

MANZANITA LAKE PLANNING UNIT

Willow Creek Watershed

Existing Conditions & Uses

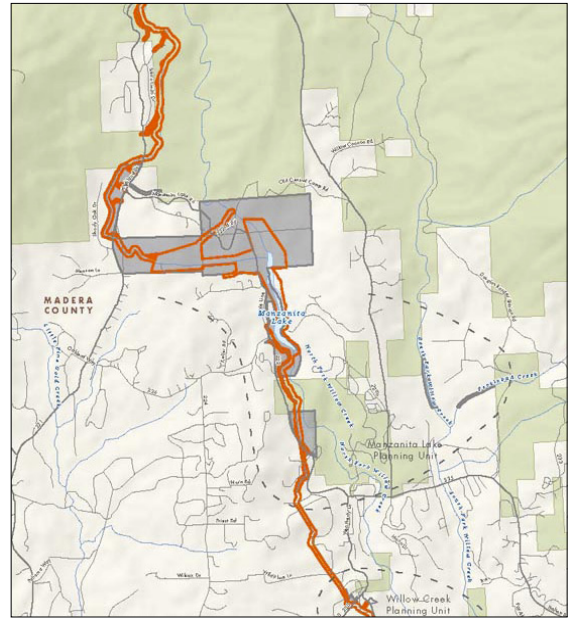
Overview

- Area surrounding a small afterbay and creeks with ethnobotanical resources and valuable habitat
- 472 acres in Madera County; 337 acres outside the FERC boundary and 135 acres inside the FERC boundary
- Part of the Crane Valley Project (FERC #1354); New License issued September 2003

The Manzanita Lake Planning Unit is located in Madera County, approximately three miles south of Bass Lake and one mile north of the town of North Fork (see Figure WC-3). Most of the parcels contain features of the San Joaquin No. 2 and No. 3 hydropower developments, both of which are part of the Crane Valley FERC Project (#1354). Manzanita Lake, with 26 surface acres and an average depth of about 6.5 feet, is the most prominent and accessible feature of the planning unit. It is located at an elevation of 2,850 feet and forms the afterbay for the San Joaquin No. 3 Powerhouse. The planning unit includes portions of North Fork Willow Creek and two narrow parcels located along South Fork Willow Creek and Peckinpah Creek, about



Chaparral & pines at Willow Creek



Manzanita Lake Planning Unit
Madera County

one mile east of Manzanita Lake. Planning unit acreage is primarily located north of Manzanita Lake and outside the FERC boundary.

County Road 222 provides access to the planning unit, passing alongside Manzanita Lake and linking Bass Lake to the north with the town of North Fork to the south. County Road 222 links with Highway 162 farther to the south, providing access from the Clovis and Fresno urban areas. The planning unit is surrounded by Sierra National Forest (SNF) lands, as well as private lands consisting of widely spaced rural residences.

The New License for the Crane Valley Project requires several plans to be developed by PG&E in consultation with others, some of which have been completed and others of which are in draft form or have been postponed, with FERC approval. These include a Historic Properties Management Plan (HPMP), a Recreation Use Monitoring Plan, a Visual Resources Plan, and a Vegetation Management Plan.

Fish, Plant, and Wildlife Habitat

Riparian vegetation in the planning unit occurs in small patches and relatively narrow bands along

Manzanita Lake Planning Unit Existing Conditions



Figure WC-3

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the shorelines of Manzanita Lake, North Fork and South Fork Willow Creek, and Peckinpah Creek. Despite their small size, these areas support unique plant communities and provide important habitat for wildlife, including migratory and resident bird species. Several special status plant species have been recorded in the Crane Valley Project area, along with two noxious plant species. Many Native Americans who reside in the area actively gather and use plants for traditional purposes. Known ethnobotanical sites are located in the planning unit on the north end of Manzanita Lake near the powerhouse, day use area, and south of the dam. These important ethnobotanical resources include manzanita, wormwood, white sedge, soaproot, buckwheat, bracken fern, oak, and willow.

Special status wildlife species have been documented within the planning unit. Several species of bats frequent the area, including at least one special status species. Historically, this planning unit had documented occurrences of foothill yellow-legged frog, however, this species has not been identified in recent surveys. PG&E's habitat assessment indicated that Manzanita Lake could also serve as potential dispersal habitat for the California red-legged frog. Suitable habitat is also present for the Federally threatened valley elderberry longhorn beetle.

The reservoirs and creeks provide important fisheries habitat, though no special status fish species are present. Species found in Manzanita Lake include rainbow trout, hitch, golden shiner, bluegill, largemouth bass, and black crappie. North Fork Willow Creek above and below the lake also supports rainbow trout and hitch, but the dominant species is Sacramento sucker. DFG stocks Manzanita Lake with rainbow trout; however, sedimentation is threatening to fill the lake to a point where the ability to stock is impaired. Sand deposits have also altered essential pool and spawning habitat for resident trout in bypassed reaches upstream and downstream of Manzanita Lake. An erosion control and sediment management plan is part of the new Crane Valley Project FERC License.

A vegetation management plan is also being drafted and will address vegetation management goals, objectives, and constraints; integrated pest management; riparian area monitoring; valley elderberry longhorn beetle protection; and measures to ensure tribal access to botanical gathering areas. In addition, a Willow Creek Native Species Management Plan has been drafted that will evaluate the condition of native aquatic/riparian species within several project-affected segments of the Willow Creek drainage over the period of the license.

Open Space

Open space values are found throughout the planning unit surrounding project facilities and roads. Planning unit lands provide scenic views for travelers on County Road 222 and for adjacent private landowners.

Outdoor Recreation

In addition to traditional uses, locals from North Fork and the surrounding area use Manzanita Lake for recreation activities such as picnicking and fishing. There is an easily accessible day use area on the west side of the lake with picnic tables and cooking grills, a restroom, parking, and shoreline access. Canoes and kayaks can be used on the reservoir. There are no other formal recreation facilities in the planning unit; however, dispersed recreation takes place along canals,



Manzanita Lake picnic area

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Mixed vegetation community near the forebay flumes, and Willow Creek. Unauthorized OHV use and camping have been reported at more remote access points along Willow Creek.

Forest Resources

The elevation of the planning unit places it in a transition zone between mixed conifer forests to the north (at higher elevations) and oak woodlands and chaparral to the south (at lower elevations). The planning unit is a mixture of these two forest community types. The planning unit contains a single PG&E Timber Management Unit (TMU) with 257 acres of timberlands that are being managed under a Recreation and Sustainable Timber Management prescription. This means that forest management in designated recreational areas is limited to fuel reduction, hazard tree removal, and improving aesthetics while sustainable timber management is emphasized outside of designated recreational areas. There are also several Fire Safe Councils operating in the area who focus on fuel load reduction and fire prevention.

Agricultural Uses

No agricultural uses occur in this area. Planning unit lands have low potential for agricultural uses due to steep topography and lack of forage. There are no USFS grazing allotments in the vicinity of the Manzanita Lake Planning Unit.

Historic Resources

Many cultural sites have been found within the Crane Valley Project cultural resource study area (primarily within the FERC boundary), and artifacts of the area are featured at the Sierra Mono Museum in the nearby town of North Fork. The local Native American community, mostly consisting of members of the Mono Tribe, use the Manzanita Lake area for plant gathering, community gatherings and related cultural activities, as well as for recreation. There is strong interest in the Native American community regarding formal development of facilities to host cultural resource demonstrations and interpretation, in conjunction with continued public recreation. Many Native Americans reside in the area and maintain an active interest in protecting and using cultural resources and pursuing traditional cultural practices in the vicinity of Manzanita Lake.

Stewardship Council Recommendations

The Stewardship Council recommends that the land and land uses at Manzanita Lake be preserved and enhanced by focusing on unique biological and cultural resource values and recreation opportunities. Recommendations focus on providing additional enhancements to the recent FERC Project relicensing measures and applying them to all planning unit lands. In presenting the Recommended Concept provided



Canal near the forebay

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here, our objective is to protect and enhance habitat and cultural resources, provide for traditional uses, and enhance recreation and education opportunities.

Objective: Preserve and enhance habitat, cultural resources and traditional uses, and enhance recreation opportunities and sustainable forestry management.

As shown on Table WC-2, the Stewardship Council has identified a number of preservation and/or enhancement measures that may contribute to the conservation management program for Manzanita Lake. Additional detail and background regarding these potential measures can be found in the Supporting Analysis for Recommendations, provided under separate cover. These measures are intended to be illustrative in nature, not prescriptive, and will be amended, deleted, or augmented over time in coordination with future land owners and managers to best meet the objective for this planning unit.

Fish, Plant, and Wildlife Habitat

Objective: Preserve and enhance habitat in order to protect special biological resources.

The Manzanita Lake Planning Unit provides important riparian habitat, a recreational fishery, and habitat for special status and ethnobotanical plant species. In order to preserve and enhance the habitat and resources found here, and traditional uses that depend on these resources, the Stewardship Council recommends that baseline studies and plans be developed to gain a clear understanding of the resources (particularly outside the FERC boundary where little information is currently available). These studies will likely be followed by management plans to ensure implementation of preservation and enhancement measures for specific resources. Management of the property



Granite boulder by North Fork Willow Creek Bridge to preserve and enhance habitat will also include addressing noxious weeds.

The Stewardship Council also recommends OHV barriers and signage, as well as increasing site upkeep, at the Willow Creek bridge to protect habitat and prevent erosion. We encourage close coordination with the USFS and other resource-focused organizations working in the area. All planning should be considered in conjunction with the forest, recreation, and cultural resource management plans, as well as with available and forthcoming FERC license required management and monitoring plans.

Open Space

Objective: Preserve open space in order to protect natural and cultural resources and the recreation setting.

This concept would preserve open space by limiting new development to minor additional recreation facilities, as well as through permanent conservation easements. Conservation easements would describe all prohibited uses to maintain open space values, including the level of uses allowed and the requirement to maintain scenic qualities.

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Outdoor Recreation

Objective: Enhance recreational facilities in order to provide additional education and recreation opportunities and recreation management.

The planning unit currently provides non-motorized boating, dispersed use, and day use opportunities, generally focused at Manzanita Lake. As shown in Figure WC-4, the Stewardship Council looks to enhance these opportunities by recommending trail facilities, an education program, and management of recreation. We recommend enhancements focused on assessing the potential for trails along Willow Creek, South Fork Willow Creek, Peckinpah Creek, and Manzanita Lake, as well as a nature park and interpretive trails near the No. 3 ditch. The Stewardship Council also recommends developing an interpretation and education program, as well as a recreation management plan for lands outside the FERC boundary consistent with the forthcoming FERC license required recreation plan.

Sustainable Forestry

Objective: Develop and implement forestry practices in order to contribute to a sustainable forest and preserve and enhance habitat.

The Manzanita Lake Planning Unit contains approximately 250 acres of mixed conifer/oak



Spring runoff in North Fork Willow Creek

woodland transitional zone forest resources. The Stewardship Council recommends that future care and management of the land include developing a long-term vision for forest management in the area, addressing silvicultural practices and holistic watershed management. The forest management plan should be developed in conjunction with the noxious weed and wildlife and habitat management plans, as well as with the forthcoming FERC Project vegetation management plan. We expect that all of these plans would be developed in coordination with adjacent landowners, local fire safe councils and resource conservation districts, and USFS management and practices as appropriate.

Preservation of Historic Values

Objective: Identify and manage cultural resources in order to ensure their protection, as well as to support opportunities for public education and traditional uses.

Many cultural sites are located within the planning unit, as well as traditionally important ethnobotanical gathering areas. The Stewardship Council aims to support an increased understanding of these resources and ensure they are appropriately protected. To meet this objective, we recommend that cultural resource studies be conducted to understand the resources found at Manzanita Lake (particularly outside the FERC boundary where less information is available), that appropriate management plans be developed and implemented, and that opportunities to support public education regarding cultural resources be considered. As this planning unit provides important ethnobotanical resources, the Stewardship Council also recommends restoration and enhancement of ethnobotanical species throughout the planning unit, along with allowing access for traditional practices. Throughout this effort, the Stewardship Council recommends close coordination with Native American entities. Development of the cultural resources management plan should be consistent with the FERC Project HPMP.

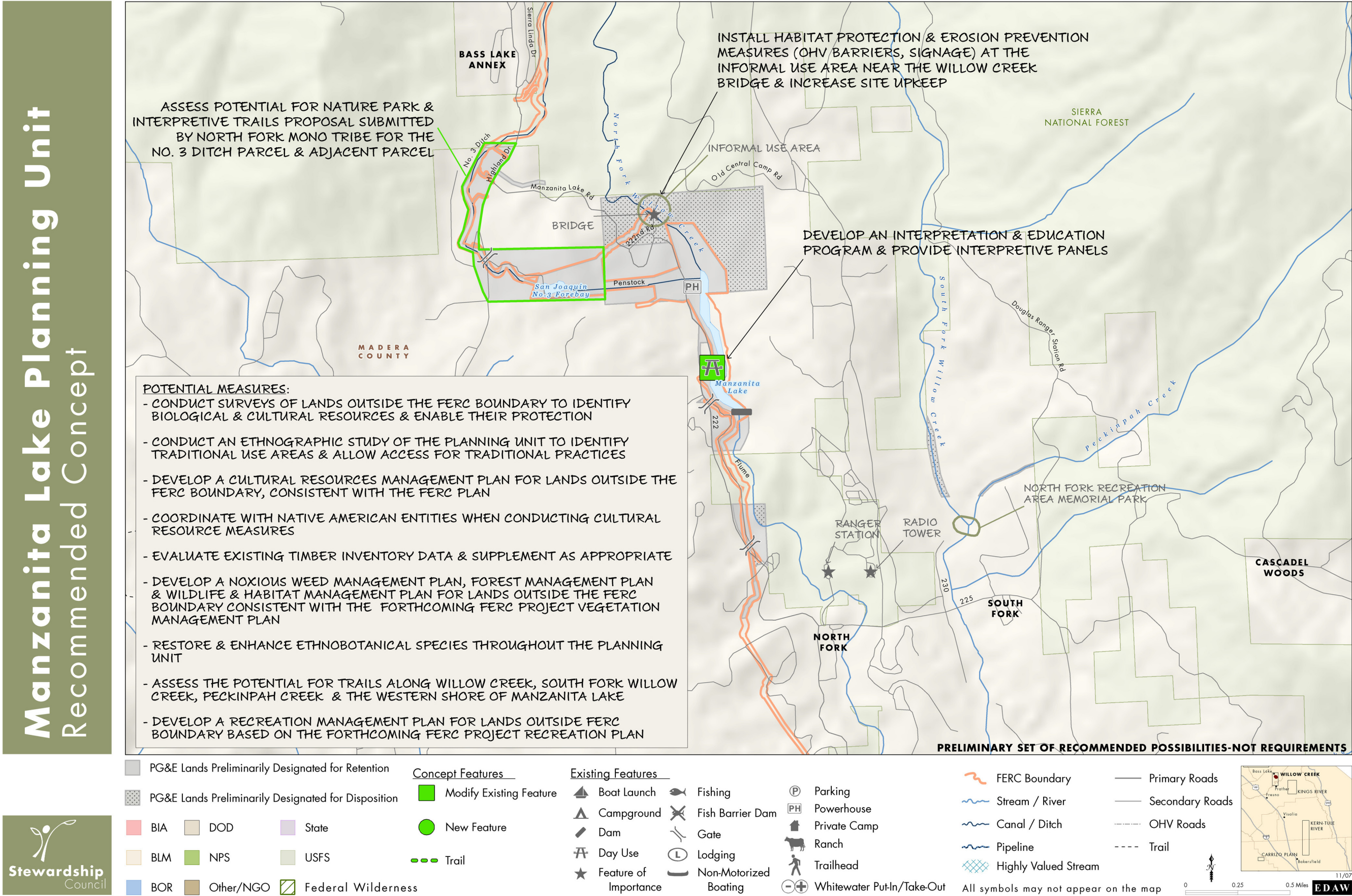
Table WC-2 Objectives to Preserve and/or Enhance – Recommended Concept

Planning Unit Objective: Preserve and enhance habitat, cultural resources and traditional uses, and enhance recreation opportunities and sustainable forestry management.		
Beneficial Public Value	Objective	Potential Measures to Preserve and/or Enhance BPVs – Not Requirements*
Protection of the Natural Habitat of Fish, Wildlife, and Plants	Preserve and enhance habitat in order to protect special biological resources.	<ul style="list-style-type: none">• Conduct surveys of lands outside the FERC boundary to identify biological resources and enable their protection.• Develop a wildlife and habitat management plan for lands outside the FERC boundary consistent with the forthcoming FERC Project vegetation management plan.• Develop a noxious weed management plan for lands outside the FERC boundary consistent with the forthcoming FERC Project vegetation management plan.• Install habitat protection and erosion prevention measures (OHV barriers, signage) at the informal use area near the Willow Creek bridge and increase site upkeep.**
Preservation of Open Space	Preserve open space in order to protect natural and cultural resources and the recreation setting.	<ul style="list-style-type: none">• Apply permanent conservation easements to ensure a higher level of open space protection.
Outdoor Recreation by the General Public	Enhance recreational facilities in order to provide additional education and recreation opportunities and recreation management.	<ul style="list-style-type: none">• Assess the potential for trails along Willow Creek, South Fork Willow Creek, Peckinpah Creek, and the western shore of Manzanita Lake.• Develop an interpretation and education program and provide interpretive panels at the Manzanita Lake Day Use Area.**• Assess the potential of the nature park and interpretive trails proposal submitted by North Fork Mono Tribe for the No. 3 ditch parcel and adjacent parcel.**• Develop a recreation management plan for lands outside the FERC boundary based on the forthcoming FERC Project recreation plan.
Sustainable Forestry	Develop and implement forestry practices in order to contribute to a sustainable forest and preserve and enhance habitat.	<ul style="list-style-type: none">• Evaluate existing timber inventory data and supplement as appropriate.• Develop a forest management plan for the planning unit to promote natural forest development and structural and physical diversity in forests for long-term ecological, economic, social, and cultural benefits, consistent with the forthcoming FERC Project vegetation management plan.
Agricultural Uses		None proposed.
Preservation of Historic Values	Identify and manage cultural resources in order to ensure their protection, as well as to support opportunities for public education and traditional uses.	<ul style="list-style-type: none">• Conduct surveys for lands outside the FERC boundary to identify cultural resources and enable their protection.• Conduct an ethnographic study of the planning unit to identify traditional use areas and allow access for traditional practices.• Develop a cultural resources management plan for lands outside the FERC boundary, consistent with the FERC Project Historic Properties Management Plan (HPMP).• Restore and enhance ethnobotanical species throughout the planning unit.• Coordinate with Native American entities when conducting cultural resource measures.

* This is a set of recommended possibilities for the preservation and enhancement of BPV’s, and is not intended to be a set of requirements for future land management.

** Denotes site specific measure.

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Fish, Plant, and Wildlife Habitat

Potential Measures:

- *Conduct surveys of lands outside the FERC boundary to identify biological resources and enable their protection.*
- *Develop a wildlife and habitat management plan for lands outside the FERC boundary consistent with the forthcoming FERC Project vegetation management plan.*
- *Develop a noxious weed management plan for lands outside the FERC boundary consistent with the forthcoming FERC Project vegetation management plan.*

Though many studies were and are being conducted for the Crane Valley Project relicensing effort, these studies generally focus on resources within the FERC boundary. Therefore, the Stewardship Council recommends conducting surveys of lands outside the FERC boundary to identify biological resources and thus gain a broader knowledge of the wildlife, plants, and habitats within the Manzanita Lake Planning Unit to enable their protection. For example, as part of PG&E's License condition, a biological evaluation must be prepared in accordance with the USFWS for the assessment of potential impacts to the valley elderberry longhorn beetle. This requirement would be extended to all lands in the planning unit, as the Crane Valley vegetation management plan will also address protection of the valley elderberry longhorn beetle. Based on these surveys and the forthcoming Crane Valley FERC Project vegetation management plan, a wildlife and habitat management plan and a noxious weed management plan would be developed for the lands outside the FERC boundary.

The noxious weed management plan would detail how and where to eradicate existing populations of noxious weeds and implement preventative measures to minimize the spread of weeds in the future. Similar to the development of the Crane Valley FERC Project vegetation management plan, the plans would incorporate practices that are considerate of local Native American traditional use sites and incorporate ethnobotanical resource protection.

Potential Measure:

- *Install habitat protection and erosion prevention measures (OHV barriers, signage) at the informal use area near the Willow Creek bridge and increase site upkeep.*

Several of the dispersed use sites also require additional habitat protection and erosion control measures, such as vehicle barriers and signage to limit unauthorized uses. An area which needs such measures is the informal use area by the bridge crossing North Fork Willow Creek north of Manzanita Lake. Dumping, OHV-caused erosion, and traces of target shooting and digging were observed at this site. The Stewardship Council recommends habitat protection and erosion prevention measures at this area and potentially other easily accessible but remote sites would receive additional periodic maintenance to discourage dumping.

Outdoor Recreation

Potential Measure:

- *Assess the potential of the nature park and interpretive trails proposal submitted by North Fork Mono Tribe for the No. 3 ditch parcel and adjacent parcel.*

People in the area enjoy the lands, as well as the informal access to them for authorized activities such as walking and gathering of ethnobotanical plants. This informal access, particularly to traditional use areas, would remain and would be enhanced. An example of such an enhancement is the assessment of developing a day use area with interpretive trails on the Conduit No. 3 parcel and adjacent parcel. The Stewardship Council recommends assessing a proposal from the North Fork Mono Tribe for a nature park on these parcels, including a day use area with picnic tables and parking, to enhance access to this historic ethnographic site. The tribe's vision is to keep it a gathering area. The site has many of the plant species used for traditional purposes; including soaproot, oak, pine, clover, manzanita, and willow. It is easily accessible from the County Road and would provide connectivity to other important areas and gathering grounds for nearby tribal residents. Adding parking, an interpretive trail, and panels would make this site accessible and interesting to the general public and could serve as an active educational tool. It would be an important addition to the local historic and interpretive resources of the larger area and could be of interest to visitors traveling through the area on their way to and from Bass Lake. Such a measure would be consistent and would be coordinated with the interpretation and education program that is also recommended (see below). Buffers to existing flumes and other operational facilities would be delineated as necessary to ensure safety and protect ongoing operations.

Potential Measure:

- *Assess the potential for trails along Willow Creek, South Fork Willow Creek, Peckinpah Creek, and the western shore of Manzanita Lake.*

Potential trail opportunities exist in several areas of the planning unit, especially in areas where planning unit lands follow a creek and/or connect to other trails, public lands, or points of interest. The North Fork portion of Willow Creek and the western shore of Manzanita Lake appear to provide opportunities to connect points of interest, potentially even linking Manzanita Lake with the town of North Fork. (Madera County is currently looking to collaborate with the Forest Service and the Coarsegold Resource Conservation District to enhance recreational access to Manzanita Lake, including a walking/biking trail along the old Forest Service road from the town of North Fork to the lake.) Opportunities for trails may also exist along South Fork Willow Creek and Peckinpah Creek. Planning unit lands along these creeks are near the North Fork Recreation Center and could provide a publicly accessible corridor from the recreation center to the Sierra National Forest. However, further investigation is necessary to identify the extent of these lands outside the creek channel to determine if there is enough shoreline planning unit land to provide for a trail.

Potential Measure:

- *Develop a recreation management plan for lands outside the FERC boundary based on the forthcoming FERC Project recreation plan.*

The Stewardship Council recommends developing a recreation management plan for areas outside the FERC boundary based on the forthcoming Crane Valley FERC Project recreation plan (due in 2007), and including measures to limit unauthorized uses. The recreation management

plan would also include other recommended measures to enhance recreation, such as assessing the potential for trails along Willow Creek and the western shore of Manzanita Lake and the potential for a nature park with interpretive trails as proposed by the North Fork Mono Tribe for the No. 3 ditch parcels.

Potential Measure:

- *Develop an interpretation and education program and provide interpretive panels at the Manzanita Lake Day Use Area.*

Due to its wealth of natural and cultural resources and uses, the planning unit offers opportunities to educate visitors on these subjects. To provide a consistent format and information for interpretation and education, the program would be developed in coordination with DFG and other interested stakeholders. Suggested elements of an interpretation and education program include: developing consistent information and directional signage; developing educational programs with Native Americans and local schools and groups; and developing interpretation programs and materials focusing on traditional use of the area, plant identification, and appropriate recreation use. As part of the interpretation and education Program, interpretive panels would be added to the heavily used day use site at Manzanita Lake.

Preservation of Historic Values

Potential Measures:

- *Conduct surveys of lands outside the FERC boundary to identify cultural resources and enable their protection.*
- *Conduct an ethnographic study of the planning unit to identify traditional use areas and allow access for traditional practices.*
- *Develop a cultural resources management plan for lands outside the FERC boundary, consistent with the FERC Project Historic Properties Management Plan (HPMP).*
- *Restore and enhance ethnobotanical species throughout the planning unit.*
- *Coordinate with Native American entities when conducting cultural resource measures.*

Along with other recommended enhancements that also benefit cultural resources, the Stewardship Council recommends conducting surveys and an ethnographic study to identify and document additional cultural resources and traditional use areas on lands outside the FERC boundary. The Stewardship Council also recommends developing a cultural resources management plan to enable the protection of these resources. The cultural resources management plan would be consistent with the Crane Valley FERC Project Historic Properties Management Plan (HPMP). Specific enhancement measures would include the restoration of sedge stands for basketmakers farther south at Manzanita Lake, and allowing enhancements and limited management of other ethnobotanical resources in the planning unit by local tribes. There may be more specific access and preservation measures necessary for traditional use and archeological sites, but these can only be identified with more information about the location and status about these sites and in coordination with the tribes. Cultural resource surveys, the ethnographic study, development of the cultural resources management plan, and ethnobotanical enhancements would be coordinated with Native American entities.

Sustainable Forestry

Potential Measures:

- *Evaluate existing timber inventory data and supplement as appropriate.*
- *Develop a forest management plan for the planning unit to promote natural forest development and structural and physical diversity in forests for long-term ecological, economic, social, and cultural benefits, consistent with the forthcoming FERC Project vegetation management plan.*

Even though there is a Timber Management Unit (TMU) for the planning unit, the amount of timber that is commercially harvestable is limited to a few areas that are outside the designated recreation area and viewsheds. Since erosion control and sedimentation management are very important in this area, a more active harvesting schedule is not recommended. However, there are opportunities to manage the forest resources outside the FERC boundary according to the forthcoming Crane Valley Project vegetation management plan, thus enhancing habitat, recreation, and cultural values. The Stewardship Council recommends developing a forest management plan for the planning unit consistent with the aforementioned vegetation management plan. The forest management plan would be developed through the evaluation of existing forest inventory data and supplemental information, when appropriate. In addition to supporting natural forest development, the forest management plan would promote holistic watershed management, supporting the enhancement of other BPVs over the long term. The forest resources in the whole planning unit would be managed for habitat enhancement, fuel load reduction, viewshed protection, and timber production in compliance with the vegetation management plan and New License conditions. In addition, the forest management plan should be coordinated with local resource conservation districts and fire safe councils, such as the Coarsegold Resource Conservation District and the Eastern Madera County Fire Safe Council, as well as the USFS.

Open Space

Potential Measure:

- *Apply permanent conservation easements to ensure a higher level of open space protection.*

The Stewardship Council recommends preserving open space through permanent conservation easements. Conservation easements would describe all prohibited uses to maintain open space values, including the level of uses allowed. Except for a potential interpretive day use area and trail in the Conduit No. 3 area, recommendations do not include development of any new sites; therefore, the scenic quality of the viewsheds is not expected to decrease through these measures.

Agricultural Uses

None recommended.