

**SANTA FELICIA PROJECT  
FERC LICENSE NO. 2153-012**

# **Spoil Management, Erosion, and Sediment Control Plan**

---

**NOVEMBER 2009**

**UNITED WATER CONSERVATION DISTRICT  
106 N. 8TH STREET  
SANTA PAULA, CALIFORNIA 93060**



# Table of Contents

---

<b>SECTION 1.0 Introduction .....</b>	<b>1-1</b>
<b>SECTION 2.0 Project Description .....</b>	<b>2-1</b>
2.1 FERC Project Boundary .....	2-1
2.2 FERC Project Facilities .....	2-1
<b>SECTION 3.0 Overview of Current Sediment Management Activities.....</b>	<b>3-1</b>
3.1 Maintenance of the Hydroplant Tailrace and Santa Felicia Dam Outlet Channel .....	3-1
3.2 Surficial Debris Removal in Lake Piru .....	3-1
<b>SECTION 4.0 Spoil Management, Erosion, and Sediment Control Plan .....</b>	<b>4-1</b>
<b>SECTION 5.0 Annual Consultation .....</b>	<b>5-1</b>

## Appendices

Appendix A – California Department of Fish and Game Streambed Alteration Agreement #1600-2004-0237-R5 Revision 3 dated August 1, 2007

## Figures

Figure 1. Project Facilities and FERC Project Boundary



# Introduction

---

This Spoil Management, Erosion, and Sediment Control Plan (SMESCP) has been prepared for the Santa Felicia Project (FERC Project No. 2153-012) to comply with Section 4(e), Condition No. 15 in Appendix A of the *Order Issuing the New License* dated September 12, 2008. The Project is located in eastern Ventura County approximately 5 miles east of Piru, California and is owned and operated by the United Water Conservation District (United or Licensee). Section 4(e), Condition No. 15 requires that, within 1-year of license issuance, United prepare a plan to address sediment management activities affecting U.S. Department of Agriculture-Forest Service (USDA-FS) lands including the following:

- The location of proposed or existing disposal sites on USFS lands;
- Potential erosion and/or stabilization measures, including Best Management Practices and the use of certified weed free straw;
- Revegetation measures;
- Noxious weed management; and,
- Foreign material treatment, including removal of visible non-native materials.

This document provides a description of the Project, an overview of Project-related sediment management activities conducted by United within the FERC Project boundary, and the proposed SMESCP. It is organized as follows:

- Section 2.0 provides a description of the FERC Project boundary and the FERC Project facilities;
- Section 3.0 presents an overview of current sediment management activities conducted by United within the FERC Project boundary;
- Section 4.0 describes the SMESCP; and,
- Section 5.0 discusses the Annual Consultation Meeting.



# Project Description

---

This section provides a description of the FERC Project boundary and the FERC Project facilities.

## 2.1 FERC PROJECT BOUNDARY

The existing FERC Project Boundary encompasses approximately 1,552 acres of land as shown in Figure 1. Approximately 201 acres of the land within the Project boundary is situated within the Los Padres National Forest and is owned by the USDA-FS. Of the USDA-FS land, approximately 121 acres are inundated by Lake Piru at the maximum water surface elevation of 1,055 feet mean sea level (msl).

## 2.2 FERC PROJECT FACILITIES

As specified in the FERC *Order Issuing the New License* dated September 12, 2008, the Project facilities include the following:

- Santa Felicia Dam which consists of an earth-filled dam that is 200 feet high and 1,260 feet long with a crest elevation of 1,075 feet msl;
- An ungated spillway that is 450 feet long and is situated adjacent to and west of the dam with a crest elevation of 1,055 feet msl;
- Lake Piru which is a surface water reservoir with a maximum capacity of 87,187 acre-feet, a useable storage capacity of 67,669 acre-feet, and a surface area of 1,213 acres at the spillway crest elevation of 1,055 feet msl;
- A powerhouse at the base of Santa Felicia Dam that contains 2 generating units with a total installed capacity of 1,420 kW;
- A generator lead to a step-up transformer that is 150 feet long; and,
- Recreational facilities including:
  - Lower Oaks and Oak Lane campgrounds;
  - Whitewater boating take-out at the upper end of Lake Piru (located near the USFS closure gate);
  - Lake Piru Marina;
  - Juan Fernandez Boat Launch Area; and,
  - Reasoner Canyon Picnic Area and Overflow Area.

The locations of these facilities are presented in Figure 1.





# Overview of Current Sediment Management Activities

---

This section discusses the current sediment management activities conducted by United within the FERC Project boundary. These activities consist of the periodic redistribution of sediment in the Hydroplant tailrace and Santa Felicia Dam outlet channel and the periodic removal of debris from the surface of Lake Piru as described below. Both of these activities are conducted on property owned by United and neither affect USDA-FS lands.

## **3.1 MAINTENANCE OF THE HYDROPLANT TAILRACE AND SANTA FELICIA DAM OUTLET CHANNEL**

United maintenance operations include the periodic redistribution of sediment in the Hydroplant tailrace and Santa Felicia Dam outlet channel which are located downstream of the dam on property owned by United. These activities are conducted on an as-needed basis and include the following:

- Redistribution of cobble/boulder material in the Hydroplant tailrace and the outlet channel. Releases from the Hydroplant and dam periodically mobilize this material which is used to armor the channel bed and prevent scour. During maintenance operations, the mobilized material is placed back upstream and redistributed to ensure proper armoring of the channel.
- Replacement of rip-rap streambank protection along the Hydroplant tailrace and the outlet channel. Similar to the channel bed material, the rip-rap bank protection along the tailrace and outlet channel is periodically mobilized downstream during releases. Accordingly, United maintenance operations include the replacement and/or redistribution of this material to maintain the stability of the streambanks along these channels.
- Re-contouring of the streambanks downstream of the United States Geological Survey (USGS) gauging station. Slumping and/or sloughing of the streambanks in this area periodically impedes flow and affects the accuracy of the stream gauge. Accordingly, United maintenance operations include the removal of material from the channel and placement back on to the banks.

The maintenance activities are conducted in accordance with the requirements specified in California Department of Fish and Game (CDFG) Streambed Alteration Agreement #1600-2004-0237-R5 Revision 3 dated August 1, 2007 which includes mitigation measures that require United to maintain the pool habitat situated below the cone valves in the outlet channel and to mitigate for the removal of vegetation. A copy of this permit is provided in Appendix A.

## **3.2 SURFICIAL DEBRIS REMOVAL IN LAKE PIRU**

Periodically, United needs to remove debris from the surface of Lake Piru to protect public safety and potential damage to Project infrastructure. These activities are generally conducted in the northern (upstream) portion of the lake typically following periods of high inflow. The debris includes woody

(e.g., sticks and logs) and other organic material. The removal operations are performed using a skimmer and/or, as needed, heavy equipment such as a backhoe. These activities are conducted on United-owned property, primarily the property located in the northern portion of Lake Piru (see Figure 1), in accordance with Best Management Practices (BMPs) specified by the County of Ventura. Following removal, the debris is temporarily stockpiled on United-owned property prior to burning in accordance with Ventura County Air Pollution Control District and Ventura County Fire Department regulations.

# Spoil Management, Erosion, and Sediment Control Plan

---

Section 4(e), Condition No. 15 in Appendix A of the *Order Issuing the New License* dated September 12, 2008 requires the preparation of an SMESCP to address sediment management activities that effect USDA-FS lands. As discussed in Section 3.0, the sediment management activities performed by United are conducted on property owned by United in accordance with applicable guidelines and regulations. As such, these sediment management activities do not affect USDA-FS lands. However, in the future, if proposed sediment management activities associated with the Santa Felicia Project have the potential to affect USDA-FS lands or resources, then United will submit a site specific plan for approval by the USDA-FS and FERC prior to implementation. This documentation will include the following:

- A description of the material to be removed;
- The reason for removal;
- The approximate quantities of material;
- The selected method of removal along with alternatives considered;
- The schedule of removal or remedial activities;
- Water quality monitoring including adherence to Forest Service, Region 5, Best Management Practices (BMPs);
- A description of BMPs that will be implemented to minimize potential erosion in accordance with the *Water Quality Management for National Forest System Lands in California – Best Management Practices* dated September 2000 (or more recent version if applicable at the time) prepared by the USDA-FS Pacific Southwest Region;
- Consideration of visual quality;
- Utilization of material;
- Revegetation and noxious weed management measures in accordance with the *Vegetation and Noxious Weed Management Plan* required in Section 4(e), Condition No. 18(b) in Appendix A of the *Order Issuing the New License* dated September 12, 2008;
- Foreign material treatment, including removal of visible non-native materials; and,
- Mitigation measures and disposal site stabilization plans for material placed on USFS lands.

In addition, United will consult with the California Department of Fish and Game, State Water Resources Control Board, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers and obtain any necessary approvals prior to proceeding.



# Annual Consultation

---

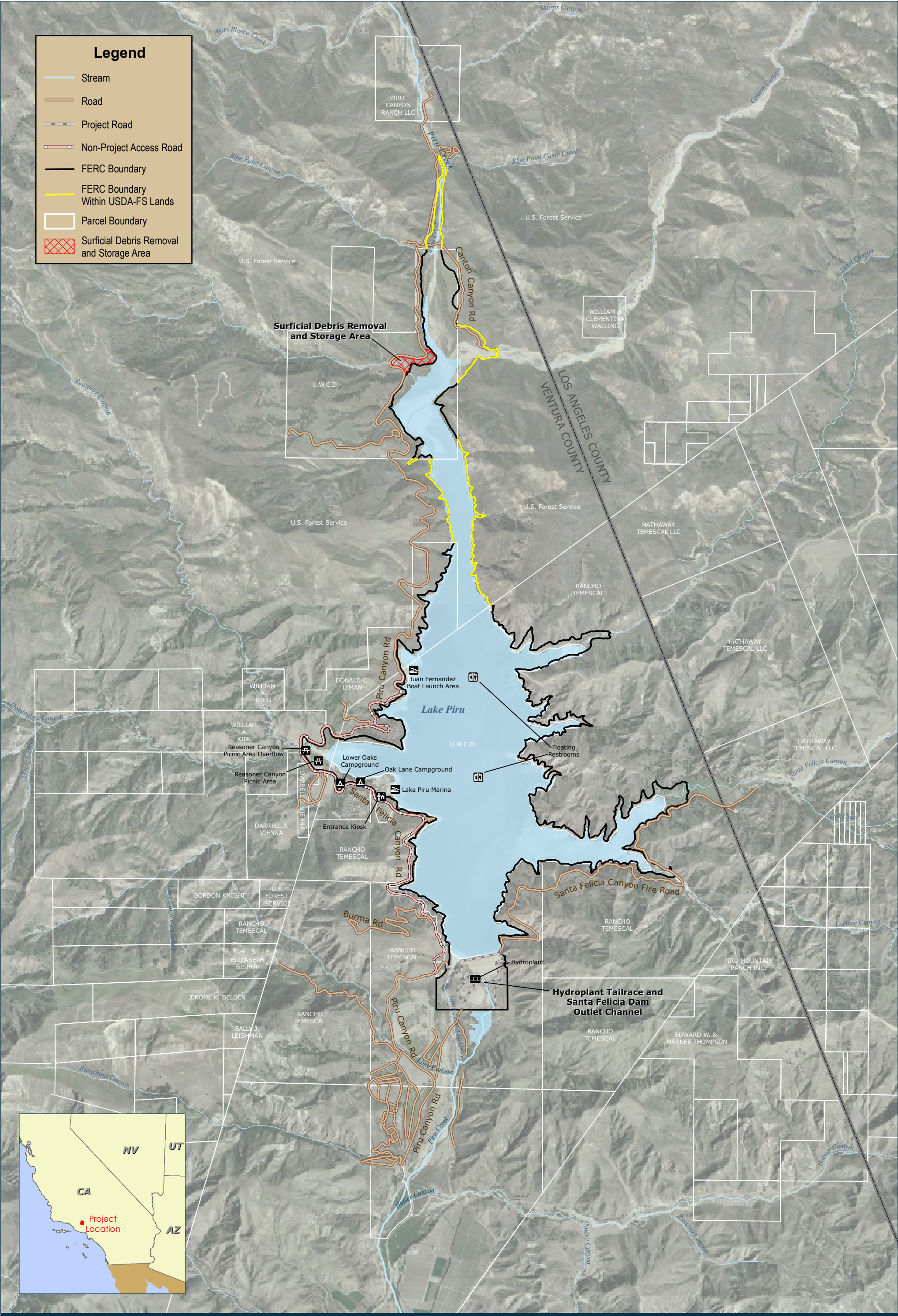
As required by Section 4(e), Condition No. 2 in Appendix A of the *Order Issuing the New License* dated September 12, 2008; United personnel will annually consult with USDA-FS personnel. The annual consultation will occur between January 10 and March 15 of each year and will include:

- A status report regarding implementation of License conditions;
- Results of any monitoring studies performed over the previous year in formats agreed to by the USDA-FS and the Licensee;
- Review of any non-routine maintenance;
- Discussion of any foreseeable changes to Project facilities or features;
- Discussion of any necessary revisions or modifications to approved plans;
- Discussion of the needed protection measures for species newly listed as threatened, endangered, or sensitive or, changes to existing management plans that may no longer be warranted due to delisting of species or, to incorporate new knowledge about a species requiring protection; and,
- Discussion of elements of current year maintenance plans.

United will maintain a record of the consultation including any recommendations from the USDA-FS for the protection of resources on USDA-FS lands. United will file the consultation record with FERC no later than 60 days following the consultation.



Figures



SPOIL MANAGEMENT, EROSION, AND SEDIMENT CONTROL PLAN  
FOR THE SANTA FELICIA PROJECT

Figure 1 – Project Facilities and FERC Project Boundary





APPENDIX A

---

California Department of Fish and Game  
Streambed Alteration Agreement #1600-  
2004-0237-R5 Revision 3 dated August 1,  
2007

**CALIFORNIA DEPARTMENT OF FISH AND GAME**

4949 Viewridge Avenue  
San Diego, CA 92123

July 25, 2007

Notification No. 1600-2004-0237-R5 revision3

Page 1 of 13

**AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION**

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and United Water Conservation District, represented by James Kentosh, 106 N. 8<sup>th</sup> Street, Santa Paula, CA 93060, (805) 525-4431, hereinafter called the Operator, is as follows:

WHEREAS, pursuant to Section 1602 of the California Fish and Game Code, the Operator, on the 23 day of June, 2004, notified the Department that they intend to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed(s) of the following water(s): Piru Creek a tributary to the Santa Clara River, Ventura County, California. Assessor's Parcel Number 016-021-003; Lat./Long. N 34.45/W 118.75.

WHEREAS, the Department (represented by Jeff Humble on June 15, 2007) has determined that such operations may substantially adversely affect existing fish and wildlife resources specifically including: fishes: Arroyo Chub, Southern California Steelhead, Santa Ana sucker, Owens sucker, threespine stickleback; amphibians: arroyo toad, red-legged frog; reptiles: southwestern pond turtle, Coast horned lizard, two-striped garter snake; birds: least Bell's vireo, Cooper's hawk, Yellow warbler, yellow-breasted chat, Southwestern willow flycatcher; mammals: ringtail cat, American badger; native plants: riparian habitat; and all other aquatic and wildlife resources in the area, including the riparian vegetation which provides habitat for such species in the area.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife resources during the Operator's work. The Operator hereby agrees to accept the following measures/conditions as part of the proposed work.

If the Operator's work changes from that stated in the notification specified above, this Agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. Failure to comply with the provisions of this Agreement and with other pertinent code sections, including but not limited to Fish and Game Code Sections 5650, 5652, 5901, 5931, 5937, and 5948, may result in prosecution.

Nothing in this Agreement authorizes the Operator to trespass on any land or property, nor does it relieve the Operator of responsibility for compliance with applicable federal, state, or local laws or ordinances. A consummated Agreement does not constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

This Agreement becomes effective the date of the Department's signature and the construction portion terminates on 7/1/2012. This Agreement shall remain in effect to satisfy the terms/conditions of this Agreement. Any provisions of the agreement may be amended at any time provided such amendment is agreed to in writing by both parties. Mutually approved amendments become part of the original agreement and are subject to all previously

negotiated provisions.

Pursuant to Section 1600 et. seq., the Operator may request one extension of the Agreement; the Operator shall request the extension of this Agreement prior to its termination. The one extension may be granted for up to five years from the date of termination of the Agreement and is subject to Departmental approval. The extension request and fees shall be submitted to the Department's South Coast Office at the above address. If the Operator fails to request the extension prior to the Agreement's termination, then the Operator shall submit a new notification with fees and required information to the Department. Any construction/impacts conducted under an expired Agreement are a violation of Fish and Game Code Section 1600 et. seq. For complete information see Fish and Game Code Section 1600 et. seq.

1. The following provisions constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the Operator is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement, shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 et seq.

**Project Description:**

2. The Operator proposes to alter the streambed by conducting maintenance operations below the Santa Felicia Dam. Activities include a) Replacement of a culvert structure and fill to re-create an access road crossing the spillway channel. b) Redistribution of cobble/boulder material below the cone valves. Material built up from the flows will be pushed back in the pool of origin located directly below the cone valves. c) Replacement of washed out rip-rap below the dam outlet works. d) Re-creation of the bank below the gauging station. Some vegetation, along with a small portion of the bank will be removed and pushed back to allow for unimpeded flows which may result in more accurate gauge readings.

3. The agreed work includes activities associated with No. 2 above. The project area is below the Santa Felicia Dam located in Ventura County (Thomas Guide Page 367, grid E-7). Specific work areas and mitigation measures are described on/in the plans and documents (Figure 2, Cross Section-Santa Felicia Dam Outlet Works, 4-1-04, Figure 3, Photo of Culverts and Access Road, 4-1-04, Section 3.1, Report on Aquatic Resources, 2004, Section 3.2, Report on Wildlife Resources, 2004) submitted by the Operator and shall be implemented as proposed, unless directed differently by this agreement. Contact: James Kentosh at Phone: (805) 525-4431 for additional information.

**Impacts:**

4. The Operator shall not temporarily impact more than the existing structures described in condition #2, and shall not permanently impact more than 0.01 acres of riparian within the stream.

**Mitigation:**

5. Mitigation for areas of temporary disturbance—For the area of bank re-contouring and vegetation removal (project description, 2-d), the Operator shall mitigate with the planting of cottonwoods and or willows at a 3:1 ratio. Mitigation for the other maintenance activities shall include the revegetation of stripped or exposed work areas within the banks, bed, and channel of the stream (including construction areas, access roads, etc.) with native vegetation local to the area.

The redistribution of the cobble/boulder below the pool at the cone valves will be done in a manner that will prevent the loss of the "pool" habitat.

6. The Operator shall submit a Revegetation/Mitigation plan for Department review within 60 days of initiating any maintenance activity, except for that described in 2-d. Plans for restoration, enhancement/re-vegetation and/or creation should be prepared by persons with expertise in southern California ecosystems and native plant re-vegetation techniques. The plan should include at minimum: (a) the location of the mitigation site; (b) the plant species to be used; (c) a schematic depicting the mitigation area; (d) time of year that the planting will occur; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met.

7. To provide protection from erosion, the Operator may plant willow cuttings (obtained from nearby plants) on 6-8 ft centers, on the restored slope. These shall be planted during the willows dormant season, and shall be augered/dug into the groundwater or wetted soil.

8. No restoration/mitigation shall occur in fuel modification zones, future project areas or areas of maintenance.

9. If native trees have been removed from the stream's banks, they shall be replaced in-kind per the ratio above, and maintained until established, under the direction of a Department representative.

10. In order to determine if the revegetation techniques used have been successful, any plant species required that are listed below should achieve the minimum growth at the end of three and five years. If the minimum growth is not achieved, then the Operator may be responsible for taking the appropriate corrective measures as determined by Department representatives. The Operator shall be responsible for any cost incurred during the revegetation or in subsequent corrective measures. Plant size and height requirements may be adjusted.

SPECIES	SIZE AT PLANTING (GALLONS)	PLANTING CENTERS	HEIGHT	
			3 years	5 years
Arroyo Willow	1 gallon	8 ft	10 ft	15 ft
Black Willow	1 gallon	8 ft	12 ft	18 ft
Sandbar Willow	1 gallon	5 ft	4 ft	6 ft
Red Willow	1 gallon	8 ft	9 ft	15 ft
Cottonwood	1 gallon	20 ft	7 ft	12 ft

11. Planting, maintenance, monitoring and reporting activities shall be overseen by a specialist familiar with restoration of native plants.

12. All plants shall be planted in randomly spaced, naturally clumped patterns. The average planting densities shall meet the criteria specified above.

13. Mitigation for activities other than those described in 2-d: all planting shall have a minimum of 80% survival, by species, the first year and 100% survival thereafter and/or shall attain 75% cover after 3 years and 90% cover after 5 years for the life of the project. Prior to the mitigation site(s) being determined successful, they shall be entirely without supplemental irrigation for a minimum of 2 years. No single species shall constitute more than 50% of the vegetative cover, no woody invasive species shall be present, and herbaceous invasive species shall not exceed 5% cover. If the survival and cover requirements have not been met, the Operator is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for 3 years after planting.

14. Mitigation for activities other than those described in 2-d: an annual report shall be submitted to the Department by Jan. 1 of each year for 3 years after planting. This report shall include the survival, % cover, and height by species of both trees and shrubs. The number by species of plants replaced, an overview of the revegetation and exotic plant control efforts, and the method used to assess these parameters shall also be included. Photos from designated photo stations shall be included.

15. All planting should be done after the first wetting rains between October 1 and February 1 to take advantage of the winter rainy season, dormancy of foliage, and rooting period to ensure optimum survival of plantings. Should the Operator be required to plant during other times of the year, chances of survival are diminished. To compensate for decreased survival rates, the Operator shall be required to augment the specified planting density by 25 % to account for the likelihood of increased mortality of plantings. Any restoration/planting shall be completed within 6 months after the completion of a maintenance activity.

16. The Operator shall provide irrigation when natural moisture conditions are inadequate to ensure survival of plants. Irrigation shall be provided for a period of at least two years from planting. Irrigation shall be phased out during the fall/winter of second year unless unusually

severe conditions threaten survival of plantings. All plants must survive and grow for at least three years without supplemental water for the restoration phase of the project to be eligible for acceptance by the Department.

17. Plant material for revegetation shall be derived from cuttings, materials salvaged from disturbed areas, and/or seeds obtained from randomly selected native trees and shrubs occurring locally within the same drainage.

18. Any replacement tree/shrub stock, which cannot be grown from cuttings or seeds, shall be obtained from a native plant nursery, be ant free and shall not be inoculated to prevent heart rot. The Operator shall provide a list of all materials which must be obtained from other than onsite sources.

**Resource Protection:**

19. The Operator certifies by signing this agreement that the project site has been surveyed and shall not impact any rare, threatened or endangered species; or the Operator certifies that such a survey is not required for the proposed project. If rare, threatened or endangered species occur within the proposed work area, or could be impacted by the work proposed, the Operator shall consult with the Department and obtain any required State and/or Federal permits.

20. The Operator shall not remove or otherwise disturb vegetation or conduct any other project activities on the project site from March 1 to September 1 to avoid impacts to breeding/nesting birds. If work during the breeding/nesting season can not be avoided then, prior to construction or site preparation activities, the Operator shall have a qualified biologist survey all breeding/nesting habitat within the project site and adjacent to the project site for breeding/nesting birds. Surveys shall be conducted every 2-3 days for 2 consecutive weeks prior to any maintenance activity. Documentation of findings, including a negative finding must be submitted to the Department for review and concurrence. If no breeding/nesting birds are observed and concurrence has been received from the Department, site preparation and construction activities may begin. If breeding activities and/or an active bird nest is located and concurrence has been received from the Department, the breeding habitat/nest site shall be buffered a minimum of 200 feet (300 feet for raptors) in all directions, and this area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project.

If threatened or endangered species are observed in the area, no work shall occur during the breeding season (March 1 through September 15) to avoid direct or indirect (noise) take of listed species and State and/or Federal threatened/endangered species permits may be required prior to commencing project activities. This Agreement does not authorize take of species listed as Threatened and/or Endangered.

Be advised, migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918(50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the

Federal MBTA).

21. The Operator shall have a qualified wildlife biologist conduct pre-construction surveys to confirm the presence/absence of coast horned lizard (for the activities described in 2a), southwestern pond turtle and southern steelhead (for the activities described in 2b and 2c), and/or other species of concern likely to be found in the area during the proposed operations.

If evidence exist that additional surveys are required, survey techniques, timing, and schedule shall be approved by the Department. Survey results, analysis, and recommendations, along with the field notes shall be provided to the Department prior to commencing construction or within two weeks of completion of field surveys, whichever is earlier. Should any sensitive species be found during pre-project surveys and work must be done in identified areas during sensitive periods, the Operator shall develop and implement a plan for the protection of these species. This plan shall be approved by the department prior to commencing work. The results of any surveys and any protective measures instituted, as a part of the protection and monitoring plan, shall be provided to the Department within one week from implementation. The Operator shall be responsible for reporting all observations of threatened/endangered species or of species of special concern to the Departments Natural Diversity Data Base within ten (10) days of sighting.

22. Should the least Bell's vireo, willow flycatcher, or any other rare, threatened or endangered species occur in the area, the Operator shall submit, for Department review and approval, a plan to ensure that no rare, threatened or endangered species are disturbed during project implementation. The plan shall be approved by the Department prior to initiation of any work.

23. No diversion, dams, or restriction of flows are authorized within this agreement.

24. The Operator's activities shall be limited to the period of daylight hours; no night work is authorized.

25. If the Department determines that any threatened or endangered species will be impacted by the work proposed, this Agreement shall not be valid (the project cannot begin/continue) until the Operator obtains the appropriate federal and state permits for take of threatened or endangered species. The Operator shall contact Environmental Services at (805) 640-3677 to obtain information on applying for the State Management Take Permit for State listed species.

26. A qualified biological monitor with all required collection permits shall be on site during operations and shall survey for species prior to construction. If any life stages of any native vertebrate species are found in the path of construction, the monitor shall relocate the species to a safe location. Exclusionary devices shall be erected to prevent the migration into or the return of species into the work site.

27. If least Bell's vireo, southwestern willow flycatcher, steelhead trout or any other federally listed threatened/endangered (T/E) species occur in the area or will be impacted by the work proposed, the Department herein advises the Operator that a Federal Endangered Species Permit may be required to address possible impacts on the least Bell's vireo, southwestern willow flycatcher, steelhead trout and/or any other T/E species. Should such a permit(s) be required, the Operator shall provide copies to the Department. All conditions contained



therein, shall become a part of this agreement and shall be enforceable by the Department.

28. The Operator shall install and use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scrapes, food wrappers, beverage and other miscellaneous trash.

29. The Operator shall not permit pets on or adjacent to the project site during construction activities.

30. The Operator shall ensure that no guns/or other weapons are on-site during construction, with the exception of the security personnel and only for security type functions. No hunting shall be authorized/permitted during construction.

### **Fish Passage**

31. If flowing or ponded water is within the proposed work limits, the Operator shall have a qualified fisheries biologist survey the proposed work area to verify presence/absence of the any sensitive fish species and any other species of special concern which may occur within the area. Survey methods shall conform to the current U. S. National Marines Fisheries Service and the California Department of Fish and Game. If any T/E species are found, the Operator shall cease all work within a mile radius of the sighting and in all water (flowing or impounded) and shall contact the Department within 24 hours of the sighting and shall request an onsite inspection by the Department representative (to be done at the discretion of the Department) to determine if work shall proceed. The results of the surveys shall be provided to the Department, along with copies of all field notes, prior to the completion of work or as otherwise specified. The survey techniques shall be approved by the Department, in writing, and the researcher shall have the required State and federal permits.

32. The Operator shall report all fish mortality immediately to the Departments Fisheries Biologist, Maurice Cardenas at (805) 640-1852. The Operator shall report all rainbow trout/southern steelhead trout mortalities to Mary Larson at (562) 342-7186.

### **Work Areas and Vegetation Removal:**

33. Disturbance or removal of vegetation shall not exceed the limits approved by the Department. The disturbed portions of any stream channel or lake margin, within the high water mark of the stream or lake, shall be restored to their original condition under the direction of the Department.

34. The work area shall be flagged to identify its limits within the stream. Vegetation shall not be removed or intentionally damaged beyond these limits.

35. No vegetation with a diameter at breast height (DBH) in excess of (3) inches shall be removed or damaged without prior consultation and approval of a Department representative.

36. In areas of temporary disturbance, where vegetation must be removed, native trees and shrubs, with DBHs of 3 inches or less, shall be cut to ground level with hand operated power tools rather than by grading.

37. Vegetation removed from the stream shall not be stockpiled in the stream bed or on its bank. The sites selected on which to push this material out of the stream should be selected in compliance with the other provisions of this Agreement. Where possible brush piles shall be left outside the channel in upland areas to provide wildlife habitat.

**Exotic Species Removal and Control:**

38. The Operator shall remove any non-native vegetation (tree tobacco, castor bean, giant cane, cape ivy, periwinkle, etc.) from the work area and shall dispose of it in a manner and a location which prevents its reestablishment. Removal shall be done at least twice annually during the spring/summer season, as needed, through the term of restoration.

Giant cane (*Arundo*), if present, shall be cut to a height of 6 inches or less, and the stumps painted with an herbicide approved for aquatic use within 5 minutes of cutting. Herbicides shall be applied at least three times during the period from May 1 to October 1 to eradicate these plants. Where proposed methods for removing giant cane deviate from this procedure, the Operator shall present the alternate methods, in writing, to the Department for review and approval, prior to construction.

39. Whenever possible, invasive species shall be removed by hand or by hand-operated power tools rather than by chemical means. Where control of non-native vegetation is required within the bed, bank, or channel of the stream, the use of herbicides is necessary, and there is a possibility that the herbicides could come into contact with water, the Operator shall employ only those herbicides, such as Rodeo/Aquamaster (Glyphosate), which are approved for aquatic use. If surfactants are required, they shall be restricted to non-ionic chemicals, such as Agri-Dex, which are approved for aquatic use.

40. The Operator shall apply any herbicides in accordance with state and federal law. No herbicides shall be used where Threatened or Endangered species occur. No herbicides shall be used when wind velocities are above 5 miles per hour.

41. No herbicides shall be used on native vegetation unless specifically authorized, in writing, by the Department.

42. Operator shall remove all non-native aquatic animals from the work area as part of the restoration of the site. Target animals include bullfrog, African clawed frog, non-native turtles, and crayfish. Compliance with this condition may be subject to a sportsfishing license from the Department.

43. A small amount of selective trimming of native species (e.g. willow, oak and sycamore) may occur to prevent overspray of herbicide from reaching these branches, but only as provided within the conditions of this Agreement. Native vegetation may only be trimmed; individual plants shall not be removed. Material in excess of three (3) inches DBH shall require specific notice to and consultation with the Department.

**Equipment and Access:**

44. Staging/storage areas for equipment and materials shall be located outside of the stream/lake.

45. One vehicle may be driven in wet portions of the stream/lake to accomplish the work authorized by this Agreement. This work is only authorized when the vehicle is completely clean of petroleum residue and water levels are below the gear boxes of the equipment in use or lubricants and fuels are sealed such that inundation by water shall not result in leaks. This vehicle shall be clean and free of any weed seeds.

46. Access to the work site shall be via existing roads and access ramps. If no ramps are available in the immediate area, the Operator may construct a ramp in the footprint of the project. Any ramp shall be removed upon completion of the project.

**Fill and Spoil:**

47. Fill length, width, and height dimensions shall not exceed those of the original design/installation or the original naturally occurring topography, contour, and elevation. Fill shall be limited to the minimal amount necessary to accomplish the agreed activities. Except as otherwise specified in this Agreement, fill construction materials other than on-site alluvium, shall consist of clean silt-free gravel or river rock.

48. All fill materials shall be obtained from upland sources, and must be weed free.

49. The Operator shall only use unconcreted rock rip-rap for activities described in 2-c.

50. Spoil storage sites shall not be located within a stream/lake, where spoil can be washed back into a stream/lake, or where it will cover aquatic or riparian vegetation.

**Structures:**

51. Structures and associated materials not designed to withstand high water flows shall be moved to areas above high water before such flows occur.

52. Any materials placed in seasonally dry portions of a stream or lake that could be washed downstream or could be deleterious to aquatic life shall be removed from the project site prior to inundation by high flows.

53. Areas of disturbed soils with slopes toward a stream or lake shall be stabilized to reduce erosion potential. Planting, seeding and mulching is conditionally acceptable. Where suitable vegetation cannot reasonably be expected to become established, non-erodible materials, such as coconut fiber matting, shall be used for such stabilization. Any installation of non-erodible materials not described in the original project description shall be coordinated with the Department. Coordination may include the negotiation of additional Agreement provisions for this activity.

**Pollution, Sedimentation, and Litter:**

54. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project related activity shall be allowed to contaminate the soil and/or enter into or placed where it may be washed by rainfall or runoff into, waters of the State. Any of these materials, placed within or where they may enter a stream or lake, by the Operator or any party working under contract, or with the permission of the Operator, shall be removed immediately. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.

55. The Operator shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the operator to insure compliance.

56. Any equipment or vehicles driven and/or operated within or adjacent to the stream/lake shall be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.

57. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.

58. No equipment maintenance shall be done within or near any stream channel or lake margin where petroleum products or other pollutants from the equipment may enter these areas under any flow.

59. The clean-up of all spills shall begin immediately. The Department shall be notified immediately by the Operator of any spills and shall be consulted regarding clean-up procedures.

60. Upon Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

61. If applicable, the Operator shall submit to the Department for review and approval, the proposed water diversion plan for this project. The plan shall be consistent with the terms and conditions of this Agreement.

62. Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.

63. If an off-stream siltation pond/s is/are used to control sediment, pond/s shall be constructed in a location, or shall be designed, such that potential spills into the stream/lake during periods of high water levels/flow are precluded.

64. If silt catchment basin/s is/are used, the basin/s shall be constructed across the stream immediately downstream of the project site. Catchment basins shall be constructed of materials which are free from mud and silt. Upon completion of the project, all basin materials along with the trapped sediments shall be removed from the stream in such a manner that said removal shall not introduce sediment to the stream.

65. Silt settling basins shall be located away from the stream or lake to prevent discolored, silt-bearing water from reaching the stream or lake during any flow regime.

66. When operations require moving of equipment across a flowing stream, such operations shall be conducted without substantially increasing stream turbidity. For repeated crossings, the operator shall install a bridge, culvert, or rock-fill crossing.

**Permitting and Safeguards:**

67. The Department believes that permits/certification may be required from the Corps of Engineers and Regional Water Quality Control Board for this project, should such permits/certification be required, a copy shall be submitted to the Department.

**Maintenance:**

68. The Operator may repair damage to any existing bank protection features, such as rip-rap. Such repair shall employ the same type materials used in the original construction and shall occur only in the locations of existing bank protection. New sites requiring bank protection, expansions in the size of protected sites, or changes in the materials to be used, are not covered by this Agreement. As such a separate notification and Agreement would be needed for such work. Repair work shall be accomplished without damaging vegetation or altering the stream bed or stream banks more than fifteen (15) feet in any direction beyond the area of the original bank protection. Where vehicles are required, the work area limit is extended to fifty (50) feet.

69. Spoil shall not be placed on the stream side slope, or where it could enter the stream. Spoil shall not be placed over vegetation except as specifically noticed to and accepted by the Department.

70. The Operator shall provide the Department an annual report, due January 1 of each year, describing the type of damage which occurred or work needing to be conducted, describing the type of maintenance work that was completed during the previous year, species accounts, quantity and type of materials moved, and photos of the finished work.

**Administrative:**

71. All provisions of this Agreement remain in force throughout the term of the Agreement. Any provisions of the Agreement may be amended or the Agreement may be terminated at any time provided such amendment and/or termination is agreed to in writing by both parties. Mutually approved amendments become part of the original Agreement and are subject to all previously negotiated provisions.

72. If the Operator or any employees, agents, contractors and/or subcontractors violate any of the terms or conditions of this agreement, all work shall terminate immediately and shall not proceed until the Department has taken all of its legal actions.

73. The Operator shall provide a copy of this Agreement, and all required permits and supporting documents provided with the notification or required by this Agreement, to all contractors, subcontractors, and the Operator's project supervisors. Copies of this Agreement and all required permits and supporting documents, shall be readily available at work site at all times during periods of active work and must be presented to any Department personnel, or personnel from another agency upon demand. All contractors shall read and become familiar with the contents of this agreement.

74. A pre-construction meeting/briefing shall be held involving all the contractors and subcontractors, concerning the conditions in this Agreement.

75. The Operator shall notify the Department, in writing, at least five (5) days prior to initiation of any of the described maintenance activities and at least five (5) days prior to completion of construction (project) activities each time the activity is conducted. Notification shall be sent to the Department at 4949 Viewridge Avenue, San Diego 92123, Attn: ES. FAX Number (858) 467-4299, Reference # 1600-2004-0237-R5.

76. The Operator herein grants to Department employees and/or their consultants (accompanied by a Department employee) the right to enter the project site at any time, to ensure compliance with the terms and conditions of this Agreement and/or to determine the impacts of the project on wildlife and aquatic resources and/or their habitats.

77. The Department reserves the right to suspend or cancel this Agreement for other reasons, including but not limited to, the following:

- a. The Department determines that the information provided by the Operator in support of this Agreement/Notification is incomplete or inaccurate;
- b. The Department obtains new information that was not known to it in preparing the terms and conditions of this Agreement;
- c. The condition of, or affecting fish and wildlife resources change; and
- d. The Department determines that project activities have resulted in a substantial adverse effect on the environment.

78. Before any suspension or cancellation of the Agreement, the Department will notify the operator in writing of the circumstances which the Department believes warrant suspension or cancellation. The Operator will have seven (7) working days from the date of receipt of the notification to respond in writing to the circumstances described in the Department's notification. During the seven (7) day response period, the Operator shall immediately cease any project activities which the Department specified in its notification as resulting in a substantial adverse effect on the environment and which will continue to substantially adversely affect the environment during the response period. The Operator may continue the specified activities if the Department and the Operator agree on a method to adequately

mitigate or eliminate the substantial adverse effect.

CONCURRENCE

(Operator's name)

James Kentosh July 25, 2007  
Name (signature) Date

JAMES KENTOSH  
Name (printed)

MANAGER OF RESOURCE PLANNING  
Title

California Department of Fish and Game

Marilyn J. Mulholland for: Aug 1 2007  
Michael J. Mulligan Date  
Deputy Regional Manager  
South Coast Region

This agreement was prepared by Jeff Humble.