

# BATTLE CREEK PLANNING UNIT

## Cow-Battle Creek Watershed

### Existing Conditions & Uses

#### Overview

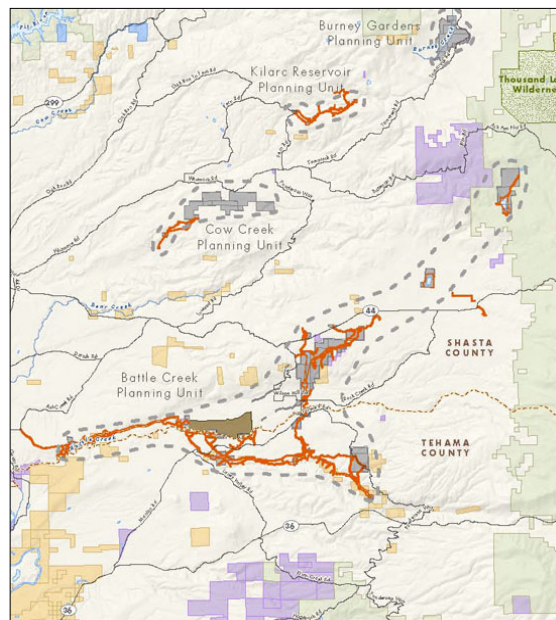
- Reservoirs, canals, and dams surrounded by scenic forests and oak woodlands
- 6,057 acres in Shasta and Tehama Counties; 5,931 acres outside the FERC boundary and 1,126 acres inside the FERC boundary
- Comprises the Battle Creek Project (FERC #1121); License expires 2026

The Battle Creek Planning Unit is located in both Shasta and Tehama Counties at an elevation range of 1,000 to 6,000 feet. The planning unit is located in and around the rural communities of Shingletown and Manton; approximately 30 miles east of the City of Redding (see Figure CB-7). The most eastern area (North Battle Creek Reservoir) and the most western area (Coleman Forebay) are separated by about 28 miles (by air).

The planning unit contains lands and facilities associated with the Battle Creek Project (FERC #1121). This project contains numerous facilities and water bodies.<sup>1</sup> Though many of these project facilities are all or at least partially on planning unit lands, many portions of canals, flumes,



Fishing at Lake Grace



Battle Creek Planning Unit  
Shasta & Tehama Counties

tunnels, and pipelines cross private property as well.

Surrounding ownership in the eastern portion of the planning unit includes the Lassen National Forest around North Battle Creek Reservoir; private housing around McCumber Reservoir; private, State, and BLM land in the Shingletown/Volta areas; private land around planning unit lands in Manton; and private and BLM land around Bluff Springs. In the western portion of the planning unit, ownership includes: The Nature Conservancy's Wildcat Ranch and private land around Wildcat Diversion Dam; State and private land around Asbury Pump; and private and BLM land around Inskip and Coleman Powerhouses. BLM lands around Coleman Forebay in the western portion of the planning unit have been included in legislation introduced to Congress to establish the Sacramento River National Recreation Area.

There are six leases in the planning unit: one for a District 4-C1 Lion's Club/Shasta YMCA Camp (Camp McCumber), one grazing lease, and two aquaculture and two water use agreements with Mt. Lassen Trout Farm. There is also a PG&E Service Center located on planning unit lands within the community of Manton. Other notable



# Battle Creek Planning Unit Existing Conditions

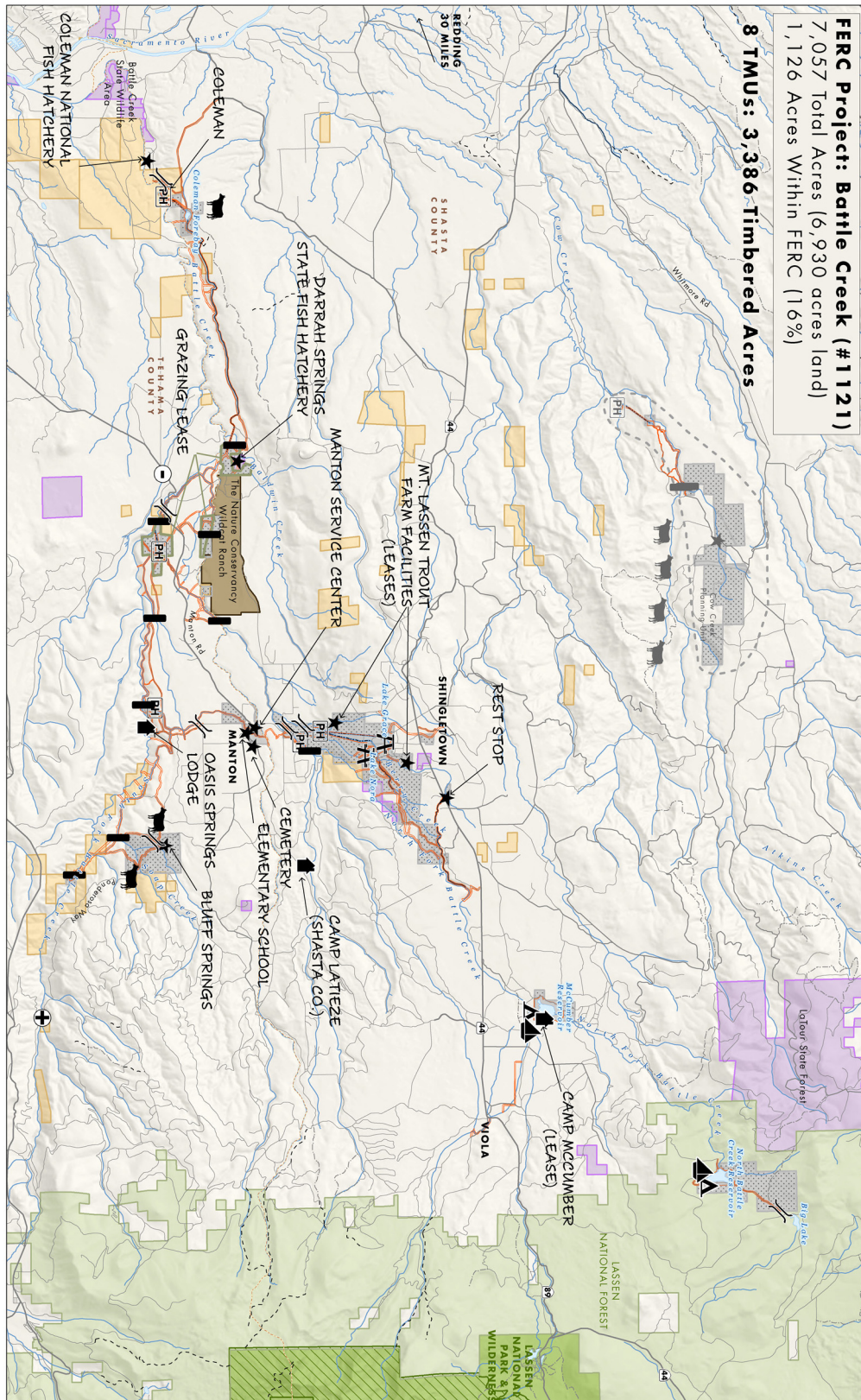
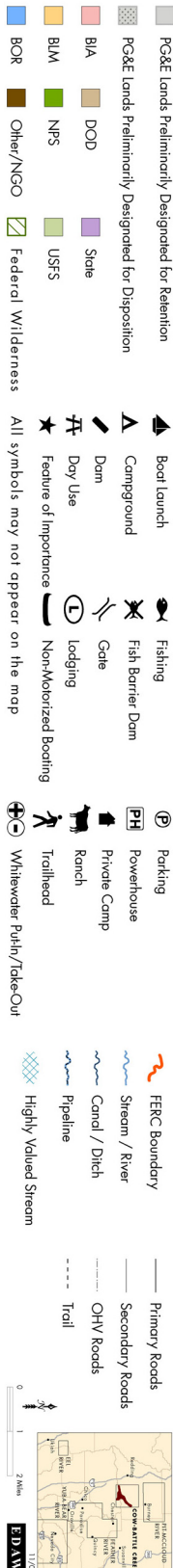


Figure CB-7



# BATTLE CREEK PLANNING UNIT

## Cow-Battle Creek Watershed

landmarks in the area include the Coleman National Fish Hatchery just downstream of Coleman Powerhouse, and Darrah Springs State Fish Hatchery adjacent to the Asbury Pump area.

### Fish, Plant, and Wildlife Habitat

The planning unit provides aquatic habitat within the planning unit's many reservoirs, lakes, creeks, and canals. Rainbow trout are found in the two reservoirs and two lakes. DFG currently stocks fish in North Battle Creek Reservoir and Grace and Nora Lakes. Fish species within Battle Creek include spring-run, fall-run, and late fall-run chinook salmon and steelhead, among other native and non-native fish species. Special status aquatic species within the planning unit include foothill yellow-legged frog and northwestern pond turtle as well as salmon and steelhead (see below). There is also potential habitat for mountain yellow-legged frog at North Battle Creek Reservoir; however, no surveys have been conducted for this species.

Other than the mainstem of the Sacramento River, Battle Creek may be the only remaining creek in California that can sustain breeding populations of steelhead (Federally threatened) and all four runs of chinook salmon (winter, late fall, fall, and spring-run), a State and Federally threatened species. To enhance habitat for these fish species, a large scale restoration project is proposed throughout much of the planning unit, particularly the South Fork Battle Creek area. The project is called the Battle Creek Salmon and Steelhead Restoration Project (Restoration Project) and is being funded primarily through the U.S. Bureau of Reclamation (from CALFED funds) and PG&E. Conveyance facilities, removal of diversion dams, and additional fish screens and ladders would enhance habitat for steelhead as well as chinook salmon and would re-establish steelhead and winter-run and spring-run chinook salmon populations in Battle Creek.

Wildlife species in the planning unit include yellow-breasted chat, ringtail, deer, several bat species, and a variety of raptors including

hawks, eagles, and osprey. Surveys conducted for the Restoration Project identified several raptors in the lower planning unit, including osprey, bald and golden eagles, peregrine falcon, and sharp-skinned and Cooper's hawks. All of these species have a special status varying from Federally threatened to State species of special concern. Suitable habitat was also found for valley elderberry longhorn beetle, prairie falcon, California spotted owl, little willow flycatcher, and yellow warbler during Restoration Project surveys.

Additionally, the USFS has designated Protected Activity Centers (PACs) for willow flycatcher and California spotted owl within the North Battle Creek Reservoir area. Numerous mapped goshawk territories occur throughout the planning unit as well. Suitable foraging habitat for several bat species, many of which are special status species, were also identified in surveys for the Restoration Project. The planning unit also contains critical winter range for deer. The Restoration Project identified riparian forest and scrub habitats as among the most important wildlife habitats within the project as they are important deer migratory corridors and attract a diversity of birds. These types of riparian habitat



Waterfall at Bluff Springs

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Grassland pasture at Asbury Pump

within the Restoration Project area are found along the two forks of Battle Creek and along Soap Creek.

Botanical data are limited to information from the CNDDDB and Restoration Project surveys. Special status plant species identified within the planning unit include Butte County fritillary, Baker's globe mallow, slender orcutt grass, depauperate milk-vetch, woolly meadowfoam, shield-bracted monkeyflower, and Biwell's knotweed. The Restoration Project surveys found 59 special status plant populations occurring or potentially occurring in the Restoration Project area. Surveys for the Restoration Project also found five species of noxious weeds at several sites.

### Open Space

The planning unit contains open space around the two reservoirs and two lakes (outside of recreation developments) as well as around FERC Project facilities. The Shasta County General Plan recognizes that agricultural lands provide privately maintained open space, which contributes to both the rural character of the county and its open, natural landscape. The General Plan also identifies that rivers and creeks and their associated riparian corridors provide major open space resources in the county.

Open space values are found throughout the planning unit, due to the use of planning unit

lands for grazing and timber production, as well as the concentration of recreation facilities at four developed sites. The planning unit lands around and within the communities of Shingletown and Manton provide open space for these communities. Lands around McCumber Reservoir, near Highway 44 in Shingletown, along South Battle Creek, near Wildcat Ranch, and adjacent to Darrah Springs State Fish Hatchery provide open space and viewshed for surrounding developments and facilities. McCumber Reservoir is also specifically included in Shasta County's Open Space Inventory.

### Outdoor Recreation

Developed recreation facilities are all located in the northern half of the planning unit at the two reservoirs and the two lakes. There is a campground with a host at North Battle Creek Reservoir which was found to be partially on USFS land in a late 1980s landline survey. There is also a car-top boat ramp (electric motors only on reservoir), and recreationists can walk from the boat ramp to the dam (0.5 mile). The reservoir is mainly used for camping, boating, and fishing. The road along the east edge of the reservoir running north through the planning unit is gated to maintain a remote setting.

McCumber Reservoir also has a campground with a host and a boat launch (electric motors only on the reservoir), and is also a popular local fishing spot. The reservoir had a day use



South Fork Battle Creek by Inskip Powerhouse



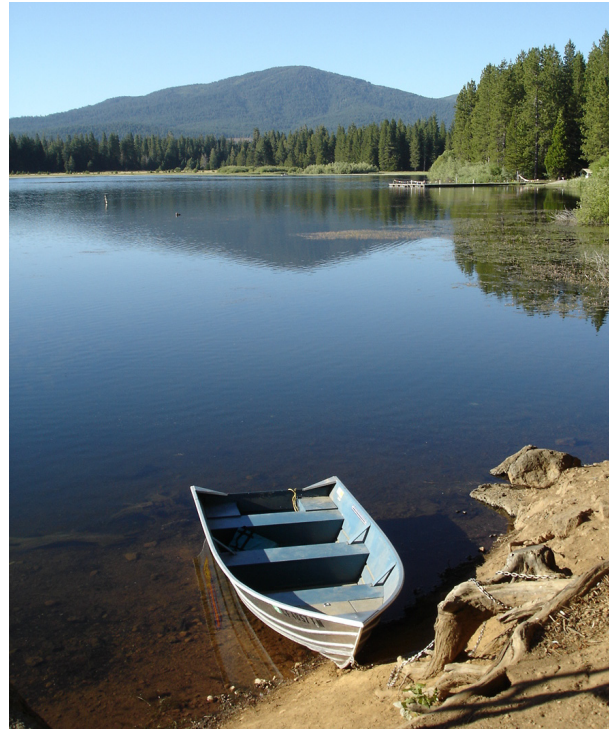
## BATTLE CREEK PLANNING UNIT

### Cow-Battle Creek Watershed

area, but it was converted to a camping area in 1973 due to low use. A private camp (Camp McCumber) managed by the District 4-C1 Lion's Club and Shasta YMCA is leased on the east side of the reservoir. In addition to the traditional summer camp experience, the camp provides special sessions for diabetic and deaf children.<sup>2</sup> Both Grace and Nora Lakes have developed recreation facilities including a ten-site day use area at each lake; and both lakes receive year-round local fishing use.

Apart from developed facilities, recreation in the northern portion of the planning unit also takes place at the Shingletown rest stop and along hydroelectric project canals. The Shingletown rest stop is located on planning unit lands along Highway 44 near Shingletown. This rest stop was developed in conjunction with the California Department of Transportation (CalTrans) and Shasta Forests Company, and visitors can fish in the nearby creek or in the Al Smith Canal. There are seven fishing access sites along canals in the northern portion of the planning unit (north of the Volta Powerhouses); however, many of these accesses are difficult to find, not signed, and receive very little use. Apart from the two forks of Battle Creek, most creeks in the planning unit have a short fishing season, primarily in spring when flows are high and fish migrate up the creeks.

Although the southern half of the planning unit does not have any formal recreation facilities, fishing and kayaking are popular recreation activities along with limited hunting and picnicking use. Public access limitations constrict fishing opportunities to the Cross Country Canal, located on planning unit lands in Manton, and Baldwin Creek at Asbury Pump. There is a portable restroom at Asbury Pump and fishing is popular here from the end of April to the beginning of July. Due to the necessity to cross private property, fishing access is not possible at Wildcat Diversion Dam, Inskip Powerhouse, South Powerhouse, and upstream of South Powerhouse at Soap Creek and South Diversion Dams. Fishing and public access were previously allowed at Coleman Forebay, but due



Boat at McCumber Reservoir

to a new gate on adjacent private land, as well as the presence of BLM and PG&E gates, public access is now prevented.

Planning unit lands along South Fork Battle Creek also receive kayaking use, but this use is likely minimal. There is an 11.5-mile Class V whitewater run on the South Fork that begins upstream of South Diversion Dam at the Ponderosa Way road crossing and ends just downstream of the Inskip Powerhouse at the Manton Road crossing. Boaters can portage around existing hydroelectric facilities. Removal of these facilities and increased flows resulting from the Restoration Project would likely benefit kayaking use on the South Fork. The Restoration Project Final Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) describes an additional 13-mile Class III whitewater run from the Manton Road crossing downstream to Coleman National Fish Hatchery.

The BLM's Redding Resource Management Plan classifies South Fork Battle Creek from the Ponderosa Way road crossing to the Manton Road crossing (the first whitewater run) as "recreational" and the segment from the Manton

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Road crossing to 0.25 mile upstream of Coleman Powerhouse (along the second whitewater run) as “scenic.” Though a BLM Wild and Scenic River Eligibility Study found Battle Creek to be eligible for wild and scenic river status, no stretch of Battle Creek has been Federally-designated as Wild and Scenic.

Recreation use also occurs at Bluff Springs, consisting mainly of hunting and picnicking use. Deer and quail hunting occur in this area, but use is probably light. Picnicking at the Bluff Springs, or “Little Hawaii,” waterfalls occurs during the summer and receives use from Red Bluff, Redding, and local residents.

### Forest Resources

The planning unit contains eight PG&E Timber Management Units (TMUs), which cover a large portion of the planning unit, except for the lands west of South Powerhouse (Coleman Forebay/ Powerhouse, Asbury Pump, and Wildcat and Inskip Powerhouse areas) for a total of 3,386 timbered acres. The North Battle Creek Reservoir TMU includes 1,135 timbered acres containing species such as lodgepole pine, red fir, and white fir. This TMU has tree plantations and is managed under a Recreation and Sustainable Timber Management prescription, meaning that recreation in this area is compatible with timber management. Forest management in designated recreation areas is limited to fuel reduction, hazard tree removal, and improvement of aesthetics. Outside of designated recreation areas, sustainable timber management is



Baldwin Creek at Asbury Pump

emphasized. This is also the management prescription for TMUs along Millseat Creek (89 timbered acres) and Lake Grace (699 timbered acres) in the Shingletown area.

The two TMUs surrounding the Lake Grace TMU are the Berry Creek (812 timbered acres) and Volta Powerhouse (77 timbered acres) TMUs. These TMUs are managed under a Sustainable Timber Management prescription, meaning that sustained timber production is regarded as the highest and best use of the land while also placing an emphasis on protecting water quality, wildlife and fisheries habitat, soils, carbon sequestration, and cultural resources.

The lands south of the Volta Powerhouse TMU are within the rural community of Manton where a fire occurred in 2005, burning much of the planning unit lands in that area. PG&E has planted conifers on this land after burned brush was removed. A new TMU will be created for this area, approximately 100 acres, and will also be managed by PG&E under a Sustainable Timber Management prescription.

The McCumber Reservoir TMU contains 221 timbered acres of second-growth mixed conifer forest, including ponderosa pine and white fir species. This is the only TMU managed under a Multiple Uses prescription, meaning that protection and uses of other resources and facilities may preclude sustained timber management as the highest and best use of portions of the TMU. There is a Timber Harvesting Plan (THP) in effect until 2008 for the North Battle Creek Reservoir, McCumber Reservoir, Millseat Creek, Berry Creek, and Lake Grace TMU areas. Harvesting has occurred in the area east of Lakes Grace and Nora. It is unknown when or if harvesting has occurred in the other areas.

Finally, the Bluff Springs TMU has 235 timbered acres covering the Bluff Springs and South Powerhouse parcels. This TMU is currently managed under a Salvage/Stand Improvement prescription, meaning that the lands are primarily managed for uses other than sustained timber production, but may require entry to reduce



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Float fishing at North Battle Creek Reservoir

fuel loads, remove hazard trees, and improve aesthetics. There was a fire in the Bluff Springs area 8 to 10 years ago that encompassed the southern half of the area. The non-TMU lands are primarily oak woodlands; fires have occurred on lands in the Coleman Forebay, Inskip Powerhouse, and Asbury Pump areas according to geographic information system (GIS) data.

### Agricultural Uses

Agricultural use currently occurs in the planning unit at Asbury Pump, the Wildcat Diversion Dam area south of North Fork Battle Creek, and at Inskip Powerhouse. These areas are all under one grazing lease, but details regarding grazing operations are not available. Grazing previously occurred at several other areas in the Battle Creek Planning Unit, including an area near North Battle Creek Reservoir; however, it was terminated approximately six years ago due to lack of use and poor performance by the lessee. There is also a USFS range allotment on land adjacent to the reservoir. Grazing also occurred at McCumber Reservoir, but was terminated by FERC order in 1990 to improve meadow habitat adjacent to the reservoir. The areas around Coleman Forebay and near the Volta 1 Powerhouse access road were also grazed at one time, but are no longer being used for that purpose. Grazing leases at both Coleman Forebay and Volta 1 Powerhouse were not renewed at the lessee's request. Though Bluff

Springs is not currently leased for grazing, cattle have been seen on planning unit lands.

### Historic Resources

Both historic and prehistoric resources are present within the Battle Creek Planning Unit. The planning unit lies within the ancestral territory of the Yana people. Skirmishes between Yana populations and European settlers led to massacres between 1847 and 1867, leaving the Yana population at less than 100 individuals. The Pit River Tribe now represents the Yana people, as some members of the Pit River Tribe are of Yana decent.

The planning unit also has a long history of hydroelectric power generation and several structures associated with hydropower development may be eligible for NRHP listing. In 1900, Keswick Electric Power Company began building a hydroelectric plant on North Fork Battle Creek (Volta 1) to provide power to mines and smelters in the Keswick area. Subsequently, Northern California Power Company took over the Volta power plant and expanded the system by building the South, Inskip, and Coleman Powerhouses. PG&E purchased the system in 1919 and made very few improvements until 1980 when old powerhouses were replaced with automatic facilities.

Surveys for the Restoration Project found four cultural sites at Inskip Powerhouse including a prehistoric flake scatter, historic rock wall, historic rock pile, and historic foundation. An assessment of sites for NRHP and California Register of Historic Places eligibility found that three dams on planning unit lands are eligible for historical reasons (primarily related to the dam designers) and include the Inskip, Coleman, and Wildcat Diversion Dams. Many of the hydroelectric project canals and dams are also considered cultural resources. The Bluff Springs area contains cultural resources that were at one point vandalized and stolen. The erection of fencing, as well as the arrests of a few individuals who were pilfering USFS lands, has likely led to the cessation of this illegal activity.

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### Stewardship Council Recommendations

The Stewardship Council recommends that the land and land uses at the Battle Creek Planning Unit be preserved and enhanced by focusing on enhancing valuable forestry, agricultural, and habitat resources, protecting cultural resources and enhancing the recreation experience. In presenting the Recommended Concept provided here, our objective is to protect and enhance habitat and cultural resources, as well as enhance sustainable forestry, agricultural uses and recreation opportunities. We recommend this effort be conducted in close coordination with PG&E and the Restoration Project.

**Objective: Preserve and enhance biological, cultural, and agricultural resources, and enhance sustainable forestry management and recreation opportunities and experiences.**

As shown on Table CB-4, the Stewardship Council has identified a number of preservation and/or enhancement measures that may contribute to the conservation management program for the Battle 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 and coordinate with ongoing restoration projects in the area.**

In addition to forest habitats, the planning unit provides extensive aquatic, riparian, and scrub habitat for numerous special status species. 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 Battle Creek Restoration Project boundary where less 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 to preserve and enhance habitat will also include addressing noxious weeds. Habitat preservation and enhancement measures should be coordinated with the Battle Creek Salmon and Steelhead Restoration Project and the Battle Creek Watershed Conservancy, as appropriate. All planning should also 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, viewsheds, and agricultural land uses.**



Soap Creek road crossing at Bluff Springs



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Logged area near Lake Nora

This concept would preserve open space by limiting construction to only minor additions of 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.

### Outdoor Recreation

**Objective: Enhance recreational facilities in order to provide additional recreation opportunities and management, and enhance the recreation experience.**

Fishing is a primary recreation use of the Battle Creek Planning Unit lands and waters; however, camping, picnicking, boating, whitewater kayaking, and hunting are also available at different locations throughout the planning unit. As shown in Figure CB-8, the Stewardship Council looks to enhance these opportunities by recommending facility enhancements and additions, as well as further study and management of recreation within the planning unit. We recommend enhancements focused on developing a day use area with ADA accessibility; increasing opportunities for youth education and recreation; working to resolve boundary issues and enhancing facilities at the North Battle Creek Reservoir Campground;

assessing use of a parcel near Shingletown for public open space, recreation, or educational use; as well as improving road crossings at Bluff Springs to enhance safety.

The Stewardship Council also recommends conducting an inventory of recreation uses on planning unit lands in order to evaluate the need/demand for additional facilities. The inventory of recreation use should be coordinated with adjacent landowners such as the BLM and USFS, and should be used to develop a recreation management plan for lands outside the FERC boundary.

### 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 and fire management.**

A significant portion of the planning unit is forested and primarily managed for sustainable timber production. The planning unit is also within a fire-prone area, as demonstrated by a recent large fire in the community of Manton in 2005. 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, holistic watershed management, regeneration of oaks, research opportunities, fuels management, fire management and response, and management of plantations. The fuels, fire management and response, and forest management plans should be developed in conjunction with rangeland, noxious weed and wildlife and habitat management plans. We expect that all of these plans would be developed in coordination with adjacent landowners, lessees, BLM, and USFS management and practices as appropriate. Additionally, all plans should be consistent with other relevant plans, such as the Lassen Foothills Fire Plan, and local community planning efforts. To protect sensitive resources

# BATTLE CREEK PLANNING UNIT

## Cow-Battle Creek Watershed

at North Battle Creek and McCumber Reservoirs as well as areas adjacent to spotted owl PACs mapped by the USFS at North Battle Creek Reservoir, harvesting should avoid these areas.

### Agricultural Uses

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

Grazing use is currently taking place in three areas under one lease, and several other areas within the planning unit have the potential for agricultural uses. The Stewardship Council looks to preserve this resource and important economic use as part of the long-term management of Battle Creek. To support this effort, we anticipate that a baseline conditions report will be required to describe current agricultural, physical, and overall biological conditions of the area, and determine the feasibility of providing additional grazing within the planning unit in coordination with adjacent landowners, such as The Nature Conservancy's (TNC) Wildcat Ranch. Specific determinations can then be made to identify and manage grazing practices in balance with other uses and values of the property. To protect sensitive resources, we also recommend fencing of planning unit lands at North Battle Creek Reservoir as needed to restrict adjacent grazing use from encroaching onto planning unit lands.

### Preservation of Historic Values

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

The Battle Creek Planning Unit contains documented cultural resources and a high likelihood for additional resources in areas that have not been surveyed. 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



Bridge at Asbury Pump

found at Battle Creek (particularly outside the Battle Creek Restoration Project boundary where less information is available) 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> The Battle Creek Project contains two reservoirs, three forebays, five powerhouses, eight main diversion dams, and numerous tributary and spring diversions, canals, ditches, flumes, tunnels, and pipelines.

<sup>2</sup> The camp draws 600 to 700 campers annually. Camp facilities include a ball field, archery range, basketball court, volleyball court, beach, dock, amphitheater, and cabins.



Table CB-4 Objectives to Preserve and/or Enhance – Recommended Concept

| Planning Unit Objective: Preserve and enhance biological, cultural, and agricultural resources, and enhance sustainable forestry management and recreation opportunities and experiences. |   |  |
|---|---|--|
| 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 and coordinate with ongoing restoration projects in the area.</b>  | <ul style="list-style-type: none"><li>• Conduct surveys of lands outside the Battle Creek Restoration Project boundary to identify biological resources and enable their protection.</li><li>• Develop a noxious weed management plan for the planning unit.</li><li>• Develop a wildlife and habitat management plan for the planning unit.</li><li>• Coordinate with the Battle Creek Salmon and Steelhead Restoration Project and the Battle Creek Watershed Conservancy.</li></ul>   |
| Preservation of Open Space  | <b>Preserve open space in order to protect natural and cultural resources, viewsheds, and agricultural land uses.</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  | <b>Enhance recreational facilities in order to provide additional recreation opportunities and management, and enhance the recreation experience.</b>   | <ul style="list-style-type: none"><li>• Develop a day use area with an ADA fishing platform at Asbury Pump.**</li><li>• Assess the potential for youth program opportunities.</li><li>• Work with the USFS to resolve the boundary issue at North Battle Creek Reservoir Campground.**</li><li>• Install bear boxes and bear-proof trash cans at North Battle Creek Reservoir Campground.**</li><li>• Install better directional and informative signage at North Battle Creek Reservoir in coordination with the USFS.**</li><li>• Assess the potential to use a parcel along Highway 44 near Shingletown as public open space/park/outdoor education area.**</li><li>• Improve road crossings at Bluff Springs to enhance safety.**</li><li>• Inventory recreation use on planning unit lands and evaluate need/demand for additional facilities.</li><li>• Develop a recreation management plan for lands outside the FERC boundary.</li></ul>  |
| Sustainable Forestry  | <b>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 and fire management.</b> | <ul style="list-style-type: none"><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>• Manage plantations to best mimic forests in the natural landscape.</li><li>• Protect sensitive habitats at North Battle Creek Reservoir and McCumber Reservoir from harvesting and grazing.**</li><li>• Develop a fuels management plan for the planning unit in coordination with the Lassen Foothills Fire Plan, Manton Fire Safe Council, and community of Shingletown to ensure long-term forest health and reduce fuel loading and fire hazard.</li><li>• Develop a fire management and response plan for planning unit lands in the Manton and Shingletown areas in coordination with the CDF and communities of Shingletown and Manton to ensure fire preparedness.</li></ul> |
| Agricultural Uses   | <b>Preserve and enhance grazing in order to support associated economic benefits, as well as to protect open space and habitat resources.</b>   | <ul style="list-style-type: none"><li>• Evaluate the potential for additional grazing opportunities within the planning unit.</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 existing grazing use at Inskip Powerhouse, Wildcat Diversion Dam, and Asbury Pump areas 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   | <b>Identify and manage cultural resources in order to ensure their protection.</b>  | <ul style="list-style-type: none"><li>• Conduct surveys of lands outside the Battle Creek Restoration Project boundary to identify cultural resources and enable their protection.</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>  |

\* 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.



BATTLE CREEK PLANNING UNIT  
Cow-Battle Creek Watershed

Battle Creek Planning Unit  
Recommended Concept

- POTENTIAL MEASURES:
- DEVELOP MANAGEMENT PLANS FOR NOXIOUS WEEDS, WILDLIFE & HABITAT, FORESTS, FUELS, FIRE RESPONSE & CULTURAL RESOURCES
  - CONDUCT SURVEYS OUTSIDE THE BATTLE CREEK RESTORATION PROJECT BOUNDARY TO IDENTIFY BIOLOGICAL & CULTURAL RESOURCES & ENABLE THEIR PROTECTION
  - COORDINATE WITH NATIVE AMERICAN ENTITIES WHEN CONDUCTING CULTURAL RESOURCE MEASURES
  - COORDINATE WITH THE BATTLE CREEK SALMON & STEELHEAD RESTORATION PROJECT & BATTLE CREEK WATERSHED CONSERVANCY
  - EVALUATE EXISTING TIMBER INVENTORY DATA & SUPPLEMENT AS APPROPRIATE
  - MANAGE PLANTATIONS TO BEST MIMIC FORESTS IN THE NATURAL LANDSCAPE
  - DEVELOP A RECREATION MANAGEMENT PLAN FOR LANDS OUTSIDE THE FERC BOUNDARY
  - ASSESS THE POTENTIAL FOR YOUTH PROGRAM OPPORTUNITIES
  - INVENTORY RECREATION USE ON PLANNING UNIT LANDS & EVALUATE NEED/DEMAND FOR ADDITIONAL FACILITIES
  - EVALUATE THE POTENTIAL FOR ADDITIONAL GRAZING OPPORTUNITIES WITHIN THE PLANNING UNIT

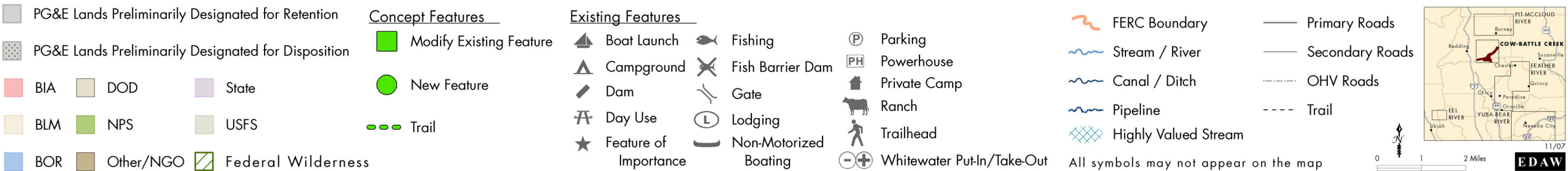
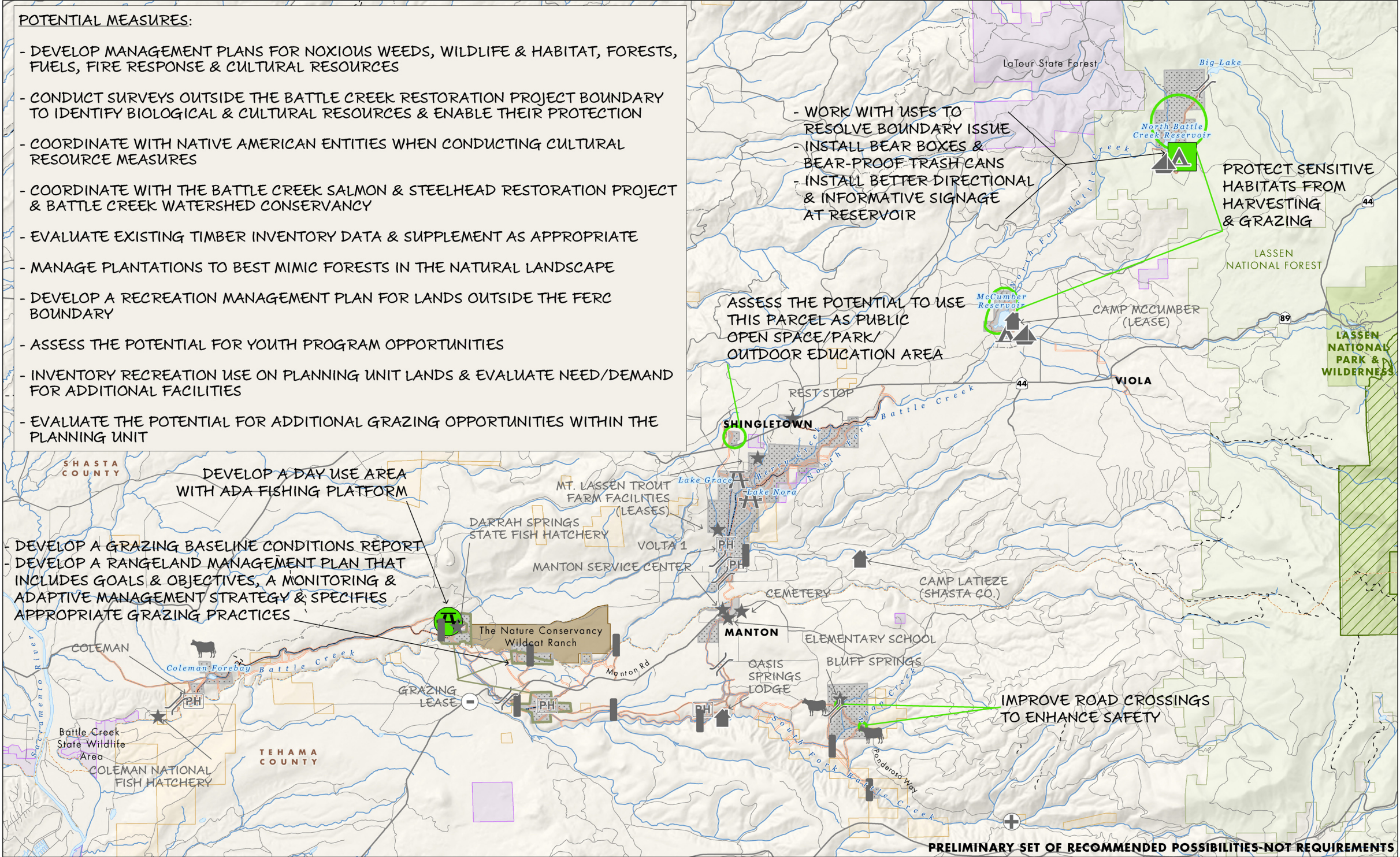


Figure CB-8  
CB-38 LCP Volume II



## **Battle Creek Planning Unit**

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

#### **Potential Measure:**

- *Conduct surveys of lands outside the Battle Creek Restoration Project boundary to identify biological resources and enable their protection.*

Due to the Restoration Project, there are substantial biological data available for certain parts of the planning unit, particularly around FERC Project facilities. Otherwise, little data are available, particularly for areas such as Bluff Springs and the area north of North Battle Creek Reservoir as they are primarily outside the FERC boundary. To provide a better understanding of the existing resources and potential for enhancement, the Stewardship Council recommends conducting surveys of lands outside the Restoration Project boundary to identify biological resources and enable their protection.

#### **Potential Measure:**

- *Develop a noxious weed management plan for the planning unit.*

Field surveys for the Restoration Project identified five noxious weed species at several locations throughout the Restoration Project area, which includes many of the planning unit lands. Other locations north of the Restoration Project area receive significant recreation use; thus, there is a potential for recreationists and their vehicles to spread noxious weeds throughout the area, if they have not already become established. Currently, there is no noxious weed management plan for the Battle Creek area. To protect native habitat and plants, the Stewardship Council recommends developing a noxious weed management plan for the entire planning unit, which would include management of both terrestrial and aquatic weeds. Development of the noxious weed management plan should be coordinated with existing PG&E noxious weed efforts, and the wildlife and habitat, fuels, rangeland, and forest management plans.

#### **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. As mentioned previously, the Restoration Project proposed for the Battle Creek area will greatly enhance aquatic habitat, primarily for special status chinook salmon and steelhead. Conversely, little habitat enhancement for terrestrial species has occurred in the Battle Creek area, except for a project at McCumber Reservoir to enhance meadow and wetland habitat. However, existing data show that the planning unit contains several special status terrestrial wildlife species including osprey, bald eagle, golden eagle, sharp-skinned hawk, Cooper's hawk, American peregrine falcon, yellow-breasted chat, ringtail, and several bat species, as well as at least seven special status plant species. The planning unit likely contains habitat for many other special status species, and recommended surveys may reveal additional special status plants and wildlife.

Once surveys are completed, potential habitat enhancements can be identified and developed into a comprehensive plan describing habitat and species goals and objectives, as well as measures needed to enhance and protect habitat for both plants and wildlife. 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 rangeland, noxious weed, forest, and fuels management plans.

**Potential Measure:**

- *Coordinate with the Battle Creek Salmon and Steelhead Restoration Project and the Battle Creek Watershed Conservancy.*

The Stewardship Council recommends also includes coordinating with the Battle Creek Salmon and Steelhead Restoration Project as appropriate. Additionally, the Stewardship Council recommends coordinating with the Battle Creek Watershed Conservancy, which has many programs throughout the area, including a Stewardship Phase II Program to assess watershed conditions and implement a watershed information system and a community strategy that addresses community issues and concerns. Data gathered for the planning unit could be shared with the Battle Creek Watershed Conservancy, and coordination with the Conservancy's efforts for public education and programs would facilitate a comprehensive vision and knowledge of the larger watershed area.

## 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 include only minor recreation development and are not expected to decrease the scenic quality of the viewsheds.

## Outdoor Recreation

**Potential Measure:**

- *Develop a day use area with an ADA fishing platform at Asbury Pump.*

Fishing is a primary recreation use of the planning unit; however, there are no ADA fishing facilities in the planning unit and thus, some users are being excluded. The Stewardship Council recommends developing a day use area at Asbury Pump that would include an ADA fishing platform along with day use facilities such as signage, restrooms, and picnic tables. This site is relatively flat, publicly accessible, and currently is heavily used by anglers in May, thus providing an excellent site for such facilities. Adjacent oak woodlands would provide shade and a pleasant setting for the day use area. Design and development of the day use area would need to be compatible with existing grazing operations.

**Potential Measure:**

- *Assess the potential for youth program opportunities.*

The presence of the Darrah Springs State Fish Hatchery adjacent to planning unit lands at Asbury Pump could provide potential for youth programs to visit the hatchery and learn about fish life cycles and production, and then go fishing on Baldwin Creek at Asbury Pump and use the



recommended day use area. Likewise, the presence of Mt. Lassen Trout Farm's two aquaculture facilities could offer a slightly different perspective on fish production compared to the State Hatchery, which does not grow fish to the size that the private facility does and provides different types of facilities.

In addition, Camp Latieze, a facility northeast of Manton that is owned and operated by the Shasta County Board of Education (not on planning unit lands) offers recreation facilities such as a volleyball court, swimming pool, hiking trails, and horseshoe pits. The camp provides classrooms, but does not provide access to working landscapes or a variety of habitats. Therefore, there is also potential to coordinate with this local camp to use planning unit lands for educational use including visitation to grazing or forestlands to demonstrate working landscape uses, management, and interactions.

There are numerous other opportunities within the planning unit for youth to learn about topics such as oak woodlands, sensitive species, grazing management, and sustainable forestry practices, among other topics. Therefore, the Stewardship Council recommends assessing the potential for youth program opportunities. Additionally, facilities located within the planning unit could provide staging areas for youth programs, including the recommended day use area at Asbury Pump.

**Potential Measure:**

- *Work with the USFS to resolve the boundary issue at North Battle Creek Reservoir Campground.*

North Battle Creek Reservoir is the easternmost point in the planning unit and contains one campground with both drive-in and walk-in campsites as well as a car-top boat ramp. The walk-in campsites are the only sites along the shoreline, a popular place to camp that can also be accessed by boat from the reservoir. A landline survey in the late 1980s determined that part of the five walk-in campsites are on USFS lands; however, there is no formal agreement with the USFS for these campsites. The Stewardship Council recommends working with the USFS to resolve this boundary issue to ensure that these special shoreline walk-in campsites continue to be available to campground visitors.

**Potential Measure:**

- *Install bear boxes and bear-proof trash cans at North Battle Creek Reservoir Campground.*

The Stewardship Council also recommends installing bear boxes at the North Battle Creek Reservoir Campground for users to store food in as well as bear-proof trash cans to prevent bears from eating trash. Currently, there are few reported bear-related incidents, but many bears have been seen in the area. To prevent the habituation of bears to human food and potential future conflicts between bears and campers, installation of special food boxes and trash cans would be worthwhile.

**Potential Measure:**

- *Install better directional and informative signage at North Battle Creek Reservoir in coordination with the USFS.*

Currently, there are some hand-written directional signs and little informative signage at the reservoir. The Stewardship Council recommends installing better directional and informative

signage regarding reservoir facilities, campground rules and regulations, and other recreation activities in the area. Such signage would be developed in coordination with the USFS as they also own land around the reservoir and provide nearby recreation opportunities.

**Potential Measure:**

- *Assess the potential to use a parcel along Highway 44 near Shingletown as public open space/park/outdoor education area.*

The planning unit contains two parcels along Highway 44 through Shingletown. The eastern parcel has a rest stop, but the western parcel is currently only being used as timberland. As this parcel is located in town and near the highway, it provides potential for local community use. The Stewardship Council recommends assessing the potential to use this parcel as public open space (as it is surrounded by development), a public park, or as an outdoor education area where local students could learn about forestry or conduct studies on topics such as water quality, air pollution, soil compaction, or forest regeneration.

**Potential Measure:**

- *Improve road crossings at Bluff Springs to enhance safety.*

Kayaking on South Fork Battle Creek does occur, though use is likely low. Proposed dam removals will likely enhance kayaking on South Fork Battle Creek due to less portages and increased flows. Though the put-in and take-out for the whitewater run from the Ponderosa Way road crossing to the Manton Road crossing are on public road rights-of-way and not on planning unit lands, access to the put-in via Ponderosa Way does cross planning unit lands in Bluff Springs. The Bluff Springs area also receives picnicking and hunting use. There are two water crossings on the dirt access road (Ponderosa Way) that can be deep and rocky enough to be dangerous to many drivers. Therefore, the Stewardship Council recommends improving these road crossings to enhance safety for recreationists and other users of Ponderosa Way through the Bluff Springs area. Enhancing these road crossings may also reduce sedimentation into the two creeks that are crossed.

**Potential Measure:**

- *Inventory recreation use on planning unit lands and evaluate need/demand for additional facilities.*

The guiding document for recreation use within the planning unit is the 1969 Battle Creek Recreational Use Plan (FERC Exhibit R), which focuses on North Battle Creek Reservoir, McCumber Reservoir, Lakes Grace and Nora, Coleman Forebay, and fishing at canal accesses. The five drawings in the plan were revised in 1980 and 1989. The plan is brief and focuses mainly on developed recreation facilities. Recording of recreation use is done through FERC Form 80s, which state the percent capacity of recreation facilities and are completed every four years. Documentation of recreation use is only performed within the planning unit by the campground hosts at North Battle Creek and McCumber Reservoirs and during occasional visits by PG&E to the area. Additionally, the Battle Creek FERC License does not expire until 2026, so relicensing and associated studies will not be completed for another 15-20 years.

Due to the lack of recreation use data, particularly for recreation use outside developed sites, and the long period of time until relicensing begins, the Stewardship Council recommends inventorying recreation use on planning unit lands and evaluating the need and demand for additional recreation facilities within the planning unit such as additional signage, trails, day use



areas, or campgrounds. In addition, the need for (and feasibility of providing) additional public access to areas within the planning unit would also be evaluated. A recreation use inventory is particularly important to identify type, quantity, and location of recreation uses on lands outside developed recreation sites, such as at Bluff Springs and in the Shingletown and Manton areas. The inventory of recreation use should also be coordinated with adjacent landowners such as BLM and USFS as recreation uses on planning unit lands may overlap with recreation use on adjacent lands. If additional recreation facilities are identified as needed, compatibility with existing land uses, such as grazing, would need to be evaluated.

### **Potential Measure:**

- *Develop a recreation management plan for lands outside the FERC boundary.*

The Stewardship Council recommends using the recreation inventory information to develop a recreation management plan for lands outside the FERC boundary as most of the planning unit is located outside of the FERC boundary and lands within the FERC boundary are covered under the existing FERC Recreational Use Plan. Suggested elements of the recreation management plan include developing a recreation monitoring program, developing a dispersed recreation use and access management component, and developing an operations and maintenance program for any recreational facilities developed outside of the FERC boundary.

The recreation management plan would also address the accommodation of recreation uses in and around the community of Manton. The planning unit contains many lands within the rural community of Manton including a lawn area adjacent to the PG&E Manton Service Center, lands across from the Manton Elementary School and Manton Joint Cemetery, as well as lands near the post office. There are currently no public recreation areas in the community; planning unit lands could potentially provide such space. Potential ideas for recreation development in Manton include using lands across from the elementary school as an outdoor classroom/lab, developing a local park/day use area potentially adjacent to the Service Center or across from the post office, and creating a loop trail through the lands across from the school. Any recreation development would need to be coordinated with the recommended forest management plan and management of plantations.

## **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.*

A significant portion of the planning unit is forested and primarily managed for sustainable timber production; however, there is no overall documented vision for the Timber Management Units (TMUs) within the planning unit or management of oak woodlands in the western portion of the planning unit not included within TMUs. Therefore, 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 holistic watershed management, supporting the enhancement of other beneficial public values

over the long term. There are several areas within the planning unit where forest management is not currently taking place, including the Coleman Forebay, Asbury Pump, Wildcat Diversion Dam, and Inskip Powerhouse areas. These areas are primarily oak woodlands, which provide for a rich diversity of plant and wildlife species. Both Shasta and Tehama Counties support oak woodland protection and conservation and have passed resolutions regarding oak woodland protection. The forest management plan would address management and regeneration of oaks, the potential for research on planning unit lands, and monitoring to evaluate effects of grazing on health of the woodlands. Development of the forest management plan should be coordinated with wildlife and habitat, noxious weed, rangeland, and fuels management plans.

In 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 harvesting schedule would be consistent with the forest management plan, promoting natural forest development in perpetuity.

**Potential Measure:**

- *Manage plantations to best mimic forests in the natural landscape.*

As mentioned before, there was a large fire in the community of Manton in 2005 that burned many acres of planning unit lands. PG&E has planted conifers in these areas, essentially creating plantations. There are also plantations at North Battle Creek Reservoir. Plantations are monocultures that provide low biological value and biodiversity compared to natural forests. Therefore, to enhance sustainable forestry management, the Stewardship Council recommends managing plantations to best mimic forests in the natural landscape. The scale and layout of plantation blocks would be consistent with the patterns of forest stands found in the natural landscape. Trees would be selected that are suitable for the natural conditions of the site. Unless unsuitable based on regeneration, native species would be selected and exotic species used minimally and only when determined to present no adverse ecological impacts. Plantation management would be included as a component of the forest management plan.

**Potential Measure:**

- *Protect sensitive habitats at North Battle Creek Reservoir and McCumber Reservoir from harvesting and grazing.*

The Stewardship Council also recommends protecting sensitive habitats at North Battle Creek and McCumber Reservoirs from harvesting and grazing. There are wetlands, meadows, and potentially a fen (peat bog) that could be damaged from timber harvesting activities. Harvesting should avoid these areas and potential impacts in other nearby locations that could affect these sensitive areas. Additionally, areas adjacent to USFS mapped spotted owl Protected Activity Centers (PACs) at North Battle Creek Reservoir should be managed to be consistent with USFS goals in order to protect these habitats for special status wildlife.

Grazing use at both reservoirs has been terminated, at McCumber Reservoir by FERC order and at North Battle Creek Reservoir by PG&E. There is a grazing allotment on adjacent USFS land at North Battle Creek Reservoir; due to a lack of fencing, there could be grazing use of planning unit lands. To protect sensitive resources, including a potential peat bog, fencing of planning unit lands may be needed to restrict adjacent grazing use from encroaching on planning unit lands at



North Battle Creek Reservoir. However, a determination of grazing use on planning unit lands and its impacts (both positive and negative) on sensitive resources would need to be made prior to appropriate measures being taken. Any measures taken should be coordinated with the USFS and their grazing permittee.

**Potential Measure:**

- *Develop a fuels management plan for the planning unit in coordination with the Lassen Foothills Fire Plan, Manton Fire Safe Council, and community of Shingletown to ensure long-term forest health and reduce fuel loading and fire hazard.*

Reducing fire risk is important in this planning unit due to its proximity to the communities of Manton and Shingletown and numerous housing developments, as well as the presence of fire-prone vegetation throughout the planning unit. Many fires have occurred in and around planning unit lands, with the most recent being the Manton Fire that burned many acres and homes in and around Manton. There is currently no plan for the management of fuels within the planning unit. Therefore, to protect the wildland-urban interface and increase forest health, 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.

A concurrent effort in the region is the Lassen Foothills Fire Plan, which will address fire management on 500,000 acres in the lower elevations of the Lassen foothills. There is also a group in Manton, the Manton Fire Safe Council, which is working toward creating a fire safe zone in Manton and determining fuel break locations. Development of the fuels management plan should be completed in coordination with these two efforts and with any efforts by the community of Shingletown to reduce fuels around this community, as well as development of the noxious weed, wildlife and habitat, forest, and rangeland management plans.

**Potential Measure:**

- *Develop a fire management and response plan for planning unit lands in the Manton and Shingletown areas in coordination with the CDF and communities of Shingletown and Manton to ensure fire preparedness.*

The Stewardship Council also recommends developing a fire management and response plan for planning unit lands in the Manton and Shingletown areas to ensure fire preparedness and guide fire fighting reporting methods and responsibilities. Most of the housing development within the planning unit areas is around the communities of Manton and Shingletown and around McCumber Reservoir, which is just east of Shingletown. It is important for residents to have reporting protocols and ways to escape the area if there is a fire. There is also a host for Lakes Grace and Nora and a campground host at McCumber Reservoir Campground, both of which could assist in fire management efforts. Training of site hosts is vital to evacuating visitors, as hosts are important points of contact. Therefore, the fire management and response plan should include the training of site hosts in fire response and safety, as well as other fire fighting and reporting methods. The fire management and response plan should be developed in conjunction with the communities of Manton and Shingletown, as well as the CDF, to ensure consistency with any already developed protocols.

## Agricultural Uses

### Potential Measure:

- *Evaluate the potential for additional grazing opportunities within the planning unit.*

Due to the availability of several potential grazing locations, the Stewardship Council recommends evaluating the potential for additional grazing opportunities within the planning unit. In addition to North Battle Creek and McCumber Reservoirs, there used to be grazing use at the Coleman Forebay area and an area near the two Volta powerhouses, but grazing leases were not renewed at the lessee's request. There is a ranch adjacent to the northern portion of Coleman Forebay that could be interested in grazing on adjacent planning unit lands. Though not currently grazed, the Bluff Springs parcel also has potential for agricultural use. On a site visit, cattle were seen in the planning unit, which were likely from an adjacent ranch as most, but not all, of the area is fenced. Forage and water are both available in the parcel.

There is also grazing potential on lands adjacent to The Nature Conservancy's (TNC) Wildcat Ranch north of North Fork Battle Creek near Wildcat Diversion Dam. There are two parcels where grazing potential exists, one of which has grazing use currently occurring on the adjacent parcel south of North Fork Battle Creek. It is not possible for the current lessee to cross the creek to expand grazing operations to the northern parcel due to the steepness of the creek canyon. Because access is limited to only north of the parcels, grazing here would require identifying the interest of TNC or the subsequent owner of the ranch in grazing these parcels (if TNC does not retain ownership of the ranch).

Previously mentioned grazing areas could be reviewed for potential reintroduction or initiation of grazing and whether or not grazing is an appropriate use in these areas, impacts to other resources, compatibility with existing and recommended land uses, and whether or not a qualified lessee could be identified. If grazing is found to be an appropriate use of these areas, then a baseline conditions report would be prepared and a rangeland management plan developed.

### 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.*

Grazing use currently takes place in three areas under one lease: Asbury Pump, Inskip Powerhouse, and Wildcat Diversion Dam south of North Fork Battle Creek. Specific grazing practices and forage management are unknown. 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 existing grazing use at Inskip Powerhouse, Wildcat Diversion Dam, and Asbury Pump areas 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 prescriptions 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 Stewardship Council policy for agricultural uses on Watershed Lands. To ensure consistency and complementary measures, the rangeland management plan should be developed in coordination with the noxious weed, fuels, forest, and wildlife and habitat management plans.

## **Preservation of Historic Values**

### **Potential Measures:**

- *Conduct surveys of lands outside the Battle Creek Restoration Project boundary to identify cultural resources and enable their protection.*
- *Coordinate with Native American entities when conducting cultural resource measures.*

There are documented cultural resources within the planning unit and a high likelihood for additional resources in areas that have not been surveyed. Surveys for cultural resource were completed for the Restoration Project, and surveys may also have been completed prior to development of the Timber Harvesting Plan (THP) for lands from Shingletown to North Battle Creek Reservoir. Therefore, the Stewardship Council recommends conducting surveys of lands outside the Restoration Project boundary to identify cultural resources and enable their protection. Documentation of cultural sites 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.*

Assuming that recommended surveys identify cultural sites within the planning unit, 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), 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 coordinated with Native American entities.

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