

# Tulloch Shoreline Management Plan

## Introduction

This Shoreline Management Plan (SMP) addresses the uses, densities and management guidelines on Tulloch Reservoir's water surface area and along its shoreline. The Reservoir is located on the Stanislaus River, primarily on private lands within Tuolumne and Calaveras Counties. This Plan will establish the cooperative management strategy of the Tri-Dam Project and the Counties of Tuolumne and Calaveras. The Reservoir is located in the foothills of California's Sierra Nevada Mountains, 13 miles southwest of Angels Camp and approximately 45 miles northeast of Modesto.

Most of the existing and potential development occurs on subdivided land along the Calaveras County side of the reservoir in the Copper Cove, Poker Flat and Connor Estates developments. There are many undeveloped large parcel holdings along the Calaveras County shoreline, which the Planning Department indicates are receiving increasing development pressures. On the Tuolumne County side of the reservoir, development opportunities are more limited. There are several large lot subdivisions including Green Springs, Lake Tulloch Estates, Black Jack Bluff Estates and South Shore subdivision, which contain waterfront properties. Recreational opportunities consist of the South Shore Campground and Marina located in Tuolumne County on the southwestern shore of the reservoir, Lake Tulloch Resort in Calaveras County along the north shore of the reservoir. There are also several other private facilities developed and operated for the sole use of residents within the various subdivisions.

The Shoreline Management Plan addresses shoreline uses within the FERC project boundary, which is below the 515' elevation. The plan also addresses the boating and recreational uses of the reservoir's water surface area.

## Description and History of the Project

Initial water use in the Stanislaus River was by the Tulloch family starting in the late 1800s. As the demand for water grew, so did the development of larger facilities. Goodwin Dam and the associated canal system constructed by the Oakdale Irrigation District (OID) and the South San Joaquin Irrigation District (SSJID) expanded the ability to deliver water and placed greater demands on the river system, which proved to be unreliable in dry years. The construction of Old Melones Reservoir in 1926 provided 112,600 acre-feet (af) of water storage for use during the summer and fall irrigation season. This too proved to be inadequate during the dry periods and support for the Tri-Dam Project resulted in the construction of three additional reservoirs in the late

1950s: Donnells (64,325 af), Beardsley (97,802 af), and Tulloch (66,968 af). These reservoirs are operated to provide water supply for irrigation and to produce power.

With the construction of New Melones Reservoir (2,420,000 af) in 1982 by the United States Army, Corps of Engineers (USACOE), the historical operation of the Donnells, Beardsley, and Tulloch reservoirs changed significantly. Most notable is Tulloch Reservoir, which experienced historical seasonal changes from the full reservoir of 66,968 af in the spring to 20,000 to 30,000 af in the late fall, to a current seasonal change of 54,000 af in the late fall. Tulloch Reservoir now operates as an afterbay for New Melones Reservoir providing daily regulation from power generation of 2 to 3 feet in elevation and limited flood control space for local runoff during the winter/spring by lowering the reservoir approximately 10 feet. Tulloch Reservoir storage and elevation is now directed by the federal government as a result of the New Melones operation and effectively functions as a "pass through" facility.

Tulloch Reservoir is a water supply/power project constructed in the late 1950s and which went on-line in 1958. The reservoir is licensed by the Federal Energy Regulatory Commission (FERC) Project No. 2067, and supplies electric power used in the region. Tulloch Reservoir has a normal maximum water surface elevation of 510 feet, has a surface area of 1,260 acres at full pool and has a gross storage capacity of 66,968 af.

Tulloch Dam is a concrete gravity structure 200 feet high with a crest length of 1600 feet. Water releases and levels are controlled by power and by pass penstocks at the base of the dam and 7 radial gates each 40 feet wide by 30 feet tall.

Tulloch powerhouse has two generating facilities with a capacity of 9,000 Kilowatts each. A third generating unit is proposed to be constructed with a 7,000 kilowatt capacity next to the existing generators.

### **Use of Project Lands and Resources**

There are 1,619 acres of land within the Project Boundary. Twenty-two parcels located at the upstream end of the reservoir (the northeast arm of the reservoir) are United States-owned lands managed by the U.S. Department of Interior, Bureau of Reclamation (USBR) as part of the New Melones Development. Another three parcels located at the lower end of the northeast arm of the reservoir are United States-owned lands managed by the U.S. Department of Interior, Bureau of Land Management (USBLM), as is one parcel of land located at the upper end of the northwest arm of the reservoir (Black Creek). Federal land within the Tulloch Project Boundary totals 119 acres or seven percent of all of the land within the Project Boundary. The California Department of Fish and Game (CDFG) owns two parcels totaling 83 acres near Tulloch Dam, which it leases to Tuolumne County, who in turn leases to a concessionaire for operation of a public campground, boat launch and marina on the property. The state of California owns five percent of all of the land within the Project Boundary. The Licensee owns 16 parcels totaling 419 acres or 26 percent of all of the land within the Project Boundary.

Approximately 60 percent of the lands surrounding Tulloch Reservoir are in private ownership and are managed according to the General Plans of Calaveras and Tuolumne Counties

Land use along the shoreline of Tulloch Reservoir in Calaveras County is primarily designated as residential, though most of the lots have not been developed and therefore remain in near natural condition. In Tuolumne County, the majority of the land is designated agricultural or is public, with a small percentage designated as residential. (See Land Designation Map Attachment A) The majority of the residential and commercial developed parcels occur on the northwestern and southwestern arms of the reservoir

The Black Creek arm of the reservoir is the most highly developed area consisting of Copper Cove (1,000 units), Lake Tulloch Shores of Poker Flat (600 units) and Conner Estates (169 units). The Calaveras County Planning Department estimates that jointly these developments are approximately 30 percent built out. The County has recently approved another 300-unit subdivision, Tuscany Hills and others are in preliminary planning stages.

On the south side of the reservoir, within Tuolumne County there is less density and less likely hood of major development. Currently there are three developed areas; South Shore, Green Springs and Black Jack Bluffs. The majority of the remaining land is in large holdings and is less likely to see development pressure.

The extent of current shoreline development is illustrated in the attached map of the shoreline ownership showing the land division. (See Land Ownership Map Attachment B)

Tri-Dam Project has an active program of reviewing and permitting uses of project lands. The permitting process is guided by the Shoreline Development Permitting Process as described later in the Shoreline Plan. The permitting is done concurrently with the respective counties and with consultation of California Department of Fish and Game and the United States Corps of Engineers as appropriate.

### **Plan Objectives**

Several agencies have jurisdictional authority at Tulloch Reservoir. The purpose of this Plan is to develop a comprehensive policy for managing the reservoir's shoreline and water surface that is consistent with the project's primary purpose of power generation and water supply. The goal will be to balance present and future residential and recreational development with the need to provide a safe and enjoyable experience for visitors and residents. The Plan has been developed with input from Tuolumne County, Calaveras County, Sheriff's Marine Safety Departments and local residents, landowners and other interested parties.

Implementation and success of this Plan will depend upon the ongoing commitment and cooperation of Tri-Dam, Calaveras County and Tuolumne County, other resources agencies, commercial marinas and homeowners around the reservoir.

## **Background Information Shoreline Plan**

The Oakdale Irrigation District (OID) and the South San Joaquin Irrigation District (SSJID) cooperatively operate as the Tri-Dam Project, as the owner and operator of the Tulloch Project (Project). OID and SSJID received an initial license for the Project (No. 2067) from the Federal Energy Regulatory Commission (FERC) effective on January 1, 1955, for a term ending December 31, 2004. Article 39 of that license provided Tri-Dam Project with the authority to grant permission for use of lands within the FERC Project Boundary. The FERC Project Boundary is generally defined as the area within the 515-foot elevation contour (five feet above the normal maximum pool elevation) that surrounds the reservoir. To implement this authority, Tri-Dam Project filed an initial Reservoir Management Plan with FERC on November 3, 1978, and supplemented in on December 8, 1978 and January 9, 1979. Tri-Dam Project also filed with FERC on November 20, 1978, an application to permit the Heart Federal Savings and Loan Association to develop and sell lands within the Lake Tulloch Shores Subdivision Unit Nos. 1 and 2 that included a unique provision to construct housing over the reservoir. FERC approved the Reservoir Management Plan including the subdivision on February 2, 1979. In addition, Tri-Dam Project requested an additional amendment addressing shoreline erosion structures on July 8, 1998, which FERC approved on October 13, 1998.

Tri-Dam Project has received a new FERC License that requires Tri-Dam submit a revised Shoreline Management plan. During the relicensing efforts, Tri-Dam Project, in cooperation with PG&E Company, conducted broad-focus public meetings with resource agencies, non-governmental organizations (NGOs) and other parties interested in re-licensing of this Project as well as other projects in the Stanislaus River watershed. Several broad-focus public groups were formed in order to effectively provide comments and participate in this process. The first group formed is known as the Stanislaus Planning Action Team (SPLAT) and from this group, several subgroups were formed. One of these, the Tulloch Reservoir Shoreline Management Subgroup, was created to develop a new Tulloch Reservoir Shoreline Management Plan (TRSMP) that would become effective upon issuance of a new license to OID and SSJID for the Tulloch Project, or sooner.

One of the other items that has arisen as a part of the re-licensing process is the need to develop an overall development plan for the reservoir. Tulloch reservoir is unique in that a significant portion of the lands surrounding the reservoir are privately owned and subject to development pressures, which in this case consists of privately owned lands within two counties (Calaveras and Tuolumne).

Many landowners have private docks and at present, there are approximately 400 single-family residential docks along the shoreline. Most of the docks are designed with one slip; however, it is common to see additional watercraft tied to the sides of these docks. Due to the increasing amount of residential development along the shoreline and the reservoir's popularity with tourists, it is important that an overall carrying capacity of the reservoir be determined so that the quality of the reservoir, recreational experience and quality of life for area residents is maintained.

**GOALS, POLICIES AND IMPLEMENTATION MEASURES:**

**GOAL: PROVIDE AN OVERALL MANAGEMENT PLAN FOR THE RESERVOIR**

**Policies:**

Encourage cooperative planning and management efforts among the multi-jurisdictional agencies at Tulloch Reservoir.

**Implementation Measures:**

Pursue the adoption of a Memorandum of Understanding or similar mechanism to more effectively allow Tri-Dam to operate Tulloch Reservoir in conjunction with Calaveras and Tuolumne Counties.

Adopt the Reservoir Management Plan, which incorporates the land use designations and zoning districts of Calaveras and Tuolumne Counties for lands along the shoreline. (See Attachment A)

Adoption of this Plan shall include provisions for periodic review and updates as necessary to ensure consistency between all applicable Tri-Dam and County regulations.

Conduct periodic meetings of involved agencies, as necessary, to ensure that continued cooperative efforts are achieved.

**GOAL: PROMOTE ORDERLY GROWTH AND DEVELOPMENT IN ORDER TO ENSURE THAT BOAT DOCKS AND OTHER SHORELINE STRUCTURES ARE INSTALLED AND MAINTAINED IN A MANNER WHICH ENSURES THAT THE MAXIMUM NAVIGABLE AREA OF THE RESERVOIR IS ACHIEVED**

**Policies:**

Use the guidelines and regulations of the Tulloch Reservoir Shoreline Management Plan in the permitting process of all facilities within the project area.

**Implementation Measures:**

Ensure that all new and replacement facilities conform to the criteria established in the Shoreline Management Plan. Continue to utilize a permitting process, which integrates the requirements of Tuolumne County, Calaveras County and Tri-Dam.

Ensure that all new and replacement facilities are located as close to the shoreline as possible in order to minimize intrusion of boat docks and other facilities onto the navigable water surface area.

Coordinate the permitting process to ensure that permits, if needed, from multiple agencies are obtained prior to installation of facilities.

Encourage property owners to excavate shallow shoreline areas where possible, upon permit issuance, in order to reduce intrusion of facilities into the reservoir or within congested cove areas.

**GOAL: PROMOTE SHORELINE DEVELOPMENT WITHIN LIMITS WHICH ENSURE THAT RECREATIONAL QUALITY OF THE RESERVOIR IS MAINTAINED**

**Policies:**

Ensure that all facilities conform to established guidelines.

**Implementation Measures:**

Limit the number of boat docks and other facilities by implementing spacing standards of the Tulloch Reservoir design guidelines, using California Boating specifications and other resources. Permit one dock per existing parcel within the pre-developed subdivisions of Poker Flat, Connor Estates, Peninsula Estates, Copper Cove and those within Tuolumne County, provided that adequate separation between existing lot lines can be achieved.

Permit new docks in accordance with the density limits established by the land use designations of the Counties. Allow one new dock per existing parcel, as it currently exists. Additional docks for new subdivisions shall be reviewed in conjunction with the County's subdivision approval process and Calaveras Tulloch Lakeshore Development policies, however, new docks shall be only be authorized when it can be demonstrated that the additional docks will not interfere with existing navigable recreational water space or adjacent parcels and conform to applicable criteria of the Shoreline Management Plan.

Require that all shoreline structures be located on land owned in fee title by the property owner on whose land the facilities are to be located. Continue to use the adopted

policies pertaining to the consideration of temporary use agreements for facilities located on District lands.

Encourage the counties to adopt enforcement guidelines for violations of permit or other regulatory requirements.

**GOAL: PROMOTE BOATING AND PERSONAL WATERCRAFT SAFETY**

**Policies:**

Work cooperatively with the Sheriff's Department to ensure that boating regulations are enforced. Develop instructional programs to better educate reservoir users.

**Implementation Measures:**

Continue to enforce speed limitations, as required by applicable laws.

Continue to maintain the buoy and signage program in order to denote restricted speed areas.

Inform boaters and other reservoir users of the rules and regulations at Tulloch through the distribution of handouts at Homeowners Associations, Marinas and other private and public launching facilities.

Encourage the Sheriff's Department to strictly enforce California Boating Regulations and local regulations and to cite persons who violate boating and safety regulations.

**GOAL: ENHANCE THE QUALITY OF RECREATIONAL OPPORTUNITIES AT TULLOCH RESERVOIR**

**Policies:**

Encourage the implementation of policies which ensure that high levels of satisfaction upon Tulloch Reservoirs water recreations users are maintained, including pleasure boaters, water skiers and wake boarders, swimmers, anglers and personal watercraft users.

**Implementation Measures:**

Continue to conduct periodic surveys of water recreation users and residents to determine levels of satisfaction with the quality of recreational experience, including access to facilities, crowding and overall quality of reservoir management.

Require that all new and replacement development conform to applicable guidelines in order to maintain the maximum navigable water area possible to ensure that overcrowding does not occur.

Implement additional regulations, as necessary, to minimize congestion including access limits, use restrictions and/or other mechanisms so that a high level of satisfaction is achieved.

Encourage the Counties to develop and maintain facilities, which will provide public access to the reservoir.

Implement user fees or similar programs, if necessary, to provide additional funding for law enforcement, water safety, graffiti and nuisance abatement, facility development and recreational facility management.

Consider the adoption of additional regulations, if necessary, including but not necessarily limited to the establishment of designated areas within the reservoir for skiing, wakeboarding fishing and personal watercraft usage.

**GOAL:        ENHANCE THE COORDINATION AND MANAGEMENT OF ACTIVITIES AT TULLOCH RESERVOIR TO ENSURE THAT ENVIRONMENTAL RESOURCE GOALS INCLUDING WATER QUALITY ARE MAINTAINED AT VERY HIGH LEVELS.**

**Policies:**

Encourage continued implementation of regulations designed to ensure that high water quality levels are maintained.

**Implementation Measures:**

Develop a handout to be given to recreational users designed to promote environmentally sensitive boating practices.

Continue to enforce applicable County regulations regarding appropriate sanitation policies within the reservoir area.

Encourage the Counties to prohibit boat camping along the shoreline, except within approved campground areas. Adopt regulations, which prohibit the usage of houseboats on Tulloch Reservoir.

Prepare an informational handout describing measures that lakefront property owners can utilize in order to minimize the introduction of domestic pollutants entering Tulloch Reservoir.

Encourage the Counties to implement regulations designed to minimize impacts from new construction, including grading plan requirements designed to prevent increased sedimentation into the water surface area.

Encourage the continued efforts of local citizens groups in organizing and conducting Tulloch Reservoir Clean-up Days.

**GOAL: MINIMIZE SHORELINE EROSION AND INCREASED SEDIMENTATION WITHIN TULLOCH RESERVOIR**

**Policies:**

Encourage the development of regulations designed to control erosion and eliminate increased sedimentation.

**Implementation Measures:**

Use the permitting program implementing the Shoreline Management Plan to encourage the proper placement and construction of erosion protection devices.

Adopt specific guidelines for erosion control measures on all shoreline construction projects, to be required by the County during all lakefront construction projects.

Use the permitting program established in the Shoreline Management Plan to authorize and encourage permit requests for excavation of soil materials along shoreline and cove areas, where possible.

Prepare an informational handout informing shoreline property owners of measures designed to prevent increased sediment and other materials from entering the reservoir, including measured designed to prevent the proliferation of weed species throughout the reservoir area.

## **Environmental and Cultural Resources**

### **Wildlife Resources:**

#### **Management Measures for Special Status Species:**

Twenty-nine (29) Special Status Animal Species were found on the project site in 2006 by the team of project biologists or were identified in earlier years by the Natural Diversity Database, Division of the State Department of Fish and Game as reported within the project area. An updated GIS map showing the location of special status animals identified at Tulloch Reservoir or near Tulloch Reservoir has been prepared for Lake Tulloch and is available to resource agencies, but not for the general public.

The proposed management and monitoring measures below are designed to establish standards to avoid impacts to the special status animals and, therefore, avoid the need for "take" permits required pursuant to the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) for disturbances to the special status animals and

their habitats. These measures will assist in designing project specific mitigation to avoid incidental "take" and establish thresholds that require consultation with the USFWS and State DFG as required by ESA and CESA.

The following measures will be implemented by Tri-Dam at the time of an application for a project subject to Tri-Dam approval. Mitigation measures are subject to review and approval by the USFWS and State DFG and any project that cannot comply with these impact avoidance measures may need to secure an incidental "take" permit from USFWS and State DFG, pursuant to ESA and CESA.

1. Tri-Dam will supply applicants that have Special Status Species on their parcels with a copy of Management Measures for those species known on the project site at the time of project application. (See #4 through #11 below)
2. Tri-Dam will require implementation of these protective measures as part of their permitting process on properties with Special Status Species. To accomplish this, Tri-Dam will supply contractors and workers conducting work permitted by Tri-Dam within 50 feet of any Special Status Species habitat on a project site with a copy of Management Measures. Workers will be provided education on the sensitivity of the Special Status Species habitat prior to the commencement of any permitted work within 50 feet of the Special Status Species habitat.
3. Tri-Dam will encourage the retention of all Special Status Species located within their jurisdiction. If they cannot be retained, Tri-Dam will require that the project proponent consult with the U.S. Fish and Wildlife Service (USFWS) (at the USFWS Sacramento Endangered Species Division, 2800 Cottage Way, Suite W-2605, Sacramento, CA 95825, phone (916) 414-6678) and consult with the State Department of Fish and Game (DFG) (at the Region 2 office of the State Department of Fish and Game, 1701 Nimbus Road, Rancho Cordova, 95670, phone (916) 358-2382) for USFWS and DFG approval prior to issuance of any Tri-Dam permit.
4. Avoid removing native tree and shrub vegetation within fifty (50) feet of the known Special Status Species habitat. However, non-native trees and weeds such as non-native thistles and non-native grasses may be trimmed, mowed or limbed up by mechanical means for wild-land fire safety when located within 100 feet of a structure, providing that the following measures are followed:
  - a. No limning or trimming of trees or shrubs shall occur within twenty (20) feet of the Special Status Species without approval by the State Department of Fish and Game and/or U.S. Fish and Wildlife Service;
  - b. The limning or trimming of trees and shrubs shall not occur during the reproductive nursery period, nesting season, or denning season of the special status species (identified in Table above);
  - c. No mowing of grasses and weeds shall occur within twenty (20) feet of the mapped Special Status Species Habitat without approval by the State Department of Fish and Game and/or U.S. Fish and Wildlife Service. Mowing may occur outside the reproductive period of the Special Status Species (as identified in

Table) to reduce fire hazards. Mowing must be done in a manner to avoid damaging the habitat of the Special Status Species;

- d. Workers shall be provided education on the sensitivity of the Special Status Species; and
5. If native tree and shrub vegetation must be removed within 50 feet of Special Status Species, other than as provided in Management Measures above, the project proponent shall consult with the U.S. Fish and Wildlife Service (USFWS) and the State Department of Fish and Game (DFG), and secure USFWS and DFG approval prior to the commencement of any permitted work within 50 feet of Special Status Species Habitat.
6. The project proponent with a mapped Special Status Species habitat on the subject parcel shall flag that species habitat, incorporating a staked perimeter marked in bright flagging or a temporary fenced setback of no less than twenty (20) feet from the Special Status Species habitat targeted for retention prior, during and throughout construction.
7. Prior to the commencement of any permitted work within 50 feet of a Special Status Species habitat, the temporary fence or perimeter stakes around mapped Special Status Species habitat shall be signed every 50 feet as follows for the duration of the construction project: "*This Area is Habitat for a Special Status Species and Must Not Be Disturbed; This Species is Protected by State and Federal Law; Violators may be Subject to Prosecution, Fines, and Imprisonment*". The sign shall be readable from a distance of 20 feet.
8. Pesticides, herbicides or other chemical agents that might harm the Special Status Species shall not be sprayed or enter within 100 feet of Special Status Species habitat.
9. Construction vehicles, construction materials, trash and rubbish shall not be placed or stored within 50 feet of mapped Special Status Species habitat without consultation with and approval of the U.S. Fish and Wildlife Service (USFWS) and State Department of Fish and Game (DFG).
10. Tri-Dam will not issue authorization for work that occurs within 50 feet of Special Status Species habitat until the consultation with the U.S. Fish and Wildlife Service (USFWS) and State Department of Fish and Game (DFG) is complete and the proposed action is approved by the USFWS and DFG.
11. Livestock grazing for fire suppression and suppression control of invasive non-native plants within 50 feet of Special Status Species habitat shall be limited to fall, winter and the early spring months (October through mid-February). The build up of dry, fire prone thatch shall be discouraged within 50 feet around mapped Special Status Species habitat.

**A Special Western Pond Turtle Plan was prepared and includes the following measures:**

To preserve and improve the existing habitat for the Western Pond Turtle at Tulloch Reservoir, Tri-Dam will initiate the following actions in areas identified as preferred habitat based on observations of turtle at the lake.

1. Over a period of three years from approval of this plan, Tri-Dam will place ten (10) new fallen log basking structure habitats in concentrated turtle management areas, especially within any non-motorized sections of Tulloch Reservoir. At least three fallen log basking structures will be created during the first year following approval of this plan. Created habitats will be developed with fallen trees secured by anchoring logs to the banks by cables for submerged habitats, such that the tree extends from above the summer high water mark (510-foot elevation) to below the winter low water mark (498-foot elevation), which permits turtle use during the range in reservoir elevation.
2. Existing fallen logs will be secured by Tri-Dam in areas of known turtle habitations so as to maintain existing habitat. Tri-Dam will replace the existing habitats with new fallen logs, if the existing logs are no longer functional as a basking habitat.
3. Underwater protective habitat will be created and maintained by Tri-Dam by placing brush (manzanita /other trees) in clumps and anchored near shore as a refuge for the turtle at the new fallen log locations.
4. Through Tri-Dams permitting authority, or in coordination with State or Federal land managers, preserve upland areas associated with existing or new turtle populations by preserving large trees and snags along the shoreline for recruitment purposes, controlling livestock grazing during nesting and incubation season (April-July), preserving travel corridors along natural drainages linking lake side aquatic and upland habitats.
5. Through Tri-Dam's permitting authority, Tri-Dam will encourage the use of Best Management Practices (BMP's) to maintain water quality throughout Tulloch Reservoir related to turf and landscape, erosion control, pesticide use, and construction activities.
6. As part of the revised reservoir management plan Tri-Dam will work with the other jurisdictional agencies to encourage establishment of non-motorized boating areas north of the Louck's Creek confluence with the Black Creek Arm, south from the K-Arrow Ranch Recreational docks on the Greenhorn Springs Arm, and upstream of Peoria Creek on the main stem to New Melones Dam in order to protect Western Pond Turtle and other special status species foraging areas.

7. Tri-Dam will recommend to agencies managing upland habitat at Tulloch Reservoir with open savanna, prairie, or pasture areas that these agencies maintain these areas as open with grasses and herbaceous vegetation. Tri-Dam will also recommend that the managing agencies provide open pond turtle travel corridors along natural drainages linking lakeside aquatic and upland habitats and protect these drainages from disturbance. These natural drainage corridors would allow female turtles adequate area to move between the aquatic and nesting sites, and allow unimpeded movement for hatchlings from the nest to the aquatic site. Tri-Dam will further recommend that the managing agencies exclude livestock grazing during pond turtle nesting and incubation season (April-July), in grassland areas around Lake Tulloch to provide protection of nesting and rearing areas for pond turtles.

**Article 407 included five specific requirements. These requirements are:**

- (1) Measures to protect bat roosting habitat;
- (2) Provisions for periodically training project staff so that minimal bat disturbance will occur during project-related operation and maintenance;
- (3) Provisions for coordinating with appropriate state and county agencies to establish wildlife protection areas where motorized boating is prohibited, and publicizing any such exclusion zones;
- (4) The specific locations where two osprey nesting platforms will be installed within the project boundary, or if a suitable location cannot be identified within the project boundary, adjacent to the project boundary; and
- (5) A schedule for implementation of training, management, and habitat enhancement measures specified in this plan.

The following sections describe the management measures to be implemented to comply with each of the requirements described by Article 407.

**1. Measures to Protect Bat Roosting Habitat**

Surveys of Project features (Tulloch Dam, Tulloch Powerhouse and Tulloch Houses) identified the following bat roosting locations:

<b>Capture Records for Bats at Tulloch Dam Project Site in 2006.</b>									
Note: Latitude and longitude values were obtained using NAD27 CONUS									
<b>Date</b>	<b>Site</b>	<b>Latitude</b>	<b>Anpa</b>	<b>Laci</b>	<b>Myca</b>	<b>Myyu</b>	<b>Pihe</b>	<b># of bats</b>	<b># of spp.</b>
		<b>Longitude</b>							
25-May-06	Fire Hydrant Shed @ Powerhouse	37.87661 120.60444			1			1	1

25-May-06	Interior Tunnels of Tulloch Dam	37.87674 120.60433				2		2	1
11-July-06	Dam Entrance @ Powerhouse	37.87674 120.60433				3		3	1
11-July-06	Tarmac near Powerhouse	37.87594 120.60504				3		3	1
11-July-06	Reservoir edge, NE of Dam	37.87847 120.60454				6	1	7	2
11-July-06	Oak Woodland, NE of Dam	37.87834 120.80521	1	1		1		3	3
02-Aug-06	North Gate, Tulloch Dam	37.87714 120.60478				2		2	1
02-Aug-06	South Gate, Tulloch Dam	37.87547 120.60378				10	1	11	2
<b>TOTALS</b>			<b>1</b>	<b>1</b>	<b>1</b>	<b>39</b>	<b>2</b>	<b>44</b>	<b>5</b>

SCIENTIFIC NAME	COMMON NAME	ACRONYM
<i>Antrozous pallidus</i>	Pallid bat	Anpa
<i>Lasiurus cinereus</i>	Hoary bat	Laci
<i>Myotis californicus</i>	California myotis	Myca
<i>Myotis yumanensis</i>	Yuma myotis	Myyu
<i>Pipistrellus hesperus</i>	Western pipistrelle	Pihe

A survey of the powerhouse concluded there were no areas suitable for roosting by bats. There was no effort to capture or identify bats since there were neither suitable sites nor indication of habitation.

### **Proposed Management Measures, Bats**

The following Management Measures specific to bats are to be implemented by Tri-Dam to protect the existing habitation and encourage improved conditions;

- a) Maintain gates on the dam passageways to be “bat friendly.” This means having a grid pattern large enough for bats to fly through (at least 12 inches long x 5.5 inches between bars).

- b) Install 2 “bat houses” in the vicinity of the existing houses on the south side of Tulloch Dam.
- c) Implement a policy of preserving oak savannah and oak woodland within the project boundary. Removal of living or dead oak tress will be prohibited except when it is necessary to remove hazards, provide necessary clearances around buildings and electric equipment, or for public safety.
- d) Encourage restoring cottonwood habitat wherever feasible in the project area, particularly along the Green Spring and Black Creek stream corridors. Cottonwoods are known to be very important habitat for the foliage roosting of the western red bat and hoary bat.
- e) Tri-Dam will conduct a survey for potential bat roosting habitat prior to conducting any fuel reduction efforts in chaparral and oak dominated rocky habitats within Project boundaries. Potential roosting sites will be flagged and a buffer zone of 50 feet around each site will be preserved.

**2. Provisions for Periodically Training Project Staff so that Minimal Bat Disturbance Will Occur During Project-Related Operation and Maintenance**

- a) Tri-Dam will set up a field review of existing bat roosts and related project activities with a qualified biologist during the spring of 2008 for the purpose of training staff as to the impact of project operations on bat habitat and activities. The training will reoccur when there is a turn over in project staff or at 3-5 year intervals dependent on the bat activity and any changes to Tri-Dam operations.
- b) Prior to the initiation of any new project activities Tri-Dam will consult with a qualified biologist the potential impact on bat roosts and appropriate mitigation to reduce or eliminate any negative impacts.

**3. Provisions for coordinating with appropriate state and county agencies to establish wildlife protection areas where motorized boating is prohibited, and publicizing any such exclusion zones;**

During the preparation of the License application and the proceedings through the issuance of the License two sites were identified that provide unique habitat conditions that should be considered for addition protection as wildlife habitat. Those two sites are the upper reaches of the Black Creek and Green Springs arms. An additional site was proposed by project-engaged biologist during the review and preparation of these plans, the upper reaches of the main stem from New Melones down to the intersection with Peoria Creek (approximately 2 miles). This area is heavily used by fishermen, kayakers and sightseers

Tri-Dam is currently working on a revised ordinance to be jointly adopted by Calaveras And Tuolumne Counties regarding regulating use at Tulloch reservoir include speed limits, use limitations, and permitting that will provide uniform regulations. Currently each County has their own ordinance and they are not consistent and in some cases conflict between the two.

This effort will also facilitate the development of additional regulations at Tulloch such as the restricted use of specific areas for wildlife or other similar user restrictions. Calaveras County is actively involved with the preparation of the “Copperopolis Community Plan” that includes lands adjoining Tulloch Reservoir and will when completed by part of the Calaveras County General Plan.

Tuolumne County has already completed their planning designations for the lands in Tuolumne County that adjoin Tulloch and have much lower density designations (5- 20 Acres) and therefore less impact on the resources surrounding Tulloch.

Designation of Wildlife habitat areas;

The Black Creek arm is currently undeveloped and the surrounding lands are in 20-acre parcels. There is however increasing pressure for more development in these areas and is being addressed in the above references discussion about the Copper Community Plan. The upper Black Creek arm represents a diverse range of wildlife and vegetative resources that warrant efforts to preserve. Presently there is a 5-mile per hour speed limitation that receives periodic enforcement. To create a non-motorized area the County of Calaveras would need to adopt the ordinance currently being considered or amend an existing ordinance to include the restriction for purposes of enforcement by County Sheriff patrols. Prior to enforcement signage of the new restriction would be installed by Tri-Dam.



**Black Creek Wildlife Area**

The Green Springs arm is also undeveloped and in the holding of a large ranch. At the entrance to the upper Green Springs segment there is currently a youth camp water play area and the cove is used by fishermen, casual boaters and sightseers. Upstream from this cove there is more limited use primarily by fishing and kayaks. There is currently a 5 mph speed limitation that is enforced by sheriff patrols. Similar to Black Creek a new or revised ordinance would be necessary to create a non-motorized boating area by Tuolumne County.



## Green Springs Wildlife Area

The upper mainstream has not yet had any public discussion as it was recently raised by a team of biologist that was engaged to prepare plans in response to this License. This site is primarily controlled by Federal agencies and is unlikely to see any development pressure. The impacts to the wildlife are primarily boat in users and occasionally hikers. The typical users are fishermen, kayakers and sightseers. The area is within a 5 mph area that starts at the O'Brien's Ferry Bridge and extends up to the headwaters at Melones Dam. This alternative will be further presented through the amendment process of the Shoreline Management Plan and the respective plans of local and Federal agencies. If selected this area would require a new ordinance or the approval by both Counties of revised ordinances.



## Upper Mainstream Wildlife Area

### **4. The specific locations where two osprey nesting platforms will be installed within the project boundary, or if a suitable location cannot be identified within the project boundary, adjacent to the project boundary**

The following three sites are suggested by priority.

- a.) An excellent nest site exists for a nest platform at the top of the hill on the 40 acre parcel of BLM land located in the Black Creek Arm, north of the portion of the area Tri-Dam has indicated has potential for a day use picnic facility, see photograph below. A platform as shown in the attached schematic is appropriate for this site.
- b.) A second site for an Osprey nest platform exists on Bureau of Reclamation lands, west of New Melones Dam. The kind of platform described in the schematic below is appropriate for construction at this site, too. This platform might also incorporate a bat-friendly roost facility beneath it.
- c.) A third potential Osprey nesting site was identified just southwest of Tulloch Dam, in a partially alive Grey Pine tree that recently became a snag. The ragged, broken top of this snag could be sawed off just above the top live branch, so the surface is flat. Then the snag could be equipped with a platform just above the branch. The Ospreys would use the live branch as an area for the young to practice flying skills close to the nest. This snag would provide nesting Ospreys with a good view of the Tulloch Afterbay.

**5. A schedule for implementation of training, management, and habitat enhancement measures specified in this plan.**

- 1) Bat Habitat
  - a) Install Bat Houses by Tri-Dam spring 2007
  - b) Integrate recommended measures into permitting – Upon FERC approval of plan.
  
- 2) Staff Training
  - a) In Field Training of Tri-Dam Staff
  
- 3) Coordination with Local, State and Federal Agencies

Coordination is currently on going through the following activities:

  - a) Joint development of ordinances with the Counties
  - b) Review and comment on Copperopolis Community Plan
  - c) Comments on local land use applications
  - d) Review and comment on Federal resources plans related to Tulloch
  - e) Working with BLM for use of 20 acre parcel on Black Creek
  - f) Coordination of operations with Bureau of Reclamation

**Vegetation**

An inventory of the vegetative habitats was completed from May through August of 2006, by biological consultants. The vegetative habitat inventory was conducted utilizing boats to survey the shoreline, utilizing the existing aerial photography from the U.S.G.S., Tri-Dam’s FERC Application, the State’s CDF oak inventory maps, and information from the Natural Diversity Database of State Fish and Game. An updated hard copy Geographic Information System (GIS) map has been prepared for the vegetative habitats at Lake Tulloch and is attached to this report. (See Vegetation Map of Tulloch Reservoir Attachment C)

The following is a list of the vegetative habitats that were identified at Tulloch Reservoir, with the corresponding California Department of Fish and Game Natural Diversity Database numbering system, and the approximate percentage of the Tulloch shoreline occupied by each vegetative habitat type:

<u>HABITAT</u>	<u>NDDB#</u>	<u>% SHORE</u>
Chamise Chaparral -	37.100.00	3.7*
Non-native Grassland -	42.000.00	1.3
Black Oak Forests and Woodland-	71.120.00	0.3
Blue Oak / Grass-	71.140.00	
Woodland	71.020.05	11.5*
Savanna		9.7*
Blue Oak / Interior Live Oak / Grass	71.020.06	4.9*
Interior Live Oak / Blue Oak / FP	71.080.01	2.4
Interior Live Oak / Foothill Pine	71.150.00	9.1
Mixed Oak / Foothill Pine / Grass	71.100.07	11.0
Foothill Pine / Chamise	71.000.00	4.5*

Foothill Pine / Grass / Shrub Oak	71.000.00	3.5*
Rock Outcrop / Grass / Buckeye	(n/a)	4.0*
Urban / Disturbed	(n/a)	
Industrial		8.3
Residential/Recreation		23.3
Riparian		
Willow	61.320.00	<1.0*
Cottonwood	61.410.00	1.5*
Rush/Sedge	52.000.00	2.0*

- Indicates combination of riparian with other habitat types

### Management Measures

Tri-Dam will continue to work with Federal land managers to maintain existing habitats, particularly in the main stem upper reaches towards New Melones Dam. The Bureau of Reclamation is currently updating its "Resource Management Plan" that will encourage open space, vegetation and wildlife protection near Tulloch reservoir. Similarly, the Bureau of Land Management has been developing its "Sierra Draft Resource Management Plan and Draft Environmental Impact Statement" that also preserves and protects lands adjoining Tulloch.

On Tri-Dam controlled lands in the upper main stem continue managing to assure exiting habitats are maintained. These lands interface with Federal and Private lands. Monitor land use issues in the adjoining Counties and providing comments/ recommendations during any proceedings to minimize adverse impacts on those lands as well as direct impacts to Tri-Dam lands.

Prior to initiating any construction activity or issuing a permit for projects such as docks, retaining walls or other activities Tri-Dam will investigate the site and evaluate the potential impacts using the following guidelines;

**Non-urban areas;** building setbacks of 100 feet on both sides of perennial streams and 75 feet on both sides of intermittent streams, and prohibit vegetation clearing within 100 feet of perennial streams and within 75 feet of intermittent streams, except to improve wildlife habitat. **Urban areas:** building setbacks of 50 feet on both sides of perennial streams and 50 feet on both sides of intermittent streams.

Minimize the number of road crossings of streams, and design crossings to be perpendicular to streams, to minimize impacts on riparian habitat. Stream crossing culverts shall be designed to handle 100-year storm water events. Prohibit off-road vehicles and heavy construction equipment within the setbacks of streambeds unless there is a demonstrated need and no feasible alternative.

For projects such as bridges, pilings, seawalls, docks and channel alterations, Tri-Dam staff shall cooperate with the Department of Fish and Game to obtain

adequate fish and wildlife protection through individual Streambed Alteration Agreements.

Require suitable erosion control measures and Best Management Practices (BMPs) to be implemented on-site before, during and after development activities on the shoreline or stream banks to avoid increasing sedimentation of aquatic habitats.

In wet meadows, including seasonally wet meadows with wetland plant species, associated stands of willows (including shrubby growths), and all cottonwood groves; Prohibit new structures, new or improved roads and vegetation clearing unless there is a demonstrated need and no feasible alternative.

Discourage removal of native oaks with greater than 5 inches diameter (measured at a height of 4.5 feet above the ground level), except where required for public safety, and minimize removal of smaller oaks, including seedlings.

### **Noxious Weeds (License Article 405 conditions 1, 2, 5, 6, & 7)**

A separate Noxious Weed Plan has been prepared and will be implemented by Tri-Dam for the control and reduction of noxious weeds on Tri-Dam lands and through a coordinated effort on other lands within the Project Boundary. These efforts include:

- a) A noxious weed pamphlet to assist Tri-Dam staff and others, coupled with on site training of Tri-Dam staff (condition 1) to identify and control noxious weeds
- b) A GIS map and the noxious weed pamphlet will be provided to Federal, State and County land managers to assist with control of noxious weeds (condition 2). (See Noxious Weeds Map Attachment D)
- c) Implementing the noxious weed program will control weeds on and adjacent to Project lands (condition 5).
- d) Providing copies of the Noxious weed pamphlet on a regular basis (annually) to homeowners associations, individual land owners with noxious weed populations and visitors will involve others in controlling Noxious weeds (conditions 6 & 7)

### **Special Status Plant Species- Elderberry Bush (Condition 11)**

Tri-Dam will supply project proponents and land owners that have mapped or known Elderberries on their parcels with a copy of the *Valley Elderberry Longhorn Beetle Protection Plan* at the time of a project application. (See map of VELB Habitat Attachment E)

Tri-Dam will encourage the retention of all Elderberry shrubs located in the project area, which is below 3000 foot in elevation, and with stems possessing a diameter of one inch

or greater at ground level. Smaller shrubs shall be retained if there is evidence of beetle emergence holes. If Elderberry shrubs cannot be retained, Tri-Dam will require that the project proponent consult with the U.S. Fish and Wildlife Service (USFWS) for USFWS approval prior to issuance of any Tri-Dam permit.

**Note: Consultations for potential impacts to the Valley Elderberry Longhorn Beetle habitat will be at the USFWS Sacramento Endangered Species Division, 2800 Cottage Way, Suite W-2605, Sacramento, CA 95825, phone (916) 414-6678.**

## **Fire Fuels and Management (condition 9)**

Fire suppression in the Tulloch Reservoir area is by California Division of Forestry, Copperopolis Fire Department and Tuolumne County Fire any outbreak of fire that is not easily contained by Project personnel will be reported via a 911 emergency system phone call.

State law, pursuant to PRC 4291 (Public Resources Code) requires the land owner (Tri-Dam) to create 100 feet of defensible space around Tri-Dam owned properties with structures or buildings.

As a condition of the permitting process on lands within Tri-Dam's jurisdiction, Tri-Dam will require implementation of PRC 4291. To assist applicants Tri-Dam will make available to project proponents the information outlined in the May 2006 brochure titled "*WHY 100 FEET?*" which was developed by California Division of Forestry (CDF).

Tri-Dam will complete yearly fuels modification work on the following fuel breaks. Tri-Dam will maintain fuels treatments for their developed sites at Tulloch Dam and at the new BLM boat-in facility within 30 days of CDF's annual declaration of fire season or by June 15 of each year, whichever is sooner.

- a) The fuels modification work for the BLM boat-in picnic area shall consist of a 10-foot wide mineral soil fuel break around the perimeter of the boat-in picnic area and mowing or weed-wacking of grass fuel types to a height of 4 inches within the perimeter fuel break. In addition, spacing of shrubs will be no closer than 2x the height of the shrub from the next shrub on flat to mild slopes and will be no closer than 4x the height of the shrub from the next shrub on mild to moderate slopes. If fire rings or barbecues are allowed, a minimum of 10 feet of mineral soil clearance is required around the fire pit or barbecue. No trees will need to be removed for fuels reduction in this area. However, any trees within the fuel break should be limbed up within 8 feet above the ground level. This work shall be maintained annually.

- b) The fuels modification work for the Tulloch Dam shall include a developed fuel break at the west boundary and along the existing unsurfaced road from the corral area off of the powerhouse road to the gauging station on Goodwin Reservoir (with approval of land owner). The grass type fuels shall be removed to mineral soil, 10 feet on each side of the road centerline. Additional mowing of grass and clearing of shrubs for 12 feet should be done inside of the boundary fence going up to the radio/microwave tower. Shrubs should be thinned to be spaced no more than 4 times (4x) the height of shrub apart. This fire fuel break should be completed prior to beginning construction of the new powerhouse. The fuel break along the west fence line will be treated to a 12-foot width by mowing grass to a 4 inch height and clearing shrubs to no closer than 4x the height of the shrub from the next shrub in spacing.
- c) The fuel break from the dam access gate to Goodwin Reservoir will be construction in a similar fashion and trees should be cleared to be no closer than 20 feet apart in spacing in this area, excepting the areas within 20 feet of elderberry shrubs. This work shall be maintained annually. This fuel break will require clearing of trees to a 20 foot spacing in addition to mowing of grass and clearing of shrubs to be spaced no more than (4x) the height of shrub apart in spacing. In addition, PRC 4291 requirements will further reduce the threat of project induced or off-site fire.

Tri-Dam proposed construction of a low level power generator facility just south of the powerhouse at the base of the Tulloch Dam will require normal fire inspection, permits and precautions as may be prescribed by CDF.

## Sudden Oak Death

A concern was raised in the Final Environmental Impact Statement over the potential for the alien plant pathogen, *Phytophthora ramorum*, a fungus that has caused the Sudden Oak Death disease in native trees and shrubs in coastal counties in California (see item 8 of FERC conditions). Only one case of this pathogen has been found in the Central Sierra in the past five years. That occurrence was at a nursery in Oakdale, approximately 20 miles from Tulloch Reservoir. The hot dry summers in the Central Sierra foothills is thought to discourage the development of this pathogenic fungus in the natural plant communities found at the project site. It is not likely that this pathogen will become a major issue at the Tulloch Project site. However, the public should be informed to avoid buying nursery stock that appears unhealthy and should discard any unhealthy nursery stock in the trash and not mulch these plants on the project site. No other control measures are recommended at this time in the Central Sierra foothills.

## Cultural Resources

### Prehistoric Sites

Of the eight prehistoric cultural resources documented as a result of this Project Licensing and previous studies that included sections of the Tulloch APE, all are considered to be eligible or potentially eligible for inclusion in the NRHP under criterion d for their potential to provide important scientific information. Without doubt, CA-CAL-1878, with housepits, midden, and bedrock mortar stations, is a village site that contains a significant cultural deposit that could address important scientific questions. The site is considered eligible for the NRHP.

CA-TUO-1416 contains bedrock mortars with cobble pestles present at the site. CA-TUO-4458 is also a site consisting of a bedrock mortar station. There could be a subsurface culture deposit surrounding the mortar stations, and the deposits at the sites could address important research question. This site is considered potentially eligible for the NRHP.

Similarly, CA-CAL-1880 and CA-CAL-1886 contain bedrock with mortar stations, with surface evidence of a lithic scatter present at each locus. As a result, it is believed that both of these sites may contain subsurface deposits that could provide important information about prehistoric activities in the region, and are potentially eligible under Criterion D.

### Historic Sites

The recorded historic period sites include ditches, a road grade and bridge, a small dam, structure pads, prospect pits, fences, and two remnant historic occupation sites: CA-CAL-1884H and CA-CAL-1887H. An extensive water conveyance ditch, designated as site CA-CAL-409H (including a newly recorded segment), and CA-TUO-428H and CA-TUO-429H, both of which include prospect pits, multiple dry-laid rock walls and trenches, may be related to corporate mining activities dating to the late nineteenth and early twentieth centuries. All three of these sites have been recommended as potentially contributing elements of historic districts (Moratto 1976).

Two of the historic sites, CA-CAL-1884H and CA-CAL-1887H, are early historic occupation sites and probably related to mining activities. Both sites are potentially eligible for the NRHP under criterion d as they may contain subsurface deposits that could be important in history.

The greatest number (19) of resources in the APE are prospect pits, representing attempts to locate mineral-bearing deposits. None can be dated, and all of these features are determined to be not eligible resources, as they have no further research value.

The cultural resource sites are more completely identified in the Historic Properties Management Plan, due to the sensitive nature of the plan it will not be incorporated into

the Shoreline plan. Tri-Dam project will consider the sites when reviewing an application for any activity within or immediately adjacent to the Project Boundaries. Maps of the sites will be provided to appropriate reviewing personnel and agencies.

# TULLOCH RESERVOIR

## SHORELINE DEVELOPMENT PERMITTING PROCESS

### **Tri-Dam Project**

TABLE OF CONTENTS

<b>1.0</b>	<b>BACKGROUND .....</b>	<b>1-1</b>
<b>2.0</b>	<b>DESCRIPTION OF THE TULLOCH PROJECT .....</b>	<b>2-1</b>
<b>3.0</b>	<b>PURPOSE OF RESERVOIR SHORELINE MANAGEMENT PLAN .....</b>	<b>3-1</b>
<b>4.0</b>	<b>GENERAL REQUIREMENTS .....</b>	<b>4-1</b>
4.1	General .....	4-1
4.2	Application Procedure.....	4-1
4.3	Construction .....	4-2
4.4	Inspection.....	4-2
4.5	General Notes .....	4-2
4.6	Violations and Enforcement .....	4-3
<b>5.0</b>	<b>COMMERCIAL FACILITIES PROGRAM.....</b>	<b>5-1</b>
5.1	General .....	5-1
5.2	Application Procedure.....	5-1
5.3	Criteria for Commercial Facilities.....	5-1
<b>6.0</b>	<b>PRIVATE FACILITIES PROGRAM.....</b>	<b>6-1</b>
6.1	General .....	6-1
6.2	Application Procedure.....	6-1
6.3	Criteria for Private Facilities .....	6-1
<b>7.0</b>	<b>EXCAVATION PROGRAM .....</b>	<b>7-1</b>
7.1	General .....	7-1
7.2	Application Procedure.....	7-1
7.3	Criteria for Excavation.....	7-1
<b>8.0</b>	<b>SHORELINE MANAGEMENT &amp; STABILIZATION PROGRAM .....</b>	<b>8-1</b>
8.1	General .....	8-1
8.2	Application Procedure.....	8-1
8.3	Criteria for Shoreline Stabilization and Erosion Protection Facilities.....	8-1
<b>9.0</b>	<b>BUOY AND SIGNAGE PROGRAM .....</b>	<b>9-1</b>
9.1	General .....	9-1
9.2	Application Procedure.....	9-1
9.3	Criteria for Buoy Installation.....	9-1
<b>10.0</b>	<b>RECREATION AND USE PLANNING PROGRAM .....</b>	<b>10-1</b>
10.1	General .....	10-1

## GLOSSARY OF TERMS

<b>Term</b>	<b>Definition</b>
Application	Tri-Dam Project form upon which an applicant describes and officially requests permission of a given use or facility within the FERC Project Boundary.
Boathouse/ Covered Boatslip	A floating, roofed structure with open sides and designed for permanent or temporary watercraft storage.
Boatlift	A facility within or adjacent to a boatslip designed to lift a boat or watercraft above the normal high water level for temporary or permanent storage purposes.
Boatslip	An unroofed structure designed for temporary or permanent watercraft storage. A boatslip is normally 10feet wide by 20 feet long and is confined by at least three sides. One boatslip can accommodate only one watercraft at a time.
Buoy	A floating waterway marker.
Commercial/ Non-residential	A shoreline/reservoir use that involves the use of project lands and waters for facilities where boats can be launched, retrieved or moored and where provisions for food services or convenience retailing, including petroleum dispensing, wet and dry storage of watercraft and other activities normally associated with marinas, campgrounds and yacht clubs are made.
<b>Non-Commercial/ Residential</b>	A shoreline/reservoir use that involves the use of project lands and waters for facilities where boats can be launched, retrieved or moored for the purpose of providing access to the reservoir for certain residential property owners, particularly off-water lots and multi-family dwellings. Residential properties associated with this classification include townhouses, condominiums and subdivision access lots.
Dock	A facility located on the reservoir that is designed to accommodate the parking and/or in water storage of watercraft.
Earthfill	The placement of fill material (soil or rock) within the FERC Project Boundary.
Encroachment Permit	A permit, which provides authorization of <b>for</b> a particular use or facility within the FERC Project Boundary.
Excavation	Removal of soil or rock material from within the FERC Project Boundary.
Facility	Any structure, use, or combination of structures that are placed within the FERC Project Boundary. A structure includes, but is not limited to a boat ramp, dock, buoy or other mooring facility, basin, retaining wall, float, access ramp, stairs or piers.
Facility Expansion	The modification of an existing facility that results in an increase of its reservoir incursion, increased decking square footage, increased dock size, an increase in the number of boats it can accommodate, or increases or decreases in water storage quantities.
Facility Maintenance or Rebuild	The reconfiguring or repairing of existing facilities in a like for like fashion. Rebuilds are minor in nature and do not result in any significant modification or expansion of project facilities.
Fee	A dollar amount paid by the applicant to the Tri-Dam Project to help offset Tri-Dam Project's costs for processing of encroachment permits applications and other reservoir use permits.
FERC	Federal Energy Regulatory Commission, the federal agency that issues permits for hydroelectric projects to non-federal entities and <b>for</b> <b>from</b> whom Tri-Dam Project must obtain approval for any facilities within the FERC Project Boundary.
Float	A floating platform for use by swimmers or for docking watercraft.
Full Reservoir Elevation	The elevation, measured in feet above mean sea level, of the top of the reservoir's spillway or the top of the floodgates. This is normally referred to as the 510-foot elevation.
FERC Project Boundary	Also Project Boundary, generally include the reservoir and adjoining lands to the 515 foot contour elevation.
Individual Private Facility	A facility, which provides access to the reservoir for the owner or leaseholder of a single waterfront lot containing one single-family type dwelling. Individual private facilities may include, but are not limited to piers for structures, docks, boathouses, boatshelters, boatlifts, floats, boatslips, and boatramps.
Project	A project includes the placement, installation, construction, repair, maintenance or replacement of any Structure, any excavation or the placement of any fill, including Earthfill at Tulloch Reservoir at or below an elevation of 515'. The replacement, expansion or other alteration of any legally existing facilities in place at the time of adoption of the Shoreline Management Plan is also included in this definition.
Waterway Marker	Any device designed to be placed in, on, or near the water to convey an official message to a boat operator on matters that may affect health, safety or well-being.

## 1.0 BACKGROUND

The Oakdale Irrigation District (OID) and the South San Joaquin Irrigation District (SSJID), cooperatively operating as the Tri-Dam Project, are the owners and operators of the Tulloch Project (Project). OID and SSJID received an initial license for the Project (No. 2067) from the Federal Energy Regulatory Commission (FERC) effective on January 1, 1955, for a term ending December 31, 2004. A new License was issued on February 28, 2006 for a term of 40 years ending on Jan 1, 2046. The new License Standard Land Use and Occupancy Article 413 and this Shoreline Management Plan provides Tri-Dam Project with the authority to grant permission for use of lands within the FERC Project Boundary without prior approval of FERC for certain incursions into the project boundary. The FERC Project Boundary is generally defined as the area within the 515-foot elevation contour (five feet above the normal maximum pool elevation) that surrounds the reservoir.

Historically Tri-Dam Project operated under an initial Reservoir Management Plan with FERC on November 3, 1978, supplemented it on December 8, 1978, and January 9, 1979. Tri-Dam Project also filed with FERC on November 20, 1978, to permit the Heart Federal Savings and Loan Association to develop and sell lands within the Lake Tulloch Shores Subdivision Unit Nos. 1 and 2. The adopted regulations including Article 39 (Land Use Occupancy), which set forth specific development standards, which applied, to Lake Tulloch Shores. FERC approved the Reservoir Management Plan including the subdivision on February 2, 1979. Tri-Dam Project requested an additional amendment dealing with construction of erosion protection facilities on July 8, 1998, which FERC approved on October 13, 1998.

In anticipation of obtaining a new license for the Project, Tri-Dam Project, in cooperation with PG&E Company, conducted broad-focus public meetings with resource agencies, non-governmental organizations (NGOs), and other parties interested in relicensing of this Project as well as other projects in the Stanislaus River watershed. The first of the broad-focus public meetings took place in Stockton, California, on July 27, 1999, at which time the attendees of that meeting decided to refer to the participants ~~at~~ **as** the Stanislaus Planning Action Team (SPLAT). Under SPLAT, a number of subgroups were formed. One of these, the Tulloch Reservoir Shoreline Management Subgroup, was created to develop a new Tulloch Reservoir Shoreline Management Plan (Plan) that would become effective upon issuance of a new license to OID and SSJID for the Tulloch Project, or sooner. That Plan was filed with the FERC License application. The new License directed that Tri-Dam filed an updated plan as described below within 1 year, an extension was granted to December 1, 2007

Within one year of license issuance, the licensee shall revise the Tulloch Reservoir Shoreline Management Plan. The revised plan shall include, at a minimum: (1) an inventory of sensitive environmental resources within the project boundary (i.e., natural and cultural resources); (2) maps of sensitive shoreline zones that should be afforded extra protection without compromising confidential site locations; (3) strategies that the licensee will implement to protect such sensitive areas from inappropriate

encroachment; (4) provisions for future updates to the plan as new information becomes available; and (5) provisions for informing shoreline private landowners about the importance of protecting the zones identified as having sensitive environmental resources. The licensee shall coordinate the environmental information needed for future updates to this plan, specified in item (4), with the information gathered pursuant to Article 405, item (10) of the vegetation management plan.

The plan shall be developed in consultation with the California Department of Fish and Game, the U.S. Fish and Wildlife Service, Tuolumne County, Calaveras County, and representatives of homeowner's associations for land that abuts Tulloch reservoir. The licensee shall include with the revised shoreline management plan that it files with the Commission, documentation of consultation with the consulted entities, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. The licensee shall allow a minimum of 30 days for consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The revised plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the revised plan, including any changes required by the Commission. The shoreline management plan filed with the Tulloch license application shall remain in effect until the Commission approves the revised plan.”

## 2.0 DESCRIPTION OF THE TULLOCH PROJECT

The Tulloch Project is a water supply/power project constructed in the late 1950s and on-line in 1958. It is located mostly on private land in Tuolumne and Calaveras counties on the Stanislaus River. New Melones Reservoir, a part of the U.S. Bureau of Reclamation's Central Valley Project, discharges directly into Tulloch Reservoir. Downstream of Tulloch Reservoir is Goodwin Dam, a diversion dam by which OID, SSJID and Stock East Water District divert water to their respective districts. Tulloch Project includes: 1) Tulloch Dam and Reservoir; 2) Tulloch Penstock; 3) Tulloch Powerhouse; and 4) Tulloch Switchyard.

Tulloch Reservoir has a normal maximum water surface elevation of 510 feet, has a surface area of 1,260 acres at full pool, and has a gross storage capacity of 66,968 af. The reservoir is about 7.0 miles long, has a maximum width of about 2,000 feet, and a maximum depth of about 149 feet. In normal water years, the reservoir surface elevation fluctuates by about 10 feet over the course of the year and 1-3 feet on a daily basis. Water is normally released from Tulloch Reservoir through Tulloch Powerhouse located at the base of the dam and through a low level outlet structure, also at the base of the dam. Each generating unit has a full gate discharge capability of 900 cfs and the low level outlet has a maximum capability of 1,600 cfs. Water may also be regulated by the spillway gates, which control water elevation from the spillway (elevation 481) to the full reservoir.

The FERC requires that each licensee obtain control over all lands needed for operation and maintenance of the project and for other project purposes, such as flowage, shoreline control and protection of environmental resources. These lands are identified by the area within what is known as the "FERC Project Boundary." For the Tulloch Project, this is an area of about 1,619 acres, and includes all the land within the 515-foot elevation contour surrounding Tulloch Reservoir. Sixty-one percent of the land within the FERC Project Boundary is privately owned, twenty-six percent of the land is owned by OID and SSJID, and twelve percent of the land is owned by either the state or the federal government. OID and SSJID obtained flowage easements for all of the land within the FERC Project Boundary. These easements allow Tri-Dam Project to overflow, flood and cover said lands with the water created by the construction and operation of Tulloch Dam; enter upon the land to clear, destroy or dispose of any timber or other natural growth, and any obstruction, accumulations, trash, filth and any other thing which would in any way interfere with the use of said reservoir, or the waters therein, or tend to render unsafe or unsanitary either the reservoir created by said Dam or the margin thereof; and grant the right of ingress to and egress from said lands for the above purposes.

Tulloch Reservoir is subject to fluctuating water levels that occur on a daily and seasonal basis. Tulloch Reservoir is operated by the Tri-Dam Project as an afterbay for the New Melones Project. Reservoir levels are controlled by the United States Bureau of Reclamation and are subject to fluctuation within the limitations of an agreement required by FERC. All facilities installed within the reservoir and persons using the

reservoir should be aware of the daily and seasonal water fluctuations. The operating levels are issued by the Bureau of Reclamation and distributed each year to interested persons

### **3.0 PURPOSE OF RESERVOIR SHORELINE MANAGEMENT PLAN**

As discussed above, Tri-Dam Project operates the Tulloch Project, including Tulloch Reservoir, under a license issued by the FERC. This license specifically requires that 1) Tri-Dam Project obtain FERC approval of any actions that in any way would reduce the storage capacity of Tulloch Reservoir, and 2) Tri-Dam Project obtain FERC approval for the use of lands within the FERC Project Boundary. Tri-Dam Project appreciates that there is considerable public interest for development of the Tulloch Reservoir shoreline within the FERC Project Boundary, and that some of this development has relatively minor impacts on reservoir storage or Project operation. To facilitate these minor development activities within the FERC Project Boundary and avoid the need for obtaining FERC approval for each and every individual development activity, Tri-Dam Project plans to secure FERC approval for general approval of the minor development activities through the submittal of this plan

Tri-Dam received special authorization for the Shores of Poker Flat permitting a unique authorization to construct buildings extending beyond the 515 elevation and into the reservoir. This unique authorization will be preserved for Poker Flat. All other areas will be limited to shoreline protection and docks with related access facilities in keeping with efforts to preserve and protect the remaining shoreline of Tulloch Reservoir.

Tri-Dam Project may consider developments that are not covered under this plan, but developers should be aware that it would be necessary for Tri-Dam Project to approach FERC specifically for approval of that development.

This Plan describes the minor development activities for which Tri-Dam Project has requested FERC's prior approval, and describes how Tri-Dam Project would issue encroachment permits for each of these activities. This plan is intended to assist in the process by providing detailed criteria for the minor development activities and encroachment permit application procedures. The objectives of these guidelines are:

- To provide clear guidelines for shoreline development
- To meet regulatory requirements
- To protect Tri-Dam's power generation interests
- To protect and enhance the scenic, environmental, and public recreational value of the reservoir

Specifically, the minor development activities addressed in this plan include:

- Private Facilities Program
- Commercial Facilities Program
- Excavation Program

- Shoreline Management Program
- Recreational Program
- Miscellaneous Reservoir Uses Program

All proposed development activities are subject to the requirement of obtaining an encroachment permit from the Tri-Dam Project. All such activities may have an application filing fee, user fee, and security deposit to offset reasonable costs associated with the continued operation of a comprehensive management program and to ensure compliance with the program guidelines. Tri-Dam may amend or modify the fee program for all existing and future docks and encroachments to offset the cost of administering and managing the Shoreline Management Plan

IT IS IMPORTANT TO NOTE THAT PLANNING, CONSTRUCTING, OPERATING AND MAINTAINING THE MINOR DEVELOPMENTS COVERED UNDER THIS PLAN MAY REQUIRE OBTAINING LOCAL, STATE AND FEDERAL PERMITS AND APPROVALS IN ADDITION TO AN ENCROACHMENT PERMIT FROM TRI-DAM PROJECT. IT IS THE SOLE RESPONSIBILITY OF THE PARTY PROPOSING THE DEVELOPMENT TO IDENTIFY AND OBTAIN THESE PERMITS. CONSULTING WITH OR OBTAINING AN ENCROACHMENT PERMIT FROM TRI-DAM PROJECT IN NO WAY RELIEVES THE PARTY PROPOSING THE DEVELOPMENT FROM IDENTIFYING AND OBTAINING THESE OTHER PERMITS AND APPROVALS.

Tri-Dam Project recognizes that there are existing, legally installed facilities within the FERC Project Boundary at the time of adoption of these guidelines. This document applies to the replacement, expansion or other alteration of these legally existing facilities and to all future facilities.

## **4.0 GENERAL REQUIREMENTS**

### **4.1 General**

In addition to the requirement of obtaining an encroachment permit from the Tri-Dam Project, application may require additional review by other local, state and federal agencies. It is the sole responsibility of the party proposing the development to identify and obtain all necessary permits. All commercial facilities applications require prior authorization from FERC, subject to license requirements. In addition, the Tri-Dam Project may require the applicant to enter into a lease or use agreement, depending upon the scope and type of the project to ensure that construction and operation of the proposed facility will not interfere with project purposes.

## 4.2 Application Procedure

- 1) An individual initiates an application request by contacting the Tri-Dam Project via phone at (209) 532-3838 or (209) 785-3838, by mail or via the Internet (info@tridamproject.com).
- 2) All applications must include the following information (as a minimum) to start the review process:
  - a) Completed Tri-Dam Project Application Form
  - b) Basic description of the proposed facility (e.g.-20 slip marina)
  - c) Intended users (e.g.-subdivision lot owners, general public, etc)
  - d) Engineered site plan depicting the location of all facilities with elevations and property lines shown.
  - e) Location of project within the reservoir
  - f) A list of all permits and agency approvals identified by the applicant for the construction, operation and maintenance of this facility.
- 3) Tri-Dam reviews the application to determine that the proposed activity is consistent with the Reservoir Management Plan and FERC license requirements including the Shoreline Erosion Plan, Vegetation Management Plan, Wildlife Management Plan and Western Pond Turtle Plan. If the project is not consistent with the Reservoir Management and other Plans, the applicant will have to redesign the project or seek FERC's approval of an amendment to the Reservoir Management Plan. Any FERC approval done at this stage will be done at the applicant's expense. An on-site review will normally be conducted at this stage.
- 4) The applicant will be required to obtain the necessary permits and provide them to Tri-Dam. A list of the permits which may be required for a project include the following: Section 404 Permit-US Army Corps of Engineers, County Building Permit, Fish & Game Permit, Regional Water Quality Control Board Permit. If a house and/or deck are to be located below the 515' elevation, the County will not issue a building permit until an encroachment permit is issued by Tri-Dam. This list is not exclusive and it is the applicant's responsibility to investigate necessary permit requirements and obtain all required permits.
- 5) Projects within Tuolumne County will require a use permit for all activities; Calaveras County will issue building permits in conjunction with any Tri-Dam permit.

- 6) Tri-Dam will coordinate with the applicant to ensure that any necessary changes or additional information can be obtained promptly.
- 7) Tri-Dam then completes the permitting process, issues the permit and sends the applicant a copy of all permit documents. The applicant must execute a Hold Harmless document as a part of the final permit issuance process. The applicant may also be required to execute a lease/use agreement for the facilities, if located on lands owned by Tri-Dam, depending on the nature of the project.
- 8) All Facilities must be fully contained within the applicant's property lines and may not cross private property lines.
- 9) Any project shall be designed with the protection of the public health, safety and welfare in mind, as well as for the protection of the scenic and wildlife habitat values of the area.

#### **4.3 Construction**

- 1) Construction progress is monitored by Tri-Dam as required by permit conditions. The applicant is required to contact Tri-Dam prior to the initiation of excavation and construction and upon completion of construction so that compliance with the approved permit can be verified by site inspection.
- 2) All County and other required set backs shall be shown on the permit application and identified in the field prior to construction i.e. Tuolumne County building set back of 25 feet horizontally from normal high water mark (510') or 10 feet horizontally from right of way line (515') and sanitary setbacks/ controls within 100' of high water mark. (Ordinance No. 514)

#### **4.4 Inspection**

- 1) The Facility will be inspected periodically for compliance with project conditions and use agreements, the FERC order and any other Tri-Dam requirements.
- 2) The construction of any facility must be completed as described in the approved permit and within twelve months from the date of permit approval by Tri-Dam. A one-year extension may be considered if the applicant files a written request with Tri-Dam, prior to the original permit expiration date. If during the extension period additional guidelines are imposed, the new construction will be required to comply to the maximum extent practicable. If warranted, a project may be approved in phases, with approval timelines as specified in the encroachment permit. Additional conditions may be imposed as needed.

#### **4.5 General Notes**

Since every possible situation cannot be anticipated, Tri-Dam reserves the right to make decisions in cases not specifically covered by these guidelines. Requests for variances from these guidelines will be considered on a case-by-case basis subject to demonstration that the proposed variance results from a physical constraint or other limitation that result in a substantial hardship to the applicant if imposed. Furthermore, it must be demonstrated that approval of the variance would not conflict with any other standard or create conflicts with adjoining properties or other reservoir use. Additional review and consideration by FERC may be required.

All proposed projects are subject to Tri-Dam's review and approval to ensure that the proposed project is consistent with the FERC license and management agreement.

In considering requests for development approval, Tri-Dam must take into consideration the various environmental constraints, development patterns, physical reservoir characteristics, and adjacent land uses which may exist. In accordance with these factors, applicants may be required to redesign or otherwise alter their proposals in order for the project to be approved.

There are existing structures and improvements permitted under prior permits or "grandfathered" into existence, which may not be compatible with current and future guidelines. These structures may be maintained or repaired though their use does not conform to these guidelines. When it becomes necessary to replace, expand or otherwise alter a previously approved non-complying structure, the new structure must comply with the guidelines in effect at the time of replacement.

The Tri-Dam Project reserves the right to make alterations to these guidelines should they become necessary over time, following notice and comment by interested parties and affected property owners.

#### **4.6 Violations and Enforcement**

Tri-Dam staff will issue stop work notices for any violations that are detected within the FERC Project Boundary of the reservoir. Consequences for violations may include one or more of the following:

- Unwanted construction delays.
- Suspension or cancellation of approved applications.
- Increases in fees.
- Modification or removal of non-complying structures and restoration of disturbed areas at the owner's expense.
- Loss of any consideration for future reservoir use applications until the violation is successfully resolved.

## 5.0 COMMERCIAL FACILITIES PROGRAM

### 5.1 General

All parties desiring to construct, expand or rebuild a commercial facility any part of which lies within the FERC Project Boundary of Tulloch Reservoir (at or below the 515 elevation contour) must obtain authorization from the Tri-Dam Project prior to the initiation of excavation or construction. A commercial facility is defined as any use or facility within the Project Boundary, which is non-single family residential. Thus any facility, use or proposal other than that proposed for a single family residential unit is subject to the following guidelines.

### 5.2 Application Procedure

An applicant must complete the Application Process described in Section 4.0, General Requirements, of this Plan.

### 5.3 Criteria for Commercial Facilities

These include public marinas, campgrounds, parks and any other non-single family residential project.

- 1) Facilities may not extend more than one-third the distance to the opposite shoreline or more than one hundred feet from the project's shoreline, whichever is more limiting. See figure.
- 2) All flotation materials shall be puncture resistant and designed not to sink, if punctured. Steel drums are prohibited and uncoated, beaded polystyrene will not be permitted for new construction.
- 3) Reflectors shall be placed on the two furthest corners of the structure that extend into the water and along the sides of the structure from the end back toward the shore.
- 4) All fixed pier decking must be at least one foot above the normal high water elevation (510 water level).
- 5) A facility accommodating watercraft equipped with devices that can produce a wastewater discharge (e.g. marine toilet, shower, sink, kitchen fixed or portable holding tank) is required to provide sanitation facilities for pump-out and/or deposit of waste.
- 6) Structures built or used within the FERC Project Boundary must not contain sinks, toilets, showers, or any other type of devices that could cause liquid or solid waste to be discharged into the lake.

*(Note: Boat fueling facilities are an exception to this requirement but must conform to all applicable federal, state and local laws and regulations).*

- 7) All facilities shall be setback from the property lines in accordance with county zoning regulations for structures.
- 8) Commercial facilities that can accommodate more than 10 watercraft will also require submittal to and approval from FERC.

## 6.0 PRIVATE FACILITIES PROGRAM

### 6.1 General

All parties desiring to construct, expand or rebuild a private single-family facility within the FERC Project Boundary of Tulloch Reservoir (at or below the 515 elevation contour) must obtain authorization from the Tri-Dam Project prior to the initiation of excavation or construction. All facilities must be constructed on the applicant's deeded waterfront lot for the purpose of providing private access for occupant of single-family type dwellings.

### 6.2 Application Procedure

An applicant must complete the Application Process described in Section 4.0, General Requirements, of this Plan.

### 6.3 Criteria for Private Facilities

- 1) All facilities shall be designed to ensure that the facilities are located as close to the shoreline as possible, and shall not extend more than forty feet from the shoreline, at high-water (510 water level) elevations. An owner may apply for a facility that extends further than forty feet if it can be demonstrated that the forty feet restriction would make the facility unfeasible given environmental considerations such as topography or terrain. In addition, it must be demonstrated that the facility would not obstruct or interfere with the access of adjacent parcels and public lake use.
- 2) Reflectors shall be placed on the two furthestmost corners of any dock structure that extends into the water.
- 3) All fixed pier decking must be at least one foot above the normal high water elevation (510'). No portion of the structure will be approved for habitation purposes, as this area is subject to potential inundation.
- 4) Floatation materials, if used, shall be puncture resistant and designed not to sink, if punctured.
- 5) Structures built within the FERC Project Boundary must not contain sinks, toilets, showers, or any other type of device, which could cause any liquid or solid waste to be discharged into the lake.
- 6) The sides of gazebos, boat shelters and boathouses are not to be enclosed. Handrails may be installed for safety, but must not be enclosed.

- 7) The maximum allowed docking area for single family residential facilities is four hundred forty square feet of surface area for a slip type dock and four hundred square feet of surface area for a platform dock. In addition, two personal watercraft ports not exceeding 50 square feet each may be permitted. An awning if installed shall not exceed the footprint of the dock area, excluding personal watercraft ports. Overhangs and/or side enclosures are not permitted. Formatted: Bullets and Numbering
  
- 8) Two story docks are not permitted. Formatted: Bullets and Numbering
  
- 9) All facilities shall be setback from the property lines in accordance with county zoning regulations for structures. Formatted: Bullets and Numbering
  
- 11) Only one non-stackable boatlift is permitted for each single-family residential dock.

## 7.0 EXCAVATION PROGRAM

### 7.1 General

All parties desiring to excavate or remove soil and/or materials from within the project boundaries must obtain written authorization from Tri-Dam prior to beginning any such activity.

### 7.2 Application Procedure

An applicant must complete the Application Process described in Section 4.0, General Requirements, of this Plan.

### 7.3 Criteria for Excavation

- 1) All work shall be done in the “dry”, under limits prescribed by the applicable state and local agencies, including the California Department of Fish & Game, California Regional Water Quality Control Board, US Army Corps of Engineers and any other agencies as may be required.
  
- 2) Any material excavated in accordance with an approved permit shall be deposited outside of the FERC Project boundaries, with sufficient protection to ensure that no material is allowed to slough off into the

FERC Project Boundary. Any necessary permits or approvals for the placement of excavated material shall be included in the application.

- 3) Projects shall be designed to preserve existing vegetation and replant with natural vegetation, use of weed free straw to protect against erosion and use of best management practices to minimize erosion and siltation. Avoid any critical habitat disturbances.
- 4) The applicant must be the owner or leaseholder of the land impacted or used by any proposed waterfront facility. The responsibility is considered to transfer automatically along with ownership and leases.
- 5) The excavation shall be designed to be the minimum amount necessary to accomplish the stated objective, however, in no case shall the maximum material excavated exceed 1,000 cubic yards per single-family lot or applicable government regulations, which ever is less. Excavation requests exceeding this limitation may be considered, however, FERC review and approval is also required prior **to** approval by Tri-Dam. Additional permits from other agencies may be required as well and it is the applicant's sole responsibility to investigate necessary permit requirements and to obtain required permits
- 6) At all times, appropriate drainage controls and safety standards shall be employed.

## **8.0 SHORELINE MANAGEMENT & STABILIZATION PROGRAM**

### **8.1 General**

All parties desiring to construct shoreline protection devices or other erosion protection devices within the FERC Project Boundary of Tulloch Reservoir must obtain authorization from the Tri-Dam Project prior to the initiation of any activity/construction within the FERC Project Boundary. Applicants are encouraged to design all facilities so as to preserve the natural appearance of the shoreline. The installation of erosion protection devices shall balance preservation of the natural shoreline, wherever possible and the use of vertical retaining walls or similar facilities shall be prohibited, except where there is no feasible alternative. Landscape plantings are encouraged; other measures in combination with planting will be considered. Tri-Dam's FERC approved "Shoreline Erosion Plan" will be reviewed and as appropriate applied to each project.

### **8.2 Application Procedure**

An applicant must complete the Application Process described in Section 4.0, General Requirements, of this Plan.

### **8.3 Criteria for Shoreline Stabilization and Erosion Protection Facilities**

- 1) Shoreline stabilization or erosion protection devices that would substantially alter the FERC Project Boundary will not be permitted. Natural plantings including willows and cottonwoods are the preferred mechanism for erosion control.
- 2) Shoreline stabilization or erosion protection devices shall be designed to protect the natural appearance of the shoreline, wherever possible. Riprap or similar material shall be placed along the base of all walls or bulkheads subject to permit requirements based upon physical characteristics of the subject property.
- 3) The limits of shoreline stabilization or erosion protection devices shall be in accordance with all related Tulloch plans, local ordinances and best practices.
- 4) The use of tires, scrap metal, crush block or other types of material that are not aesthetically acceptable is prohibited for stabilization.
- 5) The applicant must be the owner or leaseholder of the land immediately adjoining any proposed waterfront facility. Tri-Dam will hold the applicant

fully responsible for the permitted project. The responsibility is considered to transfer automatically along with ownership and leases.

## **9.0 BUOYS AND SIGNAGE PROGRAM**

### **9.1 General**

In 1999, the Tri-Dam Project implemented a new buoy and signage program in conjunction with the Calaveras and Tuolumne Sheriff's units. Development of the plan began in 1998 at the request of the Calaveras and Tuolumne Boating Patrol Units. The plan was designed to provide the public with orderly implementation of applicable watercraft regulations to ensure greater safety of the recreational watercraft users at Tulloch.

The plan included the removal of all existing, older buoys on the reservoir and replacement with new buoys in locations as specified by the Boating Patrol Units in compliance with waterway regulations. New signs were also installed in key locations to better inform the public of application 5 mph zones. Handouts were also distributed to homeowner associations, business and marina operators.

In the future, this plan will be reviewed periodically for compliance with applicable watercraft regulations and revised as appropriate. It is anticipated that no buoys will be placed within the reservoir without approval of the Tri-Dam Project, and other agencies as may be required. Placement of individual buoys by homeowners is discouraged, unless a specific need can be demonstrated.

### **9.2 Application Procedure**

An applicant must complete the Application Process described in Section 4.0, General Requirements, of this Plan.

### **9.3 Criteria for Buoy Installation**

- 1) Buoy installation, which does not conform to the approved Buoy Master Plan, shall not be approved.
- 2) The applicant must be the owner or leaseholder of the land immediately adjoining any proposed waterfront facility. Tri-Dam will hold the applicant fully responsible for the permitted project. The responsibility is considered to transfer automatically along with ownership and leases.

## **10.0 RECREATION AND LAND USE PLANNING PROGRAM**

### **10.1 General**

As stated previously, the purpose of this document is to set clear guidelines for the implementation of the FERC license by the Tri-Dam Project. In particular, this Plan focuses on the issuance of encroachment permits by the Tri-Dam Project for lands within the FERC Project Boundary.

The lands along the shoreline are predominately under private ownership within the Counties of Calaveras and Tuolumne. As such, these respective agencies have regulatory and statutory control over land use and the development of standards applicable within these areas. Tri-Dam Project will review and comment on new projects and development proposals as requested by the respective planning agencies to ensure that applicable guidelines, if any, of the FERC license are met. The Tri-Dam Project will also participate with local, state and federal agencies in the development of adjacent land use and recreational plans as requested.

## **Attachments**

**Attachment A**—A map of the entire reservoir area, showing existing parcels and land use designations from each County. (Fig E-8. 2-1)

**Attachment B** – A map of the land ownership in the Tulloch Project Area (Fig E8. 1-1)

**Attachment C** - Vegetation Map of Tulloch Reservoir

**Attachment D**-- Noxious Weed Map of Tulloch Reservoir

**Attachment E** – VELB map of Tulloch Reservoir

Buoy Master Plan