

# WILLOW CREEK PLANNING UNIT

## Willow Creek Watershed

### Existing Conditions & Uses

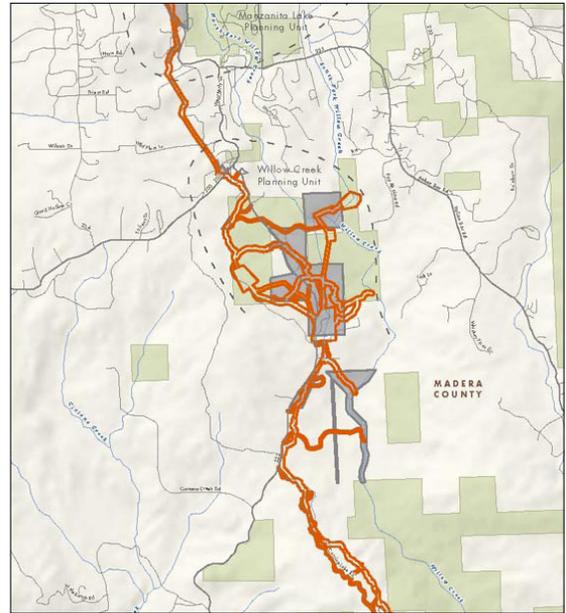
#### Overview

- Scattered parcels on and near Willow Creek, crossed by hydropower facilities, including canals, flumes, and access roads
- 246 acres in Madera County; 196 acres outside and 50 acres inside the FERC boundary
- Part of the Crane Valley Project, FERC #1354; New License Order issued October 2003

As shown in Figure WC-5, the Willow Creek Planning Unit is located within Madera County, just south of the towns of North Fork and South Fork. County Road 222 passes through the center of the planning unit. The site is situated between 800 and 1,600 feet in elevation and includes significant hydropower facilities associated with the San Joaquin No. 1A and San Joaquin No. 2 developments. Facilities include conduits, tunnels, flumes, dams, and a powerhouse, as well as roads providing access to these features. Federal lands administered by the Sierra National Forest (SNF) are adjacent to some of the lands within the planning unit, and private property surrounds the rest of the parcels.



Pond & annual grassland near County Road 222



Willow Creek Planning Unit  
Madera County

All of the hydropower facilities in the planning unit are part of the Crane Valley Project, which was issued a New License by FERC in October 2003. The New License requires that PG&E develop several plans 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 an Historic Properties Management Plan (HPMP), a Recreation Use Monitoring Plan, and a Visual Resources Plan.

#### Fish, Plant, and Wildlife Habitat

Terrestrial habitats throughout the planning unit include a mix of oak woodland and manzanita-dominated brush that support a variety of wildlife. The planning unit is within the range of the San Joaquin deer herd and may be used as a wintering area. Upland game birds that may be present in the planning unit include California quail and mourning dove. Bat surveys conducted in 2001 identified 13 species of bats within the Crane Valley Project area, including special status species such as the western red bat.

Riparian habitat, consisting primarily of white alder, ash, and willow, is found along Willow Creek, North Fork Willow Creek, and South Fork

# Willow Creek Planning Unit Existing Conditions

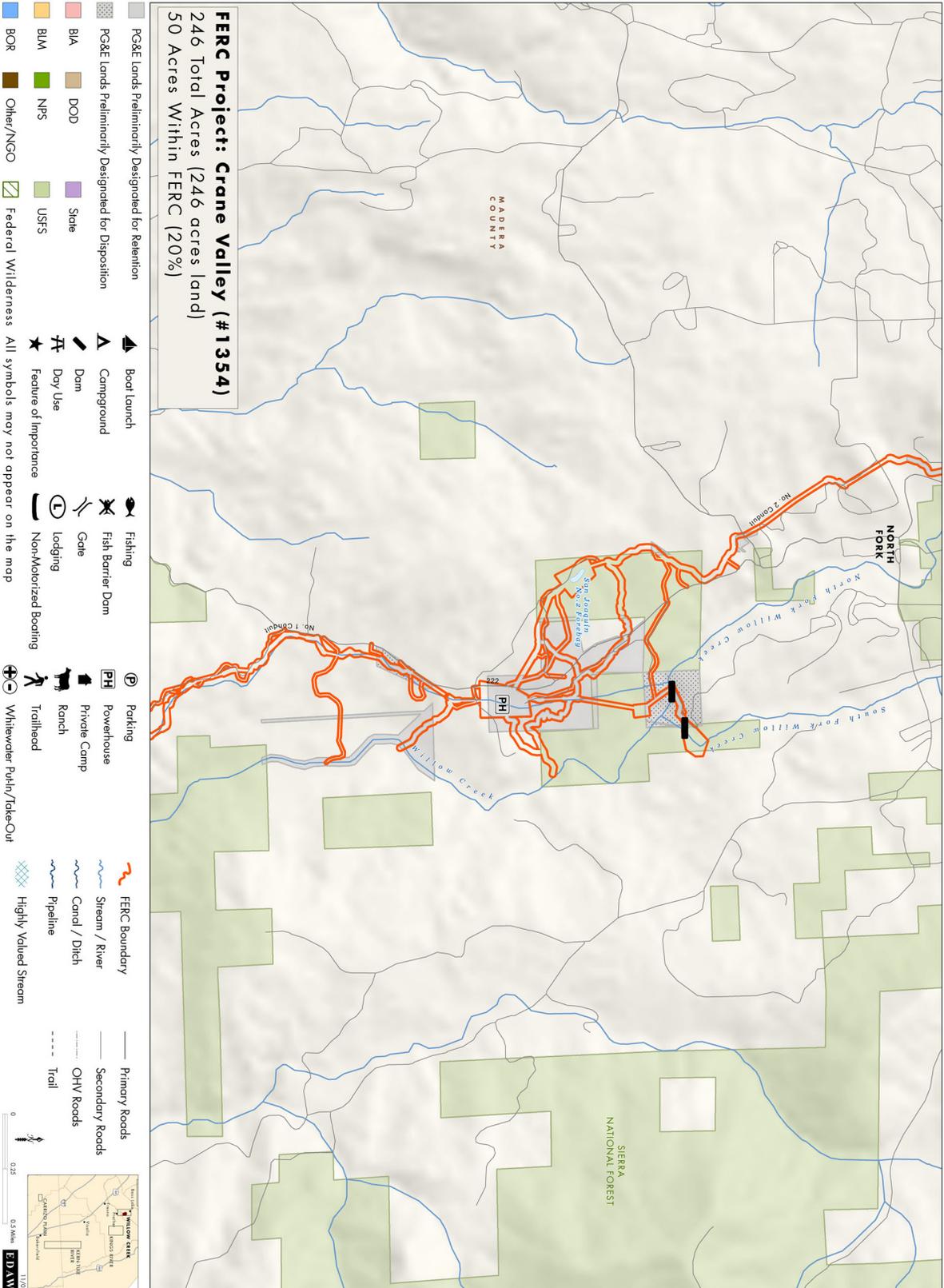


Figure WC-5

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Willow Creek and provides potential habitat for special status species such as the foothill yellow-legged frog. Surveys conducted in 2001 for the Crane Valley Project relicensing identified western pond turtles in North Fork Willow Creek, South Fork Willow Creek, and at the confluence of the two forks in the northern portion of the planning unit.

There are elderberry shrubs along both conduits and near the North Fork Diversion Dam, and possibly other locations within the planning unit, providing potential habitat for the Federally threatened valley elderberry longhorn beetle. Additionally, there is potential habitat for four special status plants including the Mariposa pussypaws and the flaming trumpet. Two noxious weeds, Scotch broom and Spanish broom, have been identified in the area. It is unknown to what extent lands outside the FERC boundary have been studied for terrestrial resources.

Aquatic habitat is provided in Willow Creek and its two forks. Species found in Willow Creek below the North and South Fork confluence include rainbow trout, brown trout, golden shiner, Sacramento sucker, mosquitofish, green sunfish, and prickly sculpin. As a condition of the New License, PG&E will be evaluating instream flows necessary to provide 0.5 cubic feet per second (cfs) at a stream gage downstream of the planning unit on Willow Creek, which could boost flow in Willow Creek within the planning unit.

PG&E is developing a FERC license required vegetation management plan and has also completed the Willow Creek Native Species Management Plan and Deer Protection Facilities Construction and Monitoring Plan. These management and monitoring plans will provide monitoring, protection, and enhancement of vegetation resources, species monitoring, tribal access to botanical gathering areas, condition of native aquatic/riparian species, and safe crossing of canals and other water conveyance structures for deer and other wildlife.

### Open Space

Open space values can be found throughout the planning unit on lands surrounding the project facilities and roads. Planning unit lands provide views dominated by natural vegetation for travelers along County Road 222 and for surrounding private landowners.

### Outdoor Recreation

There are no developed recreation sites within the planning unit, and it is unlikely the planning unit is used for recreation to any substantial amount. Developed recreation facilities are located north of the planning unit in the Bass Lake and Manzanita Lake Planning Units, to the east in the Sierra National Forest and to the south at Kerckhoff Lake. Access is available only to parcels along County Road 222 and near project roads. Access to most of the land along Willow Creek requires crossing private property, and steep terrain makes access difficult. Known recreation uses along Willow Creek and its tributaries include dispersed hunting, fishing, camping, and hiking.

### Forest Resources

Forest resources are present though not commercially viable for timber production. There are no PG&E Timber Management Units (TMUs) within the Willow Creek Planning



Large elderberry shrub

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Grasslands & view across Willow Creek Valley

Unit, with the exception of a few small parcels near Conduit No. 2 that are included in the Manzanita Lake TMU, which is managed under a Recreation and Sustainable Timber Management prescription.

### Agricultural Uses

Agricultural uses do not occur in this area. There are reports that portions of the planning unit were historically grazed, but the presence of high thick brush suggests this use has not occurred recently, and PG&E has not leased the property for grazing. There are no grazing allotments on adjacent SNF lands; however, most of the surrounding private lands have been zoned for agricultural uses by Madera County.

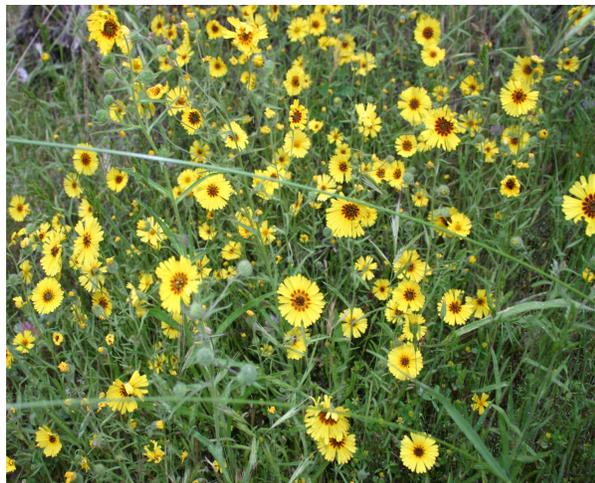
### Historic Resources

Many cultural sites have been found within the FERC cultural resource study area for the Crane Valley Project (which is primarily within the FERC boundary) including 19 archaeological sites, 15 historic sites, and 6 prehistoric/historic sites. Although available information indicates that most of these are located in other areas of the project, some are within or near the planning unit parcels. Specific information on these sites is not available.

Several tribes currently reside in the area, including the Picayune Rancheria of Chukchansi Indians, North Fork Mono Rancheria, and North Fork Mono Tribe. Ethnobotanical resources — such as willows, sedges, and bracken fern used for basketry and wormwood used for medicine — are important to Native Americans who reside in the area and who make use of these resources throughout the Crane Valley Project area. Ethnographic surveys in 1985 identified 10 sites of concern to the Native American community within the Crane Valley Project area. Ethnobotanical resources are present within this planning unit, although surveys indicate that more substantial resources of this type are found in other nearby areas, such as Manzanita Lake and Kerckhoff Lake, where the terrain and road network make resources more accessible to gatherers.

### Stewardship Council Recommendations

The Stewardship Council recommends that the land and land uses at the Willow Creek Planning Unit be preserved and enhanced by focusing on cultural resources and habitat values. In presenting the Recommended Concept provided here (see Figure WC-6), our objective is to enhance cultural resources, including ethnobotanical and other traditional uses, while preserving biological resources.



Common medea wildflowers by PG&E access road

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**Objective: Preserve and enhance biological resources, cultural resources, and traditional uses and evaluate the potential for grazing opportunities.**

As shown on Table WC-3, the Stewardship Council has identified a number of preservation and/or enhancement measures that may contribute to the conservation management program for the Willow Creek Planning Unit. 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.**

Terrestrial and aquatic habitats that may support special status species are found primarily along Willow Creek and its tributaries. In order to preserve and enhance the habitat and resources found here, 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.

The Stewardship Council also recommends identifying and disclosing unauthorized uses and developing strategies to address future management of these properties. We encourage close coordination with the USFS and other resource-focused organizations working in the region, and that all planning be considered in



Foothill prettyface wildflower by PG&E access road

conjunction with relevant FERC license required management and monitoring plans.

### Open Space

**Objective: Preserve open space in order to protect natural and cultural resources.**

This concept would preserve open space through permanent conservation easements and does not recommend any new development other than signage. 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.

### Agricultural Uses

**Objective: Identify potential grazing opportunities in order to enhance agricultural resources and related economic benefits.**

Although grazing is not currently occurring within the planning unit, limited grazing may be possible. The Stewardship Council recommends an evaluation of the grazing potential within the planning unit, including feasibility, economic viability, benefits, and costs. Any grazing practices would need to be managed in balance with other uses and values in the planning unit.

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### 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.**

Cultural sites have been documented within or near planning unit lands and undiscovered sites may be present within the planning unit. Also, important Native American ethnobotanical resources currently used for traditional purposes are present. 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 in the Willow Creek Planning Unit (particularly outside the FERC cultural resource study area where less information is available). Throughout this effort, the Council recommends close coordination with Native American entities. Development of the cultural resources management plan should be consistent with the FERC Project HPMP. Additionally, the Stewardship Council recommends providing signage near San Joaquin No. 2 Powerhouse to increase visitors' knowledge of the long history of hydropower in the Willow Creek area and secondarily to explain the purpose and use of the extensive project facilities located within the planning unit.

**Table WC-3 Objectives to Preserve and/or Enhance – Recommended Concept**

Planning Unit Objective: Preserve and enhance biological resources, cultural resources, and traditional uses and evaluate the potential for grazing opportunities.		
Beneficial Public Value	Objective	Potential Measures to Preserve and/or Enhance BPVs – Not Requirements*
Protection of the Natural Habitat of Fish, Wildlife, and Plants	<b>Preserve and enhance habitat in order to protect special biological resources.</b>	<ul style="list-style-type: none"> <li>• Conduct surveys of lands outside the FERC boundary to identify biological resources and enable their protection.</li> <li>• Develop a wildlife and habitat management plan for lands outside the FERC boundary consistent with the vegetation management plan required by the new Crane Valley Project License.</li> <li>• Identify and disclose unauthorized uses and develop strategies to address future management and/or eradication.</li> </ul>
Preservation of Open Space	<b>Preserve open space in order to protect natural and cultural resources.</b>	<ul style="list-style-type: none"> <li>• Apply permanent conservation easements to ensure a higher level of open space protection.</li> </ul>
Outdoor Recreation by the General Public		None proposed.
Sustainable Forestry		None proposed.
Agricultural Uses	<b>Identify potential grazing opportunities in order to enhance agricultural resources and related economic benefits.</b>	<ul style="list-style-type: none"> <li>• Evaluate the potential for grazing on the planning unit.</li> </ul>
Preservation of Historic Values	<b>Identify and manage cultural resources in order to ensure their protection, as well as to support opportunities for public education and traditional uses.</b>	<ul style="list-style-type: none"> <li>• Conduct surveys outside the FERC Project APE to identify cultural resources and enable their protection.</li> <li>• Conduct an ethnographic study of lands outside the FERC Project APE to identify traditional use areas, if PG&amp;E studies proposed within the Crane Valley Project HPMP do not provide adequate coverage of the planning unit.</li> <li>• Develop a cultural resources management plan for lands outside the FERC Project APE.</li> <li>• Coordinate with Native American entities when conducting cultural resource measures.</li> <li>• Provide signage along County Road 222 near San Joaquin No. 2 Powerhouse regarding the history of the Crane Valley Hydroelectric Project.</li> </ul>

\*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.

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### Willow Creek Planning Unit Recommended Concept

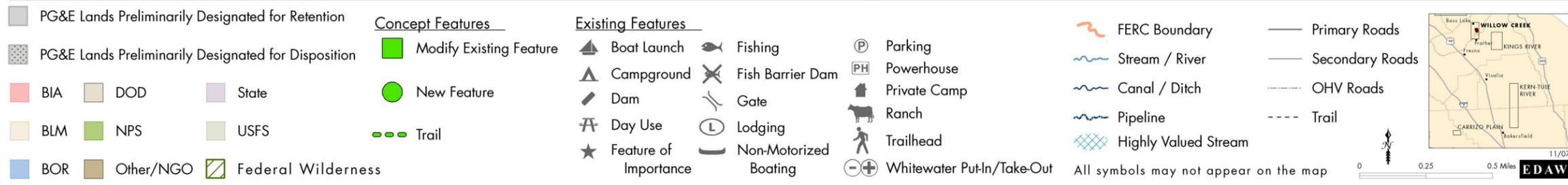
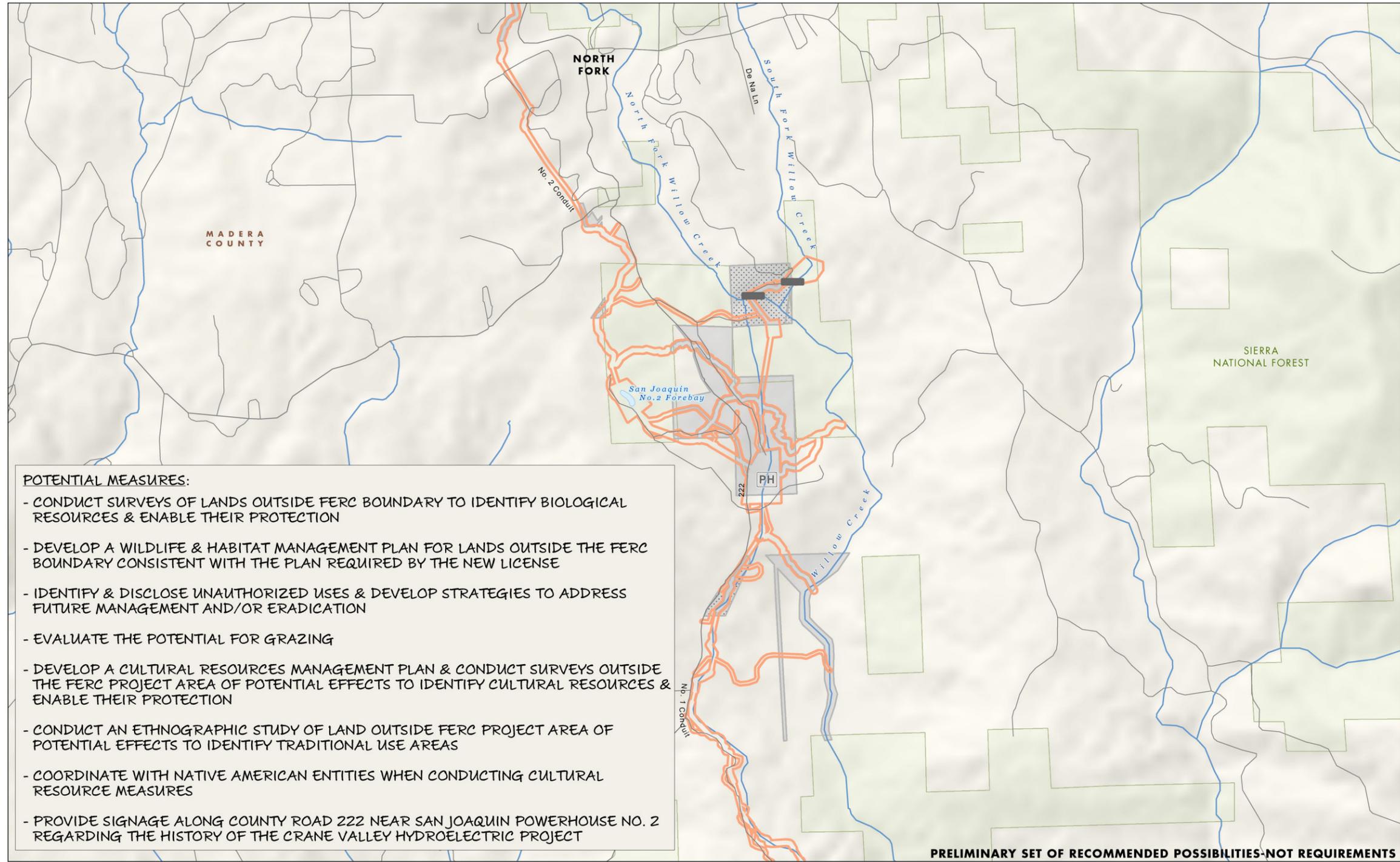


Figure WC-6

## **Willow Creek Planning Unit**

### **Fish, Plant, and Wildlife Habitat**

#### **Potential Measure:**

- *Conduct surveys of lands outside the FERC boundary to identify biological resources and enable their protection.*

Although surveys for terrestrial and aquatic species were conducted during the 1980s for the Crane Valley Project FERC relicensing, it is likely that surveying was limited to lands within the FERC boundary, which includes only 20% of the planning unit and consists mostly of corridors around access roads, flumes, tunnels, and conduits. Therefore, little specific biological information is available for this planning unit. The Stewardship Council recommends surveying lands outside the FERC boundary for biological resources to develop better baseline information on resources present within the planning unit.

#### **Potential Measure:**

- *Develop a wildlife and habitat management plan for lands outside the FERC boundary consistent with the vegetation management plan required by the new Crane Valley Project License.*

The New License for the Crane Valley Project requires PG&E to develop many new management and monitoring plans including a Willow Creek Native Species Monitoring Plan and vegetation management plan. The Willow Creek Native Species Monitoring Plan proposes monitoring of fish in the planning unit portion of Willow Creek, and monitoring of western pond turtles and foothill yellow-legged frogs. Proposed monitoring would also secondarily monitor riparian habitat. The vegetation management plan would address management of vegetation in the project vicinity, the control of noxious weeds, the protection of the valley elderberry longhorn beetle, and the monitoring of project effects on riparian vegetation. It is unknown to what extent this proposed plan will cover lands outside the FERC boundary. Due to the presence of currently unmanaged forest resources, known habitat for a Federally listed species (i.e., valley elderberry longhorn beetle) and potential habitat for other special status species, the Stewardship Council recommends developing a wildlife and habitat management plan for lands outside the FERC boundary as a companion to and consistent with the vegetation management plan required by the New License. The recommended plan should include management of noxious weeds, fuels, protection and monitoring of special status species and their habitat, management of vegetation and forest resources for habitat enhancement, and management of lands along Willow Creek as a riparian buffer.

#### **Potential Measure:**

- *Identify and disclose unauthorized uses and develop strategies to address future management and/or eradication.*

Field visits revealed illegal dumping of garbage on access roads off County Road 222. The ease of access from the County Road, accompanied with the lack of public use, likely contribute to this problem. To protect the habitat values of the land (and to promote protection of cultural and aesthetic values) from any potential future illegal dumping, the Stewardship Council will work with PG&E to identify and disclose unauthorized uses, and develop strategies to address future

management and/or eradication of those uses during the development of the disposition packages in Volume III of the LCP.

## **Agricultural Uses**

### **Potential Measure:**

- *Evaluate the potential for grazing on the planning unit.*

The Stewardship Council recommends evaluating the potential for grazing on the planning unit. Although grazing is not now occurring within the planning unit, and PG&E has stated that no grazing uses of the property were authorized in the past, grazing may have occurred historically. Due to the presence of numerous roads and project facilities and discontinuity of the parcels, it is unlikely that the planning unit could provide for economically viable grazing without use of adjacent lands. However, there is no grazing allotment on adjacent USFS lands. Further investigation into the feasibility, benefits, and costs of introducing grazing on these lands would need to be completed. Although specific information on sensitive habitats is not available, the necessity to protect potentially sensitive habitats associated with Willow Creek would need to be taken into consideration. This evaluation could occur as a component of the vegetation management plan.

## **Preservation of Historic Values**

### **Potential Measures:**

- *Conduct surveys outside the FERC Project APE to identify cultural resources and enable their protection.*
- *Conduct an ethnographic study of lands outside the FERC Project APE to identify traditional use areas, if PG&E studies proposed within the Crane Valley Project HPMP do not provide adequate coverage of the planning unit.*
- *Coordinate with Native American entities when conducting cultural resource measures.*

Although cultural resource surveys were conducted for project relicensing in the 1980s and 1990s, the entire planning unit was not surveyed, as the majority of the lands are located outside the FERC boundary. Ethnographic studies were also conducted for relicensing, and in the 2002 revised Historic Properties Management Plan (HPMP), PG&E committed to conducting additional ethnographic studies to identify traditional cultural properties. To develop a better baseline understanding of existing cultural resources, the Stewardship Council recommends surveying lands outside the FERC Project Area of Potential Effects (APE) for cultural resources and conducting an ethnographic study of lands outside the FERC Project APE if PG&E studies proposed in the revised HPMP do not provide adequate coverage of the planning unit.

### **Potential Measures:**

- *Develop a cultural resources management plan for lands outside the FERC Project APE.*
- *Coordinate with Native American entities when conducting cultural resource measures.*

Assuming that recommended surveys identify cultural sites outside the Crane Valley Project APE, the Stewardship Council recommends developing a cultural resources management plan for lands outside the APE to ensure that cultural resources are provided adequate protection in the

future. The plan would include appropriate measures for the identification, evaluation, and treatment of cultural resources (archaeological and historical), as well as traditional use areas. Treatment measures could include avoidance, specific protective measures (e.g., fencing), site monitoring, and methods to preserve, restore, or enhance cultural resource values through conservation easements, management agreements, or through public interpretation and education programs. Development of the cultural resources management plan should be consistent with the Crane Valley Project Programmatic Agreement and HPMP. All cultural resources measures would be conducted in coordination with Native American entities, potentially through the Crane Valley Project Cultural Resource Committee.

**Potential Measure:**

- *Provide signage along County Road 222 near San Joaquin No. 2 Powerhouse regarding the history of the Crane Valley Hydroelectric Project.*

Although the Willow Creek Planning Unit contains numerous hydropower facilities (including roads, flumes, conduits, tunnels, dams, and a powerhouse), there is currently no information presented to the public on the history of these facilities or their purpose. The Stewardship Council recommends providing interpretive signage along County Road 222 near San Joaquin No. 2 Powerhouse regarding the history of the Crane Valley Hydroelectric Project to increase visitors' knowledge of the long history of hydropower in the Willow Creek area and secondarily to explain the purpose and use of project facilities.

**Open Space****Potential Measure:**

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

The Stewardship Council recommends preserving open space values through permanent conservation easements. Conservation easements would describe all prohibited uses to maintain open space values, including the level of uses allowed. Development of new recreation sites is not recommended; therefore, recommendations are not expected to decrease the scenic quality of the viewsheds.

**Outdoor Recreation**

None recommended.

**Sustainable Forestry**

None recommended.