## **Cow-Battle Creek Watershed**

## **Existing Conditions & Uses**

## **Overview**

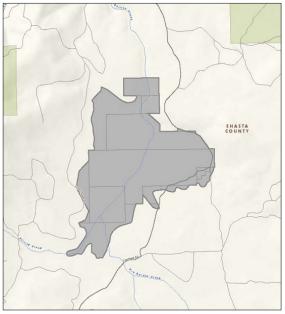
- Formerly homesteaded scenic mountain meadows and forestland surrounded by private timber and grazing lands
- 1,611 acres in Shasta County
- No FERC Project associated with this planning unit

The Burney Gardens Planning Unit is located in Shasta County, approximately 13 miles south of Burney and 22 miles northeast of the rural community of Whitmore. PG&E purchased planning unit lands to create a reservoir, but the reservoir was never developed. There is no hydropower infrastructure onsite and the planning unit is not associated with a FERC Project.

The Burney Gardens area is at an elevation of almost 5,000 feet and is entirely surrounded by private lands used for timber production<sup>1</sup> and grazing. There are a few scattered BLM parcels north and west of the planning unit and a small block of Lassen National Forest land to the west around Snow Mountain, with the main portion of Lassen National Forest to the east (see Figure CB-1). The Thousand Lakes Wilderness Area is approximately five miles away.



Wet & dry meadows grazed by livestock



Burney Gardens Planning Unit Shasta County

## Fish, Plant, and Wildlife Habitat

Burney Gardens provides limited aquatic and riparian habitat within and along Dry Burney Creek. In the spring, the water is high enough for fish to migrate up the stream; however, as its name implies, the creek dries up during the summer and fish can be stranded in remaining pools. It is unknown what fish species live in the creek, though it is likely they are a trout species. In spring and early summer, the Burney Gardens area is wet from snowmelt and springs, forming seasonal wetlands and vernal pools. Because this area is not associated with a FERC Project, it has not been thoroughly studied; thus, there is limited information available on habitats and species.

Various wildlife species such as elk, deer, mountain quail, pileated woodpecker, badger, flying squirrel, mountain lion, black bear, and northern goshawk have been observed in the planning unit. In addition, it is likely that the Burney Gardens Planning Unit serves as a migration corridor for the Cow Creek deer herd. Although very little plant data are available, a special status plant, long-haired star tulip, was identified on a site visit.

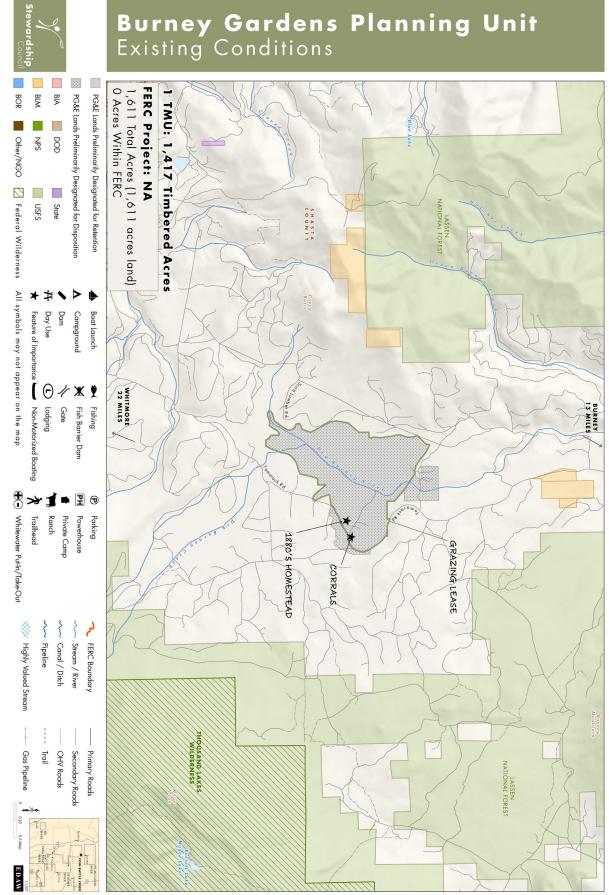


Figure CB-1

## Cow-Battle Creek Watershed

## **Open Space**

The Shasta County General Plan recognizes that agricultural lands provide privately maintained open space, contributing to both the rural character of the county and an open, natural landscape. Open space values are found throughout Burney Gardens due to lack of development and recreation facilities, as well as the primary use of these lands for grazing and timber production. In addition, the high mountain meadows of the planning unit provide excellent views of Burney Mountain, Covey Butte, and Magee Peak.

## **Outdoor Recreation**

Very little recreation takes place on the planning unit, except for hunting, possibly some light fishing use, and unauthorized OHV use. The planning unit is difficult to find and access (via dirt roads), and has a short recreation season due to its location and heavy snow loads.<sup>2</sup>

Fishing in Dry Burney Creek is possible only in spring and very early summer while the creek conveys water. Hunting for bear and deer, as well as unauthorized OHV use, also occurs on the planning unit. Hunting is allowed after cattle have been removed from the planning unit; however, some hunters and OHV users have forced entry into the planning unit, vandalizing fences, gates, and locks.

There is little potential to enhance recreation as the site is difficult to reach and provides few recreation opportunities during a short season. The planning unit presents potential opportunities for wildlife watching; however, there are closer, more accessible opportunities nearby in Lassen National Forest. Additionally, more public access could lead to conflicts with grazing operations and impacts to the fragile meadow system.

## **Forest Resources**

Forest resources within Burney Gardens primarily consist of lodgepole pine-fir forest.

There is one PG&E Timber Management Unit (TMU) that covers most of the planning unit and consists of 1,417 timbered acres. The TMU is currently managed under a Sustainable Timber Management prescription, meaning that sustained timber production is regarded as the highest and best use of the land, while an emphasis is also placed on protecting water quality, wildlife and fisheries habitat, soils, carbon sequestration, and cultural resources. While the majority of the planning unit consists of submerchantable lodgepole pine, a recent timber inventory shows that merchantable timber within the planning unit consists of white fir (65%), lodgepole pine (25%), and ponderosa pine (8%). The last timber harvest at Burney Gardens was in the late 1980s.

## **Agricultural Uses**

A primary use of the Burney Gardens Planning Unit is for cattle grazing. The current grazing lessee has been grazing cattle at Burney Gardens for 55 years. Cattle are grazed at Burney Gardens from about the 10th of June to the 5th of October, depending on the weather and snow conditions. Historically, the lessee grazed about 90 head of cattle, but lodgepole pine encroachment has reduced the amount of forage available, and currently 75 to 80 head graze the planning unit.

The only facilities onsite are for range improvement and consist of waterholes, fencing, and corrals. Eight in-ground waterholes have



Cattle chute & corrals

## **Cow-Battle Creek Watershed**



Meadow & lodgepole forest

been dug to provide water for cattle throughout the summer. There are about 15 miles of fence in the planning unit, enclosing the majority of the planning unit except for two small portions of land that are not grazed. There are corrals on the northeast side of the planning unit and a chute for loading cows into trucks for transporting.

### **Historic Resources**

Both historical and archaeological resources occur within the Burney Gardens Planning Unit. Burney Gardens was surveyed for cultural resources in 1991 for PG&E's Burney Gardens Timber Harvesting Plan. This survey recorded seven sites, including three historic-era sites, three prehistoric sites, and one site containing both prehistoric and historic components. In a meeting with the Pit River Tribe, a tribal member stated that Burney Gardens is an important tribal place. The northern half of the planning unit is within the ancestral lands of the Atsugewi band of the Pit River Tribe.

In addition, the current grazing lessee's step-grandfather was one of the seven homesteaders to settle at Burney Gardens. Remains of the 1880s homestead are still visible within the planning unit along with remains of two other homesteads. The lessee has also found arrowheads on the property in several locations, indicating that archeological resources are present. The lessee also noted that artifact collecting occurs in the planning unit.

## Stewardship Council Recommendations

The Stewardship Council recommends that the land and land uses at Burney Gardens be preserved and enhanced by focusing on habitat values, forest management, cultural resource protection, and the importance of local ranching to the area. In presenting the Recommended Concept provided here (see Figure CB-2), our objective is to preserve and enhance habitat, forest, and cultural resources while also protecting and preserving important agricultural uses.

Objective: Preserve and enhance biological, cultural, and agricultural resources and enhance sustainable forestry management.

As shown on Table CB-1, the Stewardship Council has identified a number of preservation and/or enhancement measures that may contribute to the conservation management program for the Burney Gardens 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.



Meadow penstemon

## **Cow-Battle Creek Watershed**

## Fish, Plant, and Wildlife Habitat

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

Burney Gardens offers forest and high meadow habitat for a potentially wide variety of species, though little information exists on the habitat and species found in the planning unit. 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. These studies will likely be followed by management plans to ensure implementation of preservation and enhancement measures for specific resources. Management of the property to preserve and enhance habitat will also include addressing noxious weeds. The Stewardship Council also recommends encouraging the local Game Warden to patrol the planning unit at the beginning of hunting season to stop unauthorized hunting. We encourage close coordination with the grazing lessee, DFG, and other resourcefocused organizations working in the area, and all planning should be considered in conjunction with the fuels, forest, and rangeland management plans.

### **Open Space**

# Objective: Preserve open space in order to protect natural and cultural resources and agricultural land uses.

This concept would preserve open space 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.



Meadow habitat

## **Sustainable Forestry**

## Objective: Develop and implement forestry practices in order to contribute to a sustainable forest, preserve and enhance habitat, as well as to ensure appropriate fuel load management.

The Burney Gardens Planning Unit provides lodgepole pine forest stands with some late successional trees within the greater Whitmore area, an area known for its frequent forest fires. Additionally, lodgepole pine trees in the planning unit have begun to encroach on valuable meadow habitat, also used for grazing cattle. The Stewardship Council recommends that future care and management of the property include developing a long-term vision for forest management, addressing silvicultural practices, holistic watershed management, and fuels management. Development of measures to protect remaining late successional habitat from vandalism and harvesting, as well as to reduce and control lodgepole pine encroachment on meadow areas, are also recommended. The fuels and forest management plans should be developed in conjunction with the noxious weed, rangeland, and wildlife and habitat management plans. We expect that all of these plans would be developed in coordination with adjacent landowners and lessee management and practices as appropriate.

## **Cow-Battle Creek Watershed**

## **Agricultural Uses**

Objective: Preserve and enhance grazing in order to support associated economic benefits, as well as to protect open space and habitat resources.

Cattle grazing in Burney Gardens has occurred for the past 55 years and contributes to both the agricultural history and local economy of the area. The Stewardship Council looks to preserve this resource and important economic use as part of the long-term management of Burney Gardens. To support this effort, we anticipate a baseline conditions report will be required to describe current agricultural, physical, and overall biological conditions of the area. From this, specific determinations can be made to identify and manage grazing practices in balance with other uses and values of the property. The Stewardship Council also recommends improving fencing in the planning unit to better



Large ponderosa pine tree

manage livestock movement and distribution, and allowing use of only established corridors to access cattle areas in order to protect sensitive meadow habitat.

#### **Preservation of Historic Values**

## Objective: Identify and manage cultural resources in order to ensure their protection.

Burney Gardens is rich in historical resources with at least seven homesteads and contains prehistoric resources as well, though these resources have experienced some looting in the past. 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 Burney Gardens, and that appropriate management plans be developed and implemented. Throughout this effort, the Stewardship Council recommends close coordination with Native American entities.

#### **Endnotes**

<sup>1</sup> Adjacent landowners include Sierra Pacific Industries, Beatty and Associates, and Roseburg Resources.
<sup>2</sup> The area is accessible from the north (Burney) via Tamarack Road, a County Road, where it is a two-lane dirt road often maintained to support logging truck traffic. The area is also accessible from the south (Whitmore) via Tamarack Road, which is a four-wheel-drive road that is not well maintained or signed. In addition, many logging spur roads make the area difficult to navigate.

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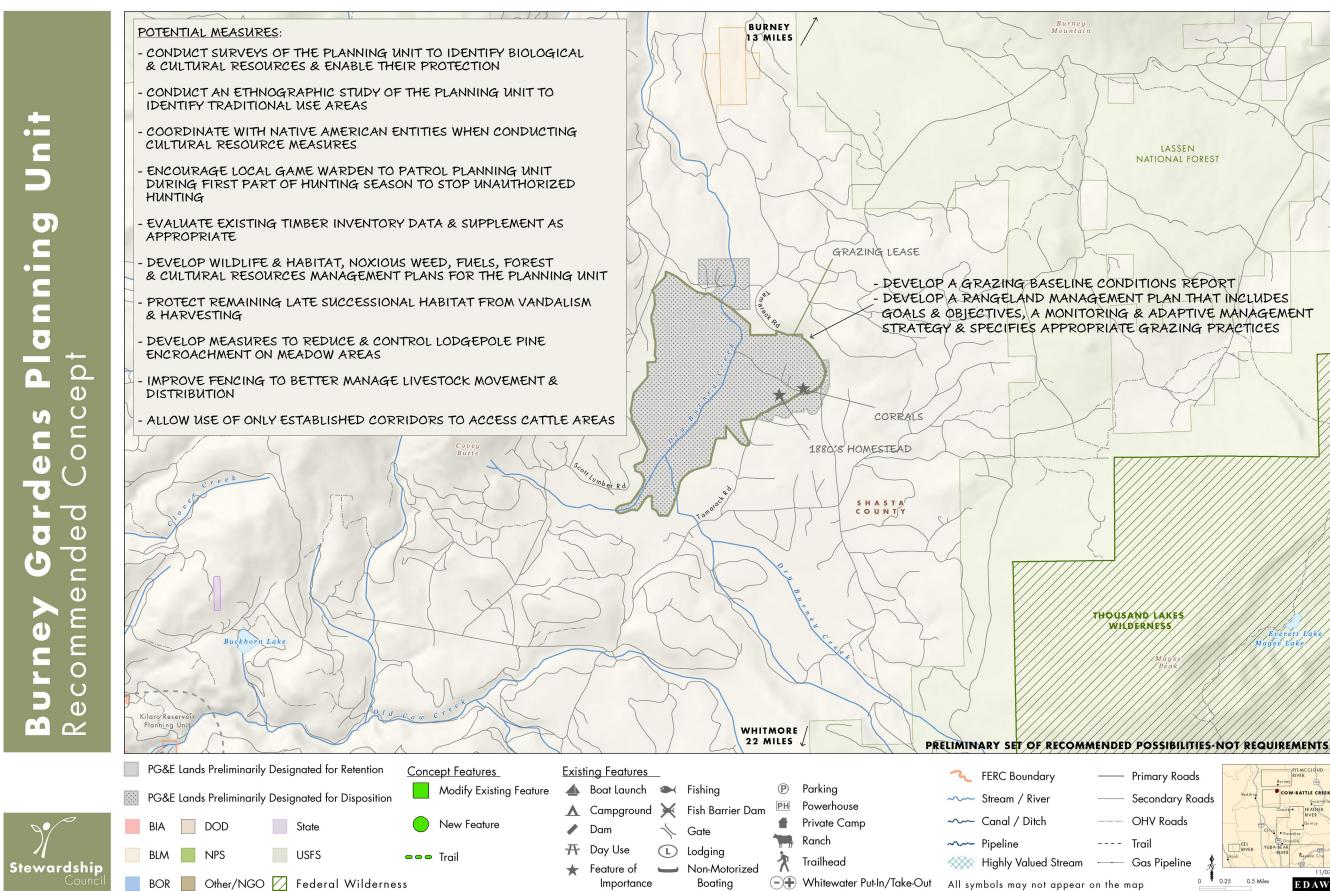
## Table CB-1 Objectives to Preserve and/or Enhance – Recommended Concept

Planning Unit Objective: Preserve and enhance biological, cultural, and agricultural resources and enhance 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> <li>Conduct surveys of the planning unit to identify biological resources and enable their protection.</li> <li>Develop a wildlife and habitat management plan for the planning unit.</li> <li>Develop a noxious weed management plan for the planning unit.</li> <li>Encourage the local Game Warden to patrol the planning unit during the first part of hunting season to stop unauthorized hunting.</li> </ul>
Preservation of Open Space	Preserve open space in order to protect natural and cultural resources and agricultural land uses.	Apply permanent conservation easements to ensure a higher level of open space protection.
Outdoor Recreation by the General Public		None proposed.
Sustainable Forestry	Develop and implement forestry practices in order to contribute to a sustainable forest, preserve and enhance habitat, as well as to ensure appropriate fuel load management.	<ul> <li>Protect remaining late successional habitat from vandalism and harvesting.</li> <li>Develop measures to reduce and control lodgepole pine encroachment on meadow areas.</li> <li>Evaluate existing timber inventory data and supplement as appropriate.</li> <li>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.</li> <li>Develop a fuels management plan for the planning unit to ensure long-term forest health and reduce fuel loading and fire hazard.</li> </ul>
Agricultural Uses	Preserve and enhance grazing in order to support associated economic benefits, as well as to protect open space and habitat resources.	<ul> <li>Improve fencing to better manage livestock movement and distribution.</li> <li>Allow use of only established corridors to access cattle areas.</li> <li>Develop a baseline conditions report that describes current agricultural, physical, and overall biological conditions of the area, including current uses and state of improvement.</li> <li>Develop a rangeland management plan for grazing use that includes goals and objectives and a monitoring and adaptive management strategy, and specifies grazing practices that address soil and water conservation, erosion control, pest management, nutrient management, vegetation management, habitat protection, and cultural resources management.</li> </ul>
Preservation of Historic Values	Identify and manage cultural resources in order to ensure their protection.	<ul> <li>Conduct surveys of the planning unit to identify cultural resources and enable their protection.</li> <li>Conduct an ethnographic study of the planning unit to identify traditional use areas.</li> <li>Develop a cultural resources management plan for the planning unit.</li> <li>Coordinate with Native American entities when conducting cultural resource measures.</li> </ul>

<sup>\*</sup> 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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## **Cow-Battle Creek Watershed**



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## **Burney Gardens Planning Unit**

## Fish, Plant, and Wildlife Habitat

### **Potential Measure:**

• Conduct surveys of the planning unit to identify biological resources and enable their protection.

The planning unit is not associated with a FERC Project and likely has not been surveyed or studied, except possibly for previous timber harvests (the last of which was over 15 years ago). Wetlands and vernal pools within the planning unit, as well as the moderate elevation meadow, suggest there could be special status species present. Therefore, the Stewardship Council recommends conducting surveys of the planning unit to identify biological resources and enable their protection.

### **Potential Measure:**

• Develop a wildlife and habitat management plan for the planning unit.

The Stewardship Council also recommends using biological resource survey data to develop a wildlife and habitat management plan. This planning unit contains excellent habitat, and many species likely use this area. Once surveys are completed, potential habitat enhancements can be identified and developed into a comprehensive plan describing goals and objectives for habitat and species, as well as measures needed to enhance and protect habitat for both plant and wildlife species. Monitoring of species and/or habitats would also be developed as a component of the plan. The wildlife and habitat management plan should be developed in conjunction with the noxious weed, forest, rangeland, and fuels management plans, as well as coordinated with patrols of the planning unit for unauthorized hunting (see below).

### **Potential Measure:**

• Develop a noxious weed management plan for the planning unit.

It is unknown if there are noxious weeds within the planning unit. Therefore, the Stewardship Council recommends developing a noxious weed management plan for the planning unit. Development of the noxious weed management plan should be coordinated with existing PG&E noxious weed efforts, and the wildlife and habitat, rangeland, fuels, and forest management plans.

#### **Potential Measure:**

• Encourage the local Game Warden to patrol the planning unit during the first part of hunting season to stop unauthorized hunting.

Unauthorized hunting use does occur in Burney Gardens, primarily at the beginning of the season before cattle have been removed from the planning unit. To reduce unauthorized hunting use, the Stewardship Council recommends encouraging the local Game Warden to patrol the planning unit during the first part of the hunting season to stop unauthorized hunting. Such patrol might also deter unauthorized artifact collecting and OHV use.

## **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. Recommendations do not include development of any new sites and therefore are not expected to decrease the scenic quality of the viewsheds.

## **Outdoor Recreation**

None recommended.

## **Sustainable Forestry**

### **Potential Measure:**

• Protect remaining late successional habitat from vandalism and harvesting.

There are a few very large ponderosa pines left around the edge of the planning unit along Tamarack Road. Some of these trees are within the fenced area and some are not. One in particular is extremely large and not within the fenced area. This tree has been vandalized by people carving into the tree. There is potential for this to occur on other large trees nearby that are not fenced. Though these large ponderosa pine trees are commercially valuable, such large, old trees provide excellent habitat for many species, especially as surrounding areas are being intensively harvested. Therefore, the Stewardship Council recommends protecting late successional habitat from further vandalism and potential harvesting, both legal and illegal, to ensure that such important habitat is preserved and protected. Measures to protect late successional habitat would be included as a component of the forest management plan.

## **Potential Measure:**

• Develop measures to reduce and control lodgepole pine encroachment on meadow areas.

Lodgepole pine is currently encroaching into the meadow areas of the planning unit, reducing meadow habitat and available forage. Potential causes of lodgepole pine encroachment could include previous disturbances such as logging or water manipulation, previous fire suppression efforts, changing microclimates due to downed trees, and removal of other tree species such as ponderosa pine. To maintain meadow habitat, provide forage, and return to more historical forest conditions, the Stewardship Council recommends developing measures to reduce and control lodgepole pine encroachment on meadow areas. Such measures could include tree removal and controlled burning. Efforts to reduce lodgepole pine encroachment should also be coordinated with the grazing lessee and would be included as a component of the forest management plan.

### **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.

Current forest management at Burney Gardens is for sustained timber production. Most large trees, except for a few scattered late successional ponderosa pines along the edge of the planning unit, have likely been removed. Such late successional habitat can provide habitat for many species. Surrounding lands are being intensively harvested and occasionally clearcut. Therefore, habitat quality and quantity in the greater area are being diminished. To enhance sustainable forestry management, promote late successional growth, and protect existing habitat, the Stewardship Council recommends developing a forest management plan for the planning unit 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 watershed management, supporting the enhancement of other BPVs over the long term. The plan would address the potential for research on planning unit lands and would include previously mentioned measures to protect remaining late successional habitat and reduce lodgepole pine encroachment. Development of the forest management plan should be coordinated with development of the wildlife and habitat, noxious weed, rangeland, and fuels management plans.

In the areas where timber extraction is consistent with the forest management plan, timber harvesting techniques would be promoted that maintain mosaics of forest stands of different age, size, and rotation period. In addition to utilizing PG&E's uneven-age selection harvest system, harvesting practices and a monitoring program would be included to protect watercourses and lakes and promote the restoration and conservation of natural forests. Post-harvest, a monitoring plan would be developed to ensure that forest management and the proposed harvesting schedule would be consistent with the forest management plan, promoting natural forest development in perpetuity.

### **Potential Measure:**

• Develop a fuels management plan for the planning unit to ensure long-term forest health and reduce fuel loading and fire hazard.

Due to the location of the planning unit near the towns of Burney and Whitmore, presence of late successional habitat, and propensity for fires in the Whitmore area, reduction of fuels within the planning unit is important. Therefore, the Stewardship Council recommends developing a fuels management plan for the planning unit to ensure long-term forest health and reduce fuel loading and fire hazard. Development of the fuels management plan should be coordinated with the wildlife and habitat, noxious weed, rangeland, and forest management plans.

## **Agricultural Uses**

### **Potential Measure:**

• *Improve fencing to better manage livestock movement and distribution.* 

Fencing infrastructure at Burney Gardens is somewhat dated and has been vandalized, as well as damaged from snow and fallen trees. To better manage livestock movement and distribution, the Stewardship Council recommends improving fencing. Improved fences would not only benefit agricultural use, but could also reduce unauthorized artifact collecting, hunting, and OHV use.

## **Potential Measure:**

• Allow use of only established corridors to access cattle areas.

The Stewardship Council also recommends using only established corridors to access cattle areas. Currently, the grazing lessee does use existing corridors such as old logging roads that have become four-wheel-drive roads and trails; however, the lessee also sometimes drives an all-terrain vehicle across the meadows to access cattle areas. This can damage meadow habitat and reduce forage. By limiting access to existing corridors, meadow habitat would be protected and forage resources maintained. If established corridors do not offer direct access and are cumbersome to the lessee, a compromise would need to be developed to both offer direct access to cattle areas and protect meadow habitat. This measure would also be included within the rangeland management plan.

#### **Potential Measure:**

• Develop a baseline conditions report that describes current agricultural, physical, and overall biological conditions of the area, including current uses and state of improvement.

It is unknown if range assessments have been conducted for the planning unit. Thus, the Stewardship Council recommends developing a baseline conditions report that describes current agricultural, physical, and overall biological conditions of the area, including current uses and state of improvement. This report would help determine appropriate grazing practices, regime, and management.

## **Potential Measure:**

• Develop a rangeland management plan for grazing use that includes goals and objectives and a monitoring and adaptive management strategy, and specifies grazing practices that address soil and water conservation, erosion control, pest management, nutrient management, vegetation management, and habitat protection.

Once the recommended baseline conditions report is completed, the Stewardship Council recommends developing a rangeland management plan for grazing use that includes goals and objectives and a monitoring and adaptive management strategy, and specifies grazing practices that may address topics including soil and water conservation, erosion control, pest management, nutrient management, vegetation management, habitat protection, and cultural resources management. This plan would ensure that grazing use within the planning unit meets the Stewardship Council policy for agricultural uses on Watershed Lands. This plan would also identify any additional fencing needed within the planning unit, in conjunction with protection and enhancement of habitat as identified in the wildlife and habitat management plan. Development of the rangeland management plan should be coordinated with the noxious weed, fuels, and forest management plans. Additionally, development of the rangeland management plan should be coordinated with measures to reduce lodgepole pine encroachment as such efforts would maintain and/or increase forage availability.

## **Preservation of Historic Values**

#### **Potential Measures:**

• Conduct surveys of the planning unit to identify cultural resources and enable their protection.

• Coordinate with Native American entities when conducting cultural resource measures.

Burney Gardens is not associated with a FERC Project and was last surveyed in 1991 for a timber harvest. It is unknown if this survey meets current standards. The area is rich in historic resources as there were at least seven homesteads in the area, and remnants of some can still be found. Projectile points and other lithics have been found by the lessee around the meadow and because of the unique meadow setting, the planning unit is likely rich in cultural resources. To develop a better understanding of cultural resources within Burney Gardens, the Stewardship Council recommends conducting surveys of the planning unit to identify cultural resources and enable their protection. Documentation of cultural sites should be coordinated with Native American entities.

## **Potential Measures:**

- Conduct an ethnographic study of the planning unit to identify traditional use areas.
- Coordinate with Native American entities when conducting cultural resource measures.

In addition to surveys, the Stewardship Council recommends conducting an ethnographic (and ethnohistoric) study of the planning unit to identify traditional use areas. Such a study would document both historical and Native American use of the planning unit. As generations pass on, such information is difficult to obtain and valuable historical information may be lost. There appear to be individuals in the area that know the history of the area, providing an opportunity to document historical and traditional use of the planning unit; thus, advantage should be taken of this opportunity. Such information may also help identify additional cultural sites that surveys cannot or do not identify. The ethnographic study should be coordinated with Native American entities.

## **Potential Measures:**

- Develop a cultural resources management plan for the planning unit.
- Coordinate with Native American entities when conducting cultural resource measures.

Once the recommended surveying and ethnographic study identify cultural sites and traditional use areas, the Stewardship Council recommends developing a cultural resources management plan for the planning unit 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) and 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 coordinated with Native American entities.