

FINAL DRAFT

**ARROYO GRANDE CREEK
HABITAT CONSERVATION PLAN (HCP) AND
ENVIRONMENTAL ASSESSMENT/INITIAL STUDY (EA/IS)
FOR THE PROTECTION OF STEELHEAD AND
CALIFORNIA RED-LEGGED FROGS**

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Revised**



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EXECUTIVE SUMMARY

San Luis Obispo County Flood Control and Water Conservation District Zone 3 (District) operates and maintains Lopez Reservoir, 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.

To comply with the Endangered Species Act, and provide incidental take authorization for steelhead and red-legged frogs resulting from District operations and maintenance activities affecting Arroyo Grande Creek, there is a need for incidental take authorization for covered activities while providing enhanced habitat conditions and protection for both red-legged frogs and southern steelhead.

Section 10(a)(1)(B) of the Endangered Species Act permits a non-federal entity 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 the following 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 within Arroyo Grande Creek downstream of Lopez Dam, and to obtain an incidental take permit under the Federal Endangered Species Act for authorized and covered activities. 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.

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. The HCP documents the technical and scientific basis for the proposed conservation actions, based on the best scientific and commercial data available for Arroyo Grande Creek. Operations, maintenance, habitat improvements, and protective measures identified as part of this HCP will be the sole responsibility of the District.

The HCP boundaries include Arroyo Grande Creek downstream from Lopez Dam to the flood control channel (Fair Oaks Boulevard), a distance of approximately 10 miles. The HCP boundaries extend laterally from the Arroyo Grande Creek channel to encompass riparian land along the creek supporting ecological processes associated with habitat for steelhead and red-legged frogs. The designated HCP boundaries encompass land and facilities owned by the District, as well as lands owned by others. Habitat enhancement or conservation measures within the designated HCP boundaries on lands not owned or managed by the District are not, however, precluded from consideration under this HCP. With the concurrence of willing landowners, the District will secure environmental

easements and access on private lands to develop non-flow habitat improvement projects along the creek corridor.

The District requests authorization for incidental take of steelhead and red-legged frogs within the HCP boundaries associated with the following covered activities:

- Reservoir storage;
- Uncontrolled spills and managed instream flow releases;
- Municipal water treatment and supply, including backwash water disposal and water sampling activities;
- Water releases for irrigated agriculture;
- Rainfall and stream gaging;
- Dam and stream channel by the District in Arroyo Grande Creek; Lopez Dam and Reservoir operations;
- Arroyo Grande stream gage removal and replacement and other habitat enhancement actions implemented as part of this HCP;
- Instream flow releases exceeding flows established by this HCP; and
- Channel and facility maintenance by the District in Arroyo Grande Creek.

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

Objectives of the HCP are to (1) reduce mortality and enhance habitat for steelhead and red-legged frogs within Arroyo Grande Creek; 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:

- Follow instream flow schedule in Arroyo Grande Creek, using managed releases from Lopez Reservoir 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 Reservoir to Arroyo Grande Creek, varying with inter- and intra-annual hydrologic conditions, to protect and enhance habitat for various lifestages 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 this HCP.

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 lifestages 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 streamflow from runoff within the watershed. To the extent that naturally occurring streamflow at Lopez Dam (e.g., reservoir spill) meets the 20 cfs passage criteria, no additional releases would be required from Lopez Reservoir to meet requirements of an individual passage event. Releases from Lopez Reservoir 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. Habitat improvement projects funded by the Conservation Account would be recommended by the HCP Technical Committee, representing the USFWS, NOAA Fisheries, California Department of Fish and Game (CDFG), and the District. 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:
 - 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 stream maintenance and vegetation control; and
- Develop and implement a public education/awareness program.

Monitoring performance of project elements implemented under this 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 this 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 this 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 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 shows that these actions would improve the quality and availability of habitat within Arroyo Grande Creek for steelhead and red-legged frogs. These 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) impact recreation within the lake, including boating, water skiing, and angling; (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.

Despite the identified and potential adverse environmental consequences and constraints, it was 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 this HCP and addressed through incidental take authorization by USFWS and NOAA Fisheries in compliance with Sections 9 and 10 of the Endangered Species Act.