys. In this area, the creek is overgrown with dense vegetation and thick poison oak and could not be thoroughly inspected along the southeastern edge of the site. The site area includes a privately owned knoll that was not inspected. This property presently has a modern house on top of it with a wide entrance driveway. The western end of the site is bisected by Lopez Road and surrounded by cultivated fields. It is doubtful that cultural resources at this location, should they exist, would be impacted by stream flow fluctuation in Arroyo Grande Creek.

Garcia and Associates recorded ***CA-San Luis Obispo-1796*** in 1996 prior to construction of a road at the intersection of Lopez Road and Talley Farms Road adjacent to Arroyo Grande Creek. The majority of the site is paved and extends to the intersection of Lopez Road and Orcutt Road. The drainage channel of the creek is approximately 30-40 feet deep at this point.

Access to the creek bank at Strother Park allowed approximately 200 feet of creek area to be surveyed in an area subject to seasonal flooding. There is a sign approximately 300 feet from the

creek designating this area as a Chumash Historical Site, although the UCSB clearinghouse provided no information on this resource during the record search. No cultural materials were observed.

CA-San Luis Obispo-408 was recorded in 1958 as a light scatter of shell and chert, approximately 300 feet west of the creek. The site was not relocated during these surveys.

CA-San Luis Obispo-846 was recorded by Sawyer in 1978 as a prehistoric food-processing site approximately 500 feet from Arroyo Grande Creek. It was not relocated during these surveys and was probably destroyed during construction of the sewage treatment plant.

CA-San Luis Obispo-454 was recorded in 1958 as a prehistoric campsite littered with shell and chert fragments. It was not relocated during these surveys.

CA-San Luis Obispo-189, CA-San Luis Obispo-190, CA-San Luis Obispo-191, CA-San Luis Obispo-192, *and* ***CA-San Luis Obispo-193*** were recorded by Hoover in 1967 as middens located on sand dunes approximately 350-1,500 feet south of the creek and were not relocated. This area is now part of Pismo Dunes Natural Preserve.

No other recorded sites were relocated and no new archaeological sites were observed during the field survey.

Construction activity associated with implementing non-flow elements of the HCP (e.g., riparian planting, vegetation control, construction of instream habitat, etc.) would potentially expose archaeological sites. In the event that an archaeological site is discovered, specific mitigation actions and protocols have been developed as outlined in Appendix C to avoid and mitigate potential damage and disruption to the site. Water level fluctuations in Lopez Lake may potentially impact site SLO-CA-373 by causing increased erosion and/or exposing more of the site for longer periods of time for collection of artifacts by "pothunters." However, the effect of the lake operation (lake itself as well as recreation impacts) since 1969 has likely been causing an adverse effect on the site. The proposed project may be adding to the effect already occurring to the site. Mitigation has been proposed to offset the proposed project's impact to a level of insignificance. These avoidance and mitigation actions are included as part of the HCP program.

Impact

Criteria for Determining Impact Significance. Cultural and historical resources, archeological sites, structures or objects listed in, or eligible for listing in, the National Register of Historic Places (NRHP) are subject to the following effects:

- Physical destruction or alteration of all or part of the property;
- Isolation of the property from, or alteration of, the property setting when that character contributes to the property's qualifications for the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or setting;
- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of the property.

Discussion of Environmental Consequences

- A cultural resources inventory of the proposed project area was conducted (Section 3.10 of the draft HCP). Cultural or historic resources were identified within the area potentially affected by the proposed project.

- The proposed project would not conflict with the cultural and historic protection measures established by federal, State, or local regulatory programs because issuance of State and federal funding and permits would be dependent upon compliance of the National Historic Preservation Act.

- Review of historic literature and maps for the Arroyo Grande Creek corridor downstream of Lopez Dam gave no indication that prehistoric, historic, or cultural resources which are eligible for listing on the NRHP, California Register of Historic Resources, or local entities would be impacted by the modified stream flow pattern or removal of the Arroyo Grande stream gage. Construction of habitat enhancement projects may, however, result in disturbance of historic and cultural sites along the creek. Mitigation measures have been identified below to be included in the HCP projects to address potential impacts, should they be identified during habitat enhancement project construction. Based on the inclusion of mitigation actions into the HCP projects it was concluded that the project would not adversely impact or prevent future access to cultural or historical resources.

- No features of historic or cultural significance have been identified at the Arroyo Grande stream gage site. As noted above, mitigation actions have been identified and incorporated as part of the HCP to address potential impacts resulting from construction activity or removal of the stream gage. Impacts of the project to either cultural or historic resources, therefore, are considered to be less than significant.

- Construction activity associated with habitat enhancement projects may expose paleontological resources. In the event that these resources are exposed by project construction the mitigation action outlined below would be implemented to avoid and minimize adverse impacts to these resources.

- No human remains have been identified in the proposed project area downstream of Lopez Dam. If buried cultural resources, either prehistoric (i.e. chert or obsidian flakes; projectile points; mortars and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials) or historic (i.e. stone or adobe foundations or walls, structures and remains with square nails, and refuse deposits often in old wells or privies), are inadvertently discovered during ground-breaking activities, work will stop in that area until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the State Historic Preservation Office.

- Increased fluctuation and drawdown of Lopez Lake in response to instream flow releases under the proposed HCP would be expected to increase the frequency and duration that archeological sites located upstream of the dam may be exposed increased erosion and/or exposing more of the site for a longer period of time for collection of artifacts by “pothunters”. The proposed project would result in an incremental increase in potential impacts above existing baseline conditions. Mitigation has been proposed to offset the proposed project’s impact to a level of insignificance.

Mitigation/Conclusion

Mitigation Measure CR-1. In the unlikely occurrence that cultural resources, paleontological resources, or human remains are encountered after an HCP habitat enhancement project has begun construction, the procedures in 36 CFR 800.11 will be followed. The District or contractor will cease work at that location and immediately notify a qualified archeologist. The archeologist will assess the nature and value of the site and will recommend to the State Historic Preservation Officer (SHPO) a course of action. Appropriate mitigation, as determined through negotiations with SHPO, will be completed for any significant sites.

Responsible Party: The District will serve as lead agency responsible for compliance with Section 106 of the NHPA. The District will insure that the identified mitigation measures are implemented.

Timing: Cultural resource, paleontological resource, or human remains mitigation measures will be implemented at the time of project construction in the identified locations.

Monitoring Program: Resource monitoring will be limited to the vicinity of the find that would appear during construction of a habitat enhancement project. Monitoring would be by a qualified archaeologist after appropriate treatment measures have been identified for the find.

Standards for Success: Cultural resources, paleontological resource, or human remains that may be discovered during the project are analyzed and either protected or recovered.

Mitigation Measure CR-2. The construction and long-term use of the lake itself constitutes a significant adverse impact on site CA-SLO-373 due to on-going wave erosion and the potential for unauthorized artifact collection. Because the impacts to the site are already adverse, any additional exposure of the site to erosion or artifact collectors would also be significant. The following mitigation measures were developed as a range of options to offset the additional impacts implementation of the release schedule would create.

1. **Data Recovery.** It is likely that the site will eventually erode over the next several decades and much of the site's data will be lost. This erosion would occur even without the influences of the proposed project but would likely be minimally hastened with the increase in lake level fluctuations. Data recovery could satisfy the requirements of CEQA to mitigate the project's impacts to archaeology. Data recovery would likely include systematic survey and fine scale mapping of the site, excavation of a specified percentage of the total site (possibly 10%), artifact evaluation, and reporting. This data recovery in combination with mitigation measure #4, below, would mitigate impacts to the site to a level of insignificance.

2. **Monitoring by Parks Department Personnel.** An environmental training program could be prepared for selected park rangers. This training would focus on preparing park rangers to monitor the archaeological site and prepare them for encountering members of the public who disturb or collect from the site. The park rangers are consistently and frequently in contact with the public at Lopez Lake and can easily access the site to ensure it is not being impacted by collectors. However, through unintentional word-of-mouth to the uninformed public, artifact collectors and the general public could become aware of the site and expose it to further damage. This measure would not protect the site from further erosion.

3. **Permanent Erosion Control at Burial Elevations.** Rock riprap or some other type of permanent erosion control could be placed along the 510-520 elevation. This is the elevation range where human burials had been discovered in the late 1970's. This mitigation measure

would have limited utility as it is unknown whether this elevation is the only place burials exist on site. It is likely that other portions of the site contain significant data.

4. **Annual Site Monitoring by Archaeologist and Chumash Representatives.** The site could be monitored and evaluated on an annual basis by an archaeologist who would coordinate with interested Chumash representatives. Any human remains or ceremonial items that become uncovered as a result of erosion would be reburied with the approval of the Native Americans. The monitoring archaeologist would document erosion occurring at the site and recommend additional mitigation if it becomes necessary.

5. **Complete Permanent Erosion Control.** Complete erosion control at this site would likely entail placing riprap or another hardscape feature such as concrete blocks. Vegetative erosion control has been determined to be infeasible due to the high degree of water level fluctuation at the site (planted areas would be inundated on a regular basis). While protecting the site with riprap would likely stop erosion at the site, it would also be visually obtrusive and technically difficult. Virtually the entire peninsula would have to be protected which would result in nearly ¾ of an acre covered in rock riprap.

To ensure that no significant impacts to site CA-SLO-373 occur, the District will, at a minimum, implement mitigation measures 1 and 4 listed above. Implementation of mitigation measure 1 will necessarily require on-going monitoring and consultation with appropriate Native American representatives prior to each phase of any proposed data recovery effort. Additional listed mitigation measures may be implemented after consultation with appropriate Native American representatives and the State Historic Preservation Officer (SHPO).

Responsible Party: The District will serve as lead agency responsible for compliance with the proposed mitigation of increased lake level fluctuations. The District will insure that the identified mitigation measures are implemented.

Timing: Cultural resource, paleontological resource, or human remains mitigation measures will be implemented at the time of HCP approval and implementation in the identified locations.

Monitoring Program: Resource monitoring will be limited to the vicinity of the find that would appear during lake level drawdown. Monitoring would be by a qualified archaeologist.

Standards for Success: Cultural resources, paleontological resource, or human remains that may be exposed during lake level drawdown are protected or recovered.

No-Project Alternative

Implementation of the No-Project Alternative would avoid potential disturbance of cultural artifacts caused by habitat enhancement construction activities and removal of the Arroyo Grande stream gage, and by increased water surface drawdown with Lopez Lake, but would not achieve the project goals and objectives.

6. GEOLOGY AND SOILS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards?		X		
b) Be within a CA Dept. of Mines & Geology Earthquake Fault Zone (formerly Alquist Priolo)?				X
c) Result in soil erosion, topographic changes, loss of topsoil, or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill?		X		
d) Change rates of soil absorption, or amount or direction of surface runoff?				X
e) Include structures located on expansive soils?				X
f) Change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?				X
g) Involve activities within the 100-year flood zone?			X	
h) Be inconsistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards?				X
i) Preclude the future extraction of valuable mineral resources?				X

Setting

***Seismicity*.** The habitat enhancement projects, such as spawning gravel augmentation or construction of cover habitat and pools would not be structural features. Similarly, removal of the stream gage or modification to stream flow releases would not be subject to seismic hazard. Riparian planting along the stream corridor would be designed to reduce local erosion and conserve sediment along the channel. The potential for future impacts of a seismic event on habitat enhancement projects implemented as part of the HCP is low.

Geology and Soils. Soils long the Arroyo Grande Creek are characterized as recent alluvial fans and flood plains. These soils are characterized as consisting of shallow to deep, well drained to excessively-drained gravelly and non-gravelly stratified material. These soils support highly productive permanent and row crops on lands adjacent to the creek.

Impact

Criteria for Determining Impact Significance. The following criteria were used to determine the level of significance of geology, soils, and seismicity impacts. The criteria are based on the State CEQA Guidelines and professional judgment. A project will normally have a significant geologic or soil impact if it will:

- Expose people, structures, or property to major geologic hazards such as earthquakes, landslides, mudslides, or ground failure;
- Result in unstable earth conditions or changes in geologic substructure;
- Result in substantial disruptions, displacements, compaction, or over-covering of the soil;
- Result in a substantial change in topography or ground-surface relief features;
- Result in a substantial increase in wind or water erosion of soils, either on or off the site; or
- Be located on soils displaying evidence of static hazards, such as landslides or excessively steep slopes that could result in slope failure.

Discussion of Environmental Consequences

- The proposed project would not conflict with legal requirements regarding geological hazards and soil conservation. The project will not require extensive excavation within the creek channel although some excavation would be required for removal of the Arroyo Grande stream gage. Limited localized excavation may also be required for the installation of stream habitat enhancement projects and/or construction of ponds for red-legged frog habitat. Excavated materials will be used on the site as backfill or for other uses. Material excavated during construction of the habitat enhancement projects will be used on-site. No excavated soil will be transported off-site. Debris and deposited sediment resulting from removal of the stream gage will be removed from the site for landfill disposal or other use.
- The proposed project area is within a seismically active area focused on the Oceanic/West Huasna Fault system. A major seismic remediation project to strengthen Lopez Dam was recently completed, and recent earthquake activity on the northern portion of the Oceanic/West Huasna fault system resulted in substantial damage throughout San Luis Obispo and northern Santa Barbara Counties. However, the habitat enhancement features implemented as part of the HCP would not expose people or structures to significant geological hazards because they would consist of non-structural earth and vegetative elements that would typically not be substantially affected by seismic activity. Non-structural earth fills would not be used to support buildings or roadways, would not be constructed on steep slopes above development (all would be located adjacent or within the creek channel), and would not be so extensive that slumping could block creek flows.

- Arroyo Grande Creek is characterized as an incised channel along most of the reach from Lopez Dam downstream to the flood control reach near Highway 101. The creek within the flood control reach is bounded by constructed levees adjacent to both channel margins. The incised channel reach has slopes in excess of 15%. Other than localized slumping there is no evidence of potential landslides along the creek channel in areas where habitat enhancement projects would be constructed or the location of the existing stream gage.

- The proposed in-channel habitat enhancement projects and ponds for red-legged frogs would be located on soil that is not likely to collapse or subside. The increase in stream flow releases from the reservoir under the HCP would be expected to contribute to increased local groundwater recharge and therefore would have a positive effect on local subsidence conditions.

- The habitat enhancement projects, including riparian revegetation, would not be expected to contribute to increased erosion in the area. Precautions to stabilize the Arroyo Grande stream gage site during and after removal of the stream gage, in addition to sediment management and control during removal, reduce the risk of adverse effects of gage removal. No damage to foundations or structures would occur as a result of the proposed project activities.

- Minimal erosion could occur during habitat enhancement project construction, but because of the small size of the excavated or affected areas, this impact is considered less than significant. All excavated soil will be stockpiled and reused on the site. A requirement for a soil erosion control plan has been incorporated into the project as part of best management practices to minimize erosion during construction and revegetation of the area for long-term soil stability. Soil erosion is not considered a major issue because the habitat enhancement projects would be constructed in the spring, summer, and fall months when the risk of rain-induced erosion is extremely low. However, a soil erosion and control plan, including re-seeding of the creek banks and erosion control measures will be implemented on a project-specific basis as needed to comply with standard best management practices by the District.

- The proposed habitat enhancement projects would not result in the loss of, or lost access to, mineral resources along Arroyo Grande Creek.

- The proposed project would not result in the loss of a unique geographical feature of statewide or national significance.

Mitigation/Conclusion

Mitigation Measure GS-1. The District and its contractors will be required to construct habitat enhancement projects and remove the Arroyo Grande stream gage using established best management practices including a soil and sediment erosion control plan during the period of site preparation and construction. In addition, to the extent possible habitat enhancement project construction and removal of the Arroyo Grande stream gage will occur during the low-flow summer months.

Responsible Party: The District will be responsible for overseeing the soil and sediment erosion control plan implementation at habitat enhancement sites and the stream gage location

Timing: The soil and sediment erosion control plan will be developed and integrated into the design of each specific proposed HCP project in advance of project permitting and implementation.

Monitoring Program: The District will be responsible for monitoring compliance with the erosion control effects and the effectiveness of the actions. Site-specific monitoring will be required. Monitoring will primarily involve visual inspections.

Standards for Success: Permits issued for individual habitat projects are expected to include, where appropriate, water quality criteria for evaluating success of the erosion and sediment control efforts. Visual observations of sites and habitat conditions along the creek corridor will also be used to assess success in reducing or avoiding local erosion, occurrence of increased turbidity within the creek downstream of a project site, and fine sediment accumulations with spawning gravels or other habitat features within the creek.

No-Project Alternative

Implementation of the No-Project Alternative would avoid potential localized and temporary soil erosion and excavation impacts from project construction activities, but would not achieve the goals and objectives of the project.

7. HAZARDS & HAZARDOUS MATERIALS - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Result in a risk of explosion or release of hazardous substances (e.g. oil, pesticides, chemicals, radiation) or exposure of people to hazardous substances?		**X**		
b) Interfere with an emergency response or evacuation plan?				**X**
c) Expose people to safety risk associated with airport flight pattern?				**X**
d) Increase fire hazard risk or expose people or structures to high fire hazard conditions?				**X**
e) ***Create any other health hazard or potential hazard?***				**X**

Setting

Hazardous materials, which could be found in the vicinity of the project site, would be those associated with agricultural activities, such as pesticide/herbicide sprays and petroleum products. The HCP habitat enhancement projects and modification to instream flows could involve the use of hazardous materials, although these would be limited to the possible local use of herbicides to control or remove noxious weeds from sites where riparian revegetation may occur or as part of wetland management, and the petroleum based lubricants and fuels associated with heavy construction equipment. The potential use of herbicides as part of HCP activities would depend on the specific habitat enhancement project and its location in relation to other wetland resources.

Impact

Criteria for Determining Impact Significance. CEQA Guidelines state that a project will normally have a significant effect on the environment if it will:

- Create a potential public health hazard or involve the inappropriate use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected.

Discussion of Environmental Consequences

- There are no known hazardous materials contained in the creek silts and soils that will be excavated or graded during habitat project construction. Local use of herbicides may occur on an intermittent basis to control noxious weeds at riparian revegetation sites or for vegetation management adjacent to wetland areas. Failure to control leakage or spillage of gasoline, diesel, oil and grease associated with construction equipment could result in water and soil quality impacts. There would be no hazardous materials removed from the sites.

Mitigation/Conclusion

Mitigation Measure HM-1. The application of herbicides will be managed by the District in accordance with best management practices and oversight of the resource agencies involved in the HCP Technical Committee and through state and federal permit requirements for individual habitat projects implemented under the HCP.

Mitigation Measure HM-2. Construction activity and the use of construction equipment during habitat project construction will performed in accordance with hazardous material spill prevention and emergency response plans implemented by the District as part of best management practices. As part of the proposed HCP project, the District or their contractor will be required to comply with best management practices including an acceptable hazardous materials control and spill prevention plan during habitat construction. Emergency Response Plans are required when the activity involves the use of hazardous materials).

Responsible Party: The District will be responsible for overseeing that best management practices are employed during construction of HCP habitat enhancement projects and removal of the Arroyo Grande stream gage.

Timing: The best management practices plan will be prepared in advance of on-site construction activity, will be specified in contractor bid documents and contracts, and will be in effect throughout the period of construction of each HCP project.

Monitoring Program: Visual inspections will periodically be made by District staff to insure implementation of the best management practices.

Standards for Success: The use of herbicides will be in accordance with all applicable Best Management Practices and regulations; use of heavy equipment will be in accordance with Best Management Practices designed to contain petroleum products; spill prevention plans, materials and training will be in place prior to project construction.

No-Project Alternative

Implementation of the No-Project Alternative would not involve the use of herbicides, petroleum products, or any other hazardous materials, but would not achieve the goals and objectives of the project

8. NOISE - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Expose people to noise levels which exceed the County Noise Element thresholds?			**X**	
b) Generate increases in the ambient noise levels for adjoining areas?			**X**	
c) Expose people to severe noise or vibration?				**X**

Setting

The HCP habitat enhancement projects may be located at a number of locations along the Arroyo Grande Creek corridor including rural locations with few noise receptors as well as in the vicinity of residences and businesses. The Arroyo Grande stream gage is located adjacent to a residential neighborhood in the City of Arroyo Grande. Construction activity would result in short-duration (typically days to several weeks) increase in vehicle traffic to a site and equipment operation that would increase local noise levels. Many of the potential HCP projects may be contracted by hand or with minimal increases in noise levels (e.g., revegetation, installation of additional cover, etc.). Some of the projects, including removal of the stream gage, will result in temporary increases in noise levels. The HCP projects can be managed to limit construction to only during daylight hours on weekdays to avoid and minimize potential noise effects.

Impact

Criteria for Determining Impact Significance. The following criteria, used to determine the level of significance of noise impacts, were developed based on of the State CEQA Guidelines. The proposed project would result in a significant impact if it would:

- Expose people to noise levels in excess of standards established in local noise ordinances or general plan noise elements, or

- Cause a substantial permanent or temporary increase in noise above levels existing without the project

Discussion of Environmental Consequences

- The HCP habitat enhancement projects or modification of stream flows would not create a permanent, long term noise impact that would be heard by residents of the area. None of the enhancement projects would create new noise generating facilities.

- Short-term noise increases will occur with the onset of construction activities, such as noise associated with truck traffic, equipment operations, demolition and removal of the stream gage, and grading activities to create wetland habitat. According the San Luis Obispo County Land Use Ordinance, section 22.10.120A4, County noise standards are not applicable to construction, provided such activities do not take place before 7 a.m. or after 9 p.m. on any day except Saturday or Sunday, or before 8 a.m. or after 5 p.m. on Saturday or Sunday. Therefore, construction projects that adhere to these time limits would not violate local noise ordinances or policies.

- Temporary increases in noise above existing levels can be reduced to a less than significant level through the application of location specific Best Management Practices, and through consideration of construction noise in the design of projects. Where construction is to take place in proximity to noise sensitive uses (such as residences), construction designs and techniques that employ high noise generating equipment (such as pile drivers) will not used.

Mitigation/Conclusion

Mitigation Measure N-1. The District and their contractors will design and construct habitat enhancement projects using best management practices, including avoiding noise intensive features and techniques (e.g., pile driving, blasting, etc.) maintaining mufflers on all powered equipment, shutting down equipment when not in immediate use, staging away from noise sensitive uses, and specifying access routes away from developed sites.

Mitigation Measure N-2. Construction activities will not take place before 7 a.m. or after 9 p.m. on any day except Saturday or Sunday, or before 8 a.m. or after 5 p.m. on Saturday or Sunday.

Responsible Party: The District will be responsible for overseeing that best management practices are employed during construction of HCP habitat enhancement projects and removal of the Arroyo Grande stream gage.

Timing: The best management practices plan will be prepared in advance of on-site construction activity, will be specified in contractor bid documents and contracts, and will be in effect throughout the period of construction of each HCP project.

Monitoring Program: Visual inspections will periodically be made by District staff to insure implementation of the best management practices.

Standards for Success: All construction is conducted in compliance with local ordinances and temporary increases in noise levels at sensitive receptors are minimized.

No-Project Alternative

Implementation of the No-Project Alternative would avoid noise impacts associated with short-term construction activity of the proposed HCP habitat enhancement projects and removal of the Arroyo Grande stream gage, but would not achieve the project objectives.

9. POPULATION/HOUSING - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?				**X**
b) Displace existing housing or people, requiring construction of replacement housing elsewhere?				**X**
c) Create the need for substantial new housing in the area?				**X**
d) Use substantial amount of fuel or energy?				**X**

Setting

The proposed HCP project involves changes to the stream flow releases from Lopez Lake, removal of the Arroyo Grande stream gage, and other habitat enhancement and protection projects designed specifically to benefit steelhead and red-legged frogs and indirectly other wildlife and aquatic species. Except during the construction of site-specific habitat improvement projects and removal of the stream gage, there would be no new jobs created or existing jobs lost. Habitat enhancement projects and stream gage removal would be performed either by District staff or contractors. Construction of these features would be temporary and short-term (days or weeks for each project)

Impact

Criteria for Determining Impact Significance. The following criteria, based on State CEQA Guidelines and professional judgment, were used to determine the level of significance of population, employment, and housing impacts. The project would result in a significant impact if it would:

- Conflict with adopted environmental plans and community goals;
- Induce substantial growth or concentration of population;
- Cause a net loss in the number of jobs in the community; or
- Displace a large number of people.
- Use substantial amounts of fuel or energy.

Discussion of Environmental Consequences

- This project would not entail a significant change in population, employment, or housing because it is a small project that consists of constructing habitat enhancement projects along the creek corridor and removal of the Arroyo Grande stream gage. The District using existing

facilities and staff would manage changes in stream flows. No substantial new, long-term employment would be created.

- Construction of the proposed habitat enhancement projects over the 20-year duration of the HCP would potentially require seasonal recruitment of a small number of workers. This would be temporary construction-related employment. District staff would perform routine operations, maintenance, and monitoring. Neither the construction phase, routine operations or monitoring under the HCP would cause direct or indirect growth or concentration in the population beyond current levels.

- Construction of the habitat enhancement projects and routine operations and monitoring performed under the HCP would not cause any job or income loss.

- The proposed habitat enhancement projects would be located within the creek corridor and adjacent lands. Permission for access to any private lands would be by approval of the landowner. Construction of the habitat enhancement projects and routine operations to provide modified stream flows to the creek would not cause or exacerbate a housing shortage.

Mitigation/Conclusion

No mitigation measures are required.

No-Project Alternative

Implementation of the No-Project Alternative would have the same effects on population, employment, and housing when compared to the proposed project. Construction of habitat enhancement projects would be short-duration and would not affect population, housing, or long-term employment above existing conditions.

10. PUBLIC SERVICES/UTILITIES - ***Will the project have an effect upon, or result in the need for new or altered public services in any of the following areas:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Fire protection?			**X**	
b) Police protection (e.g., Sheriff, CHP)?				**X**
c) Schools?				**X**
d) Roads?			**X**	
e) Solid Wastes?			**X**	
f) Other public facilities?				**X**

Setting

The HCP project activities would involve habitat enhancement and modification to stream flow from the existing reservoir and therefore would not significantly impact the need for additional public services or public facilities. Although the HCP activities would not adversely impact local schools, the

project includes a public information and education element that would benefit school science programs.

Impact

Criteria for Determining Impact Significance. Impacts on public services are considered significant if the project would result in a substantial increase in the need for fire or police protection result in substantial school overcrowding, reduce the level of service on public roads, or generate substantial amounts of solid waste going to landfills.

Discussion of Environmental Consequences

- Construction of habitat enhancement projects and modified operation of the reservoir to provide improved stream flows to the creek would not place more than minimal new demands on the above public services. Also, it would not induce substantial growth or concentration of population that would in turn place a significant demand on police, fire, school or park resources. Therefore, impacts on public services are not significant.

Mitigation/Conclusion

No mitigation measures are necessary.

No-Project Alternative

Implementation of the No-Project Alternative would have no effect on public services.

11. RECREATION - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Increase the use or demand for parks or other recreation opportunities?			**X**	
b) Affect the access to trails, parks or other recreation opportunities?		**X**		

Setting

Recreation opportunities within the area affected by the project include Arroyo Grande Creek itself, the Oceano State Beach at the mouth of the Creek, and Lopez Lake. Recreation within the areas adjacent to Arroyo Grande Creek include limited recreational fishing within the creek (primarily in the gravel pit pools), bird watching, walking trails, picnic areas, and beach access near the mouth of the creek. Several parks are located on Arroyo Grande Creek that provide recreational opportunities. Recreation within Lopez Lake includes fishing, boating, and water skiing.

Arroyo Grande Creek flows into the Pacific Ocean near the northern end of Oceano State Beach. The bulk of the beach and the off-road vehicle use area is located south of the creek while all of the beach access ways are located north of the Creek. Beach vehicular traffic is required to cross through the creek at its mouth; there is no elevated road crossing. During summer months creek flows across the beach are wide and shallow allowing vehicles to cross the creek. During and after

winter rainfall events the creek flows wider and deeper across the beach. As the flows increase, the number and type of vehicles that can safely cross diminishes, to the point where, in average rainfall years, the creek becomes impassable for a number of days following each storm event.

Impact

Criteria for Determining Impact Significance. Recreational impacts are considered significant if the proposed project would increase the demand for neighborhood or regional parks, or other recreational facilities, or substantial reduce existing recreational opportunities.

Discussion of Environmental Consequences

- Implementation of the proposed HCP project would potentially conflict with recreational uses within Lopez Lake. Implementation of the stream flow schedule as outlined in the HCP would contribute to greater reservoir storage and elevation fluctuations when compared to current conditions. The reservoir is used for recreational boating and fishing that would potentially be affected by the greater fluctuations in lake level and reduced lake storage volumes under drought conditions. A comparative analysis of reservoir water surface elevations for the period from 1969 through 1997, with and without implementation of the proposed HCP (See Figure 5-1 of the draft HCP), demonstrates the effect of increase releases to Arroyo Grande Creek on water storage and surface elevation within Lopez Lake. During normal and wet year periods, operations under the proposed HCP would not have a substantial impact on reservoir surface elevation and recreational opportunities.

- Under extended drought conditions, such as those that occurred during the early 1990s, operations under the HCP would contribute to a substantial reduction in storage and water surface elevation. Actual changes in reservoir storage will depend on hydrologic conditions in the future. Assuming the occurrence of an extended drought during the 20-year period of the proposed HCP, operations under the HCP would result in an incremental reduction in reservoir storage, elevation, and recreational use.

- Under extended drought conditions, such as those that occurred during the early 1990s operations under the HCP would result in an incremental reduction in reservoir storage when compared to existing baseline conditions, with a corresponding decrease in reservoir elevation and surface area. The decrease in the size of the reservoir would reduce water-based recreational opportunities. Other recreational opportunities at the Lopez Recreation Area (camping, hiking, water slides, etc.) would not be directly affected. Analysis of recreational use data for Lopez Lake has shown a trend of reduced use during drought conditions and reduced lake elevation. A critical element of recreational opportunities at the Lake is the ability to operate the boat launching ramp. The boat launching ramps located within Lopez Lake extend to an elevation of 450 feet which is 15 feet lower than the lowest lake level predicted to occur under the HCP. Therefore, the existing boat ramps would not be dewatered under projected lake levels associated with the HCP operations. Data from recreational use surveys (visitor days) at the recreational area (San Luis Obispo County Parks Division unpublished data) for the period from 1969-70 through 2002-03 were compiled and compared to July 15 lake storage volume (percentage of capacity) to assess the relationship between lake storage and visitor use. Results of the analyses showed visitor use declined during the early 1990's under drought conditions when summer storage volumes were less than approximately 50% of capacity. Implementation of the instream flow schedule contained in the draft HCP would be expected to result in reduced lake levels when compared to baseline conditions and, under drought conditions, would result in more frequent and greater lake draw downs than under baseline conditions. Reduced lake storage under the HCP would be expected to contribute to

a reduction in recreational use during drought conditions. However, since all recreation facilities at the lake would be available even during drought, the impact is not considered significant.

The proposed project would not contribute to an increase in population density in the area. The project would not be expected to result in a significant increase demand for neighborhood or regional parks or other recreational facilities, although a small increase in demand on alternate recreation sites may occur during drought periods when Lopez Lake water levels are reduced.

The proposed project would not impact recreational opportunities at any of the existing locations along the creek between Lopez Dam and the ocean

- Within the creek downstream of the dam the habitat enhancement projects and modifications to instream flows would provide enhanced conditions for wildlife and improved conditions for activities such as bird watching or aesthetic conditions for picnicking and walking along the creek.

- The increased stream flow during the late winter and spring months (intermittent pulse flows for steelhead passage and migration) could increase water depths as Arroyo Grande Creek crosses the sand beach at the coast. The increase in water depth is expected to be less than six inches when compared to existing baseline conditions. These increased flows are not expected to make vehicle crossings of the creek along the beach substantially more difficult or limit access to the beach by vehicles during the period of the pulse releases because the amount of the releases is based on the amount of water already flowing in the stream. During the five day pulse period, water flow would be maintained at a flow rate that typically results in a depth of six inches of water crossing the beach; if flows are already greater than six inches, then the pulse release rate is reduced. The pulse flow releases would occur over a five-day period each month between February and April depending on reservoir storage. It should be noted that during winter conditions it is not unusual for beach traffic to wait until low tide periods to cross the creek as the creek tends to spread out wider and become shallower as it meets the surf. During these periods high flows can be considered an inconvenience to smaller vehicles. Timing pulse release periods to avoid winter holidays when larger numbers of vehicles attempt to cross the creek would reduce the inconvenience placed on some recreational users, as they would not have to wait until the lowest tide to cross the creek. Of course, during extreme high flows generated by winter storms, the creek crossing is impassable to all vehicles.

Mitigation/Conclusion.

Mitigation Measure R-1. Impacts to recreational resources are not considered significant. However, because the HCP establishes an Adaptive Management Program, (that is, the results and effects of the HCP will be subject to on-going monitoring with feedback used to alter the program as necessary to avoid negative impacts and/or better meet the goals of the program) monitoring for unanticipated impacts to recreational resources should be included in the monitoring effort. Where unanticipated effects occur, the Technical Advisory Committee can work with the recreation agency to identify feasible changes in the program to address recreational impacts. It should be noted that the Lopez Recreation Area operates on a lease between the Flood Control District and the County of San Luis Obispo. The lease establishes the operation of the facility as a water supply reservoir as a first priority. Costs for any necessary recreation mitigation measures associated with the Lake would be a matter of negotiation between the agencies.

Responsible Party: The District would be responsible for monitoring for unanticipated recreation impacts and initiating negotiations with affected agencies.

Timing: Mitigation actions would be considered if unanticipated impacts to recreation are identified through the monitoring program.

Monitoring Program: the District routinely monitors Lopez Lake levels. In the event of a severe drought the District will monitor operation of recreational to assess potential constraints imposed by reduced lake levels. Since lake levels fluctuate naturally in response to hydrological conditions, the District will monitor or model the effects of HCP operations on lake levels relative to the No-Project operations. If substantial impacts are identified at either the lake or at Oceano Dunes State Vehicular Recreation Area, the District, working cooperatively with the affected agency staff, will assess opportunities for improving recreational use and access under HCP conditions.

Standards for Success: The mitigation actions will be considered to be successful if recreational use and access to the reservoir can be maintained over the range of expected lake level conditions that would occur in response to modified operations under the proposed HCP

No-Project Alternative

Implementation of the No-Project Alternative would avoid the less-than-significant impacts to recreational vehicle access across the mouth of Arroyo Grande Creek. . The No-Project Alternative would also avoid the incremental effect of the HCP project on Lopez Lake water. The No-Project Alternative would not, however, meet the objectives of providing increased protection for steelhead and red-legged frogs inhabiting Arroyo Grande Creek and adjacent watershed areas.

12. TRANSPORTATION/ CIRCULATION - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Increase vehicle trips to local or area wide circulation system?			**X**	
b) Reduce existing "Levels of Service" on public roadway(s)?			**X**	
c) Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance, slow vehicles)?		**X**		
d) Provide for adequate emergency access?			**X**	
e) Result in inadequate parking capacity?			**X**	
f) Result in inadequate internal traffic circulation?			**X**	

12. TRANSPORTATION/ CIRCULATION - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., pedestrian access, bus turnouts, bicycle racks, etc.)?				**X**
h) Result in a change in air traffic patterns that may result in substantial safety risks?				**X**

Setting

With the exception of the City of Arroyo Grande, the Arroyo Grande Creek corridor is located within a rural agricultural area with typically light traffic. The primary roads along the creek are Lopez Drive, Huasna Road, and Highway 1. These are primarily narrow two-lane paved roadways with narrow shoulders. These roads primarily serve agricultural uses, residential areas, and access to Lopez Lake.

Impact

Criteria for Determining Impact Significance. The following criteria were used to determine the level of significance of traffic impacts; these criteria were developed based on State CEQA Guidelines and professional judgment. The proposed project would result in a significant impact if it would:

- Substantially increase traffic in relation to existing traffic load and capacity;
- Substantially disrupt traffic flow, or
- Create an unsafe roadway condition.

Discussion of Environmental Consequences

- During construction of habitat enhancement projects, removal of the Arroyo Grande stream gage, or as part of monitoring, HCP related activities would contribute to an increase in local traffic along the creek corridor. Construction activity related to HCP projects is expected to be localized to specific locations and of short duration (typically days to several weeks). New traffic generated during the course of construction is primarily associated with trucks hauling gravel for spawning areas, plants for revegetation, equipment to construct wetland habitat, and similar activities, and construction workers driving to a work site. Removal of the stream gage would require trucks and equipment to demolish the existing structure, modify the channel after removal, and to haul debris away from the site. The number of daily vehicle trips associated with these activities would not cause a violation of any traffic standard.
- There are no transportation-related plans that apply or would limit the project.
- Roadway safety problems would be minimal. The roadways in the area have narrow shoulders, but they are adequate for automobiles and trucks. Existing traffic is generally light, except during summer weekends when traffic to and from Lopez Lake increases. Where habitat improvement projects occur near roadways standard traffic safety measures can be

applied (construction signage, flagging, limited work hours, etc.) HCP activities would not generate enough new vehicle trips to change Level of Service conditions.

- A temporary access road may be required at some sites to accommodate expected traffic, or to deliver materials and equipment to some of the habitat enhancement sites.

- The project would not have any effect on pedestrian or bicycle circulation.

- The number of individuals and vehicles at an enhancement site during construction is expected to be small and would not result in parking problems or blockage to existing access roads. Short-term changes in traffic patterns may be required at some sites depending on the specific nature of the site and the requirements for access to deliver material or equipment. The project would not create a parking demand in the area. After completion of each habitat enhancement project, vehicle traffic would return to pre-project levels with the exception of periodic site visits for monitoring and maintenance.

- The project area is not served by a transit system, and there is not sufficient demand to justify transit service to the area.

Mitigation/Conclusion

- **Mitigation Measure TR-1.** All temporary access points onto public roads shall provide adequate sight distance or employ adequate signage and/or flagging personnel to mitigate traffic safety concerns.

- **Mitigation Measure TR-2.** Where construction activities occur adjacent to public roadways, the District shall develop and implement a traffic management plan that meets the applicable Caltrans standard for temporary construction on public roads.

***Responsible Party*:** The District would be responsible for preparation and implementation of traffic management plans and implementation of traffic safety mitigation measures for projects implemented as part of the HCP.

Timing: Development of traffic management plans and placement of warning signs and devices would be required before initiating project constructions.

Monitoring Program: The District would be responsible for monitoring compliance with the traffic safety mitigation measures. Monitoring will primarily be performed through site-specific visual inspections and observations.

Standards for Success: The primary standard for success will be based on compliance with traffic management plans and state and federal standards for traffic control and traffic safety during construction projects.

No-Project Alternative

Implementation of the No-Project Alternative would avoid the potential short-term transportation effects of the HCP habitat enhancement project construction, removal of the Arroyo Grande stream gage, or HCP monitoring activities, but would not achieve the project goals and objectives.

13. WASTEWATER/WATER QUALITY - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems or natural waters?		**X**		
b) Change the quality of surface or ground water (e.g., nitrogen-loading, day lighting, increased suspended sediment concentrations)?			**X**	
c) Adversely affect community wastewater service provider?		**X**		
d) Violate any water quality standards?		**X**		
e) Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, temperature, dissolved oxygen, etc.)?		**X**		
f) Change the quality of groundwater (e.g., saltwater intrusion)?			X	

Setting

Surface water quality monitoring was performed as part of HCP development with the primary emphasis being given to water temperature, dissolved oxygen, and electrical conductivity. Grab samples were periodically taken and analyzed for a range of chemical constituents including metals, pesticides, herbicides, and other water quality parameters. Results of these measurements showed that water quality within the creek is good and would provide suitable habitat conditions for steelhead, red-legged frogs, and other wildlife. Agricultural return flow was not identified as a significant factor affecting water quality for steelhead based on limited grab sample measurements. Operations under the proposed HCP would not be expected to adversely affect water quality within the creek. Construction activity associated with habitat enhancement projects and removal of the Arroyo Grande stream gage would result in temporary localized increases in turbidity and suspended sediments that would affect water quality and potential habitat suitability within the creek. The proposed HCP would not affect wastewater treatment above existing baseline conditions.

Impact

Criteria for Determining Impact Significance. The following criteria, based on State CEQA Guidelines and the Central Coast Regional Water Quality Control Board (CCRWQCB) Water Quality Control Plan (Basin Plan) were used to determine the level of significance of hydrology and water quality impacts. The project would result in a significant impact if it would:

- Contaminate a public water supply;

- Cause substantial erosion or siltation;

- Substantially degrade or deplete groundwater resources; or

- Increase ambient turbidity by more than 20% in Arroyo Grande Creek, or otherwise substantially degrade surface water quality

Discussion of Environmental Consequences

- The District is required to comply with all applicable water quality regulations. The District operates Lopez Lake under a State Water Resources Control Board water right permit and must also comply with water quality standards for surface waters issued by the Regional Board in addition to meeting municipal drinking water criteria. In addition, removal of the Arroyo Grande stream gage and in channel habitat enhancement projects that would be constructed as part of the HCP require project-specific permits from several State and federal agencies that will insure compliance with water quality regulations. The following necessary permits and approvals that address water quality and/or hydrology would be obtained as part of the proposed projects:

- Section 404/Section 10 Permit from the Army Corps of Engineers and the supporting biological opinions issued under the ESA by federal fish and wildlife resource agencies;

- Section 401 Water Quality Certification (or waiver of certification) of compliance with state water quality standards from the CCRWQCB;

- Section 1601 Streambed Alteration Agreement from the CDFG; and

- State Water Resources Control Board water right permit amendment for Lopez project operations.

- The District is required to obtain all permits and approvals from state and federal resource and regulatory agencies prior to initiating construction of habitat enhancement projects or removal of the Arroyo Grande stream gage.

The following sections describe potential effects related to releases of hazardous materials, turbidity, and erosion.

Hazardous Materials Releases: Construction projects, including habitat enhancement and removal of the Arroyo Grande stream gage, may involve the use of construction equipment and an associated variety of potentially hazardous materials, such as oils, greases, fuels, and other similar materials. As with any construction project, the construction phase of the proposed projects include a risk of accidental or inadvertent discharge of hazardous materials that, if released to a surface water body in sufficient volumes, may be toxic to aquatic life. Preparation and implementation of a hazardous spill prevention and clean-up plan, as part of best management practices by the District, is being required to respond to any hazardous materials spills that could occur during construction activities.

Turbidity and Erosion: Project site preparation and excavation activities associated with habitat enhancement projects and removal of the Arroyo Grande stream gage would expose soils and increase erosion potential. Turbidity would increase as a direct result of construction related disturbance. The potential risk of adverse effects would be reduced or avoided by

planning habitat construction during periods of low, controlled flow within the late spring, summer, and early fall months. The projects would also include erosion control actions and revegetation as needed to minimize the risk of significant effects. The potential for significant effects would be temporary and localized to a specific project area further limiting the risk of significant adverse effects. Each project implemented under the HCP would be subject to terms and conditions imposed by the necessary State and federal permits for the projects. The District and their contractors would be subject to meeting the terms and conditions of the permits and best management practices for each of the projects implemented as part of the HCP.

- The proposed HCP would not result in direct or indirect wastewater discharges to Arroyo Grande Creek that would adversely impact human health, wildlife, or local vegetation. As a result of mitigation measures incorporated into project design and construction the project would not substantially degrade surface water quality within the creek.

- The habitat enhancement projects and removal of the Arroyo Grande stream gage would result in minor localized changes to channel hydraulics within the creek but would not contribute to an increased risk of flooding. As discussed above, localized temporary changes in turbidity and erosion may occur as a consequence of habitat enhancement project construction activity. Erosion and turbidity would be minimized by actions taken as part of best management practices by the District and their contractors and through compliance with the terms and conditions of State and federal permits issued for specific projects to be implemented as part of the HCP.

- Arroyo Grande Creek, particularly in the area downstream of Arroyo Grande is subject to flooding. The lower reach of the creek is managed as a flood conveyance channel with constructed levees to contain high flows adjacent to both banks of the creek. The habitat enhancement projects or modifications to the stream flow release schedule would not result in an increase risk of flooding. No changes are proposed as part of the HCP that would modify or alter planned flood control operations within the creek channel. The increase in stream flow releases that would occur under the HCP operating strategy would reduce storage volumes within the reservoir compared to the No-Project operations (Section 5.1 of the draft HCP) and may therefore indirectly result in an incremental reduction in flood risk in some years.

Mitigation/Conclusion

Mitigation Measure WW-1. Mitigation measures incorporated as part of the District best management practices to address hydrology and water quality concerns would include:

- Compliance with the terms and conditions of State and federal permits and authorizations for habitat enhancement projects to be implemented as part of the proposed HCP;

- The HCP includes monitoring to evaluate the performance of habitat enhancement projects that would also include observations and monitoring water quality and construction activities during specific project implementation;

- Preparation of an acceptable soil and sediment erosion control plan; and

- Preparation of a hazardous materials spill prevention and emergency response plan**.**

***Responsible Party*:** The District would be responsible for preparation and implementation of erosion control and hazardous material spill prevention and emergency response plans and compliance with state and federal permit conditions for projects implemented as part of the HCP.

Timing: Completion of the erosion and hazardous material response plans and obtaining all required state and federal permits and authorizations would be required before initiating project constructions.

Monitoring Program: The District would be responsible for monitoring compliance with the response plans and terms and conditions of state and federal permits. Monitoring will primarily be performed through site-specific visual inspections and observations. Individual permits may outline additional specific monitoring required for specific projects.

Standards for Success: The primary standard for success will be based on compliance with the actions and requirements outlined in the individual response plans and the terms and conditions of state and federal permits issued for each of the projects implemented under the HCP.

No-Project Alternative

Implementation of the No-Project Alternative would avoid the short-term temporary increases in turbidity and suspended sediment loads within Arroyo Grande Creek and the risks associated with release of hazardous materials during construction activities and other hydrology and water quality effects associated with the project, but would not achieve the project goals and objectives.

14. WATER - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?			**X**	
b) Change the quantity or movement of available surface or ground water?			**X**	
c) Adversely affect community water service provider?			**X**	

Setting

Hydrologic characteristics of Arroyo Grande Creek are characterized by high variability in stream flows and runoff to the reservoir within and among years. Operation of Lopez Lake and managed releases to Arroyo Grande Creek have altered hydrologic patterns within the creek generally resulting in a reduction in stream flow during the winter and early spring periods of precipitation and stormwater runoff and an increase in stream flows during the dry summer months. Stream flow within the creek is managed to meet both municipal demand and provide for groundwater recharge to support local agriculture. Modifications to stream flow outlined in the draft HCP would add protection and

enhancement of habitat for steelhead and red-legged frog as management objectives. The lower reach of the creek is managed for flood control.

Impact

Criteria for Determining Impact Significance. The following criteria, based on State CEQA Guidelines, the Central Coast Regional Water Quality Control Board (CCRWQCB) Water Quality Control Plan (Basin Plan), and professional judgment, were used to determine the level of significance of hydrology and water quality impacts. The project would result in a significant impact if it would:

- Substantially degrade the water supply;
- Contaminate a public water supply;
- Substantially degrade or deplete groundwater resources; or
- Substantially interfere with groundwater recharge.

Discussion of Environmental Consequences

- The HCP would not result in an increase in water supply demand or water supply availability in the area for agricultural or municipal use. The HCP would result in an increase in water demand from Lopez Lake to meet instream flow requirements included in the HCP. Modeling results of water supply and reservoir operations have shown that the existing water supply contract commitments can be met under the HCP although the actual future water supplies and reservoir operations will vary depending on hydrological conditions within the watershed that cannot be predicted.

- The District is required to comply with all applicable hydrology and water quality regulations. The District operates Lopez Lake under a State Water Resources Control Board water right permit and must also comply with water quality standards for surface waters issued by the Regional Board in addition to meeting municipal drinking water criteria.

- The proposed modifications to the stream flow releases from Lopez Lake would not degrade the quality or availability of groundwater within the area. The modifications to the stream flows may contribute to enhanced groundwater recharge. The stream flow modifications would not contribute to increased risk of subsidence or water-related hazards downstream of the dam

- Arroyo Grande Creek, particularly in the area downstream of Arroyo Grande is subject to flooding. The lower reach of the creek in managed as a flood conveyance channel with constructed levees to contain high flows adjacent to both banks of the creek. The habitat enhancement projects or modifications to the stream flow release schedule would not result in an increase risk of flooding. No changes are proposed as part of the HCP that would modify or alter planned flood control operations within the creek channel. The increase in stream flow releases that would occur under the HCP operating strategy would reduce storage volumes within the reservoir compared to the No-Project operations (Section 5.1 of the draft HCP) and may therefore indirectly result in an incremental reduction in flood risk in some years.

Mitigation/Conclusion

No mitigation measures are necessary.

No-Project Alternative

Implementation of the No-Project Alternative would avoid the reductions in Lopez Lake storage and contribute to greater reservoir carryover when compared to projected operations under the HCP. The No-Project Alternative would increase water supplies available for municipal and/or agricultural use but would not meet the goals and objectives of the project.

15. LAND USE - ***Will the project:***	**Inconsistent**	**Potentially Inconsistent**	**Consistent**	**Not Applicable**
a) Be potentially inconsistent with land use, policy/regulation (e.g., general plan [county land use element and ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects?				**X**
b) Be potentially inconsistent with any habitat or community conservation plan?				**X**
c) Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project?				**X**
d) Be potentially incompatible with surrounding land uses?				**X**

Setting

With the exception of the City of Arroyo Grande, land use in the project area is predominantly agriculture or undeveloped and is within the jurisdiction of land use plans adopted by San Luis Obispo County. Row crops, orchards, and vineyards dominate the agricultural landscape. Arroyo Grande Creek passes through the City of Arroyo Grande. Rural residential homes are located adjacent to the creek corridor. The lowest reaches of the creek pass through a leveed flood control channel and sand dune area before entering the Pacific Ocean. The ocean beach in the area is managed as a recreational area.

Impact

Criteria for Determining Impact Significance. Land use impacts were considered significant if the proposed project would conflict or be inconsistent with San Luis Obispo County General plan or other local policies.

Discussion of Environmental Consequences

- Implementation of the HCP actions would not conflict with adopted San Luis Obispo County land-use plans or policies or local ordinances.

- Implementation of the proposed HCP project would not conflict with open space, low-income housing, or other land use goals that are applicable to the project area.

- Implementation of the proposed HCP project would potentially conflict with recreational uses within Lopez Lake. Implementation of the stream flow schedule as outlined in the HCP would contribute to greater reservoir storage and elevation fluctuations when compared to current conditions. The reservoir is used for recreational boating and fishing that would potentially be affected by the greater fluctuations in lake level (See 11 above).

- The project would not require cancellation of Williamson Act Agricultural contracts or adversely affect local agricultural production in the area.

- The proposed HCP project would not create a nuisance to existing or planned land uses. The actions implemented as part of the HCP are designed to enhance environmental conditions along the stream corridor.

Mitigation/Conclusion

Please refer to previous referenced sections for mitigation measures.

No-Project Alternative.

Implementation of the No-Project Alternative would avoid potential impacts to Lopez Lake levels and associated impacts to recreational use during periods of low reservoir inflow and storage. The No-Project Alternative would not, however, achieve the project goals and objectives of habitat enhancement and protection for either steelhead or red-legged frogs as identified within the HCP.

16. MANDATORY FINDINGS OF SIGNIFICANCE - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			**X**	

16. MANDATORY FINDINGS OF SIGNIFICANCE - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)			**X**	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			**X**	

Discussion of Environmental Consequences

- The purpose of the proposed project is to benefit steelhead and red-legged frog populations inhabiting Arroyo Grande Creek through construction of habitat projects designed to increase habitat quality and availability for the protected species, improve steelhead migration and passage through removal of the existing Arroyo Grande stream gage, and improve instream flow conditions to meet the requirements of the various life stages of steelhead and red-legged frogs inhabiting the creek. The project would have some short-term temporary impacts associated with site preparation and construction of habitat enhancement projects and removal of the existing stream gage that will result in short-term localized increases in turbidity and suspended sediment concentrations within the creek. The long-term benefits to steelhead and red-legged frog populations through enhanced habitat conditions would fully mitigate and compensate for any short-term construction-related impacts. Construction of habitat projects and modified reservoir operation and instream flow releases to the creek would not result in direct impacts or loss of habitat that cannot be mitigated to less than significant levels, and would not result in populations of fish or wildlife being reduced below self-sustaining levels. The project would not reduce the number or restrict the range of threatened or endangered species, or species of special concern. No significant impacts were identified for cultural or historic resources.

- The proposed project would have long-term benefits to steelhead and red-legged frog populations inhabiting Arroyo Grande Creek. The project is intended to improve habitat conditions for listed species but would also benefit a variety of other fish and wildlife species inhabiting the creek and adjacent areas. The project would result in short-term construction-related localized impacts on water quality. The proposed project would improve conditions within Arroyo Grande Creek for fishery and wildlife populations above the No-Project Alternative baseline.

- The proposed project would result in short-term (days to several weeks) localized increases in turbidity within the creek during installation of habitat enhancement projects and removal of the Arroyo Grande stream gage. As part of the proposed project, the District and their

contractors will be required to meet best management practices for construction and maintained including erosion control, dust suppression, hazardous material spill prevention and emergency response, and vegetation control methods, which will be in effect throughout the period of the HCP. Specific habitat projects proposed for implementation as part of the HCP will undergo critical review by the District and resource agencies participating on the HCP Technical Committee and will be subject to state and federal permitting and approvals prior to implementation. The HCP habitat projects will be designed to minimize and avoid adverse impacts on fish, vegetation and wildlife habitats.

- The project will not cause substantial adverse effects on human beings. The primary reach of the creek where habitat enhancement projects may be sited is a rural area, having low human population densities. Removal of the Arroyo Grande stream gage and other potential habitat projects would occur within the urban areas of the City of Arroyo Grande and would require actions such as limiting construction activity to daylight hours during weekdays, to avoid and minimize potential adverse impacts. Based on project design and mitigation actions impacts of the proposed project on air quality, noise, exposure to hazardous materials, and other human health and safety risks are considered to be less than significant.

Conclusions

The proposed project will have a beneficial impact on steelhead and red-legged frog populations inhabiting Arroyo Grande Creek through improvements in the quality and availability of habitat and improved instream flow conditions meeting the various life stages of the protected species inhabiting the system. Potential impacts of the proposed project are considered less-than-significant. Many of the potential impacts are typical of construction-related habitat enhancement projects and changes in reservoir operations to improve instream habitat conditions for fish and wildlife. The project includes specific actions designed to avoid adverse environmental impacts, such as the inclusion of a dust-suppression plan, hazardous material control and spill prevention plan, monitoring, and erosion control plan. Proposed projects considered for implementation as part of the HCP would be critically reviewed by the District and resource agencies participating in the HCP Technical Committee and would be subject to state and federal permitting and approvals to ensure that individual projects are consistent with the goals and objectives of the HCP and that no significant adverse impacts result. These and other environmental mitigation requirements included in the Districts best management practices will be integrated into project designs, permits, and bid specifications for contractors. State and federal resource and regulatory agencies, the District and their contractors will be responsible for insuring that mitigation actions during project construction are implemented. Overall, the proposed project will result in a substantial net environmental benefit to steelhead and red-legged frogs in addition to other fish and wildlife populations inhabiting Arroyo Grande Creek and adjacent areas, with no or less-than-significant impacts to other resources.

For further information on CEQA or the county's environmental review process, please visit the County's web site at "www.sloplanning.org" under "Environmental Review", or the California Environmental Resources Evaluation System at "http://ceres.ca.gov/topic/env_law/ceqa/guidelines/" for information about the California Environmental Quality Act.

Exhibit A - Initial Study References and Agency Contacts

The County Planning or Environmental Division has contacted various agencies for their comments on the proposed project. With respect to the subject application, the following have been contacted (marked with an "**X**") and when a response was made, it is either attached or in the application file:

Contacted	Agency	Response
X	County Public Works Department	**None**
X	County Environmental Health Division	**In File ***
X	County Agricultural Commissioner's Office	**Attached**
___	County Airport Manager	**Not Applicable**
___	Airport Land Use Commission	**Not Applicable**
___	Air Pollution Control District	**Not Applicable**
___	County Sheriff's Department	**Not Applicable**
___	Regional Water Quality Control Board	**Not Applicable**
___	CA Coastal Commission	**Not Applicable**
___	CA Department of Fish and Game	**Not Applicable**
___	CA Department of Forestry	**Not Applicable**
___	CA Department of Transportation	**Not Applicable**
___	_____ Community Service District	
___	Other_____	

** "No comment" or "No concerns"-type responses are usually not attached*

The following checked ("✔") reference materials have been used in the environmental review for the proposed project and are hereby incorporated by reference into the Initial Study. The following information is available at the County Planning and Building Department.

✔ Project File for the Subject Application

County documents

___ Airport Land Use Plans
✔ Annual Resource Summary Report
___ Building and Construction Ordinance
___ Coastal Policies
✔ Framework for Planning (Coastal & Inland)
✔ General Plan (Inland & Coastal), including all maps & elements; more pertinent elements considered include:
  - ✔ Agriculture & Open Space Element
  - ✔ Energy Element
  - ✔ Environment Plan (Conservation, Historic and Esthetic Elements)
  - ✔ Housing Element
  - ✔ Noise Element
  - ___ Parks & Recreation Element
  - ✔ Safety Element

✔ Land Use Ordinance
___ Real Property Division Ordinance
✔ Trails Plan
___ Solid Waste Management Plan
___ _____ Area Plan and Update EIR
___ _____ Circulation Study

Other documents

✔ Archaeological Resources Map
✔ Area of Critical Concerns Map
✔ Areas of Special Biological Importance Map
✔ California Natural Species Diversity Database
✔ Clean Air Plan
✔ Fire Hazard Severity Map
✔ Flood Hazard Maps
✔ Natural Resources Conservation Service Soil Survey for San Luis Obispo County
✔ Regional Transportation Plan
✔ Uniform Fire Code
✔ Water Quality Control Plan (Central Coast Basin – Region 3)

Exhibit B - Mitigation Summary Table

Air Quality

Mitigation Measure AQ-1. The District and their contractors would construct habitat enhancement projects using best management practices, including dust suppression and emergency response plans in the event of a chemical spill to avoid and minimize adverse impacts on air quality. The best management practices will be implemented and in effect throughout the period of the HCP.

Biological Resources

Mitigation Measure BR-1. As part of the planning and permitting for habitat projects to be implemented under the HCP, site selection would include an assessment of potential impacts to sensitive vegetation, wildlife, and fishery resources and their habitat in the proposed area. A qualified biologist would survey the immediate area for a proposed habitat project to determine potential impacts and appropriate mitigation. Results of the surveys would be included as part of the project design and permit applications to State and federal resource and regulatory agencies. In the event that these planning level surveys identify adverse impacts that cannot be avoided or mitigated to acceptable levels, the proposed project would not be approved by the HCP Technical Committee for any further consideration.

Cultural Resources

Mitigation Measure CR-1. In the unlikely occurrence that cultural resources, paleontological resources, or human remains are encountered after an HCP habitat enhancement project has begun construction, the procedures in 36 CFR 800.11 will be followed. The District or contractor will cease work at that location and immediately notify a qualified archeologist. The archeologist will assess the nature and value of the site and will recommend to the State Historic Preservation Officer (SHPO) a course of action. Appropriate mitigation, as determined through negotiations with SHPO, will be completed for any significant sites.

Mitigation Measure CR-2. The construction and long-term use of the lake itself constitutes a significant adverse impact on site CA-SLO-373. Because the impacts to the site are already adverse, any additional exposure of the site to erosion or artifact collectors would also be significant. The following mitigation measures have been prepared as options to offset the additional impacts implementation of the release schedule would create.

i. **Data Recovery.** It is likely that the site will eventually erode over the next several decades and much of the site's data will be lost. This erosion would occur even without the influences of the proposed project but would likely be minimally hastened with the increase in lake level fluctuations. Data recovery could satisfy the requirements of CEQA to mitigate the project's impacts to archaeology. Data recovery would likely include systematic survey and fine scale mapping of the site, excavation of a specified percentage of the total site (possibly 10%), artifact evaluation, and reporting. This data recovery in combination with potential mitigation measure #4, below, would mitigate impacts to the site to a level of insignificance.

ii. **Monitoring by Parks Department Personnel.** An environmental training program would be prepared for selected park rangers. This training would

focus on preparing park rangers to monitor the archaeological site and prepare them for encountering members of the public who disturb or collect from the site. The park rangers are consistently and frequently in contact with the public at Lopez Lake and can easily access the site to ensure it is not being impacted by collectors. However, through unintentional word-of-mouth to the uninformed public, artifact collectors and the general public could become aware of the site and expose it to further damage. This measure would not protect the site from further erosion.

iii. **Permanent Erosion Control at Burial Elevations.** Rock riprap or some other type of permanent erosion control would be placed along the 510-520 elevation. This is the elevation range where human burials had been discovered in the late 1970's. This mitigation measure would have limited utility as it is unknown whether this elevation is the only place burials exist on site. It is likely that other portions of the site contain significant data.

iv. **Annual Site Monitoring by Archaeologist and Chumash Representatives.** The site could be monitored and evaluated on an annual basis by an archaeologist who would coordinate with interested Chumash representatives. Any human remains or ceremonial items that become uncovered as a result of erosion would be reburied with the approval of the Native Americans. The monitoring archaeologist would document erosion occurring at the site and recommend additional mitigation if it becomes necessary.

v. **Complete Permanent Erosion Control.** Complete erosion control at this site would likely entail placing riprap or another hardscape feature such as concrete blocks. Vegetative erosion control has been determined to be infeasible due to the high degree of water level fluctuation at the site (planted areas would be inundated on a regular basis). While protecting the site with riprap would likely stop erosion at the site, it would also be visually obtrusive and technically difficult. Virtually the entire peninsula would have to be protected which would include nearly 3,000 square meters of rock.

Geology and Soils **Mitigation Measure GS-1.** The District and its contractors will be required to construct habitat enhancement projects and remove the Arroyo Grande stream gage using established best management practices including a soil and sediment erosion control plan during the period of site preparation and construction. In addition, to the extent possible habitat enhancement project construction and removal of the Arroyo Grande stream gage will occur during the low-flow summer months.

Recreation **Mitigation Measure R-1.** Mitigation for Lopez Lake level fluctuations may be required depending on future hydrologic conditions within the watershed. Increased lake level fluctuations resulting from stream flow releases to support steelhead have the potential to adversely affect operation of the boat docks and result in reduced recreational use. Under these conditions modifications to the docks may be required to mitigate for adverse impacts of the proposed project. Because of the uncertainty regarding future hydrologic conditions, the potential for adverse impacts and identification of specific mitigation measures cannot be determined. As part of the HCP a Conservation Account would be established by the District to fund habitat enhancement actions. Mitigation for impacts to recreational facilities within the reservoir, if they were to occur, would be designed and implemented by the District using funds from the HCP Conservation Account.R-1

Wastewater **Mitigation Measure WW-1.** Mitigation measures incorporated as part of the District best management practices to address hydrology and water quality concerns would include:

- Compliance with the terms and conditions of State and federal permits and authorizations for habitat enhancement projects to be implemented as part of the proposed HCP;

- The HCP includes monitoring to evaluate the performance of habitat enhancement projects that would also include observations and monitoring water quality and construction activities during specific project implementation;

- Preparation of an acceptable soil and sediment erosion control plan; and

- Preparation of a hazardous materials spill prevention and emergency response plan**.**