

1 *Seneca Reach Recreational Facilities*

2 The North Fork fishing trail begins below the Caribou powerhouses and extends
3 through the fenced switchyard to the Caribou No. 1 powerhouse. Access around the
4 powerhouse is provided via steel stairs and a narrow, metal catwalk which extends across
5 the face of the powerhouse, above the tailrace. The trail then continues down to the
6 NFFR, eventually paralleling the river, and extending for approximately two miles
7 upstream of the Caribou powerhouse to Butt Creek. The trail includes two single span
8 footbridges over the NFFR. The FS maintains the North Fork fishing trail, including the
9 maintenance and repair of the two trail suspension bridges, with the exception of the
10 metal catwalk that crosses the powerhouse. PG&E does not provide parking at the
11 powerhouse. Anglers that use the trail must utilize small roadside pull-outs along
12 Caribou Road or park at the Belden forebay and walk up Caribou Road.

13 There are two dispersed campsites in the Seneca reach. There are no facilities at
14 the sites and they appear to receive low levels of use.

15 *Belden Reach Recreational Facilities*

16 The FS owns and operates three campgrounds along the Belden reach. At each of
17 the campgrounds, each campsite has a picnic table, cooking grill, paved spur, and some
18 have tent pads. The Queen Lily campground is located on the west branch of the NFFR
19 along Caribou Road and has 12 campsites, a flush restroom, and potable water. The
20 North Fork Campground is located on the west branch of the NFFR along Caribou Road
21 approximately 1 mile from the Queen Lily campground. This facility has 20 campsites, a
22 flush toilet, and potable water. The Gansner Bar campground is located on the west
23 branch of the NFFR along Caribou Road approximately 1 mile from the North Fork
24 campground and approximately 2 miles from the Queen Lily campground. This facility
25 has 14 campsites, a flush restroom, and an amphitheater. Through its recreation facility
26 condition inventory, PG&E determined that most of the facilities along the Belden reach
27 are in good condition

28 PG&E owns and operates the Belden rest stop, which is located adjacent to the
29 Belden powerhouse. There are four picnic tables, informational and interpretive signs, a
30 vault toilet, and a paved parking lot at this site. Visitors can access three recreational
31 trails from this site: Yellow Creek Trail, Indian Springs Trail, and the Pacific Crest Trail.
32 Through its recreation facility condition inventory, PG&E determined that some of the
33 facilities at the Belden Rest Stop are in good condition while others need maintenance,
34 including the vault toilets, the picnic tables, signs, and the cooking grills. PG&E also
35 determined that the two water faucets near the open pavilions are broken, and since there
36 is no longer water at the site, they should be removed. Through its ADA-accessibility
37 study, PG&E determined that the two vault toilets and the trash receptacles at this facility
38 are fully accessible and meets ADA guidelines and there is one accessible flush restroom.

1 The picnic tables at this facility are not accessible and there is no accessible route to the
2 adjacent creek.

3 In addition, there is a well-defined, but undeveloped site that provides access to
4 the Belden forebay. Anglers use a small gravel parking area off of Caribou Road at the
5 northwest end of the forebay and follow a steep trail to the forebay shoreline. There are
6 no formal facilities at the site and boats are currently not allowed on the forebay.

7 There are 20 dispersed sites in the Belden reach used primarily for dispersed
8 camping. Some of the sites serve as overflow areas for the developed FS campgrounds.
9 PG&E documented camping at 16 of the 20 sites in 2001, while the remaining sites
10 appear to be used to access the shoreline for angling and hiking.

11 In addition to the public sites on the Belden reach, there are two privately-owned
12 campgrounds on the Feather River just below the project.

13 **Recreational Use at Project Reaches**

14 The primary recreational activities occurring at the Project river segments during
15 the summer include: wildlife viewing, picnicking, swimming, canoeing, motorboating,
16 fishing, hiking, backpacking, camping, equestrian use, and sightseeing. During the
17 winter, the primary activities include: snowshoeing and cross-country skiing. Since there
18 are no facilities in the project area that have been developed exclusively for winter
19 activities such as groomed trails or commercial ski areas, these activities all take place in
20 a dispersed manner on unplowed roads and trails.

21 *Camping*

22 The Belden reach has 3 public developed campgrounds owned and operated by the
23 FS. PG&E studied camping use at these campgrounds in 2001.

24 PG&E estimated total camping use at Belden reach public, developed campsites to
25 be 14,020 recreation days. Table 3-30 includes a breakdown of the numbers by
26 campground and season. In addition to the total number of camping days, PG&E
27 investigated the number of times that the campgrounds were at or above capacity. On the
28 Belden reach, PG&E determined that all three of the campgrounds exceeded capacity;
29 Queen Lily campground on 18 occasions, Gansner Bar campground on 35 occasions and
30 North Fork campground on 10 occasions.

1 Table 3-30. Recreation visits to campgrounds in the project reaches in 2001. (Source:
2 PG&E, 2002a)

Campground	Total recreation days	Percent of visitation during peak season	Number of days at or above capacity
Queen Lily	3,252	69	18
Gansner Bar	5,396	56	35
North Fork	5,372	65	10

3
4 *Whitewater Boating*

5 The Seneca reach of the UNFFR begins below Lake Almanor dam and runs south
6 approximately 11 miles to Caribou No. 1 powerhouse. The Seneca reach has limited
7 access because of the steep, rugged terrain and private land ownership along the river.

8 The Belden reach of the UNFFR begins at Caribou No. 1 powerhouse and runs
9 southwesterly approximately 9 miles to the confluence with the EBNFFR near State
10 Route 70. Caribou Road runs parallel to the Belden reach, which makes it relatively
11 accessible.

12 PG&E conducted a whitewater controlled flow assessment in September/October
13 2000. PG&E scheduled three boating releases on each of the two reaches. The Seneca
14 reach was assessed at 210, 325, and 410 cfs and the Belden reach was assessed at 350,
15 600, and 850 cfs.

16 For the whitewater controlled flow study, nine boaters participated in the study on
17 the Seneca reach. Participants were asked to evaluate the flows that they experienced.
18 PG&E reported that boaters would prefer flows higher than 210 and 325 cfs and a
19 majority of participants would prefer flows at 410 cfs or slightly higher. Additionally,
20 PG&E determined that, based on the participants' responses to specified flow questions,
21 if they were to provide a single release, a flow of 400 cfs would be recommended until
22 locations of rapids and lines became better known. After these became known, a single
23 release of about 450 cfs would provide quality boating.

24 On the Belden reach, 24 boaters participated in the study. PG&E reported that all
25 of the participants considered the 350 cfs flow to be too low and a majority of the
26 participants considered the 600 cfs to also be too low. A majority of the participants
27 preferred the 850 cfs flow and those who did not prefer it were roughly split as to
28 whether the flow was too high or too low. Additionally, PG&E determined that, based on
29 the participants' responses to specified flow questions, if they were to provide a single
30 release, a flow of 750 cfs would be appropriate to provide quality standard kayaking and

1 rafting opportunities and 850 cfs would be needed to provide some higher challenge
2 boating.

3 Participants were asked to compare the runs in comparison to other northern
4 California Rivers. Nearly two-thirds of the respondents rated the Seneca reach as “better
5 than average” or “excellent”; while participants were split for the Belden reach with half
6 indicating that the run is “worse than average” or “average” and half indicating that the
7 run is “better than average” or “excellent”

8 *Angling*

9 Angling is a popular activity at the project reaches and reservoirs. The shoreline
10 fishing opportunities along the Seneca and Belden reaches were assessed at various flows
11 by PG&E in a fishability study during May of 2001.

12 PG&E evaluated flows of 700, 300, and 100 cfs in the Seneca reach on separate
13 days. In addition, researchers evaluated the reach at 35 cfs. At the end of each day,
14 participants were asked to indicate their preferences for similar, higher, or lower flows.
15 All participants considered the 700 cfs flow to be too high and two-thirds of the
16 participants would definitely not return to fish at that flow. At 300 cfs, all of the
17 participants preferred lower flows. In response to items regarding likelihood of return,
18 one-third of the participants would not return and two-thirds would possibly return at the
19 300 cfs flow. At 100 cfs, all anglers reported that they preferred flows at about this level
20 and two-thirds of the participants indicated that they would definitely return, while one-
21 third indicated that they would possibly return. The core participants were asked to rate a
22 range of flows that would be suitable for fishing. The 4 study participants who were fly
23 anglers indicated a range of 50 to 200 cfs, with an optimal flow of 100 cfs. The study
24 participant who was a bait/spin angler on the panel indicated an acceptable range of 100
25 to 300 cfs, with the optimal range from about 150 to 250 cfs.

26 PG&E provided flows of 700 and 300 cfs in the Belden reach on separate days. In
27 addition, researchers evaluated the reach at 100 cfs. At the end of each day, participants
28 were asked to indicate their preferences for similar, higher, or lower flows. All
29 participants considered the 700 cfs flow to be too high and two-thirds of the participants
30 indicated that they would definitely not return to fish at that flow. At 300 cfs, three-
31 quarters of the participants preferred lower flows, while the remainder indicated that they
32 preferred flows at about this level. In response to items regarding likelihood of return at
33 the 300 cfs flow, one-quarter of the participants would not return, half would possibly
34 return, and one-quarter would definitely return. Participants were asked to rate a range of
35 flows for fishing. The 4 study participants who were fly anglers indicated a range of
36 acceptable flow levels between 50 and 250 cfs, with an optimal flow of about 150 cfs.
37 The study participant who was a bait/spin angler on the panel indicated a range of 275 to
38 600 cfs with an optimal flow of 300 cfs.

1 **Accessibility**

2 PG&E conducted a field assessment of both FS and PG&E-owned public
3 recreation facilities at Lake Almanor, Butt Valley reservoir, and Belden reach to
4 determine present adequacies and future accessibility needs for persons with disabilities
5 who may use public recreation facilities and use areas associated with the project, or who
6 may participate in primary recreation activities (i.e., camping, fishing, picnicking,
7 swimming, shoreline access and boating) occurring in the project area. The current
8 guidance for accessibility is the ADA. ADA-related elements at each site include:
9 restrooms, toilets, picnic areas, campsites, group sites, water sources, trash receptacles,
10 fishing areas, boating and swimming areas/shoreline access, outdoor recreation access
11 routes to primary elements, and recreation trails to non-primary elements.

12 PG&E determined that the North Fork Feather Trail is not accessible and likely
13 could not be made accessible due to topography. Likewise, PG&E determined that the
14 shoreline was too steep for accessible fishing access at Belden forebay. PG&E also
15 determined that none of the dispersed recreation use areas along the two bypassed
16 reaches are accessible for persons with disabilities.

17 Table 3-31 summarizes the accessibility of existing PG&E and FS facilities.

18 Both FS and PG&E have provided opportunities for persons with disabilities to
19 participate in primary recreational activities in the project area and each has emphasized
20 different activities, to help fill gaps in access.

21 **3.3.5.2 Environmental Effects**

22 **Recreation Resource Management Plan**

23 PG&E presented a draft RRMP in the final license application, which provides
24 both existing and future recreation resource needs associated with the UNFFR Project
25 and PG&E's proposed involvement and responsibilities in managing those identified
26 needs over the term of the new license. PG&E prepared the draft RRMP in consultation
27 with the Recreation, Land Use, and Aesthetics Work Group (RLA Work Group). The
28 RLA Work Group included representatives of federal, state, and local agencies; adjacent
29 landowners; shoreline homeowner and country and community club associations; and
30 other stakeholders. The RLA Work Group participated in the development and review of
31 technical studies, proposals included in the final license application, and the preparation
32 of the draft RRMP.

33

1 Table 3-31. Summary of the accessibility of existing public, FS, and licensee recreation facilities. (Source: PGE, 2002a)

	Toilets/ Restrooms	Telephones	Trash Receptacles	Water faucets	Picnic Tables	Swimming Areas/ Shoreline Access	Fishing Sites	Parking Areas	Boat Launches	Campsites	Recreation Trails
FS Facilities											
Almanor campground north	X		X								X
Almanor campground south	X		X								X
Almanor campground boat launch	X		X								
Almanor campground day use					X						
Picnic beach	X		X								
Canyon dam boat launch/day-use area	X		X				X	X			
Almanor rest area (SR 89)	X										
Almanor overflow camping area (SR 89)											
Almanor group reservation camp (SR 89)											
Dyer View day-use area	X		X					X			
Lake Almanor recreation trail											X
Gansner Bar campground	X		X							X	
North Fork campground	X		X							X	
Queen Lily campground			X								

	Toilets/ Restrooms	Telephones	Trash Receptacles	Water faucets	Picnic Tables	Swimming Areas/ Shoreline Access	Fishing Sites	Parking Areas	Boat Launches	Campsites	Recreation Trails
PG&E Facilities											
Rocky Point campground loop 1	X		X							X	
Rocky Point campground loop 2	X		X	X						X	
Rocky Point campground loop 3	X	X	X	X						X	
Lake Connery group camp											
Canyon dam day-use area	X		X		X			X			
Almanor scenic overlook	X							X			
Eastshore day-use area	X		X					X			
Last Chance campgrnd/group camp											
Ponderosa Flat campground	X		X	X						X	
Alder Creek day-use area/boat launch	X		X								
Cool Springs campground	X		X							X	
Belden rest stop (SR 70)	X		X	X				X			

1 Notes: X indicates that the existing recreational element in the corresponding column is fully or partially accessible at that
2 facility. However, the number of accessible facilities may not be fully adequate.

1 In the SA, PG&E proposes finalizing the draft RRMP in consultation with the FS
2 and Plumas County within 1 year of license issuance.

3 In the draft RRMP, PG&E proposes both site-specific and programmatic measures
4 and the details for implementing them. A brief description of the six programs included
5 in the draft RRMP defining PG&E's roles and responsibilities for recreation resources
6 over the term of the new license is presented here:

- 7 • A recreation facilities development program that defines PG&E's proposed
8 responsibilities related to construction, including details of proposed recreation
9 development projects, estimated costs, and schedules.
- 10 • A recreation O&M program that defines PG&E's proposed existing and future
11 recreation O&M responsibilities, including annual maintenance costs and
12 maintenance standards to be used. The O&M program also details
13 programmatic costs for draft RRMP implementation.
- 14 • An I&E program that defines how hydroelectric energy production,
15 environmental, cultural, and informational I&E would be coordinated and
16 conducted by PG&E at project facilities.
- 17 • A recreation monitoring program that defines how PG&E proposes conducting
18 recreation resource monitoring, including monitoring standards and indicators,
19 and how the monitoring information would be used in decision-making.
- 20 • A resource integration and coordination program that defines how PG&E
21 would integrate recreation resource needs with other resource management
22 needs over time, such as cultural, wildlife, and aquatic resources and discusses
23 how actions would be coordinated through annual meetings.
- 24 • A RRMP review and revision program that defines how the RRMP would be
25 updated or revised over the term of the new license.

26 **Recreational Facility Development Program**

27 As a component of the draft RRMP and identified in the SA, PG&E proposes
28 implementing a number of recreational facility enhancement measures after initial license
29 issuance and during the license term based on target completion dates and monitoring
30 triggers (standards) included in the draft RRMP in the license application. PG&E
31 proposes improving accessibility at various sites in accordance with the ADA.

32 In its December 1, 2003, filing with the Commission, the FS recommends, in
33 preliminary Section 4(e) condition 44, that PG&E obtain FS approval to implement a
34 variety of recreation construction, reconstruction, and O&M measures, some within a
35 specific timeline. Additionally, portions of condition 44 are not under FS jurisdiction,

1 since the facilities they address are not located on NFS lands, but are fully supported by
2 the FS and are recommended for inclusion in the license under Section 10(a) of the FPA.

3 *Our Analysis*

4 The recreation facility development program is one of the components of PG&E's
5 draft RRMP and would provide direction for the coordination of the development,
6 management, and maintenance of recreational opportunities and facilities associated with
7 the project. All of the measures outlined provide improvements to facilities that are
8 either within the project boundary or provide access to recreation opportunities that are
9 within the project boundary. Additionally, PG&E has developed the proposals in
10 consultation with a number of appropriate parties as a part of settlement discussions.
11 PG&E's implementation schedule targets high priority needs first, including ecological
12 and safety concerns, excess recreation site capacity, ADA needs, and distribution of
13 access sites around the reservoir shorelines. Campground and day use facilities which
14 would be significantly modified or newly built would conform with ADA, increasing the
15 number of accessibility related opportunities. For future improvements to facilities,
16 PG&E has developed monitoring triggers that would ensure that such improvements are
17 necessary for public use of the areas. Facilities would be made safer due to replacement
18 of old stoves and grills and accordingly, by implementing the proposed recreation
19 measures, PG&E would be responsible for ensuring that the recreational needs of the
20 public are met throughout the licensing period.

21 Section 2.7(b) of the Commission's regulations requires a project licensee to
22 consider the needs of the physically disabled in the design and construction of public
23 recreational facilities on project lands and waters, including public access to such
24 facilities. The Commission has no statutory role in implementing or enforcing the ADA
25 as it applies to its licenses. A licensee's obligation to comply with the ADA exists
26 independent of its project license. It would be helpful if the RRMP developed by PG&E
27 for project recreational facilities includes a discussion of how the licensee considered the
28 needs of physically disabled individuals in the design and construction of the proposed
29 recreational enhancements.

30 Staff lists PG&E's and FS specific recreation facility development proposals in the
31 following sections. Figure 3-10 shows the location of these facilities.

32 **Lake Almanor Recreational Facilities and Access**

33 **Last Chance Family and Group Campground**

34 In accordance with ADA guidelines, PG&E proposes to modify two campsites and
35 existing toilet buildings and provide a 150 foot access route leading to the nearby creek.
36 PG&E intends to initiate and complete the implementation of this measure within 1 to 3
37 years after license issuance. FS preliminary Section 10(a) condition 44E.1 recommends
38 the same proposal, but no timeline is included.

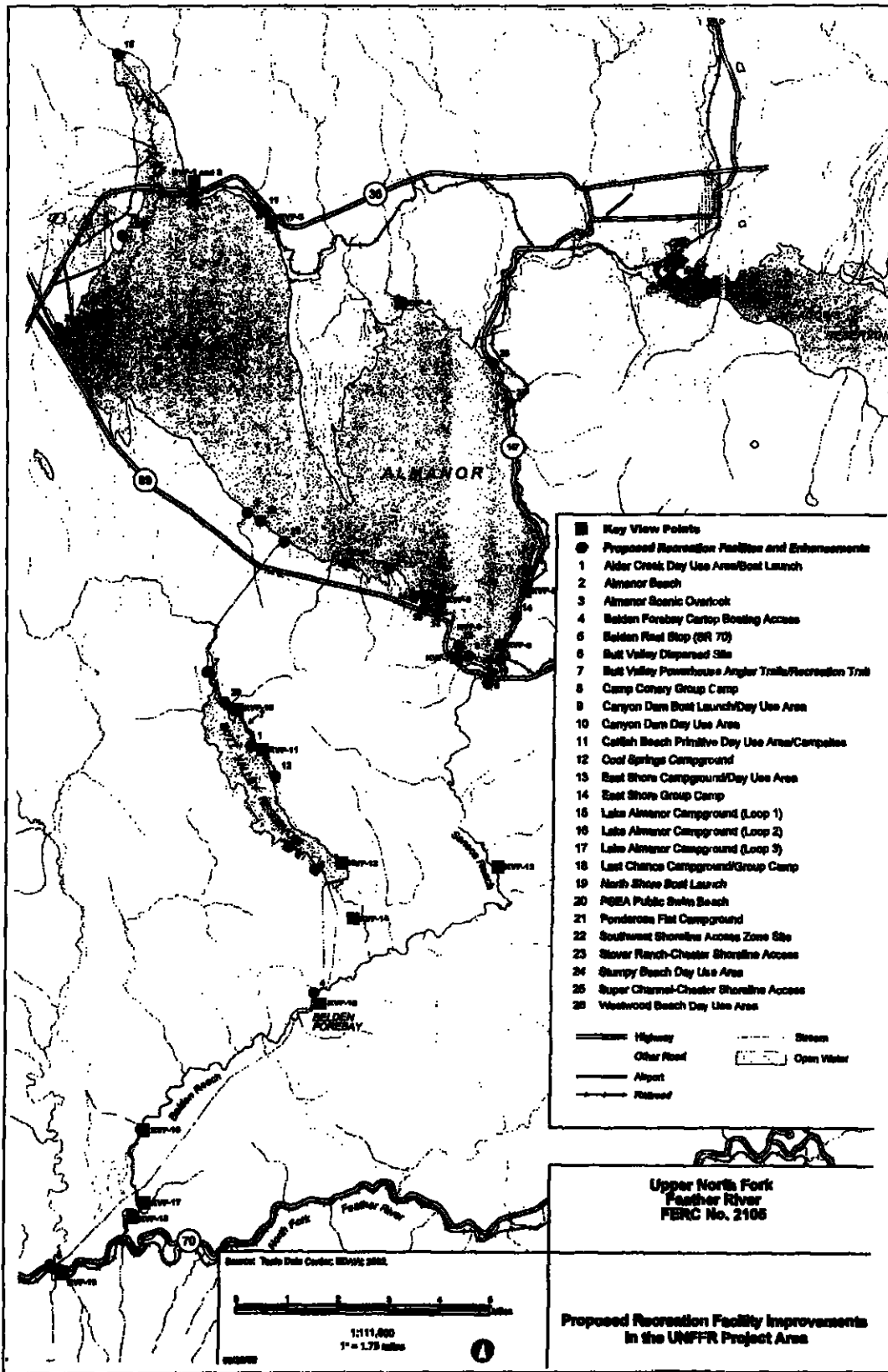


Figure 3-10. Proposed recreation facility improvements and key viewing points in the UNFFR Project area. (Source: PG&E, 2002a)

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2
3

1 **Rocky Point Campground and Day-Use Area**

2 Within 5 to 10 years after license issuance, PG&E proposes to convert the Loop 3
3 overflow camping area into a day-use swim area containing an approximately 1-acre sand
4 beach above the high water level (4,494 feet elevation, PG&E datum), a swimming
5 delineator, a paved parking area to accommodate 35 to 40 vehicles, and a double vaulted
6 restroom; relocate the 20 Loop 3 overflow campsites to the Loop 1 camp overflow area
7 and provide a new double vaulted toilet building at this location; provide a new entrance
8 kiosk at the campground, three fee-based shower facility buildings (one for each loop)
9 with hot water, and bear-proof food lockers at each campsite (151); replace older
10 Klamath stoves with campfire rings; and revegetate or harden areas significantly
11 disturbed by pedestrian or vehicle traffic. PG&E also proposes the following
12 accessibility improvements in accordance with ADA guidelines: modify 10 campsites
13 (four at Loop 1, three at Loop 2, and three at Loop 3); an accessible access route to the
14 high water level (4,494-foot elevation, PG&E datum) at the sandy beach; improvements
15 to existing recreation facilities as needed, such as the campground library box,
16 telephones, and the envelope box at the pay station and provide appropriate ADA-
17 accessible access routes; modify existing water faucets near accessible elements, such as
18 toilets and campsites, to be ADA-accessible; accessible routes to the toilet buildings near
19 the campground entrance and near campsite # 100); and relocate the interior pay station
20 directly across the road on a level, firm, and stable surface (Loop 2). FS preliminary
21 Section 10(a) condition 44E.2 concurs with this proposal, but no timeline is included.

22 **Forest Service Almanor Shoreline Facilities**

23 Within 1 to 13 years after license issuance, PG&E proposes partnering with the FS
24 and providing a maximum of 40 percent of matching funding up to a maximum of
25 \$5,000,000 (2004 dollars) for the FS to complete recreation improvements, including
26 reconstruction of existing facilities and construction of new facilities, at the following
27 FS-owned recreation facilities: the Almanor family campground, the Almanor group
28 campground, the Almanor amphitheater, the Almanor picnic area, and the Almanor
29 beach. According to the SA, the FS would provide the remaining 60 percent of the cost
30 to construct the recreation improvements.

31 If PG&E has not paid the FS the maximum \$5,000,000 (2004 dollars) at the end of
32 the thirteenth year after the license is issued because the FS has been unable to obtain its
33 corresponding share of the matching funds, then PG&E proposes to use the remaining
34 funds (the difference between the amount PG&E has already paid the FS in matching
35 funds and the \$5,000,000 cap [2004 dollars]) for recreation improvements at the Almanor
36 beach and the East Shore family campground, which would include the addition of up to
37 28 campsites in a third loop as funding permits. The recreation improvements anticipated
38 to be completed with the matching funding are described in the following section.

1 *Almanor Family Campground and Amphitheater*

2 Within 1 to 13 years after license issuance, reconstruction of the north and south
3 loops of the Almanor family campground including general improvement of travel ways
4 and campsite spurs, upgrading sanitation facilities, providing utility hookups, and
5 constructing an amphitheater, is anticipated to be completed.

6 The FS recommends, as preliminary Section 4(e) condition 44A.1, that within 5
7 years of issuance of a new license, or no later than January 1, 2009, PG&E rehabilitate
8 the Almanor campground by: converting those campsites in proximity to existing
9 underground utilities (approximately one-half of the sites in the south loop) to
10 accommodate RVs with longer level spurs, to provide water and power hookups, and to
11 be ADA-accessible; reconstructing the main access roads and spurs to improve traffic
12 flow and to accommodate modern recreational vehicles, including leveling, lengthening,
13 and widening of campsite spurs; replacing all non-accessible vault toilets; constructing
14 shower buildings with showers and toilet facilities (possibly flush, vault and/or
15 composting toilets) at both Almanor north and south campground loops; and paving small
16 vehicle parking areas to provide additional vehicle parking for campground visitors to
17 access recreation facilities. Additionally, the FS recommends that PG&E take over full
18 O&M of the Almanor family campground under an annual agreement with the FS.

19 *Almanor Group Campground*

20 Within 1 to 13 years after license issuance, construction of camping loops, a group
21 gathering area including a pavilion, and a trailer dump station, and rehabilitating,
22 restoring, and revegetating the decommissioned overflow and group camp at the Almanor
23 group camp, is anticipated to be completed.

24 The FS recommends, as preliminary Section 4(e) condition 44A.1, within 5 years
25 of issuance of a new license, or no later than January 1, 2009, that PG&E construct a new
26 group campground and an RV dumpsite approximately 0.5 mile from the Almanor North
27 campground including toilet buildings with showers, open-air design activity center
28 building with enclosed food service and storage area, host site with full hookups, two
29 group fire rings, sport area (volleyball, horseshoes), paved access road, and a 10-foot
30 wide paved bike path extending from the new facility to the LART. Additionally, the FS
31 recommends that PG&E take over full O&M of the Almanor group camp under an annual
32 operations agreement with the FS.

33 *Almanor Picnic Area*

34 Within 1 to 13 years after license issuance, defining and upgrading picnic sites,
35 shade structures, and interpretation/orientation facilities at the Almanor picnic area, is
36 anticipated to be completed. The FS recommends, as preliminary Section 4(e) condition
37 44A.1 that within 5 years of issuance of a new license, or no later than January 1, 2009,

1 that PG&E redevelop the former rest area into the Almanor picnic area by upgrading the
2 parking area, developing individual picnic sites, improving the existing water source, and
3 constructing a kiosk, an interpretive trail and other interpretive facilities. Additionally,
4 the FS recommends that PG&E take over full operation, maintenance and interpretation
5 at the Almanor picnic area under an annual operations agreement with the FS.

6 Almanor Beach

7 Within 1 to 13 years after license issuance, PG&E proposes expanding the sandy
8 beach area and parking area, and constructing a swim buoy at the Almanor beach. The
9 FS recommends, as preliminary Section 4(e) condition 44A.2, within 5 years of issuance
10 of a new license, or no later than January 1, 2009, that PG&E conduct ongoing O&M at
11 the Almanor beach and additionally augment sand at the beach on an as-needed basis.
12 Additionally, the FS recommends that PG&E take over full O&M of the Almanor beach
13 area under an annual operations agreement with the FS.

14 East Shore Group Camp Area

15 Within 1 to 3 years after license issuance, PG&E proposes converting the existing
16 East Shore picnic area to a group reservation camp area that would accommodate one
17 group of 16 RVs or two groups of eight RVs; widening the entrance road; improving
18 internal road circulation to accommodate RVs; providing one ADA-accessible parking
19 space near the existing double-vaulted toilet building and an ADA-accessible access
20 route to the nearby trash receptacles; providing bear-proof food lockers at 16 sites;
21 providing a paved, non-accessible trail down to the shoreline with switchbacks and stairs;
22 and instituting erosion control measures. FS preliminary Section 10(a) condition 44E.3
23 recommends the same proposal, but no timeline is included.

24 East Shore Day-Use Area

25 Within 1 to 5 years after license issuance, PG&E proposes designating a day-use
26 swim area in the existing cove adjacent to the proposed new East Shore campground,
27 which would include up to five picnic tables, non-paved shoreline access trails, a single
28 vaulted toilet building, and parking for 10 to 20 vehicles. FS preliminary Section 10(a)
29 condition 44E.8 recommends the same proposal but no timeline is included.

30 East Shore Family Campground

31 Over the term of the project license period, contingent on reaching the recreation
32 monitoring standards contained in the RRMP during the new license term, PG&E
33 proposes providing a new two-loop family campground on PG&E-owned land along the
34 east shore of Lake Almanor. PG&E proposes constructing the campground in two phases
35 with a total of approximately 63 new tent and RV campsites, bear-proof food lockers at
36 each campsite, two user fee, indoor hot shower buildings with flush toilets,
37 approximately 20 boat moorage slips/buoys, and a camp host site. FS preliminary
38 Section 10(a) condition 44G.2 recommends the same proposal with the same timeline.

1 **North Shore Public Boat Launch**

2 Within 3 to 5 years after license issuance, PG&E proposes providing a new and
3 expanded public boat launching facility at the North Shore campground, including paved
4 parking for 40 single vehicles with trailers and 12 single vehicles, a double vaulted toilet
5 building, and a boarding float. Additionally, PG&E proposes dredging and maintaining
6 along the existing submerged river channel to provide an approximate 1,000 foot long, 50
7 foot wide, and 6 foot deep boat channel that provides boat access to approximately the
8 4,480-foot elevation (PG&E datum). PG&E proposes that the boat launch be open for
9 public use from April 1 to December 1 when the lake's elevation is at or above the 4,480
10 foot elevation (PG&E datum) and as snow on the ground permits. PG&E proposes
11 providing public access to the boat launch facility along an abandoned portion of
12 Highway 36 located along the north side of the campground, in order to reduce traffic
13 impacts at the campground, and relocating 22 campsites within the project boundary that
14 would be impacted by the expanded boat launch facility.

15 FS preliminary Section 10(a) condition 44E.4 recommends approximately the
16 same proposal, but no timeline is included, and the FS recommends that the public access
17 to the boat launch facility be provided along an abandoned portion of Highway 89 located
18 on the north side of the campground.

19 **Stover Ranch Day-Use Area**

20 Within 3 to 5 years after license issuance, PG&E proposes developing the Stover
21 Ranch day-use area to provide improved Lake Almanor shoreline access for Chester
22 residents including gravel parking for 10 to 20 vehicles, a double-vaulted toilet building,
23 four picnic tables, a non-paved trail to the shoreline, an interpretive sign, and an RV site
24 to accommodate a new Lake Almanor caretaker. PG&E would coordinate these
25 developments with the Chester Public Utility District and the Chester Recreation and
26 Parks District. FS preliminary Section 10(a) condition 44E.5 recommends the same
27 proposal, but no timeline is included.

28 **Marvin Alexander Beach**

29 Within 1 to 3 years after license issuance, PG&E proposes assuming management
30 responsibility of the PSEA swim beach and expanding and improving the existing sandy
31 beach to a 0.4 acre area above the high water level (4,494 foot elevation, PG&E datum),
32 providing an improved gravel parking area for 30 to 45 single vehicles, replacing the
33 site's two single-vault toilet buildings and 10 picnic tables, and providing a swim
34 delineator. PG&E also proposes changing the name of the site to the "Marvin Alexander
35 Beach" to eliminate any public perception that this is a private beach. FS preliminary
36 Section 10(a) condition 44E.6 recommends the same proposal, but no timeline is
37 included.

1 **Canyon Dam Day-Use Area**

2 Within 1 to 3 years after license issuance, PG&E proposes providing an
3 approximately 0.3-acre sandy beach above the high water level (4,494 foot elevation,
4 PG&E datum), a swim area delineator, an informational kiosk, improved vehicle
5 circulation, and eight new ADA-accessible picnic tables; and in accordance with ADA
6 guidelines, modifying eight existing picnic tables to make them accessible, providing an
7 accessible parking space, and providing an accessible route to the high water level (4,494
8 foot elevation, PG&E datum) at the swim beach area in accordance with ADA guidelines.
9 Additionally, PG&E proposes to reserve approximately 2.4 acres of land adjacent to the
10 Canyon dam day-use area for potential future recreation development during the term of
11 the new license. The FS recommends the same proposal in preliminary Section 4(e)
12 condition 44E.7, but no timeline is included.

13 **Westwood Beach Day-Use Area**

14 Within 1 to 3 years after license issuance, PG&E proposes providing a gravel
15 parking area for 10 vehicles, six picnic tables, an ADA-accessible single vaulted toilet
16 building, an approximately 0.1 acre sandy beach, a swim delineator, directional signage,
17 and erosion control measures to protect the shoreline from wind-caused wave action at
18 the Westwood beach. The FS recommends the same proposal in preliminary Section
19 10(a) condition 44E.9, but no timeline is included.

20 **Stumpy Beach Day-Use Area**

21 Within 1 to 3 years after license issuance, PG&E proposes providing five picnic
22 tables, directional signage, an approximately 0.7 acre sandy beach above the high water
23 level (4,494 foot elevation, PG&E datum), a swim delineator, eight to 10 paved parking
24 spaces parallel to Highway 147 with trails connecting to the northern and southern
25 portions of Stumpy beach (the southern trail would be ADA-accessible where feasible
26 and the northern trail would be non-paved), four benches at the roadside parking area for
27 viewing Lake Almanor and the surrounding mountains, and erosion control measures to
28 protect the shoreline from wind-caused wave action. PG&E also proposes providing a
29 single vaulted toilet building if allowed by Plumas County and the California Department
30 of Transportation set back regulations; otherwise, PG&E proposes providing a seasonal
31 portable toilet building. The FS recommends the same proposal in preliminary Section
32 10(a) condition 44E.10, but no timeline is included.

33 **Catfish Beach**

34 Within 3 to 5 years after license issuance, PG&E proposes making a good faith
35 effort to negotiate a reasonable easement across private lands to provide public road
36 access to the Catfish beach area. If PG&E's negotiations are unsuccessful, PG&E would
37 not be required to seek to condemn the easement. PG&E also proposes providing a
38 single vaulted toilet building at this site and monitoring and maintaining the toilet

1 building and the site's cleanliness through appropriate means. The FS recommends the
2 same proposal in preliminary Section 10(a) condition 44E.11, but no timeline is included.

3 **Almanor Scenic Overlook**

4 Within 1 to 5 years after license issuance, PG&E proposes providing an ADA-
5 accessible route connecting the existing accessible double vaulted toilet building at the
6 overlook with a new ADA-accessible parking space, and vegetative brushing and clearing
7 to restore the views of Lake Almanor, Mt. Lassen, and Canyon dam. FS preliminary
8 Section 10(a) condition 44E.12 recommends the same proposal but no timeline is
9 included.

10 **Southwest Shoreline Access Zone**

11 Within 1 to 5 years after license issuance, PG&E proposes providing four
12 shoreline access points at existing informally used areas along Lake Almanor's southwest
13 shoreline between Prattville and Canyon dam in consultation with the FS. These
14 shoreline access areas would provide vehicle access at or above the 4,494 foot elevation
15 (PG&E datum) and serve as pedestrian access areas to the adjacent shoreline. PG&E
16 proposes providing four gravel parking areas that provide parking for up to four to eight
17 vehicles at two of the areas and 10 to 20 vehicles at the other two areas; vehicle barriers;
18 regulatory, interpretive, and informational signs; gravel access roads; and, if appropriate,
19 single vaulted toilet buildings at these access areas. PG&E also proposes closing and
20 restoring to natural conditions other degraded user-created vehicular access routes along
21 the southwest shoreline in consultation with the FS.

22 Preliminary Section 4(e) condition 44B.1, recommends implementation of the
23 same proposal within 5 years of issuance of a new license, or no later than January 1,
24 2009. Additionally, the FS recommends that PG&E take over full O&M of these
25 southwest shoreline access points under an annual operations agreement with the FS.

26 **Camp Connery Reservation Group Camp Area**

27 Within 1 to 5 years after license issuance, PG&E proposes providing a an ADA-
28 accessible parking space and a new bunk house cabin with accessible toilet and fee based
29 hot shower and retrofitting the existing telephone position and water faucet features to
30 meet the ADA guidelines. Part of FS preliminary Section 10(a) condition 44G.1
31 recommends the same proposal as a future recreation enhancement measure, contingent
32 on the monitoring triggers (standards) contained in the RRMP being reached over the
33 license term.

34 Over the term of the project license period, contingent on reaching the recreation
35 monitoring standards contained in the draft RRMP during the new license term, PG&E
36 proposes providing a new group reservation camping area adjacent to the existing Camp
37 Connery group camp, which would either provide space for two groups of approximately
38 eight self-contained RVs or one group of approximately 16 self-contained RVs, a

1 centrally located bear-proof food facility, and two user fee, indoor shower buildings with
2 hot water and flush toilets. The remainder of FS preliminary Section 10(a) condition
3 44G.1 recommends the same proposal as a future recreation enhancement measure along
4 with a recommendation to repair and resurface the existing access road.

5 **Lake Almanor Recreation Trail Easements**

6 The FS recommends, as preliminary Section 4(e) condition 44B.2, within 5 years
7 of issuance of a new license, or no later than January 1, 2009, that PG&E provide
8 easements to the FS and Plumas County for non-motorized recreational trails across
9 PG&E-owned project lands surrounding Lake Almanor. The conditions of the proposed
10 trail easements would be similar to those previously provided to the FS. The FS would
11 like to extend the LART all the way to the Canyon dam boat launch and day-use area,
12 which would add another few miles to the LART.

13 *Our Analysis*

14 Lake Almanor, the largest reservoir at the UNFFR Project, has induced high
15 concentrations of human use around the lake shoreline. Only 11 percent of the perimeter
16 of Lake Almanor is composed of NFS lands, and the remaining shoreline consists of
17 private land owned by either PG&E or private owners. The majority of the non-PG&E
18 private land is occupied by private dwellings so public access at Lake Almanor is limited
19 to NFS lands, PG&E lands, and a limited number of private marinas and other points of
20 access.

21 The Last Chance family and group camp currently has no ADA-accessible
22 elements. Based on draft ADA guidelines, this facility should have three accessible
23 campsites, but the modification of both two campsites and the two toilet buildings to
24 ADA standards would improve accessibility at the facility. Providing an ADA-accessible
25 access road to the nearby creek would also enhance accessibility.

26 Loop One of the Rocky Point campground is one of only two facilities in the
27 project that provides the minimum number of accessible campsites as required in the
28 draft ADA guidelines. PG&E's proposal to modify several elements to ADA standards at
29 this facility would greatly improve accessibility. Replacing the older Klamath stoves
30 with campfire rings at all of the campsites would improve safety at the facility. The other
31 improvements proposed at this facility would make the facility more desirable to
32 recreation users.

33 Most of the recreation facilities on NFS lands along Lake Almanor are located
34 adjacent to PG&E-operated facilities. Unfortunately, most of these recreation facilities
35 do not meet current FS standards including LRMP standards and guidelines and current
36 ADA accessibility standards. PG&E proposes providing 40 percent of the matching
37 funds up to a maximum of \$5,000,000 to the FS to assist with making major
38 improvements to its Lake Almanor facilities. Many of these facilities have very few, if

1 any, ADA-accessible elements and the elements that are there are in need of
2 modification. PG&E has set a limit on the amount of money it would provide to the FS
3 to assist with reconstruction and modifications of these facilities. Improvement of the FS
4 facilities would bring them up to the current standards of the PG&E facilities.

5 PG&E's proposed modification of the East Shore picnic area into a group camp
6 area would increase the number of group camping areas available at Lake Almanor.
7 Likewise, PG&E's proposal to modify several elements to ADA standards at this facility
8 would improve accessibility at Lake Almanor. Formalizing the trail down to the
9 shoreline and completion of erosion control measures would improve the recreation
10 experience at this site, as well as protect it and water quality in Lake Almanor.

11 PG&E's proposal to create a swimming area adjacent to the new East Shore group
12 camp area would increase recreational opportunities for visitors to the East Shore
13 campground, as well as day use visitors.

14 PG&E's proposes providing a new two-loop family campground on the east shore
15 of Lake Almanor once use levels or other indicators reach a defined capacity threshold
16 level. PG&E proposes monitoring campground utilization at Lake Almanor by
17 calculating the capacity utilization of selected campgrounds during the managed use
18 season (primarily mid-May to mid-September) and during the peak months (July and
19 August at most sites). PG&E would annually assess whether use levels are approaching
20 threshold standards to determine if demand warrants construction of another campground
21 in the area.

22 PG&E's proposal to provide a new and expanded boat launching facility at North
23 Shore campground on Lake Almanor would increase the number of free public launch
24 facilities available on Lake Almanor and would also provide a launch facility at the
25 northern end of the lake, allowing boat users to disperse themselves around the Lake
26 Almanor shoreline. Currently, parking at this site is limited and increasing opportunities
27 for parking at this facility would make this site more desirable and efficient.

28 PG&E's proposed development of the Stover Ranch into a day use area with
29 parking, picnic tables, and a trail to the shoreline would provide easier and improved
30 access to the Lake Almanor shoreline for Chester residents and visitors. Additionally,
31 accommodating a seasonal caretaker at the site would help ensure that the site is
32 maintained in a pleasing manner and should minimize the possibility of vandalism at the
33 site.

34 PG&E's proposal to modify the existing PSEA swim beach would increase day-
35 use beach opportunities for the public along the Lake Almanor shoreline. Renaming the
36 site "Marvin Alexander Beach" would allow PG&E to pay tribute to a member of the
37 community with a long-time, unwavering interest in Lake Almanor and should help
38 eliminate any public perception that the facility is a private beach.

1 PG&E's modification of eight existing picnic tables and provision of eight new
2 picnic tables to ADA standards would improve accessibility at the Canyon dam day-use
3 area and bring the facility up to ADA standards. Providing an ADA-accessible parking
4 space and an accessible route to the high water level would also enhance accessibility.

5 Westwood and Stumpy beaches are currently undeveloped dispersed sites along
6 the eastern shoreline of Lake Almanor. PG&E's proposal to provide facilities at the
7 Westwood and Stumpy beaches would increase day-use beach opportunities for the
8 public along the Lake Almanor shoreline and should attract some of the day use from the
9 western shore. PG&E's proposals to provide elements at these sites in compliance with
10 ADA standards would improve accessibility at Lake Almanor. Additionally, PG&E's
11 provision of erosion control measures would protect the shoreline and the newly created
12 beaches at these sites, and should help maintain water quality in Lake Almanor.

13 PG&E proposes attempting to acquire an easement across private lands to provide
14 both public road access and a single vaulted toilet building at Catfish beach, which
15 currently is an undeveloped dispersed site. According to studies conducted by PG&E, fly
16 fishermen expressed concern over the current gated access to Catfish beach, which makes
17 it difficult for older fly fisherman to reach the area they traditionally use to go fishing.
18 This proposal would increase day use beach opportunities for the public along the Lake
19 Almanor shoreline, may disperse some of the use from the western shore, and should
20 address sanitation issues at Catfish beach.

21 PG&E's proposals for the Almanor scenic overlook would make the site more
22 accessible and also improve the aesthetic appeal of the site for visitors.

23 PG&E's proposal for the southwest shoreline access zone would formalize some
24 of the existing undeveloped dispersed use in this area. Defining the boundaries of this
25 shoreline vehicular access area would minimize adverse impacts on water quality,
26 cultural resources, and the flora and fauna in the area.

27 PG&E's proposal to modify several elements to ADA standards at Camp Connery
28 would greatly improve accessibility at this site and allow a broader range of visitors to
29 use the facility. PG&E has also proposed providing a new group camping area adjacent
30 to the existing Camp Connery group camp once use levels or other indicators reach a
31 defined capacity threshold level. PG&E proposes monitoring group campground
32 utilization at Lake Almanor by calculating the capacity utilization of selected
33 campgrounds during the managed use season (primarily mid-May to mid-September) and
34 during the peak months (July and August at most sites). PG&E would annually assess if
35 use levels are approaching threshold standards to determine if demand warrants
36 construction of another group campground in the area.

37 The FS has recommended that PG&E provide easements to them for the purpose
38 of extending the LART to the north and to the south. Extending the LART would

1 enhance trail opportunities at Lake Almanor and provide visitors with another means to
2 access sites on the western shore of Lake Almanor without having to drive a vehicle.
3 However, in order to extend the LART all the way to Canyon dam day-use area and boat
4 launch to the south, the route would pass through sensitive plant and animal habitat and
5 coordination with other resource specialists would be necessary prior to designing a trail
6 in this area. Also, certain use restrictions in this sensitive area may apply.

7 **Butt Valley Reservoir Recreational Facilities and Access**

8 **Powerhouse Trails**

9 Within 5 to 10 years after license issuance, PG&E proposes providing improved
10 angler access trails to two locations near the Butt Valley powerhouse. One of the trails
11 would be an approximately 200-foot, non-paved trail beginning at the existing gravel
12 parking area next to the powerhouse down the steep slope east of the powerhouse to the
13 levee below, with stairs, if needed. The second trail would be ADA-accessible (compact
14 base rock) originating from an existing pullout along the Prattville-Butt Valley Road near
15 the powerhouse, extending approximately 700 feet to the eastern shoreline of the inlet
16 near the levee. PG&E proposes developing a new compacted base rock trailhead parking
17 area with barriers for this trail. The FS recommends the same proposal in preliminary
18 Section 10(a) condition 44F.1, but no timeline is included.

19 **Ponderosa Flat Campground**

20 Within 5 to 10 years after license issuance, PG&E proposes providing a single
21 person, non-heated outdoor shower at Ponderosa Flat campground, and, in accordance
22 with ADA guidelines: modifying four campsites and retrofitting the existing designated
23 accessible campsites to provide accessibility of the picnic table, fire ring, cooking grill,
24 tent or RV area, and water faucet at each of these campsites; replacing the vault toilets in
25 the overflow area with one new accessible single vaulted toilet building and modifying
26 all of the other existing designated accessible toilet buildings to meet current ADA
27 standards; providing an ADA-accessible access route to the toilet building near Site 45
28 and one ADA-accessible paved parking space near the toilet buildings; providing an
29 ADA-accessible swimming area at the campground with an approximately 0.4 acre sandy
30 beach above the high water elevation (4,132 foot elevation, PG&E datum) and a swim
31 delineator; and providing a new ADA-accessible fishing access trail and pier or platform
32 north of the overflow area. The FS recommends the same proposal in preliminary
33 Section 10(a) condition 44F.2, but no timeline is included.

34 Over the term of the project license period, contingent on reaching the recreation
35 monitoring standards contained in the draft RRMP during the new license term, PG&E
36 proposes providing approximately 20 new primitive tent campsites, likely to the north of
37 the current overflow area, and a new 100 person capacity group camp area in the existing
38 overflow area. The FS recommends approximately the same proposal as a future
39 recreation enhancement measure as preliminary Section 10(a) condition 44G.3.

1 **Cool Springs Campground**

2 Within 5 to 10 years after license issuance, PG&E proposes providing a two-
3 person, non heated outdoor shower at Cool Springs campground and one new ADA-
4 accessible campsite by modifying the picnic table, the fire ring, the cooking grill, the tent
5 or RV space, and water faucet. FS preliminary Section 10(a) condition 44F.3,
6 recommends the same proposal but no timeline is included and the FS also recommends
7 retrofitting water faucets near accessible elements to be ADA-accessible.

8 **Alder Creek Boat Launch**

9 Within 5 to 10 years after license issuance, PG&E proposes expanding the existing
10 Alder Creek boat launch parking area to accommodate 10 to 20 additional vehicles with
11 trailers and to improve circulation. PG&E proposes that new parking areas on the east
12 side of the Butt Valley Reservoir Road would be gravel while the parking areas on the
13 west side of this road would be paved. PG&E also proposes modifying the boat launch to
14 be accessible, and providing one ADA-accessible parking space near the existing double
15 vaulted toilet building. The FS recommends the same proposal in preliminary Section
16 10(a) condition 44F.4, but no timeline is included.

17 *Our Analysis*

18 Butt Valley reservoir is located on the Plumas National Forest. There is no road
19 access to the west side of the reservoir, and all developed facilities are located along the
20 Caribou-Butt Valley Road on the east side of the reservoir. Recreation development at
21 Butt Valley reservoir has focused on a more primitive recreation experience in an attempt
22 to provide a wide spectrum of opportunity from highly developed at Lake Almanor to
23 primitive at Butt Valley reservoir.

24 PG&E's proposal to provide two angler access trails near the Butt Valley
25 powerhouse would formalize some of the existing user-defined trails in the area. One of
26 the trails is proposed to be ADA-accessible, increasing the diversity of recreation
27 experiences available.

28 Ponderosa Flat Campground is the second one of only two facilities in the project
29 that provides the minimum number of accessible campsites as required in the draft ADA
30 guidelines. PG&E's proposal to modify several elements to ADA standards at this
31 facility would greatly improve accessibility. The other improvements proposed at this
32 facility would make the facility more desirable to recreation users.

33 PG&E proposes providing 20 new primitive tent campsites and a new 100 person
34 capacity group camp area in the existing overflow area at the Ponderosa Flat
35 Campground once use levels or other indicators reach a defined capacity threshold level.
36 PG&E proposes monitoring campground utilization at Butt Valley Reservoir by
37 calculating the capacity utilization of selected campgrounds during the managed use

1 season (primarily mid-May to mid-September) and during the peak months (July and
2 August at most sites). PG&E would annually assess if use levels are approaching
3 threshold standards to determine if demand warrants construction of another campground
4 in the area.

5 PG&E's proposal to provide a new, fully-accessible campsite at the Cool Springs
6 Campground would bring this facility into compliance with ADA standards.

7 The new parking areas that PG&E proposes at the Alder Creek boat launch would
8 help accommodate user demand at this facility. PG&E's proposal to modify the boat
9 launch to be ADA-accessible and providing one accessible parking space would improve
10 accessibility at this site.

11 **Belden Forebay Recreational Facilities and Access**

12 **Belden Forebay Access**

13 Within 5 to 10 years after license issuance, PG&E proposes providing a car-top
14 boat launch, a seasonal portable toilet building, and a gravel parking area for 10 single
15 vehicles at the Belden forebay's existing undeveloped parking area, which also serves as
16 the trailhead for the North Fork fishing trail; providing suitable access for launching
17 small car-top watercraft at the Belden forebay; posting signage referring to a Plumas
18 County ordinance (once the ordinance is approved) limiting boat engines to 10 hp, boat
19 speeds to 5 mph on small reservoirs such as the Belden forebay, prohibiting swimming or
20 boating within 0.25 mile of Belden dam and prohibiting swimming or boating at night.
21 The FS recommends the same proposal as preliminary Section 4(e) condition 44H.2. but
22 no timeline is included.

23 **North Fork Fishing Trail**

24 Within 1 to 3 years after license issuance, PG&E proposes improving the North
25 Fork fishing trail from the Belden forebay parking area to the upstream side of Caribou
26 powerhouse 1, including retrofitting the existing metal trail decking and railing at the
27 powerhouse above the turbine outlets providing enhanced access and safety, trail
28 directional signs, and a wider, more even non-paved trail base along the chain-link
29 fencing at the powerhouse yard and along Caribou Road from the parking area. FS
30 preliminary Section 10(a) condition 44H.3 recommends the same proposal but no
31 timeline is included.

32 ***Our Analysis***

33 There are no developed boating-related facilities at the Belden forebay. PG&E's
34 proposal to provide access for boaters to launch their car-top boats at the Belden forebay
35 would address angler needs and user demand at this site. Providing a parking lot and a
36 toilet building would address any sanitation concerns at the site. The North Fork fishing
37 trail is the only developed non-motorized trail on the project river reaches and receives

1 regular use by anglers. Improving the trail would prevent site degradation and ensure the
2 safety of trail users.

3 **Bypassed River Reaches**

4 **Upper Belden Reach River Access**

5 Prior to the initiation of any recreation release flows, PG&E proposes providing a
6 river access point at the upstream end of the Belden reach located at the spoil pile area
7 which would include a seasonal portable toilet, a seasonal dumpster located over a
8 concrete pad, and a non-paved parking area to accommodate 15 to 25 single vehicles. FS
9 preliminary Section 4(e) condition 44H.4 recommends that PG&E provide a river access
10 point at the upstream end of the Belden reach located at the spoil pile area including a
11 seasonal portable toilet and a dumpster located over a concrete pad.

12 **Belden Reach Trails**

13 Within 1 to 3 years after license issuance, PG&E proposes providing and
14 maintaining four trails to the Belden reach shoreline from existing informal parking areas
15 where public access can be provided in a safe manner. The FS recommends, as
16 preliminary Section 4(e) condition 44H.5. that PG&E provide and maintain four trails to
17 the Belden reach shoreline from existing informal parking areas where public access can
18 be provided in a safe manner.

19 **Belden Rest Stop (SR 70)**

20 Within 3 to 5 years after license issuance, PG&E proposes relocating the existing
21 picnic tables down to the rest stop's lower level and dispersing them within the area from
22 the Eby Stamp Mill to the gazebo near the creek; replacing two of the tables with ADA-
23 accessible tables; developing ADA-accessible routes to the gazebo, the overlook area
24 next to the creek, and to the Eby Stamp Mill historical features; and providing improved
25 I&E elements at the rest stop and erosion control measures on the slope between the
26 parking lot and the upper picnic area. PG&E also proposes removing the existing
27 cooking grills from the upper level and closing that area. FS preliminary Section 10(a)
28 condition 44H.6. recommends the same proposal, except that no timeline is included and
29 the FS recommends relocating the cooking grills to the lower level.

30 Over the term of the project license period PG&E proposes replacing the existing
31 vault restrooms when major renovation is needed. This improvement is contingent on the
32 monitoring triggers (standards) contained in the RRMP being reached over the license
33 term.

34 **Lower Belden Reach River Access**

35 If a determination is made to proceed with scheduled river recreation flows,
36 PG&E proposes providing up to a maximum of \$125,000 (2005 dollars) to the FS for

1 construction of non-Project river access to the lower Belden reach. PG&E expects the FS
2 to make a good faith effort to obtain matching funds to help offset the cost of these
3 improvements.

4 FS preliminary Section 4(e) condition 44H.1 recommends that PG&E prepare a
5 river recreation facilities plan in consultation with the Technical Review Group and
6 approved by FS, if a determination is made to proceed with scheduled river recreation
7 flows. FS further recommends that PG&E provide up to \$125,000 for construction of
8 essential facilities including access facilities at a site determined by the FS, with paved
9 parking, restroom, picnic table, bear-proof garbage disposal and reasonable access to
10 launch and retrieve kayaks and rafts.

11 *Our Analysis*

12 The Seneca and Belden reaches provide many dispersed recreation use
13 opportunities, especially the Belden reach. Formalizing access points at the upper and
14 lower ends of the reach would address environmental concerns at these locations.
15 Likewise, providing and maintaining trails to the shoreline should discourage the
16 formation of informal trails, thus addressing environmental concerns at this site. Regular
17 maintenance of the trails to the shoreline of the Belden reach should also ensure user
18 safety.

19 The Belden Rest Stop receives year-round use due to its location on SR 70, which
20 is plowed in the winter. It is primarily used by motorists for short periods of time.
21 PG&E's proposal to provide two ADA-accessible picnic tables would bring the facility
22 into compliance with the draft ADA guidelines. PG&E's proposal to modify other
23 elements at this facility to ADA standards would greatly improve accessibility at this site
24 and allow a broader range of visitors to use the facility. Safety for all users would be
25 enhanced with the closure of the upper picnic area. The other improvements proposed at
26 this facility would make the facility more desirable to visitors and may encourage
27 extended visits at the site. Additionally, PG&E's provision of erosion control measures
28 would protect the environmental quality of the area, and should help maintain a pleasing
29 aesthetic quality at the site.

30 Whitewater boating flows may be proposed in the Belden reach and there is
31 potential for implementation of scheduled recreational boating releases there in the
32 future. PG&E proposes providing an improved access point at the upper end of the
33 Belden reach for a boater put-in location. This access point would accommodate use
34 issues such as vehicle parking and sanitation issues at this location. Additionally, PG&E
35 proposes providing funding to the FS for construction of a non-project river access point
36 to provide a boater take-out location. Any amenities provided at this site, would be based
37 on an assessment of user needs by the FS and PG&E.

1 Recreation Operations and Maintenance Program

2 As a component of the draft RRMP and identified in the SA, PG&E proposes
3 assuming responsibility for O&M of the following FS facilities prior to the start of the
4 first recreation season following license issuance: the Dyer View day-use area, the
5 Canyon dam boat launch and day-use area, and the Almanor boat launch. Additionally,
6 as each recreation facility is individually constructed, PG&E proposes assuming O&M
7 responsibility for the southwest shoreline access zone facilities described in the recreation
8 facilities development program. Further, PG&E proposes that, within 6 months after the
9 FS has completed construction of each of the recreation improvements it has planned for
10 the FS Almanor family campground and amphitheater, the FS Almanor group
11 campground, and the FS Almanor beach, it would apply to FERC to incorporate these
12 additional FS facilities within the FERC project boundary and to include these facilities
13 in the O&M program.

14 PG&E proposes to be responsible for operational maintenance and heavy
15 maintenance at FS facilities. To offset its operational and heavy maintenance costs and
16 any matching contribution they have made toward construction of recreation
17 improvements at FS facilities, PG&E, proposes collecting and retaining 100 percent of
18 FS approved market rate user fees at all FS recreational facilities that PG&E operates and
19 maintains in accordance with FERC, FS, and applicable California Department of
20 Boating and Waterways regulations. Prior to assuming responsibility for the O&M of
21 these FS facilities, PG&E proposes entering into a FS approved operation agreement with
22 the FS that addresses PG&E's obligations as defined in the SA. PG&E further proposes
23 meeting with the FS at least annually to review the O&M of FS facilities included in the
24 license.

25 In its December 1, 2003, filing with the Commission, the FS recommends, in
26 preliminary Section 4(e) condition 44 that PG&E obtain FS approval to implement a
27 variety of recreation construction, reconstruction, and O&M measures and includes the
28 same provision as the SA allowing PG&E to charge and retain FS-approved user fees at
29 FS facilities in accordance with FERC and California Department of Boating and
30 Waterways regulations. Additionally, the FS recommends that PG&E assume full O&M
31 of the following FS facilities under an operations agreement with, and annually approved
32 by, the FS: the Almanor campground including the boat launch and beach facilities,
33 general forest areas on the Lake Almanor shoreline including shoreline access points, the
34 LART, the Dyer View day-use and trailhead access point, and the Canyon dam boat
35 launch. The operations agreement may include FS O&M standards, and the provision of
36 water, sanitation, RV dump station(s), trail maintenance, capital improvement
37 responsibilities and campground road maintenance.

1 *Our Analysis*

2 The O&M program is a component of the draft RRMP and has also been proposed
3 by PG&E in the final SA and recommended by the FS. Ongoing and adequate O&M of
4 existing and future recreation facilities is critical to visitor enjoyment and effective
5 recreation resource management. A partnership between PG&E and the FS for O&M of
6 FS recreation facilities would be beneficial for a number of reasons: FS funding is often
7 too low and unpredictable to adequately maintain facilities and meet growing needs;
8 PG&E is able to provide more consistent management over the life of the license than the
9 FS, *which is subject to changing budgets based on Congressional appropriations*; PG&E
10 would be able to realize all receipts received from the recreational facilities which would
11 provide substantially more revenues to invest in the facilities for maintenance and
12 standard upgrades over the life of the license; adjacent project facilities would be
13 managed more consistently, reducing visitor confusion over management practices; and
14 funding for the facilities would be provided in a more efficient and consistent manner,
15 which should result in improved public service and increased user satisfaction.

16 **Interpretation and Education Program**

17 As a component of the draft RRMP, PG&E proposes developing an I&E program
18 for the project in consultation with the FS, Plumas County, and other stakeholders within
19 2 years after license issuance. PG&E proposes submitting the portion of the I&E
20 program that pertains to FS facilities to the FS for its approval and implementing the
21 program within 1 year of program approval by the Commission. PG&E proposes that the
22 I&E program would provide information to enhance recreation experiences and
23 encourage appropriate resource protection, cooperative and safe behaviors from project
24 visitors. PG&E proposes that the I&E program would include themes, media, media
25 design, prioritized sites, and prioritized services. Potential themes proposed by PG&E
26 include fish and wildlife resources, volcanic history, hydropower, Native American
27 cultures, pioneers, recreation activities and facilities available in the project area, and
28 boating hazards. The program as proposed by PG&E in the SA would include
29 improvements such as interpretive or informational signs, kiosks, reservoir boating safety
30 and hazard information signs and brochures, and informational signs describing
31 recreation facilities and opportunities in the area. PG&E proposes that development of
32 improvements contemplated in the I&E program would be at recreation sites owned by
33 PG&E and the FS that are to be included within the project boundary. PG&E also
34 proposes that the I&E program would also identify funding partnership arrangements
35 with the FS and other interested parties, and include a schedule for implementation.
36 PG&E also proposes preparing a Lake Almanor bathymetric (underwater topographic)
37 map within 1 year of license issuance, which would be available in pamphlet form to area
38 boaters and posted on signs at Lake Almanor public boat ramps.

39 In its December 1, 2003, filing with the Commission, the FS recommends in
40 preliminary Section 4(e) condition 43, that PG&E develop an I&E plan, which includes

1 the same elements as PG&E's proposed I&E program except that the FS recommends
2 development of the plan within 5 years of license issuance. FS preliminary Section 4(e)
3 condition 43 further recommends that PG&E prepare a bathymetric map of Lake
4 Almanor within 1 year of license issuance.

5 *Our Analysis*

6 The I&E program is a component of the draft RRMP. Development of an I&E
7 program would help provide a means to disseminate information regarding project-area
8 resources, facilities, and management issues to members of the public who currently use
9 the project area and to members of the public who may be interested in using the area.
10 This information would provide a means to help educate the public about safety factors to
11 consider within the project area and the potential effects of recreational use on sensitive
12 project-area resources. An I&E program would also help with coordination of the types
13 of information that should be provided to the public and the best methods for providing it.

14 The proposed bathymetric map would provide valuable information such as
15 submerged hazards and pool depth to boaters that visit Lake Almanor. The map would
16 be especially useful during times of the year when the water level of Lake Almanor is
17 below full pool. PG&E's proposal to provide copies of the bathymetric map at the public
18 boat ramps on Lake Almanor would ensure that the boaters who launch their watercraft
19 there have been exposed to information included on the map such as underwater boating
20 hazards, and may improve the recreation experiences of these individuals as well as
21 enhancing safety.

22 **Recreation Monitoring Program**

23 As a component of the draft RRMP, PG&E proposes completing a recreation
24 monitoring program in consultation with the FS, Plumas County, and other interested
25 parties. PG&E proposes submitting that portion of the recreation monitoring program
26 pertaining to FS facilities to the FS for its approval. In the recreation monitoring
27 program, PG&E proposes adopting the limits-of-acceptable-change (LAC)-based
28 monitoring approach as described in the October 2002 draft of the RRMP. This approach
29 includes recreation monitoring indicators and standards that would initiate management
30 action to help maintain desired recreation experiences and resource conditions at project
31 recreation areas over the license term. PG&E proposes specifically monitoring the
32 following recreation areas at a minimum: the water surface of project reservoirs, and
33 PG&E and FS recreation facilities and shoreline areas within the project boundary.
34 PG&E proposes including a schedule of information to be collected annually, every 6
35 years, or every 12 years in the recreation monitoring program. PG&E also proposes more
36 in-depth monitoring, such as visitor questionnaire surveys and general assessment of
37 regional recreation trends at 12-year intervals. PG&E proposes preparing periodic
38 monitoring reports every 6 years in conjunction with FERC Form 80 recreation facility
39 and use monitoring requirements. As part of the monitoring program, PG&E proposes

1 conducting annual recreation planning and coordination meetings with other recreation
2 providers in the project area to discuss recreation resource management decisions for the
3 project area, implementation of project recreation enhancements, recreation monitoring
4 results, potential grant applications, and other pertinent project-related recreation issues
5 that may arise over the term of the new project license. If recreation test river flows are
6 conducted, PG&E proposes developing a study plan to monitor recreation use during the
7 test flow period and producing a report on monitoring results in consultation with the FS
8 and other interested parties.

9 In its December 1, 2003, filing with the Commission, the FS recommends, as
10 preliminary Section 4(e) condition 42, that PG&E prepare a recreation monitoring and
11 survey plan in consultation with the FS, Plumas County, and other interested parties that
12 would be approved by the FS and filed with the Commission within 12 months of license
13 issuance. The FS also recommends that PG&E complete FS-approved reports on
14 recreational resources and file them with the Commission. The FS would like to reserve
15 the right to require changes in the project and its operation, after notice and opportunity
16 for comment and administrative review, through revision of the 4(e) conditions that
17 require measures necessary to accomplish protection and utilization of National Forest
18 resources identified in those surveys. The rest of preliminary Section 4(e) condition 42 is
19 consistent with the proposal in the SA.

20 *Our Analysis*

21 The recreation monitoring program is a component of the draft RRMP.
22 Implementation of a recreation monitoring plan would provide measures to assess the
23 adequacy of the recreational facilities, the effects of recreational use on the project area's
24 resources, recreational-use capacity issues, and the opportunity to adjust recreational
25 facility development and management over the term of a new license.

26 The proposed stakeholder consultation and annual recreation coordination and
27 planning meetings would ensure that all of the recreation providers and managers are in
28 agreement with regard to the necessary improvements at the project. Implementation of
29 the recommended recreation monitoring plan and associated stakeholder consultation
30 would provide the opportunity for the review of the recreational facilities and
31 maintenance over the term of the license.

32 A report on the recreation monitoring and coordination would allow the
33 Commission to review the proposed recreation facilities as they are planned or as
34 modifications are required over the course of the license. Such a report would be best
35 suited to a similar time schedule as the FERC Form 80 requirements. This report could
36 include the recreational monitoring results, documentation of consultation, and a
37 summary of planned recreational facility improvement measures or resources protection
38 mitigation measures associated with the recreational facilities within the project
39 boundary, schedule information, the party responsible for funding and implementing the

1 measures, estimated costs for implementation, and the entity responsible for the long-
2 term maintenance and management of the planned recreational facilities and/or mitigation
3 measures.

4 **Resource Integration and Coordination Program**

5 As a component of the draft RRMP, PG&E proposes to hold annual public
6 meetings to coordinate recreation resource needs with other resource management needs
7 such as cultural, wildlife, and aquatic resources with appropriate agencies and
8 stakeholders over the term of the new project license.

9 In its December 1, 2003, filing with the Commission, the FS provides the same
10 recommendation in preliminary Section 4(e) condition 44I.

11 In its December 1, 2003, filing with the Commission, Interior recommends that
12 PG&E develop a recreational activities monitoring plan, to monitor the potential effects
13 of camping, angling, access, and boating flows (if adopted) on fish and wildlife
14 resources. Interior would like for elements of the plan to include a comparison of data on
15 recreational activities use, distribution, and expansion to fisheries and raptor monitoring
16 data. Interior would also like for the plan to include elements to assess the effects of
17 recreational use and facility development on local vegetation resources.

18 *Our Analysis*

19 The resource integration and coordination program is a component of the draft
20 RRMP. A similar program has been recommended by Interior. Results of the recreation
21 monitoring conducted at the project would provide information on the effects of
22 recreational use on the project area's resources and the opportunity to adjust recreational
23 facility development and management over the term of a new license. Monitoring of
24 recreation at the project should be designed so that effects on a variety of resources are
25 addressed, not just recreation-related interests. This would help ensure that minimal
26 adverse effects on the project area's sensitive resources, such as cultural resources, would
27 occur as a result of project-area recreational use.

28 A number of parties have oversight for and an interest in various natural resources,
29 commercial interests, and community interests that may be affected either positively or
30 negatively by recreational pursuits. By holding specific coordination meetings,
31 information obtained in previous years, as well as results of current surveys can be
32 reviewed and discussed. Data obtained from ongoing recreation surveys would assist in
33 making any needed changes in management of the area and for future planning.

34 **Recreation Resource Management Plan Review and Revision Program**

35 In the draft RRMP, PG&E discusses unforeseen recreation needs, changes in
36 visitor preferences and attitudes, and new recreation technologies that would likely occur

1 over the term of the license. PG&E proposes that the frequency with which the RRMP is
2 revised or updated should be dependent on significant changes to existing conditions,
3 monitoring results, and management responses made over time. Therefore, PG&E
4 proposes that the frequency of RRMP updates should not exceed every 12 years and
5 should be based on consultation with the FS, other parties to the SA, and the SWRCB,
6 and other interested parties during monitoring and coordination meetings and through
7 other appropriate sources. In its December 1, 2003, filing with the Commission, the FS
8 provides the same recommendation in preliminary Section 4(e) condition 44J.

9 *Our Analysis*

10 The plan review and revision program is a component of the draft RRMP.
11 Updating the RRMP on 12 year intervals allows for two FERC Form 80 cycles to occur
12 before any changes may occur. Additionally, meeting every 6 years to address the
13 information included in the FERC Form 80 report provides the licensee and interested
14 stakeholders the opportunity to identify and assess changes and trends that have occurred
15 or are occurring over time, and to distinguish them from simple annual variability.
16 Therefore, any changes to the RRMP would be appropriate and would address needed
17 change in the direction of the program. As stated above, the proposed stakeholder
18 consultation, monitoring, and reporting would ensure that the needs of the public are met
19 throughout the term of the license.

20 **Final Recreation Resources Plan**

21 In its December 1, 2003, filing with the Commission, Interior recommends, in its
22 Section 10(a) condition 2, that PG&E develop a final recreation resources plan that
23 provides for a diverse range of recreational opportunities on Lake Almanor and the river
24 reaches including a comprehensive listing of capital investments, facility enhancements,
25 and programmatic elements and delineate which entity is responsible for paying for such
26 investments and improvements and have a schedule indicating when it would take place.

27 *Our Analysis*

28 PG&E proposes finalizing the draft RRMP in consultation with the FS and Plumas
29 County within 1 year of license issuance. The six programs included in the draft RRMP,
30 described in detail above, would address Interior's recommendation.

31 **Recreation Coordination and Review**

32 In its December 1, 2003, filing with the Commission, the FS recommends, as
33 preliminary Section 4(e) condition 41, that PG&E meet in-person with the FS,
34 appropriate agencies, and interested parties every 6 years to review and adjust project-
35 wide recreation management objectives. The FS recommends that the meeting coincide
36 with the Commission recreation inspection schedule and occur within a reasonable
37 distance to the project. The FS further recommends that the meeting review be based on

1 monitoring results from recreation surveys, law enforcement monitoring, and other
2 applicable study and monitoring results and address the following factors: capacity,
3 including developed and dispersed sites, roads, trails, water bodies and river reaches;
4 types and condition of facilities; kinds, quality, quantity, and range of opportunities;
5 health and safety; and user and resource conflicts.

6 *Our Analysis*

7 PG&E, the FS, and Interior have already proposed a similar measure with the
8 resource integration and coordination program, which is a component of the draft RRMP.
9 The only difference with the FS-proposed recreation coordination and review
10 recommendation is that the FS recommends that PG&E meet with the FS and other
11 appropriate agencies every 6 years, concurrent with the FERC Form 80 reporting. PG&E
12 has already proposed meeting annually with the parties to the SA to discuss the results of
13 recreation monitoring and any effects on project resources. Therefore, we believe that
14 this recommendation is redundant and that the intent of this recommendation is already
15 met with the resource integration and coordination program.

16 **Fishery Programs**

17 PG&E proposes annually providing up to \$50,000 (2004 escalated dollars) to: (1)
18 reimburse CDFG for stocking 5,000 pounds of catchable trout per calendar year in the
19 waters of the NFFR between its confluence with the EBNFFR and the Belden diversion
20 dam; and (2) to augment CDFG's existing Lake Almanor fisheries program. PG&E
21 proposes that its cost for fish stocking in the NFFR should be the actual average hatchery
22 production cost per pound to the CDFG, and any applicable distribution and planting
23 costs. PG&E also proposes that any augmented fisheries program in Lake Almanor may
24 include, but is not limited to, such projects as the expansion of the pen rearing program
25 and the construction of rearing habitat for warmwater fish.

26 In its December 1, 2003, filing the Commission, FS Section 10(a) condition G(2),
27 is approximately the same recommendation, except that the FS recommends that PG&E
28 contribute funds to expand CDFG's existing fish planting program in Lake Almanor
29 above the average annual fish planting level expended by CDFG in the previous 5 years
30 with the size, numbers, and species of trout to be planted, the frequency of planting, and
31 the planting sites would be determined by CDFG.

32 *Our Analysis*

33 Bank fishing is one of the most popular dispersed uses in the project's bypassed
34 reaches. Also, the CDFG has a long history of developing and maintaining the popular
35 reservoir fishery in Lake Almanor. The fishery in Lake Almanor is primarily for
36 salmonids (trout and related species) and bass (smallmouth and largemouth). Since the
37 salmonid fishery is not self-sustaining, CDFG annually stocks large numbers of hatchery-
38 reared fish in Lake Almanor. According to PG&E's recreation visitor survey results,

1 approximately 71 percent of the visitors to Lake Almanor have fished at Lake Almanor
2 and fishing was the second most common activity enjoyed at Lake Almanor.

3 According to studies completed by PG&E, demand for fishing is currently high in
4 California. In the UNFFR Project area, 71 percent of visitors participate in fishing either
5 from the shoreline or from a boat. PG&E determined that fishing is increasing in demand
6 in the project area annually at 0.6 percent for both boat angling and bank angling.
7 Demand for each of these types of angling is expected to increase by 23 percent in the
8 project area over the term of the license. However, fishing has been experiencing a
9 decrease in the number of participants in California, based on the number of fishing
10 licenses sold from 1996 to 2000. The sale of both resident and non-resident fishing
11 licenses has decreased nearly 10 percent since 1996, with non-resident 10-day licenses
12 experiencing the largest decrease (approximately 14 percent). PG&E conducted a study
13 of overall fishing needs in the project area, and availability of catchable fish was not
14 considered an issue. PG&E proposes monitoring recreational activities on the surface of
15 project reservoirs and along the shoreline areas within the project boundary, as part of its
16 recreation monitoring program included in the draft RRMP. Information on fishing use
17 at the project would be determined through these activities, and the need to continue or
18 modify the fish stocking program over the term of the license should be addressed as part
19 of the monitoring program.

20 **River Ranger Funding**

21 PG&E proposes providing up to \$25,000 (2004 dollars) to the FS by March 1 of
22 each year of the new project license to assist in funding a river ranger position to provide
23 additional light maintenance, visitor information/assistance, user safety, and law
24 enforcement presence in the project's bypassed river reaches. PG&E further proposes
25 that, by January 31 of each year during the term of the new license, the FS provide it with
26 a written summary of the previous year's expenditures and river ranger activities and the
27 current year's planned expenditures and river ranger activities. In its December 1, 2003,
28 filing with the Commission, the FS recommends the same proposal as preliminary
29 Section 4(e) condition 45.

30 *Our Analysis*

31 The addition of a river ranger along the project river reaches could enhance the
32 recreation experiences of some of the visitors to the project river reaches. The
33 implementation of a seasonal position would likely increase visitor awareness of federal,
34 state, county, and local regulations and laws. This increase in awareness could lead to an
35 increase in compliance with those laws and regulations, and a greater degree of resource
36 protection resulting from increased compliance. In addition, the position would provide
37 opportunities to increase visitor satisfaction by helping to disseminate project information
38 at various recreation facilities throughout the project area.

1 **Belden Interagency Recreation River Flow Management Plan**

2 If a determination is made to proceed with scheduled river recreation flows,
3 PG&E proposes to coordinate with the FS, Plumas County, and CalTrans to develop an
4 MOU to produce the Belden interagency recreation river flow management plan. This
5 plan would address management and integration of recreation opportunities provided by
6 the Belden recreation river flow release with other recreation opportunities in the
7 watershed. The plan would address establishment of visitor capacity thresholds,
8 maintenance of facilities, signage, traffic management, and monitoring. PG&E proposes
9 that the plan and the MOU would not be financially binding, but would document agency
10 roles, responsibilities, and intentions related to river recreation management. PG&E
11 further proposes terminating the plan and the MOU if recreation river flow releases are
12 not continued after an evaluation period.

13 In its December 1, 2003, filing with the Commission, the FS recommends the
14 same plan in preliminary Section 4(e) condition 47.

15 *Our Analysis*

16 The proposal to provide recreational whitewater flows would enhance whitewater
17 boating opportunities in the area. The proposed interagency recreation river flow
18 management plan would provide guidance to ensure that whitewater boating provisions
19 would not cause unintended damage to terrestrial, aquatic, or other recreational values in
20 the Belden reach of the UNFFR. Results of the evaluation of any test flows provided in
21 the reach would provide information on the effects of recreation flows on other river
22 recreation opportunities in the watershed. The plan would be designed so that effects on
23 a variety of resources are addressed, not just recreation-related interests. This would help
24 minimize adverse effects on any sensitive resources in the Belden reach, such as riparian
25 and wetland habitat, from recreational flows. Additionally, the plan would enhance
26 recreation provisions along the river reaches and would provide guidance in regard to
27 roles and responsibilities along the river reaches.

28 **Recreation River Flow Management**

29 **Recreation River Flow Technical Review Group**

30 PG&E proposes establishing a TRG within 6 months of license issuance for the
31 purpose of consulting with PG&E in the design of recreation and resource river flow
32 management and monitoring plans, reviewing and evaluating recreation and resource
33 data, and in developing possible recreation river flows in the Belden reach. The TRG
34 would include representatives of the FS, CDFG, SWRCB, FWS, NPS, Plumas County,
35 and other parties to the SA. TRG meetings would be open to and accept comments from
36 the public. PG&E proposes maintaining, and making public, records of TRG meetings,
37 and forwarding those records with any recommendations to the FS, SWRCB, and the
38 Commission. PG&E also proposes establishing communication protocols in consultation

1 with the TRG to facilitate interaction among TRG members, which would allow for open
2 participation, consultation with independent technical experts, and communication among
3 all TRG participants.

4 In its December 1, 2003, filing with the Commission, FS preliminary Section 4(e)
5 condition 46A, recommends the same proposal.

6 **Recreation Flow Implementation Plan**

7 PG&E proposes implementing the following RFIP:

8 **A. Determination to Proceed with Test Flows.** Within 6 months after license
9 issuance, PG&E proposes convening the TRG to evaluate the existing available
10 ecological information regarding recreation river flows to make a determination whether
11 (1) sufficient information exists to conclude that recreation river flows would result in
12 unacceptable impacts on sociological or ecological resources; or (2) recreation river test
13 flows as prescribed in table 3-31 should be conducted to further evaluate the ecological
14 and social effects of the recreation river flows in the Belden reach. If the TRG
15 determines that recreation test flows should be conducted, it would not recommend any
16 flow schedule that exceeds the frequency, magnitude, or duration of flows prescribed in
17 table 3-31. Within 6 months of convening the TRG, PG&E proposes forwarding the
18 TRG recommendations regarding recreation test river flows to the FS and SWRCB.

19 **B. Approvals to Proceed with Test Flows.** If the TRG recommends that
20 recreation test river flows in the Belden reach should be conducted, the FS and SWRCB
21 would consult with appropriate state and federal agencies, PG&E, tribal governments,
22 and other interested parties prior to approving, denying, or modifying the TRG's
23 proposal. If the FS and SWRCB approve a proposed schedule for recreation test river
24 flows that does not exceed the frequency, magnitude, or duration of flows prescribed for
25 any given month in table 3-32, then PG&E proposes submitting the proposal to FERC for
26 approval.

27 **C. Conducting Test Flows.** Upon approval from FERC, PG&E proposes
28 conducting the recreation test river flows as prescribed in table 3-32 for a 3-year period.

29 **D. Monitoring.** PG&E proposes preparing and submitting to the FS and SWRCB
30 for their review and approval, concurrent with the TRG recommendation, a Belden reach
31 recreation test river flow evaluation plan. Upon FS and SWRCB approval, PG&E
32 proposes submitting the plan to FERC for approval. The plan would be designed to
33 evaluate the effects of the recreation test river flow releases on ecological and social
34 resources, and the metrics to be used in this determination. Upon approval of the plan by
35 the Commission, PG&E proposes implementing the plan during the 3-year recreation test
36 flow period.

1 **E. Determination of Continued Flows.** After the 3-year recreation test river flow
2 period, PG&E proposes convening the TRG to evaluate the existing available ecological
3 and social information. The TRG would make a recommendation regarding whether
4 recreation river flows should be continued to meet the river flow management for
5 recreation objective. The TRG would not recommend any flow schedule that exceeds the
6 frequency, magnitude, or duration of flows prescribed for any given month in table 3-31.

7 **F. Approval of Results of Determination of Continued Flows.** Any
8 recommendation regarding continued recreation river flows made by the TRG would be
9 submitted to the FS and SWRCB. The FS and SWRCB would consult with appropriate
10 state and federal agencies including FWS, PG&E, tribal governments, and other
11 interested parties prior to approving, denying, or modifying the TRG's proposal. If the
12 FS and SWRCB approve a proposed schedule for continued recreation river flows that
13 does not exceed the frequency, magnitude, or duration of the flows prescribed for any
14 given month in table 3-32 below, PG&E proposes submitting the proposal to FERC for
15 approval.

16 In its December 1, 2003, filing with the Commission, FS preliminary Section 4(e)
17 condition 46B, recommends that PG&E implement the RFIP as described above.

18 **Recreation River Flows**

19 PG&E proposes implementing the recreation river flow schedule and other
20 provisions presented in table 3-32, subject to the RFIP described above.

21 **Recreational Flow Calendar and Additional Flow Days**

22 PG&E proposes posting an annual recreation flow calendar scheduling the initial
23 recreation flow day per month through a third party or other mechanism. PG&E
24 proposes conducting an annual planning meeting each year in March to discuss expected
25 water year type, results of monitoring efforts, PG&E maintenance needs that may conflict
26 with recreation flow releases, and other relevant issues. PG&E further proposes that the
27 TRG recommend the desired date of the month for any additional recreation river flow
28 release days triggered by the number of boats per day as described below based on
29 evaluation of social and ecological considerations.

1 Table 3-32. Belden reach recreation river flow schedule.* (Source: PG&E, 2002a)

Month	Release Amount (cfs)		Release Days Per Month				Boats Per Day Triggers	
	Dry/ crit. dry	Normal/ wet	Crit. dry start	Crit. dry cap	Dry/ normal/ wet start	Dry/ normal/ wet cap	Wet and normal/dry	
							Up	Down
July	650	750	1 day	1 day	1 day	2 days	>100	<100
Aug/Sep/ Oct	650	750	1 day	1 day	1 day	2 days	>100	<100

2 * Flow releases would occur between the hours of 10 AM and 4 PM for the first day
 3 and between the hours of 10 AM and 2 PM for the second release day during wet and
 4 normal water years, and between the hours of 10 AM and 1 PM during dry and
 5 critically dry years for both release days.

6 Notes: WY types are determined by PG&E based on the predicted, unimpaired inflow
 7 to Lake Oroville and the spring snowmelt runoff forecasts provided by PG&E
 8 and CDWR each month from January through May. WY types are defined as
 9 follows:

10 Wet Water Year Type - greater than or equal to 5,679 thousand acre-feet (TAF)
 11 inflow to Oroville is predicted.

12 Normal Water Year Type – less than 5,679 TAF, but greater than or equal to
 13 3,228 TAF inflow to Oroville is predicted.

14 Dry Water Year Type – less than 3,228 TAF, but greater than or equal to 2,505
 15 TAF inflow to Oroville is predicted.

16 Critically Dry Water Year Type – less than 2,505 TAF inflow to Oroville is
 17 predicted.

18 Recreation River Flow Postponement

19 PG&E proposes postponing any scheduled recreation river flow release in the
 20 event of an emergency. PG&E proposes providing as much notice as reasonably
 21 practicable under the circumstances.

22 If practicable, PG&E proposes rescheduling postponed recreation river flow
 23 releases as recommended by the TRG.

1 **Triggers for Adjustments**

2 During scheduled recreation river flows, PG&E proposes counting observed
3 boater use in number of boats per day to determine whether recreation flow release days
4 should be added or subtracted. All boats would be counted as one boat except for rafts 12
5 feet or greater in length, which would be counted as two boats. All boats observed on the
6 Belden reach for any part of a given day would be counted. If the number of boats per
7 day on the first recreation river flow day for a month exceeds 100 boats per day, one day
8 of recreation river flow would be added to the recreation river flow schedule in that
9 month the next year. If the number of boats per day is less than 100 boats per day for
10 both the recreation river flow releases in one month, one day of recreation river flow
11 would be subtracted from the recreation river flow schedule for the that month in the next
12 year. Recreation river flow releases would not decrease below one day per month and
13 would not exceed the cap defined in table 3-31. Recreation river flow release days would
14 not be added or subtracted during any period of recreation test river flows.

15 PG&E also proposes developing and implementing a visitor survey for up to 3
16 years to determine if visitors would choose to return to recreate on the Belden reach
17 based on their experience related to the number of boats encountered on the river. The
18 visitor survey questionnaire and methodology would be statistically valid and approved
19 by the TRG. The TRG would evaluate the survey results and other data to determine if
20 the trigger for adding/deleting days, based on the number of boats per day, should be
21 amended based on this analysis.

22 **Ramping Rates**

23 PG&E proposes applying the basic ramping rates when implementing recreation
24 river flows.

25 **Streamflow Information**

26 PG&E proposes creating a calendar that lists the dates of the March pulse flow in
27 the Seneca reach and any scheduled pulse flow or recreation river flow releases in the
28 Belden reach, and making that calendar available on the Internet through a third party or
29 other mechanism. The calendar would state the timing and magnitude of the scheduled
30 flow release. The March pulse flow release in the Seneca reach would be posted by
31 February 15, and the scheduled summer releases in the Belden reach would be posted by
32 May 15. If PG&E anticipates releasing flows of a similar magnitude and duration as a
33 scheduled pulse flow in the Seneca or Belden reaches, it proposes posting an estimate of
34 the release magnitude and duration of the flow.

35 In its December 1, 2003, filing with the Commission, the FS recommends, as
36 preliminary Section 10(a) conditions 46C.2 and 3, that PG&E implement a flow schedule
37 similar to the one shown in table 3-31, and provides methods similar to those presented in

1 the SA for determining additional flow days and contingencies for recreation flow
2 postponement. The FS also concurs with the proposed recreational flow calendar, as set
3 forth in preliminary Section 4(e) condition no. 46C.1.

4 The FS also provides triggers for adjustments and ramping rates similar to those
5 presented in the SA, as set forth in preliminary Section 4(e) conditions 46D and 46E.

6 In its December 1, 2003, filing with the Commission, Interior recommends, as
7 Section 10(a) condition 1 that PG&E implement a flow schedule similar to the one shown
8 in table 3-31, and concurs with the elements for managing the recreation river flow listed
9 in the SA, including the establishment of a TRG and the consideration of river test flows.

10 In its November 26, 2003, letter to the Commission, CDFG indicates that it would
11 support the recreation river flow management program as proposed in a previous version
12 of the SA. CDFG states that it supports this proposal since the agreement language states
13 that the recreational flow proposal would go forward only if the available information
14 suggests that there would be no unacceptable impacts on sociological and ecological
15 resources.

16 In their December 1, 2003, letter to the Commission, AW, Chico Paddleheads, and
17 Shasta Paddlers concur with the recreation river flow proposal included in a previous
18 version of the SA with the following exceptions: including whitewater releases during
19 the month of June; modifying the number of boaters necessary to trigger modification of
20 whitewater releases to 80 boaters for the up-trigger and 25 boaters for the down-trigger;
21 scheduling dates for the actual releases in coordination with releases on the Rock Creek-
22 Cresta Project; and an adaptive management team limited to parties to the SA with
23 responsibility for providing recommendations to the regulatory agencies and PG&E and
24 no decision-making authority.

25 In its response to AW, Chico Paddleheads, and Shasta Paddleheads in a letter filed
26 with the Commission on January 15, 2004, PG&E disagrees with the recommended
27 number of boaters necessary to trigger modification of the whitewater flow releases and
28 explains the calculation and rationale used in the license application to determine the
29 boater use trigger.

30 *Our Analysis*

31 The proposal to provide recreational whitewater flows in the Belden reach would,
32 if implemented, enhance whitewater boating opportunities in the area. The proposed
33 TRG would ensure that whitewater boating provisions would not cause irreversible
34 damage to terrestrial, aquatic, or other recreational values in the Belden reach of the
35 UNFFR. The up and down triggers for increases and decreases of the number of days
36 would ensure that the benefits of the whitewater releases are commensurate with demand.
37 The trigger numbers that were developed for the Rock Creek-Cresta Project may not

1 necessarily be appropriate for this project. Given the features of the Belden reach and
2 relative inaccessibility, up and down triggers specific to the Belden reach developed by
3 the TRG would provide triggers that are more appropriate. As stated in section 4.3.3,
4 *Terrestrial Resources*, there is a potential for negative effects on the federally-threatened
5 bald eagle. The TRG should give special consideration to these potential conflicts caused
6 by the provision of whitewater flows during June and July to ensure that such effects are
7 not realized. Certainly, whitewater boaters would benefit from releases during these
8 months; however these benefits should be balanced with effects on other resources.

9 During 2000, PG&E conducted a flow assessment for recreational use within the
10 UNFFR bypassed reaches. The study assessed recreational opportunities including
11 whitewater boating and angling within the bypassed reaches and the effects of flows on
12 these activities. Whitewater boaters ran the rivers at approximately 350, 600, and 850
13 cfs. As a result of the study, PG&E determined that flows from about 700 to 850 cfs are
14 would likely provide quality standard trips for both kayaking and rafting. Lower flows,
15 such as approximately 600 cfs, would provide a starting point for quality kayaking
16 opportunities, but that flow would be below optimal levels for rafting. Flows above 850
17 cfs would provide more powerful hydraulics and smaller recovery areas associated with
18 challenging whitewater boating opportunities. PG&E's proposed release flows of 650
19 and 750 cfs fall within the range necessary for providing good boating opportunities.

20 PG&E proposes providing a calendar that lists the dates of the March pulse flow in
21 the Seneca reach and any scheduled pulse flows or recreation river flow releases in the
22 Belden reach for the public (including anglers and boaters) via an Internet site. This
23 information would help inform the public about flow-related recreational opportunities
24 within the river reaches. The calendar would state the timing, magnitude, and duration of
25 any scheduled flow release. This information could deter unqualified boaters from
26 beginning a run that is too dangerous for their skills and alert anglers of difficult stream
27 fishing conditions.

28 **Reservoir Levels and Annual Meeting with Plumas County**

29 In the SA, PG&E proposes meeting annually with a committee appointed by the
30 Plumas County Board of Supervisors between March 15 and May 15 in order to inform
31 the committee about the water elevation levels of Lake Almanor predicted to occur
32 between May 1 and September 30. Additionally, PG&E proposes scheduling an
33 additional meeting with the committee if PG&E forecasts that its obligation to deliver
34 water to the State of California and the Western Canal Water District pursuant to the
35 January 17, 1986 agreement would require it to deviate from the Lake Almanor water
36 elevation levels previously predicted.

37 In its December 1, 2003, filing with the Commission, FS preliminary Section
38 10(a) condition no. 29L, recommends a similar annual meeting to address the Lake
39 Almanor forecasts with Plumas County.

1 *Our Analysis*

2 In the SA, PG&E proposes operating Lake Almanor and the other reservoirs at a
3 higher level than is currently practiced. However, lake levels vary depending on the type
4 of water year forecasted. Informing Plumas County of predicted Lake Almanor water
5 surface elevations in the spring would facilitate its understanding of conditions that are
6 likely to occur during the subsequent high-use recreation season.

7 We present the estimated cost of all measures that pertain to recreational resources
8 in chapter 4, *Developmental Analysis*, and make our final recommendations regarding
9 these measures in section 5.2, *Comprehensive Development*.

10 **3.3.5.3 Unavoidable Adverse Effects**

11 None.

12 **3.3.6 Land Use and Aesthetic Resources**

13 **3.3.6.1 Affected Environment**

14 The UNFFR Project developments span a 30-mile reach of the UNFFR and 4
15 miles of the Butt Valley drainage and encompass roughly 30,920 acres of land within the
16 project boundary (see figure 1-1). A total of 1,024 acres of federally owned lands are
17 located within the project boundary. Of this acreage, the FS administers about 986 acres
18 of federally owned land within the project boundary. The Lassen National Forest
19 manages approximately 568 acres, and the Plumas National Forest manages
20 approximately 418 acres. The BLM manages the remaining 38 acres of federal land.
21 The entire project is within Plumas County

22 *The general character of the lands in the region surrounding the project includes*
23 *residential, transportation, parks and recreation, and open space. Much of the region*
24 *consists of low-density residential and undeveloped lands. The aesthetic character of the*
25 *area is generally forested. The highways and trails in the area offer scenic views of the*
26 *lakes, streams, waterfalls, and surrounding mountains.*

27 **Land Use**

28 ***Project Reservoirs***

29 ***Lake Almanor***

30 Lake Almanor is a 27,000-acre reservoir formed by the 135-foot-high earth-filled
31 Lake Almanor dam. The shoreline of Lake Almanor consists of extensive recreation and
32 residential development. There are more than 1,000 residential lots adjacent to Lake
33 Almanor, as well as 22 commercial resorts and 13 public recreation sites. Highways run

1 along all sides of Lake Almanor, which provides easy access to the area. The principal
2 highways are State Routes (SR) 36, 89, and 147.

3 *Butt Valley Reservoir*

4 Butt Valley reservoir has a surface area of 1,600 acres and is more rural in
5 character than Lake Almanor. The FS manages the lands that completely surround the
6 PG&E-owned Butt Valley reservoir. This reservoir sits within a fairly narrow wooded
7 valley with no commercial or residential uses.

8 *Belden Forebay*

9 The Belden forebay is the smallest of the project reservoirs with a surface area of
10 approximately 42 acres. The Belden forebay is surrounded by the Plumas National
11 Forest, and the shoreline adjacent to the forebay is undeveloped. The northwest
12 boundary of the reservoir is along Caribou Road.

13 *Stream and River Reaches*

14 The project's stream and river reaches are within a canyon that is a deep and
15 narrow valley. Other than the PG&E town of Caribou, there are no commercial or
16 residential developments in this area.

17 **Land Management Plans**

18 The project area falls within several different land management areas and
19 therefore is subject to the following land management plans.

20 **Sierra Nevada Forest Plan Amendment**—The Sierra Nevada Forest Plan
21 Amendment establishes the management direction for five problem areas: old forest
22 ecosystems and associated species; aquatic, riparian, and meadow ecosystems and
23 associated species; fire and fuels management; noxious weeds; and lower westside
24 hardwood forest ecosystems. It amends the LRMPs for nine National Forests within
25 California including the Lassen and Plumas LRMPs. It also amends the regional guides
26 for the Intermountain and Pacific Southwest regions. The Sierra Nevada Forest Plan
27 Amendment serves as an overlay to existing forest plan designations and only replaces
28 standards and guidelines of the LRMPs that conflict with it. Within the project area, this
29 plan applies only to NFS lands managed under the Lassen and Plumas LRMPs, namely
30 the area along the southwestern shoreline of Lake Almanor, the land surrounding Butt
31 Valley reservoir and the Belden forebay, and the land along the Belden and Seneca
32 reaches.

33 The primary objective of the Sierra Nevada Forest Plan Amendment is to conserve
34 important components of the landscape such as stands of mid-seral and late-seral forests
35 with large trees. Riparian conservation area designations are provided along streams and

1 around water bodies to preserve, enhance, and restore habitat for riparian and aquatic-
2 dependent species as well as ensure that water quality is maintained or restored. There
3 are also important and wide-ranging new land allocations for fire and fuels management.
4 The plan attempts to link potential fuel treatment areas to support one another on the
5 landscape so that wildland fire spread and intensity are reduced.

6 The majority of the NFS lands along the southwestern shoreline of Lake Almanor,
7 a little more than half of the NFS lands along the Seneca reach, and a small portion of the
8 lands along the Caribou Road are designated general forest under the Sierra Nevada
9 Forest Plan Amendment. General forest refers to lands outside other land prescriptions.
10 The management focus of these lands limits fuel treatments to 75 percent of the stand and
11 works toward increasing the amount of forest with late-successional characteristics such
12 as diverse species composition, multi-layered canopy, and a higher density of large
13 diameter trees. Most of the remaining NFS lands along the southwestern shoreline of
14 Lake Almanor, nearly half of the NFS lands along the Seneca reach, and the majority of
15 the lands along the Belden reach are classified as old forest emphasis. Management of
16 old forest emphasis areas focuses on developing larger aggregations of old forest over
17 time through reducing hazardous fuel conditions and re-introducing fire to reduce fuels
18 and meet ecological goals. Additionally, most of the NFS lands within the project are in
19 the urban wildland intermix zone, which overlaps the other land designations. This zone,
20 where human habitation is mixed with areas of flammable wildland vegetation, extends
21 1.5 miles out from areas where the population density indicates at least one structure per
22 40 acres. Management in the urban wildland intermix zone gives high priority to fuel
23 reduction activities to protect human communities from wildland fires as well as
24 minimizing the spread of fires that might originate in urban areas (FS, 2001).

25 **Lassen National Forest Land and Resource Management Plan**—The Lassen
26 National Forest LRMP was finalized in 1992 and prescribes land management measures
27 for NFS lands within or administered by the Lassen National Forest. Within the project
28 vicinity, the Lassen LRMP applies to NFS lands on Lake Almanor's southwestern
29 shoreline between Canyon dam and the Lake Almanor West subdivision. The Lassen
30 National Forest administers 568 acres within the project boundary.

31 All the project lands and lands influenced by project operations that are managed
32 under the Lassen National Forest LRMP fall within the Prattville management area, one
33 of 48 specific management areas designated by the Lassen LRMP. The Prattville
34 management area covers approximately 6,280 acres along the large southwestern
35 shoreline area above Lake Almanor. Most of this management unit lies southwest of SR
36 89. The majority of intense public recreation is generally found along lands on the
37 northeastern side of SR 89, although there is a group camp and rest area on the
38 southwestern side of the highway. Approximately 480 acres are dedicated to recreation
39 uses and management emphasis around the Almanor campground and neighboring
40 summer housing area. Another 2,210 acres south of Prattville are now designated old

1 forest emphasis areas under the Sierra Nevada Framework Plan Amendment. The Lassen
2 LRMP specifically recognizes that the Prattville area is a highly used recreation area and
3 identifies the need for a comprehensive recreation development plan for the Almanor
4 campground and vicinity. However, snags, wetlands, and nest site protection are also
5 important to protect waterfowl and raptors in the area, and the plan specifically calls for
6 protection and enhancement of bald eagle nesting habitat at Rocky Point and Prattville.

7 **Plumas National Forest Land and Resource Management Plan** – The Plumas
8 National Forest LRMP was finalized in 1988 and directs land management measures for
9 NFS lands within or administered by the Plumas National Forest. Within the project
10 vicinity, the Plumas LRMP applies to NFS lands near Canyon dam at the southern end of
11 Lake Almanor, NFS lands around Butt Valley reservoir and Belden forebay, and the NFS
12 lands along the Seneca and Belden reaches. The Plumas National Forest administers 418
13 acres within the project boundary.

14 All the project lands and lands influenced by project operations that are managed
15 under the Plumas National Forest LRMP fall within one of four management areas
16 designated by the Plumas LRMP: Butt Lake, Rich, and a small portion of the North Fork
17 and Indian Valley Management Areas. The Butt Lake management area includes all of
18 the lands surrounding the Butt Valley reservoir and the area to the southwest of Canyon
19 dam. The primary land allocation for NFS lands near Canyon dam is the protection of
20 bald eagle habitat, which includes limiting human activities between November 1 and
21 March 1 to minimize disturbance. The Rich management area includes the lower portion
22 of the Belden bypassed reach just upstream of the confluence with the EBNFFR, and
23 contains three small NFS campgrounds. The management direction for the Rich
24 management area includes maintaining or improving recreation development in the area,
25 eliminating some grazing uses, and reconstructing and surfacing the Caribou Road from
26 Highway 70 to the old railroad bridge at Queen Lily campground. The Belden rest stop,
27 which includes the trailhead for the Pacific Crest Trail (PCT), is located in the North Fork
28 management area. Management direction for the North Fork management area includes
29 maintaining this PCT trailhead and another one near Belden. The northwestern corner of
30 the Indian Valley management area reaches Canyon dam and the Almanor scenic
31 overlook.

32 **Bureau of Land Management Plans** – The BLM administers two parcels of land
33 along the western shores of Lake Almanor. One 34-acre parcel is near the end of the
34 runway at the Chester airport and is slated to be transferred to Plumas County. The area
35 below the 4,500-foot-elevation is used for storing water for project purposes. The other
36 parcel is an isolated 4-acre parcel within the Eagle Lake resource area and includes about
37 4 acres within the project boundary north of Chester. This parcel is used for grazing
38 above the 4,500 foot elevation contour.

39 **Plumas County General Plan** – The Plumas County General Plan, as amended,
40 presents goals and policies for private lands within the county and serves as a basis for all

1 decisions regarding land use within the county. The plan elements most relevant to the
2 project include land use, open space, seismic safety, scenic highways, noise safety, and
3 conservation. The Plumas County General Plan addresses hydroelectric power
4 generation under its constraints policies, and the expressed goal of the county is to
5 encourage the use of water for hydroelectric generation to meet the energy needs of the
6 county.

7 The Plumas County General Plan includes the Plumas County zoning ordinances,
8 which prescribes regulations governing land use through the establishment of land use
9 zones, parcel sizes, and placement of structures within the county. Much of the private
10 land within and adjacent to the project boundary lies within residential zones, especially
11 along Lake Almanor. Also prevalent along the shoreline of Lake Almanor are prime
12 recreation zones, which allow marinas, resorts, and boat ramps, as well as dwellings.
13 However, there are other private lands in commercial, recreation and timberland
14 production zones (TPZs). TPZs are state-designated zones that are reserved for timber
15 production and compatible uses. In addition to the basic zoning designations, Lake
16 Almanor and its shoreline are considered a scenic area, and scenic protection
17 designations include additional planning measures.

18 The Plumas County General Plan also includes standards for scenic highways and
19 roads including the Feather River Highway (SR 70) corridor, Highway 147 and SR 89,
20 except where SR 89 crosses Canyon dam. SR 36 is designated scenic from Chester to the
21 Lassen County line near Clear Creek, California. Almanor Drive West is an important
22 roadway serving the Prattville area and many public recreation areas along the
23 southwestern shoreline of Lake Almanor and is also designated as scenic. For each of
24 these scenic roads, a 100-foot scenic corridor is designated from the outer edges of the
25 road easement. Within these zones there are to be no "off-premise" advertising signs,
26 and transmission and utility lines are to be located where they may be concealed by
27 vegetation or topographical features.

28 **Shoreline Land Management**

29 PG&E maintains a public recreational policy that allows access to the project
30 lands without compromising public safety, environmental resources, or interfering with
31 the operation of the project for hydroelectric power generation. Although vehicular
32 access is limited to developed recreation sites, numerous informal trails provide access to
33 the reservoir shorelines. PG&E's policy also includes providing appropriate recreational
34 facilities for public use, without discrimination, and providing general information about
35 availability of recreational use through brochures, notices, and signs.

36 All project shorelines are open to the public because they are either PG&E lands
37 or public domain lands administered by the FS. Access to project shorelines is variable,
38 with most areas accessible by foot or boat, and specific areas accessible by bicycle,
39 wheelchair or motorized vehicles. Vehicle access is available at all commercial and

1 public recreation sites, as well as several locations where public road rights-of-way
2 parallel project shorelines.

3 *Lake Almanor*

4 Lake Almanor is a highly developed reservoir with more than 1,000 adjacent
5 residential lots, 22 commercial resorts, and 13 public recreation developments (seven
6 PG&E developments and six FS developments). The shoreline of Lake Almanor spans a
7 distance of more than 52 miles. Most of the private residential lots are developed with
8 single-family residential structures. The project boundary around Lake Almanor is
9 generally defined by the 4,500-foot elevation contour (PG&E datum). In five locations
10 the project boundary extends upland above 4,500 feet elevation to encompass Canyon
11 dam and spillway, the Prattville intake, and PSEA camp, as well as several recreation
12 facilities. A large portion of the southwestern Lake Almanor shoreline is federal land
13 managed by the Lake Almanor Ranger District of the Lassen National Forest and the Mt.
14 Hough Ranger District of the Plumas National Forest. The BLM manages another two
15 parcels of federal land in the northern half of the western shoreline. PG&E owns the
16 remaining 97 percent of the land along the shoreline within the project boundary.

17 The shoreline within the project boundary serves as a buffer zone surrounding the
18 reservoir. This buffer zone protects the reservoir from encroachments or other competing
19 uses that might degrade the natural resource conditions important to the region and also
20 protects the recreational and aesthetic values of the reservoir. The public can access most
21 of the shoreline by foot or boat. Most of the western shoreline is accessible by
22 pedestrians since it is near the town of Chester; the topography is relatively flat, and the
23 vegetation is grass and shrub land. In non-developed areas on the southeastern shoreline,
24 the land is steeper, making pedestrian access impractical for most individuals. Access is
25 restricted in the areas immediately surrounding Canyon dam and the Prattville intake for
26 safety reasons.

27 There are several roaded access points at Lake Almanor along SR 147, 36, and 89,
28 including at least two side roads accessing the reservoir off of Almanor Drive West,
29 southeast of Prattville. PG&E seasonally closes some roads along upper Lake Almanor
30 to minimize disturbance to bald eagles, and permanently gates or blocks off lesser used
31 private roads to prevent vehicular damage to archaeological sites.

32 Under the permitting authority in its current license, PG&E has developed a
33 private residential and commercial development permitting program for Lake Almanor.
34 This permitting program covers routine, non-project uses, including non-commercial
35 boating access facilities (boat docks and buoys), erosion control structures, certain types
36 of recreation development, bulkheading, vegetative removal or trimming, and planting of
37 new vegetation for both private individuals and commercial interests who desire to place
38 structures or undertake other types of development activities on project shorelines. To
39 authorize non-project uses, PG&E must ensure that the proposed uses and occupancies

1 are consistent with the purposes of protecting and enhancing the environmental values of
2 the project. Of the 1,003 residential lots adjacent to Lake Almanor's shoreline, 419 have
3 docks, and 540 have buoys. Also, some lot owners have installed shoreline protection
4 measures such as riprap.

5 *Butt Valley Reservoir*

6 Butt Valley reservoir, which is just under 5 miles long and almost 1 mile wide
7 with a surface area of 1,600 acres, is surrounded entirely by undeveloped NFS land on
8 the Plumas National Forest. The entire shoreline, with the exception of the area near the
9 Butt Valley powerhouse and the Butt Creek inlet, is open to the public. There are several
10 locations providing easy road access to the Butt Valley reservoir shoreline along the
11 Prattville-Butt Valley Road, which closely parallels the eastern edge of the undeveloped
12 reservoir shoreline.

13 *Belden Forebay*

14 Belden reservoir, or forebay, is small with a surface area of 42 acres and a daily
15 water surface elevation that can fluctuate between 5 and 10 feet, depending on power
16 operations. Belden forebay is surrounded by the Plumas National Forest and the entire
17 shoreline, with the exception of the area near the Oak Flat powerhouse, is open to the
18 public. There are several locations providing easy road access to the Belden forebay
19 shoreline along Caribou Road, which closely parallels the western edge of the
20 undeveloped reservoir shoreline.

21 **Traffic Use**

22 Four major state highways pass through the project area: SR 36, 89, 147, and 70.
23 SR 36 provides a major transportation corridor between Red Bluff and Susanville with
24 connecting access into Mount Lassen Volcanic Park and also provides access via U.S.
25 Highway 395 to the Reno area. SR 89 serves as a well-used transportation corridor
26 between communities in the Lake Almanor basin and Quincy, the Plumas County seat.
27 The route is also used as a north-south corridor to access Reno and commercial centers to
28 the south. SR 147 is a 12-mile road running along the eastern shore of Lake Almanor
29 from Canyon dam to an intersection with SR 36 near Westwood, California, and also
30 connects to SR 36 closer to Chester via the 4.2-mile-long County Road A-13. SR 70 is
31 the *Feather River Highway*, bisecting the Sierra Nevada Mountains along the NFFR
32 canyon and passing through Quincy and onto a connection with U.S. Highway 395.

33 The existing road system in the project area has been built and maintained around
34 the major transportation corridors, with secondary roads around project developments.
35 These roads continue to provide essential access to project facilities for PG&E personnel
36 as well as for the general public. The project operates on a continuous basis; therefore,
37 project facility roads must be maintained at all times.

1 Seventeen project area road segments are used (or historically were used) by
2 project personnel for accessing project lands and waters. Table 3-33 lists these 17 road
3 segments. Of these, five roads are wholly within the project boundary and are essential
4 to O&M of the project, including the Butt Valley Dam Road (two roads), the Butt Valley
5 Powerhouse Road, the Oak Flat Powerhouse Road, the French Creek Road, and the
6 Belden Surge Chamber Road. The project boundary is 60-feet wide along most of the
7 project roads and 40-feet wide along the French Creek Water Supply Road.

8 Additionally, there are 10 recreation facilities and access roads completely within
9 or partially within the project boundary. These include the Almanor scenic overlook, the
10 Canyon dam day-use area, the East Shore picnic area, the Lake Almanor campground
11 (three road loops), Camp Connery organization camp, Last Chance campground, Last
12 Chance group camp, Ponderosa Flat campground, Alder Creek day-use area, and Cool
13 Springs campground. Table 3-34 lists these 10 project recreation roads. These roads are
14 all designed as 10-mile-per-hour class roads, with a minimum 12-foot paved top.

15 New development in Plumas County is expected to be concentrated around Lake
16 Almanor and in the southern portions of the county. Overall traffic projections in the
17 project vicinity for at least the next 10 years have minimal increases, along with some
18 overall decreases on an average daily traffic usage basis. CalTrans suggests that former
19 summer homes are now occupied as full-time residences by retirees, which reduces peak
20 period travel. CalTrans recently decreased its projections for 2020 traffic in the area by
21 more than 20 percent between 1997 and 2000. Additionally, although California's
22 population is rapidly growing, a slower growth rate is reflected in Plumas and Lassen
23 counties, and most of the new residents in California would likely be urban-oriented.

24 PG&E rated all of the project area roads using the FS's classification system. The
25 majority of the roads were rated as traffic service level C, which means they have
26 interrupted traffic flow, limited passing facilities, and low-design speeds; are unstable in
27 certain traffic or weather conditions; and may not be able to accommodate some vehicles.
28 The first 7.2 miles of the Caribou Road between SR 70 and the town of Caribou; the first
29 4.3 miles of the Prattville-Butt Reservoir Road from Lake Almanor to Butt Valley
30 reservoir; the first 0.2 mile of the primary access road to the Butt Valley powerhouse
31 coming off of County Road 305; and the first 1.3 miles of the Seneca Road heading
32 southbound from the junction with SR 89 were rated with a traffic service level B, which
33 is congested during periods of heavy traffic, slower speeds, and high dust, but
34 accommodates all legal vehicles. The Belden Surge Chamber Road and a 2-mile segment
35 of the Seneca Road from Seneca to the junction with Dutch Hill Road were rated traffic
36 service level D, which has slow or blocked traffic flow and rough and irregular surface, is
37 difficult for two-way traffic, and accommodates high-clearance vehicles. There were no
38 ratings for the project recreation roads listed in table 3-34.

39

1 Table 3-33. Project-related roads. (Source: PG&E, 2002a)

Road						
Road Name	Road Number	Surface	Jurisdiction	Maintenance	Length	Notes
Caribou Road	27N26/ 27N26A	Asphalt	FS	Licensee/FS	7.8	Provides access to Caribou powerhouses
Lower Longville-Belden	26N26/ 26N26A	Aggregate	FS/Licensee	Licensee/FS	5.1	Provides access to Tunnel portals #3 and #4, and Belden surge chamber
Belden surge chamber	None	Native	FS	Licensee	0.7	Spur off Longville-Belden spur
Siphon portal #3	None	Aggregate	Licensee	Licensee	0.2	Spur off Longville-Belden Road
Siphon portal #2	None	Aggregate	Licensee	Licensee	1.2	Spur off Caribou Road
Belden adit	26N26E	Aggregate	FS	Licensee	0.3	Spur off Caribou Road
NF 70 gage station	None	Aggregate	Licensee	Licensee	0.7	Spur off Caribou Road
Oak Flat	None	Aggregate	Licensee	Licensee	0.2	Spur off Caribou Road
Butt Valley dam	27N26/ 27N26D	Aggregate	FS	Licensee/FS	7.1	A 2.2-mile portion is one way north, used only in the non-winter season.
French Creek	27N28C	Aggregate	FS	Licensee	0.3	Access to local potable water supply system
Prattville-Butt reservoir	305	Aggregate /asphalt	Plumas County	Plumas County	10.4	Plowed in winter by licensee

Road

Road Name	Number	Surface	Jurisdiction	Maintenance	Length	Notes
Butt Valley powerhouse spur(s)	None	Aggregate /asphalt	Licensee	Licensee	0.4	Two spur roads accessing Butt Valley powerhouse
Butt Valley penstock/surge chamber	None	Aggregate	Licensee	Licensee	2.4	Also provides access to Butt Creek gaging station
Humbug-Humbolt Cross	309	Aggregate	Plumas County	Plumas County	1.0	Plowed in winter by licensee, provides access to Butt Valley penstock/surge chamber access road
Seneca	306	Asphalt/ aggregate/ Native	Plumas County	Plumas County	9.8	Not used frequently for project purposes
Ohio Valley	27N98	Aggregate	FS	FS	7.7	Provides good access between Canyon dam and Butt Valley dam/Caribou
Last Chance campground access	None	Gravel	Licensee	Licensee	4.0	Provides access to adjoining properties. Closed in winter

1 Table 3-34. Project recreation roads. (Source: PG&E, 2002a)

Road Name	Road Number	Surface	Maintenance	Jurisdiction	Notes
Last Chance campground	None	Asphalt	Licensee	Licensee	Seasonal campground
Last Change group camp	None	Asphalt	Licensee	Licensee	Seasonal campground
Eastshore picnic area	None	Asphalt	Licensee	Licensee	Day-use area
Almanor scenic overlook	None	Asphalt	Licensee	Licensee	Day-use area
Canyon dam day-use area	None	Asphalt	Licensee	Licensee	
Lake Almanor campground loops	None	Asphalt	Licensee	Licensee	Seasonal campground
Camp Connery group camp	None	Asphalt	Licensee	Licensee	Seasonal campground
Ponderosa Flat campground loop	None	Asphalt	Licensee	Licensee	Seasonal campground
Alder Creek day-use area loop	None	Asphalt	Licensee	Licensee	Seasonal campground
Cool Springs campground loop	None	Asphalt	Licensee	Licensee	Seasonal campground

2

3 **Fire Events**

4 The California Department of Forestry and Fire Protection recorded more than 350
 5 small fires in the Lake Almanor region from 1981 until 2001. Small fires are considered
 6 to be less than 30 acres. Many of the small fire incidents were less than an acre, and most
 7 of them occurred close to developed areas. The most recent large fire was the Storrie fire
 8 in early September 2000, which burned more than 46,000 acres including some project
 9 facilities near the Belden powerhouse.

10 **Mining**

11 There are 206 active mining claims on federal lands situated along the NFFR,
 12 mostly along the Seneca bypassed reach. A mining claim is a particular parcel of federal
 13 land valuable for a specific mineral deposit or deposits. It is a parcel for which an
 14 individual has asserted a right of possession, and that right is restricted to the extraction
 15 and development of a mineral deposit. The rights granted by a mining claim are valid
 16 against a challenge by the United States and other claimants only after the discovery of a

1 valuable mineral deposit. There are two types of mining claims: lode and placer. Lode
 2 claims include rock-in-place bearing veins or lodes of valuable minerals having well-
 3 defined boundaries. Placer claims are mineral deposits not subject to lode claims and
 4 generally consist of unconsolidated materials such as sand and gravel containing free
 5 gold or other materials.

6 Most of the mining claims in the project area are placer claims, and most are
 7 located around the small community of Seneca within the Seneca bypassed reach of the
 8 NFFR. The maximum size of a placer claim is 20 acres, and most of the claims in the
 9 Feather River area are 20-acre claims. There are also a few lode mines as well as mining
 10 activities on the scattered private lands in the Seneca area.

11 **Aesthetic Resources**

12 For its aesthetic resource assessment, PG&E identified four characteristic
 13 landscape units (zones of generally similar landscape conditions) the Lake Almanor
 14 basin, Butt Creek Valley, NFFR/Caribou Road canyon, and the Belden area. PG&E also
 15 identified a set of key viewing points (KVPs) within the project area to provide a basis
 16 for systematic evaluation of aesthetic resources at the project. The KVPs represent a
 17 sampling of views of each landscape unit within the project area and are based on
 18 evaluation of the aesthetic characteristics of each landscape unit; each landscape unit's
 19 use patterns; the aesthetic sensitivity of each landscape unit; and the plans, regulations,
 20 and policies affecting the alteration of each landscape unit's appearance. Table 3-35
 21 provides a summary, and figure 3-10 shows the location of the KVPs.

22 Table 3-35. Key viewing points in the UNFFR Project area. (Source: PG&E, 2002a)

KVP	Orientation	Landscape Perspective
(1) SR 36 causeway	West	SR 36 Causeway bridge on Lake Almanor
(2) North Shore campground	South	Shallow areas of upper Lake Almanor
(3) SR 36 rest area	Southwest	Wooded view of upper Lake Almanor, Chester and onto Mt. Lassen
(4) Little Cove	South	Inside cove looking down into Lake Almanor neat Peninsula Village
(5) Eastshore picnic area	West	Typical wooded view from picnic area
(6) Scenic Overlook	Northwest	Canyon dam and spillway area
(7) Canyon dam boat ramp	West	Lower Lake Almanor from

KVP	Orientation	Landscape Perspective
		developed recreation site.
(8) Plumas Pines Resort	Northwest	Resort view of Lake Almanor and Mt. Lassen
(9) Almanor campground beach	East	Swimming beach at campground
(10) Butt Valley reservoir cove	Southwest	Upper Butt Valley reservoir shoreline
(11) Alder Creek campground boat ramp	South	Developed recreation site view along Butt Valley reservoir
(12) Lower Butt Valley reservoir	South	Butt Valley dam and spillway
(13) Seneca Bridge	South	Seneca bypassed reach
(14) Butt Valley Dam Road	South	Project transmission line with Belden forebay in distance
(15) Belden forebay	North	Belden forebay and Oak Flat area
(16) Caribou Road bridge	Northeast	Belden bypassed reach
(17) Belden siphon	North	At road crossing on Caribou Road
(18) Belden bypassed reach	Northeast	Along SR 70
(19) Belden powerhouse	Northwest	Pacific Crest Trail crossing and SR 70 corridor at Belden powerhouse

1

2 **Lake Almanor Basin**

3 The Lake Almanor basin is a large basin rimmed by densely wooded mountains
4 and rolling topography. Lake Almanor, the dominant feature of the basin is an extensive
5 reservoir of high scenic quality. The basin is somewhat flat and the lake is several miles
6 wide and long, broad sweeping views are generally available along most reservoir
7 shorelines. These include highly scenic views of 10,457-foot-high Mt. Lassen and the
8 rugged terrain within Mt. Lassen Volcanic National Park. Views of Mt. Lassen are
9 possible from the northeast shoreline near SR 36's Johnson Grade, the SR 36 Rest Area,
10 Lake Almanor Country Club, County Highway A13, most of the East Shore area, and
11 much of the shoreline in the Prattville community and Lake Almanor West subdivision.

12 Lake Almanor is generally a fairly shallow reservoir in a wide basin so a drop of a
13 few feet in elevation can expose wide areas of shoreline. When the lake is above 4,482
14 feet, the exposed shoreline is somewhat beneficial by serving as a beach area for

1 engaging in or staging recreation activities. However, below about elevation 4,482 feet,
2 the exposed shoreline progressively becomes more undesirable to many users and
3 viewers because of the jagged volcanic-type rocks that occur there. In steeper shoreline
4 areas along the southern portion of the east shore, larger reductions in lake elevation are
5 not noticed because the water line remains fairly close to shore. The western shoreline
6 near Chester and the area north of the SR 36 causeway have large areas of brown flat
7 terrain exposed below elevation 4,482 feet.

8 Other scenic areas of high quality include the broad meadow landscapes found
9 north of the SR 36 causeway and on the extensive lowlands between Chester and Lake
10 Almanor's western shoreline. These areas offer viewers a distinctive change in scenery
11 from the predominant wooded terrain. These meadows offer a lot of variety and
12 gradually blend into mixed lands with interspersed wooded clumps on relatively flat
13 terrain. Waterfowl and other bird life offer additional aesthetic values to these areas.

14 **Butt Creek Valley**

15 The Butt Creek Valley landscape extends from about halfway between Prattville
16 and the Butt Valley powerhouse to the Caribou powerhouses near the mouth of Butt
17 Creek on the NFFR. This landscape offers a wide variety of dramatic topographic relief
18 that is gentle in the upper elevations and steep and rugged in the lower elevations leading
19 down to the Caribou area. Butt Valley reservoir is of high scenic quality with moderately
20 low banks rimmed by a uniform and densely wooded shoreline. The reservoir is confined
21 inside the valley bottom and is long and narrow allowing good view across its waters to
22 the surrounding undeveloped shorelines. There are few long distance views from within
23 this basin since it is somewhat confined in a narrow valley. There are no residences
24 along the reservoir shoreline but the Butt Valley-Caribou Electric Transmission line,
25 supported by steel lattice towers, dominates the foreground landscape as viewed by
26 travelers on the road. Many users think the power line detracts from the natural
27 landscape qualities that dominate the scenery.

28 Butt Valley reservoir fluctuates daily and weekly to match daily output to peak
29 needs and typically fluctuates about 1 foot on a daily basis and between 3 and 5 feet on a
30 weekly basis depending on power system operating needs. Butt Valley reservoir has a
31 more attractive sand and rock shoreline than Lake Almanor when exposed. Even with
32 the usual amount of fluctuation, visual quality is generally preserved across the range of
33 normal operating levels.

34 From the Butt Valley reservoir down to the Caribou powerhouses, the terrain is
35 extremely steep and rugged. A single-lane dirt road, which splits into two one-way
36 separated roadways that wind steeply down the hill, provides most visitors their only
37 access to this landscape. There are several locations along the roads in the upper and
38 lower reaches that offer dramatic views down into the rugged and deep NFFR canyon.

1 **North Fork Feather River/Caribou Road**

2 This landscape unit extends the length of the NFFR from Canyon dam passing
3 through Caribou leading downstream to the confluence of the EBNFFR at the scenic SR
4 70 highway corridor. The uppermost part of this landscape unit is characterized by
5 rolling wooded terrain bisected by the incised NFFR. The river is hidden from
6 widespread public viewing in most locations because there are few trails or roads in the
7 area. Near Seneca, the river canyon is deeply incised, which is especially noticeable
8 around the Caribou powerhouses. Immediately downstream of the Caribou powerhouses,
9 the river fits inside a small box canyon rimmed by jagged rock ledges. The river valley
10 from this location to Belden is narrow and tucked deep down inside a more open canyon
11 with ridges and mountain tops extending over 3,000 feet above the valley floor on both
12 sides. The valley is highly scenic and has an undeveloped feel with rough mountainous
13 character.

14 **Belden Area**

15 The Belden area landscape spans a distance of less than 2 miles along the deep
16 scenic gorge of the NFFR along the SR 70 highway corridor. The upper end of this
17 distinctive landscape is the confluence of the EBNFFR and the NFFR, where Caribou
18 Road begins. The landscape is fairly uniform in topography but has an impressive
19 variety of geologic and vegetative conditions leading to the Belden powerhouse located at
20 the confluence of Yellow Creek and the NFFR. The canyon gorge is generally U-shaped
21 with both wooded and open rocky slopes bisected by steeply defined stream channels
22 extending up several thousand feet above the valley bottom. Most viewers experience the
23 landscape from well-traveled SR 70. The PCT crosses the canyon at Belden powerhouse.

24 The PCT is a 2,638-mile-long National Scenic Trail extending from Canada to
25 Mexico. The PCT section crossing the NFFR receives light use, although some
26 horseback use is noted in late summer. Views of the project from the PCT can be seen as
27 northbound users descend the canyon from the south where the Belden powerhouse
28 penstocks and surge chamber are readily visible on the lower slopes of the canyon. At
29 the SR 70 crossing, the Belden powerhouse becomes visible although viewer sensitivity
30 in this stretch is low because of the variety of developed features present.

31 **LRMP Visual Quality Objectives**

32 The Lassen and Plumas National Forest LRMPs provide guidelines for the
33 preferred VQO of land managed under each designation. VQOs are based on the degree
34 of acceptable alteration permitted within the natural characteristic landscapes and are
35 applied to all project proposals and activities on NFS lands. The Lassen National Forest
36 LRMP assigns two VQOs to the project area or lands influenced by project operations,
37 including Retention and Partial Retention. The VQOs for project lands in the Plumas

1 National Forest are Retention, Partial Retention, and Modification. The three VQOs that
2 apply to the project area are further described in table 3-36.

3 Table 3-36. Description of VQO classifications and guidelines. (Source: FS, 1992,
4 1995)

VQO Designation	Definition
Retention	Allows management activities that are not visually evident. Activities may only repeat form, line, color, and texture found frequently in the characteristic landscape. Changes in size, amount, intensity, direction, and pattern should not be evident.
Partial Retention	Allows management activities that remain visually subordinate to the characteristic landscape. Activities may repeat form, line, color, and texture common to the characteristic landscape but changes in their qualities of size, amount, intensity, direction, and pattern remain visually subordinate to the characteristic landscape. Activities may also introduce form, line, color, and texture found infrequently or not at all in the characteristic landscape, but they should remain subordinate to the visual strength of the characteristic landscape.
Modification	Human activities may visually dominate the original characteristic landscape. Vegetation and landform alteration must borrow from naturally established form, line, color, texture, and scale.

5

6 On the Lassen National Forest, Retention is prescribed for most of the recreation
7 and lightly developed lands on the southwest shore of Lake Almanor around Prattville.
8 Partial Retention is allocated for the undeveloped lands immediately outside the Lake
9 Almanor West subdivision. On the Plumas National Forest, Retention is prescribed in
10 recreation and scenic areas around Butt Valley reservoir and the lands along the NFFR
11 below the Caribou powerhouses. Partial retention is prescribed to the NFS lands along
12 the Seneca reach. Modification is assigned to the steep canyon lands leading from Butt
13 Valley dam to Caribou where the project roads, transmission lines and penstocks are
14 visible features of the landscape.

15 The Lassen and Plumas National Forest LRMPs also provide guidelines for the
16 preferred ROS of land managed under each plan. The ROS provides a framework for
17 classifying the types of outdoor recreational opportunities that the public may desire and
18 identifies the portion of the ROS that any given area may be able to provide. In
19 designating the ROS, factors include qualities provided by the natural setting (i.e.,
20 vegetation, topography, scenery), activities associated with recreational use (i.e., type and
21 level of recreational use), and experience opportunities related to management (i.e.,

1 development, access, and regulations). Table 3-37 summarizes ROS classifications and
2 guidelines.

3 Table 3-37. Summary of ROS classifications and guidelines. (Source: FS, 1992,
4 1995)

ROS Classification	Guidelines
Semi-primitive motorized	Provide for minimum evidence of onsite disturbance. Only subtle modifications to an otherwise natural environment. Motorized use of roads and trails is allowed.
Roaded natural	Provide for low-to-moderate interaction between users. Sights and sounds of others are clearly evident.
Rural	Natural environment is substantially modified. Structures are readily evident. Controls and regulations are obvious and law enforcement visible.

5

6 Plumas National Forest LRMP further specifies goals and policies for visual
7 resources. The plan emphasizes the need to allow certain management activities to
8 dominate the visual landscape, especially those activities on lands committed to intensive
9 timber or other commodity production. In areas frequently used by recreationists, the
10 plan emphasizes the need to maintain high visual quality on these lands that are clearly
11 visible from recreational developments, as well as from major travel routes and other
12 high use areas.

13 In addition to VQOs, there are considerations for visual quality related to the
14 federal designation of the Lassen Scenic Byway and Feather River Scenic Byway. SR 89
15 has also been designated a California State Scenic Highway by the California State
16 legislature.

17 **3.3.6.2 Environmental Effects**

18 **Adding Lands to the Project Boundary**

19 In the license application, PG&E proposed adding 34 acres of the Plumas National
20 Forest into the project at Caribou and Belden dams. The area around the Caribou Nos. 1
21 and 2 penstocks has required slope stabilization and remediation work over the last 20
22 years, and PG&E has indicated that it is likely that attention to slope stabilization would
23 continue. Therefore, PG&E proposes to include the area between the two penstocks
24 within the project boundary. Also the project spoil areas located west of the downstream
25 portal of the Caribou No. 2 tunnel and just downstream of the road from the top of
26 Belden forebay dam to Oak Flat powerhouse have each experienced project use and that

1 use is expected to continue. Finally, over the years, the Caribou to Butt Valley Road has
2 experienced minor changes in its alignment, and there are also short access roads in the
3 vicinity of this road that are used by the project. For these reasons, PG&E proposes
4 including the 34 acres.

5 In the SA, PG&E proposes applying to the Commission within 1 year of license
6 issuance to adjust the project boundary to include all recreation improvements covered by
7 the SA at PG&E facilities as well as the following FS facilities located on the Lassen
8 National Forest: Canyon dam boat launch and day-use area, Dyer View day-use area,
9 and Almanor boat launch. PG&E further proposes applying to the Commission to adjust
10 the project boundary as needed to incorporate the Almanor family campground and
11 amphitheater, the Almanor group campground, and the Almanor beach, 6 months after
12 the FS has completed construction of all of the recreation improvements it has planned
13 for each of these facilities. PG&E also proposes requesting a modification of any license
14 article addressing the recreation O&M program included in the draft RRMP to include
15 these facilities.

16 *Our Analysis*

17 There are currently 418 acres of lands administered by the Plumas National Forest
18 within the project boundary and 568 acres of lands administered by the Lassen National
19 Forest. PG&E meets with the FS on an annual basis to discuss plans for the upcoming
20 year. The Commission requires licensees for major projects, such as the UNFFR Project,
21 to secure all lands necessary for project purposes either by purchase or acquisition of
22 appropriate easements. Such lands are included within the designated project boundary
23 and the Commission only has jurisdiction over activities that occur within this project
24 boundary. The Commission has the authority to enforce the terms and conditions of a
25 new license within the project boundary. Adding an additional 34 acres of the Plumas
26 National Forest to the project boundary would not be detrimental to the purposes of the
27 Plumas National Forest. The activities that PG&E is responsible for on those lands to be
28 added are addressed in the discussion of vegetation management plans below and in
29 section 3.3.1.2, *Water Resources*. Likewise, including the recreation facilities listed
30 above in the project boundary would have a beneficial effect on recreation since PG&E
31 would be able to apply consistent management to all of the recreation facilities on the
32 Lake Almanor shoreline, reducing visitor confusion over management practices.

33 **Traffic Use Surveys**

34 In the SA, PG&E proposes filing a FS-approved road traffic survey plan for roads
35 used for project purposes located on NFS lands with the Commission within 1 year of
36 license issuance. PG&E proposes that the plan would include provisions for monitoring
37 traffic every 6 years when PG&E is monitoring recreation use in accordance with FERC
38 Form 80 requirements. PG&E proposes that, at a minimum, the road traffic survey
39 would include the Caribou Road (27N26) and the Caribou-Butt Valley Reservoir roads
40 (27N26 and (27N60) and include the number and types of vehicles per day on these roads

1 and a sampling schedule that includes: the fishing season, including the opening
2 weekend; holiday weekends including Memorial Day, Fourth of July, and Labor Day;
3 non-holiday weekends; the day of and the day after any scheduled Belden reach
4 recreation river flow releases; and weekdays. PG&E further proposes that every 6 years
5 the road traffic reports would be reviewed by the FS and then filed with the Commission.

6 In its December 1, 2003, filing with the Commission, the FS recommends, as
7 preliminary Section 4(e) condition 48, that every 5 years from license issuance, PG&E
8 file a FS-approved road/traffic survey report with the Commission and provide a copy of
9 the survey and the survey results to the FS. The FS would like to reserve the right to
10 require changes in the project, designated project roads, and operation, after notice and
11 opportunity for comment and administrative review, through revision of the 4(e)
12 conditions that require measures necessary to accomplish protection and utilization of
13 NFS resources and provide for public safety identified as a result of those surveys.

14 In its response to the FS, filed with the Commission on January 15, 2004, PG&E
15 does not oppose this recommendation, but suggests that it be modified to incorporate the
16 cost sharing responsibilities reflected in the 1998 road maintenance agreement between
17 PG&E and the Plumas National Forest. Additionally, PG&E proposes that the traffic
18 sampling approach not be currently defined but be developed by PG&E in consultation
19 with the FS.

20 In its December 1, 2003, filing with the Commission, the FS also recommends, as
21 preliminary Section 4(e) condition 19, that PG&E furnish, install, and maintain
22 temporary traffic controls when construction is in progress adjacent to or on FS
23 controlled roads open to public travel, to provide the public with adequate warning and
24 protection from hazardous or potentially hazardous conditions associated with PG&E's
25 operations. The FS recommends that any flaggers or devices be as specified in the
26 Manual on Uniform Traffic Control Devices for Streets and Highways.

27 In its filing with the Commission dated December 1, 2003, Interior recommends,
28 as Section 10(j) condition 19, that PG&E develop an erosion control plan for all project
29 facilities including roads, reservoirs, and bypassed reaches.

30 In its response to Interior filed with the Commission on January 15, 2004, PG&E
31 disagrees with the necessity of the proposed condition for several reasons. One of the
32 reasons PG&E disagrees with the need for a separate erosion control plan is that PG&E
33 and the Plumas National Forest have already entered into a road maintenance agreement
34 for roads on NFS lands. PG&E points out that the agreement addresses such items as
35 *slide repair, ditch cleaning, surface repair, shoulder maintenance, dust abatement,*
36 *drainage structures, and roadside vegetation.* PG&E also states that they would be
37 meeting with the FS, Plumas County, and other interested parties at least annually to
38 discuss any project-related issues, including erosion.

1 *Our Analysis*

2 During its review of PG&E's first stage consultation package, the FS
3 recommended an access management and traffic study for project roads to provide
4 information on the current condition of the project roads as well as current traffic levels,
5 to determine if the roads and trails can provide safe and adequate access to meet existing
6 and future demands. In summer 2001, PG&E conducted a traffic study of the project
7 roads, investigating the traffic safety and road system operations. Also in 2001, PG&E
8 conducted comprehensive traffic monitoring of roads throughout the project area.

9 The traffic study and road management report concluded that the project road
10 system was suitable for the traffic expected during the life of the license and also
11 provided some specific recommendations for several roads.

12 PG&E responded to the FS's request for a study of the project roads during initial
13 consultation and has already entered into a road maintenance agreement with the FS that
14 includes a list of roads covered by the agreement (FS System roads jointly used by PG&E
15 and the FS), levels of road maintenance, road maintenance specifications, and methods to
16 fulfill maintenance obligations. Additionally, PG&E projects an increase in recreation
17 use at the project over the year 2001 levels. An increase in users as well as the passage of
18 time would likely warrant additional road rehabilitation to help ensure that the capacity of
19 the roads is not exceeded and to maintain the roadways to current traffic service levels
20 and maintenance levels. The traffic use surveys that PG&E and the FS have proposed
21 would help identify when and where roads have reached or exceeded their capacity or
22 fallen below an acceptable level of service. If roads have exceeded their anticipated
23 capacity, PG&E and the FS may need to assess the need to reclassify the road
24 maintenance level or the traffic service level of the road.

25 **Specific Land Management and Visual Resource Protection Measures**

26 In the SA, PG&E proposes implementing a number of land management and
27 visual resource protection measures at existing facilities within 2 years after initial license
28 issuance.

29 In its December 1, 2003, letter to the Commission, the FS recommends, in
30 preliminary Section 4(e) condition 49 that PG&E implement specific mitigation
31 measures. Staff lists the specific visual management proposals proposed by PG&E and
32 recommended by the FS in the following section.

33 Within 2 years of license issuance, PG&E proposes painting the metal siding and
34 roof of the hoist house on the Prattville intake structure a dark green color similar to the
35 current color. The FS has recommended the same measure as an element of preliminary
36 Section 4(e) condition 49.

1 Within 2 years of license issuance, PG&E proposes planting sufficient evergreen
2 trees between the existing Prattville maintenance buildings and the shoreline to reduce
3 visual domination of the buildings on the shoreline area. PG&E further proposes
4 monitoring and overseeing survival of these trees through the first three summers to
5 ensure their successful establishment. An element of the FS-recommended preliminary
6 Section 4(e) condition no. 49 is consistent with this proposal.

7 Within 2 years of license issuance, PG&E proposes re-grading the Oak Flat road
8 debris spoil piles along Caribou Road to create a more natural rolling topography along
9 the roadside and, where possible, moving spoil materials farther from the road. PG&E
10 also proposes establishing native plantings where possible between the road and the spoil
11 piles to help screen the active use areas from passing motorists. The FS has
12 recommended the same measure as an element of preliminary Section 4(e) condition no.
13 49.

14 Within 2 years of license issuance, PG&E proposes preparing a plan, in
15 consultation with the FS, to annually apply dust palliatives or other measures, including
16 regular grading, to help minimize dust emissions and improve the lower coupled segment
17 of the Butt Valley-Caribou Road. An element of the FS-recommended preliminary
18 Section 4(e) condition No, 49 is consistent with this proposal.

19 Within 2 years of license issuance, PG&E proposes consulting with the FS on
20 color selection when maintenance or repair work is scheduled on the Belden powerhouse
21 penstocks, surge chamber, or other powerhouse facilities to reduce visual contrast as seen
22 from SR 70. The FS has recommended the same measure as an element of preliminary
23 Section 4(e) condition no. 49.

24 Within 2 years of license issuance, PG&E proposes maintaining the exterior and
25 landscaping of the old clubhouse facility and grounds at Caribou Village to preserve the
26 historic features and character of the facility. PG&E also proposes consulting with the
27 FS when maintenance or repair activities that affect exterior appearance are to take place
28 to help preserve, as practical, the historic and visual appeal of the village landscaping and
29 structures. An element of the FS-recommended preliminary Section 4(e) condition No,
30 49 is consistent with this proposal.

31 Within 2 years of license issuance, PG&E proposes filing FS-approved visual
32 management plans with FERC within 60 days prior to any ground-disturbing activities on
33 NF lands. PG&E proposes that these plans would, at a minimum, address clearings, spoil
34 piles, and project facilities such as diversion structures, penstocks, pipes, ditches,
35 powerhouses, other buildings, transmission lines, corridors and access roads; facility
36 configurations, alignments, building materials, colors, landscaping, and screening; a
37 proposed mitigation and implementation schedule necessary to bring project facilities
38 into compliance with the National Forest LRMP direction; locating spoil piles either in
39 approved areas on NFS lands or in a location off of NFS lands; monitoring and

1 eradication of noxious weeds as specified in any noxious weed management plan for the
2 project; removal of all visible non-native materials, including construction debris from
3 the surfaces of piles located on NFS lands; and stabilization and revegetation of all native
4 material that is allowed to be left on NFS lands, including compliance with visual quality
5 objectives.

6 The FS recommends, as a part of preliminary Section 4(e) condition 49 that within
7 1 year of issuance of a new license, or 60 days prior to any ground-disturbing activity,
8 that PG&E file a FS-approved visual management plan with the Commission.
9 Additionally, FS preliminary Section 4(e) condition 50 recommends that PG&E file a FS-
10 approved spoil disposal plan with the Commission within 2 years of license issuance and
11 at least 60 days prior to any ground-disturbing or soil-producing or piling activity. The
12 elements recommended by the FS for inclusion in these two plans are reflective of the
13 elements that PG&E has proposed for inclusion in any visual management plan it
14 prepares.

15 In its response to the FS, contained in a letter filed with the Commission on
16 January 15, 2004, PG&E expressed its belief that the existing project-related visual
17 quality issues on NFS lands have been adequately addressed through the relicensing
18 studies and consultation and would continue to be adequately addressed through
19 implementation of the proposals included in both the license application and the SA.
20 PG&E has discussed the need for a comprehensive visual management plan with the FS
21 and the FS has concurred with PG&E's recommendation that the visual management plan
22 would only be needed to address future ground-disturbing activities, and should be
23 developed at least 60 days prior to any such activity.

24 *Our Analysis*

25 The Lassen and Plumas National Forest LRMPs define the VQOs for National
26 Forest System lands in the project area. VQOs for the project area are intended to
27 provide various degrees of a natural-appearing landscape. Existing project facilities and
28 operations are clearly visible on the landscape, with buildings, dams, and penstocks
29 contrasting sharply with the surrounding forested setting. Project roads, campgrounds,
30 and appurtenant facilities are also obvious to the casual observer. Although it may not be
31 practical to devise methods to blend the dams in with the natural environment, there may
32 be ways to reduce the contrast of other structures through paint colors or vegetative
33 screening during regular maintenance or upgrading of existing facilities. A coordinated
34 approach to address visual effects of the existing facilities and proposed new facilities
35 would help to protect aesthetic resources within the project area and help ensure that
36 project facilities would be consistent with the applicable LRMP direction.

37 Periodic painting and maintenance of project facilities is necessary to meet current
38 standards and maintain aesthetic appeal. Consulting with the FS on color selection when

1 any maintenance or repair work is scheduled at the Belden Powerhouse facilities would
2 assure that the LRMP standards are addressed.

3 The existing PG&E-operated maintenance buildings located at the Prattville intake
4 visually dominate the Lake Almanor shoreline area. Planting evergreen trees between
5 these buildings and the shoreline would reduce the visual domination of the buildings.

6 The spoil piles located on the Caribou Road at Oak Flat are clearly visible from
7 the road and detract from the scenic quality of the area. Removal of this project-related
8 debris to the extent that such removal is practical along with establishing native plantings
9 where possible, would provide a visual benefit on this road.

10 The historic structures at the Caribou Village are in need of maintenance to
11 prevent deterioration of the buildings and loss of historic character and value. It would
12 be advantageous for PG&E to consult with the FS on preserving the historic and visual
13 appeal of the village landscaping and structures.

14 The Butt Valley-Caribou Road (27N60 and 27N26) is quite dusty during the
15 summer, and the dust creates a potential driving hazard. It would be beneficial for PG&E
16 and the FS to work together to address this concern.

17 Implementation of a spoil disposal plan, as recommended by the FS, would limit
18 the potential for existing and new spoil piles to erode and would improve the aesthetics of
19 the spoil piles. See section 3.3.1.2 for more discussion on the Spoil Disposal Plan.

20 **Shoreline Management Plan**

21 In the SA, PG&E proposes implementing the Lake Almanor SMP included in the
22 final license application within 30 days after license issuance. PG&E further proposes
23 meeting with the FS and Plumas County and other interested parties a minimum of every
24 10 years to discuss the need to update the SMP. The SMP included in PG&E's final
25 license application describes current conditions and management of the Lake Almanor
26 shoreline and presents the proposed shoreline management program including shoreline
27 authorizations and management policies, including permitting. The proposed shoreline
28 management program designates five shoreline management zones on Lake Almanor
29 including commercial, industrial, residential, recreation, and conservation and also
30 describes the shoreline management policies that apply across all shoreline zones.

31 *Our Analysis*

32 The shoreline of Lake Almanor is highly developed and along certain areas of the
33 shoreline, convenient access is limited. PG&E faces a growing need to provide more
34 shoreline access points and shoreline recreation facilities to meet future demand and
35 growth. Also, PG&E currently has more than one program for permitting various
36 features along the reservoir shoreline, addressing both private and commercial uses. The

1 draft SMP that PG&E presented in its license application integrates existing shoreline
2 management policy and permitting documents into one comprehensive plan. The SMP
3 was developed as a guide to future management of the Lake Almanor shoreline in the
4 face of increasing development pressures, as well as frequent requests from adjacent
5 property owners to either make shoreline improvements or place private docks and
6 facilities for public or group use inside the project boundary around Lake Almanor. The
7 plan examines all shoreline areas of the reservoir to identify the appropriate
8 developmental uses, as well as to protect areas deemed necessary for preservation to
9 protect and enhance environmental values. Under the terms and conditions of the project
10 license, PG&E must retain all rights to lands and waters within the project boundary
11 needed for project purposes. PG&E may permit others to use the project's lands and
12 waters but before permitting such a use, PG&E must ensure that the use does not
13 endanger health, create a nuisance, or otherwise be incompatible with overall project
14 recreational use and that a permittee takes all reasonable measures to protect the scenic,
15 recreational, and environmental values of the project. Additionally, PG&E is responsible
16 for ensuring that permitted facilities are constructed and operated in a safe manner that do
17 not adversely affect project operations and purposes. See section 3.3.1, *Water Resources*,
18 for more discussion on the SMP.

19 **Annual Meeting**

20 In the SA, PG&E proposes conducting an annual meeting with the FS, CDFG, and
21 Plumas County to coordinate ongoing project-related land management activities
22 including recreation management and use; fire suppression and related forest health
23 activities; and the planning for commercial, residential and industrial developments. The
24 FS has recommended the same measure as an element of 4(e) condition 49.

25 *Cur Analysis*

26 An annual meeting of the FS, CDFG, Plumas County, and PG&E would allow
27 these agencies to share current and future land management activities plans, including
28 any planned development or timber removal. Such a meeting should decrease conflicts
29 with the established land use policies in place for the project area, such as FS LRMP
30 direction and Plumas County zoning ordinances.

31 **Fire Prevention and Response Plan**

32 In its December 1, 2003, filing with the Commission, the FS recommends, in
33 preliminary Section 4(e) condition 26, that, within 1 year of license issuance, PG&E file
34 an FS-approved fire prevention and response plan with the Commission that sets forth in
35 detail the plan for prevention, reporting, control, and extinguishing fires in the vicinity of
36 the UNFFR Project. The FS recommends that the plan be reviewed and revised at
37 intervals of not more than 3 years.

1 *Our Analysis*

2 PG&E has documented only one large fire, but a relatively high number of small
3 fires. The large number of small fires indicates the presence of ignition sources, though
4 favorable conditions such as weather and people to extinguish the fires have helped to
5 keep the number of large fires down. However, the continued hydroelectric operations
6 along with the presence of project facilities such as generators, construction equipment,
7 and transmission lines contribute to fire danger in the project area. We expect that, over
8 the term of a new license, the number of recreational users would increase at most
9 developed project sites, and dispersed recreational areas with user-created fire rings add
10 to the threat of fires in the area. Additional fires within the project area would most
11 likely result in property damage, destruction to the scenic beauty of the project area,
12 increased particulate matter and decreased air quality due to smoke, and possibly loss of
13 life.

14 Having a fire management and response plan in place with fire prevention and
15 response strategies would help minimize damage to natural resources and increase
16 preparedness of fire personnel to provide for public safety when future fires occur.
17 Currently, CDF, Plumas County, private timber companies, the FS, and PG&E are
18 working together to reduce fire danger in the project area in the future. A fire
19 management and response plan would enable compilation of information from the
20 various consulting agencies to facilitate fire prevention needs and procedures throughout
21 the project area. Formalizing any existing agreements would improve the efficiency and
22 effectiveness of fire management of the project area.

23 **Reservoir Levels**

24 The Lake Almanor water levels proposed by PG&E in the SA provide for water
25 surface elevations from June 1 through August 31 that are 10 feet higher than current
26 levels in wet and normal water year types and 5 feet higher in dry and critically dry water
27 year types. In its Section 10(j) recommendation, Interior recommends that PG&E
28 implement project operations to maintain the same water surface elevations as those
29 proposed in the SA. The water levels proposed by PG&E in the SA maintain existing
30 water level management regimes for the Butt Valley reservoir. Typically, Butt Valley
31 reservoir fluctuates about 1 foot on a daily basis and between 3 and 5 feet on a weekly
32 basis depending on power system operating needs.

33 *Our Analysis*

34 Currently, PG&E operates the project with the level of Lake Almanor between a
35 normal maximum elevation of 4,494 feet and a normal minimum pool elevation of 4,469
36 feet. The reservoir usually reaches its highest elevation in May or June and is slowly
37 drawn down to its lowest level by December or January. Lake Almanor's average high
38 level occurs in June when the lake averages about 4,487 feet. The average September
39 lake level is about 4,482 feet.

1 PG&E's proposal to operate the project to maintain the surface water elevation
2 level of Lake Almanor at 4,485 feet until August 31 in wet and normal water years would
3 improve the aesthetic values of the Lake Almanor area.

4 We present the estimated cost of all measures that pertain to land use and aesthetic
5 resources in chapter 4, *Developmental Analysis*, and make our final recommendations
6 regarding these measures in section 5.2, *Comprehensive Development*.

7 **3.3.6.3 Unavoidable Adverse Effects**

8 None.

9 **3.3.7 Cultural Resources**

10 **3.3.7.1 Affected Environment**

11 **Identification of the Area of Potential Effects and Consultations**

12 PG&E advocated that the area of potential effects (APE) for the project (PG&E,
13 2002a, report 4E) should be defined as follows: all of the lands within the FERC project
14 boundaries, including the shorelines of Lake Almanor, Butt Valley reservoir, and Belden
15 forebay; roads between Butt Valley reservoir and Caribou powerhouse; the adit access
16 road leading up from Caribou Road to the Belden tunnel; the access road leading up from
17 Highway 70 to the Belden tunnel siphon; and about 15 acres north of the rest stop along
18 Highway 70 near Belden. Project access road corridors extend 25 feet on either side of
19 centerline and include turnouts. Maps of the APE are included in appendix E4-D of
20 PG&E's application.

21 This definition of the APE was included in PG&E's First Stage Consultation
22 Package for the UNFFR Project, and circulated for discussion among the project's
23 Cultural Resources Working Group. The Cultural Resources Working Group includes
24 representatives of the Greenville Rancheria, Susanville Indian Rancheria, Mountain
25 Maidu, Maidu Cultural and Development Group, United Maidu Nation, Honey Lake
26 Maidu Tribe, Roundhouse Council, Kasmam Koyom Foundation, Mountain Meadows
27 Conservancy, Plumas County 2105 Committee, Lassen National Forest, and Plumas
28 National Forest. FERC cultural resources staff met with the Cultural Resources Working
29 Group on two occasions (July 23 and September 4, 2002), and discussed the definition of
30 the APE.

31 In a letter dated April 10, 2002, conveying cultural resources reports to the
32 California State Historic Preservation Office (SHPO), PG&E requested that the SHPO
33 concur with its definition of the APE. The SHPO responded in a letter dated July 29,
34 2002, accepting the reports submitted by PG&E. We also agree with PG&E's definition
35 of the APE, unless it can be shown that there would be project-related impacts elsewhere.

1 Commission staff also consulted directly with federally recognized Indian tribes
2 who expressed an interest in this project, including two meetings with the Tribal Council
3 of the Greenville Rancheria. PG&E documented its consultations with Native American
4 organizations and individuals in appendix E4-C of its application.

5 **Archaeological Research**

6 The earliest professional archaeological field work in the project area was initiated
7 in the late 1940s and 1950s by Francis Riddell of the University of California at
8 Berkeley. Riddell had previously excavated Tommy Tucker cave in the Honey Lake
9 Valley of Lassen County in the late 1930s and 1940s, while a student at Sacramento
10 Junior College (Fenenga and Riddell, 1949; Riddell and Fenenga, 1951). He also was the
11 first to investigate Rainbow Point at Buck's Lake in Plumas County (Riddell and
12 Pritchard, 1971). Riddell recorded sites around Lake Almanor that include CA-PLU-1,
13 30, 32, and 33.

14 Chester Rich, a school teacher from Chester, recorded site CA-PLU-87 on Lake
15 Almanor in 1956. His students produced a manuscript (Johnson and Newman, 1956)
16 about the Indians of Big Meadow (where Lake Almanor is now located), which reported
17 projectile points found near the Durbin Motel on the east side of the lake.

18 In 1974, Makoto Kowta of California State University at Chico led a survey of the
19 Lake Almanor shoreline between the 4,490 and 4,500 foot elevation contours on behalf
20 of PG&E (Kowta, 1974). Kowta relocated four previously recorded sites and recorded
21 four new archaeological sites (CA-PLU-333, 334, 335, 336). In 1975, Kowta salvaged
22 prehistoric burial remains found eroding into the reservoir at site CA-PLU-33 (Kowta,
23 1980). Those remains were recently reinterred in the Lake Almanor vicinity.

24 Trudy Vaughn, of Coyote and Fox, led surveys on the eastern and southern end of
25 Butt Valley reservoir for a powerline tree removal project for the FS and PG&E in 1994.
26 Vaughn recorded 15 new archaeological sites (CA-PLU-1185 to 1197 and 1206 and
27 1207). PAR Environmental Services, Inc. (PAR) conducted additional archaeological
28 surveys at the Butt Valley reservoir in 1996 for PG&E's seismic remediation project at
29 the Butt Valley dam (Macdougall and Maniery, 1996).

30 In 2000, PG&E had PAR inventory all accessible lands within the relicensing
31 APE. After the level of Lake Almanor was lowered in 2001, PAR conducted additional
32 surveys (Compas, 2001, 2002). Combined, these surveys covered 7,567 acres, which
33 PG&E claims represents 75 percent of the APE, the remaining 25 percent of the APE
34 being inaccessible due to steep terrain. In 2003, PAR surveyed an additional 140 acres
35 for various proposed recreational areas around Lake Almanor, Butt Valley reservoir, and
36 Belden forebay (Compas, 2003). The 2000 PAR survey relocated 21 previously recorded
37 sites within the APE and identified 35 newly recorded sites and 119 isolated finds. The
38 2001 PAR survey relocated 11 previously recorded sites and identified 36 new

1 archaeological sites and 60 new isolated finds. The 2003 PAR survey recorded two new
2 archaeological sites. Among the previously recorded sites relocated by PAR around Lake
3 Almanor were Riddell's CA-PLU-1, 30, and 33; Rich's CA-PLU-87; and Kowta's CA-
4 PLU-334 and 336. PAR indicated that Riddell's sites CA-PLU-31 and 32 could not be
5 relocated because they are inundated beneath the waters of Lake Almanor. The same is
6 the case for Kowta's sites CA-PLU-333 and 335. PAR also relocated seven sites
7 previously recorded by Vaughn around Butt Valley reservoir (CA-PLU-1186, 1188,
8 1190, 1192, 1195, 11196, and 1206).

9 The cultural chronology of the Sierra Nevada was shaped by the work of the
10 University of California Archaeological Survey beginning in 1948 (Morato, 1984). The
11 oldest occupations in the project area can be placed within the Upper Archaic period,
12 dating back to about 2500 BC, and include projectile points typed as Elko or Martis series
13 (corner-notched, contracting stem and expanding stem) and Mesilla complex (large leaf-
14 shaped and wide-stemmed). Martis or Elko type points were found at site CA-PLU-113
15 at Rainbow Point and CA-PLU-115 at Boathouse Point on Buck's Lake (Crew, 1981).
16 Along Lake Almanor, sites CA-PLU-30, 33, 284, 1718, 1719, 1720, 1732, 2019, 2061,
17 2072, 2073, and 2077 produced Martis or Elko type points. Wide stemmed, or leaf-
18 shaped Mesilla style points were recovered at sites CA-PLU-33, 1717, 1709, 1721, 2063,
19 2067, 2068, and 2090 around Lake Almanor. No evidence of the Bidwell complex was
20 uncovered in the project area.

21 The Emergent period, after AD 1000, distinguished by the introduction of the bow
22 and arrow, is represented by the Sweetwater and Oroville complexes in the Sierra
23 Nevada. The Sweetwater complex includes Rose Spring and Gunther points. Some
24 archaeologists believe that Gunther points mark the arrival of the Maidu in the northern
25 Sierra. Gunther points were found at Rainbow Point on Buck's Lake, and at sites CA-
26 PLU-284, 2071, and 2072 along Lake Almanor. The Oroville complex is denoted by
27 Cottonwood triangular and Desert side-notched points. At Boathouse Point on Buck's
28 Lake, Gunther, Eastgate, Rose Spring, Cottonwood, and Desert side-notched points were
29 found within the same cultural horizon (Crew, 1981). Likewise, at site CA-PLU-33 at
30 Lake Almanor, Kowta (1980) recovered Gunther, Rose Spring, Desert side-notched
31 points, and Cottonwood points from a cultural horizon estimated to date between AD
32 1100 and 1750, together with ground stone artifacts, a steatite pipe, tubular bone beads,
33 pine nut beads, Olivella shell beads, abalone shell objects, and carbonized coiled
34 basketry, associated with 14 burials. Rose Spring, Eastgate, and Desert side-notched
35 points were also noted at sites CA-PLU-2063, 2072, and 2090 and P-32-2076 at Lake
36 Almanor, and site CA-PLU-1186 at the Butt Valley reservoir.

37 Table 3-38 lists all of the prehistoric or aboriginal archaeological sites identified in
38 the APE. Many of these sites also have historic materials associated with them.

1 Table 3-38. Prehistoric or multicomponent sites identified within the APE. (Source:
2 PG&E, 2002a)

Site No./Name	Description	Effects	Management
CA-PLU-1/CA-PLU-1731 (NF-15)	Prehistoric lithic scatter, originally recorded by Riddell in 1949, and relocated by Kowta in 1974 and by PAR in 2000	Riddell noted that wave action was destroying site. Partly inundated. Local residents cited artifact collection. Private home construction.	Signage, education, and limit permit. Monitor and additional recording and testing, as necessary.
CA-PLU-30 may be related to ethnohistoric Maidu village of Manimbaldiki	Prehistoric lithic scatter, with Elko/Martis type point. Originally recorded by Riddell in 1958. Relocated by Kowta in 1974 and PAR in 2001.	Usually inundated, wave action, changing lake levels, recreation, casual visitation and potential vandalism	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-33 may be related to ethnohistoric Maidu village of Nakango Koyo	Originally recorded by Riddell in 1958 as prehistoric village and historic stage station, with 8 burials reported. Kowta (1980) salvaged 14 burials eroding from site in 1975. PAR relocated site in 2000, and found bedrock mortars (BRM), ground stone artifacts, Martis expanding stem, Martis corner-notched, Mesilla large leaf shaped, and Gunther points.	Periodically inundated, wave action, recreation and potential vandalism, ORV use	Proceed to Stage 3. Consult with the FERC, SHPO, Greenville Rancheria, SIR, and other interested parties regarding treatment measures to be developed.
CA-PLU-87 may be related to ethnohistoric Maidu village of Yotim	Originally recorded by Rich in 1956 as prehistoric camp with BRMs, points, beads, and ground stone below high water mark. Relocated by PAR in 2000, noted lithics, BRM, and ground stone.	Periodically inundated, wave action, recreation (near old boat ramp and resort), vandalism	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-284 and CA-PLU-674 may be related to ethnohistoric Maidu village of Oidoing-Koyo	Originally recorded in 1977 for timber sale as prehistoric base camp with Martis corner-notched point and ground stone. Historic component of tin cans originally recorded in 1985	Recreation (near camp ground), casual visitation, logging	Within Lassen National Forest, so treatment should be determined by the FS

Site No./Name	Description	Effects	Management
	by Chico State. Relocated in 2000 by PAR with Gunther point noted.		
CA-PLU-334	Originally recorded during Kowta's 1974 survey, as BRM. Relocated in 2001 by PAR, with BRMs and lithic scatter, together with historic artifacts and remains of logging railroad grade.	Partial inundation, changing lake levels, wave action, ORV use, casual visitation	Block ORV access, signage. Monitor and additional recording and testing, as necessary
CA-PLU-336	Prehistoric lithic scatter, originally recorded during Kowta's 1974 survey, and relocated by PAR in 2000.	Casual visitation, grazing	Prohibit grazing
CA-PLU-1185	Prehistoric lithic scatter, including ground stone artifacts, originally recorded during 1994 Coyote and Fox survey.	Recreation (near a camp ground), casual visitation, logging	Restrict road grading, signage, monitor
CA-PLU-1186	Prehistoric lithic scatter, with Desert side-notched point. Originally recorded during 1994 Coyote and Fox survey. In 2001, PAR relocated site and found historic artifacts.	Recreation (near camp ground), casual visitation, logging	Signage, monitor
CA-PLU-1709 (NF-3)	Recorded by PAR in 2000 as prehistoric lithic scatter in a meadow, with large leaf-shaped Mesilla type point.	Casual visitation	Signage, monitor
CA-PLU-1710 (NF-4)	Recorded by PAR in 2000 as prehistoric lithic scatter in a forested meadow, with large leaf-shaped Mesilla type point, and ground stone (metate).	Casual visitation	Signage, monitor
CA-PLU-1712 (NF-5)	Recorded by PAR in 2000 as prehistoric lithic scatter in a forested meadow. Also has a historic component with depression and artifacts.	Casual visitation (near a dirt road)	Signage, monitor

Site No./Name	Description	Effects	Management
CA-PLU-1717 (NF-24)	Recorded by PAR in 2000 as a prehistoric lithic scatter, including large leaf-shaped point (Mesilla complex?)	Often inundated, changing lake levels, wave action	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1718 (NF-26)	Recorded by PAR in 2000 as lithic scatter, including 2 Martis type points and ground stone artifacts.	Often inundated, changing lake levels, wave action	PG&E did not propose any treatment measures
CA-PLU-1719 (NF-27)	Recorded by PAR in 2000 as a prehistoric lithic scatter in marshy alluvial flat, including Martis contracting stem point and ground stone	Often inundated, changing lake levels, wave action	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1720 (NF-28)	Recorded by PAR in 2000 as a prehistoric lithic scatter in alluvial flat, including Martis point, ground stone, and hearth feature.	Often inundated, changing lake levels, wave action, recreation (near camp ground), and casual visitation	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1721 (NF-29)	Recorded by PAR in 2000 as a prehistoric lithic scatter in marshy alluvial flat, including broad stemmed point similar to Mesilla type.	Often inundated, changing lake levels, wave action, recreation (near picnic area), and casual visitation	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1725 (NF-13) – may be associated with ethnohistoric Maidu village of Manimbaldiki	Recorded by PAR in 2000 and 2001 as prehistoric lithic scatter, with ground stone, and midden soils. Historic component related to RRLC Camp 28.	Often inundated, changing lake levels, wave action	Monitor and additional recording and testing, as necessary
CA-PLU-1728 (NF-28)	Sparse prehistoric lithic scatter recorded by PAR in 2000.	Partly inundated, changing lake levels, wave action	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1729 (NF-30)	Prehistoric lithic scatter, with ground stone, and midden soils, recorded by PAR in 2000.	Partly inundated, changing lake levels, wave action	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1730 (NF-14)	Prehistoric lithic scatter, with midden soils, recorded by PAR in 2000 on a forested	Partly inundated, changing lake levels, wave action, casual	Signage. Monitor and additional recording and

Site No./Name	Description	Effects	Management
	flat.	visitation	testing, as necessary
CA-PLU-1732 (NF-23)	Prehistoric lithic scatter, with leaf-shaped point, recorded by PAR in 2000 and 2001.	Partly inundated, changing lake levels, wave action	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1733 (NF-22)	Prehistoric lithic scatter, with ground stone, recorded by PAR in 2000 and 2001 on muddy alluvial flat meadow.	Partly inundated, changing lake levels, wave action, borrow area for golf course	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1735 (NF-1)	Prehistoric lithic scatter, with BRMs, recorded by PAR in 2000.	Partly inundated, changing lake levels, wave action	PG&E did not propose any treatment
CA-PLU-1737 (NF-7)	Prehistoric lithic scatter, with ground stone artifacts, recorded by PAR in 2000.	Partly inundated, changing lake levels, wave action. Recreation, casual visitation, and vandalism	Signage. Monitor and additional recording and testing, as necessary
CA-PLU-1738 (NF-8)	Sparse prehistoric lithic scatter, recorded by PAR in 2000. Historic component of tin cans mostly outside project boundary.	Logging, casual visitation	PG&E did not propose any treatment
CA-PLU-2019 (LA-5)	Prehistoric lithic scatter, including 4 Elko/Martis points, and ground stone artifacts, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2061 (LA-6)	Prehistoric lithic scatter, including Elko point, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2063 (LA-8)	Prehistoric lithic scatter, including 2 leaf-shaped Mesilla type points and a Desert side-notched point, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2065 (LA-10) – may be associated with ethnohistoric	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment

Site No./Name	Description	Effects	Management
villages of Oidoing-Koyo or Nakang-Koyo			
CA-PLU-2066 (LA-11)	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2068 (LA-18)	Prehistoric lithic scatter, including wide-stemmed Mesilla type point, recorded by PAR in 2001. Historic component related to logging activities.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2069 (LA-20)	Prehistoric lithic scatter, with 4 point fragments, and hearth feature, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2071 (LA-22)	Prehistoric lithic scatter, including Gunther point and ground stone, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2072 (LA-24)	Prehistoric lithic scatter, including Martis, Gunther, and Rose Spring points and ground stone, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2073 (LA-29)	Prehistoric lithic scatter, including corner-notched Martis and Sierra Contracting Stem points, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2074 (LA-30)	Prehistoric lithic scatter, with 2 point fragments, recorded by PAR in 2001. Site contains an historic component also.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2077 (LA-34)	Prehistoric lithic scatter, including Northern side- notched and Martis type points, and ground stone, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment

Site No./Name	Description	Effects	Management
CA-PLU-2089 (LA-26) - may be associated with ethnohistoric villages of Manimbalkiki	Prehistoric BRM, recorded by PAR in 2001, near sites CA-PLU-30 and 333.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2090 (LA-27)	Prehistoric lithic scatter, including leaf-shaped, Eastgate, and Desert side-notched points, and ground stone, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
CA-PLU-2094 (LA-28)	Prehistoric BRM, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-1714 (NF-16) – may be associated with ethnohistoric village of Chambukunyim	Prehistoric lithic scatter, mounds, and midden soil, in grassy meadow, recorded by PAR in 2000.	Casual visitation, grazing	Signage. Monitor and additional recording and testing, as necessary
P-32-2064 (LA-9)	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2075 (LA-32)	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2076 (LA-33)	Prehistoric lithic scatter, with 2 points, including a side-notched, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2079 (LA-36)	Prehistoric lithic scatter, with a steatite pipe bowl, recorded by PAR in 2001. Site includes an historic artifact also.	Usually inundated	PG&E did not propose any treatment
P-32-2080 (LA-39)	Prehistoric lithic scatter, recorded by PAR in 2001. May be related to site LA-40.	Usually inundated	PG&E did not propose any treatment

Site No./Name	Description	Effects	Management
P-32-2081 (LA-40)	Prehistoric lithic scatter, including ground stone artifacts, recorded by PAR in 2001. May be related to site LA-43.	Usually inundated	PG&E did not propose any treatment
P-32-2082 (LA-42)	Prehistoric lithic scatter, recorded by PAR in 2001. May be related to site CA-PLU-1717.	Usually inundated	PG&E did not propose any treatment
P-32-2083 (LA-43)	Prehistoric lithic scatter, recorded by PAR in 2001. May be related to site LA-40.	Usually inundated	PG&E did not propose any treatment
P-32-2084 (LA-44)	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2085 (LA-45)	Prehistoric lithic scatter, including 3 points, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2086 (LA-46)	Prehistoric lithic scatter, recorded by PAR in 2001. May be related to site LA-47.	Usually inundated	PG&E did not propose any treatment
P-32-2087 (LA-47)	Prehistoric lithic scatter, with ground stone, and hearth feature. May be related to site LA-46.	Usually inundated	PG&E did not propose any treatment
P-32-2092 (LA-2)	Prehistoric lithic scatter and ground stone artifacts, recorded by PAR in 2001. Site also contains an historic component.	Usually inundated	PG&E did not propose any treatment
P-32-2093 (LA-37)	Prehistoric lithic scatter, including corner-notched point, and BRM, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment
P-32-2122 (LA-38)	Prehistoric lithic scatter, recorded by PAR in 2001.	Usually inundated	PG&E did not propose any treatment

Ethnographic Research

The project area is the native homeland of the Maidu Indian tribe. The Mountain Maidu, also known as the Northern or Northeastern Maidu, occupied valleys in the Sierra Nevada along the Feather River and its tributaries, including Big Meadow and Butt Valley. Their territory extended from Mount Lassen south to Sierra Butte, and from Honey Lake west to Rich Bar. The Northwestern Maidu, or Konkow, occupied the area from Rich Bar west to the Sacramento River, while the Southern Maidu, or Nisenan, occupied the Yuba and American River drainages east from Sacramento. The Maidu, Konkow, and Nisenan are all subgroups of the California Penutain linguistic family.

Ethnographic studies of the Maidu date back to Stephan Powers' articles in the early 1870s. As part of the Huntington Expedition, between 1899 and 1903, Roland Dixon (1905) was the first trained anthropologist to conduct field work with the Maidu. Physician and biologist C. Hart Merriam did anthropological field work with the Maidu in Big Meadow and the American Valley between 1903 and 1930, supported by an endowment from E.H. Harriman. In 1924, Edward Curtis published photographs of Maidu people, together with some ethnographic notes, in volume 14 of his North American Indian series. A.L. Kroeber, of the University of California, devoted several chapters to the Maidu in his Handbook of the Indians of California, published in 1925. University of California linguist William Shipley started working on the Maidu language in 1954. Francis Riddell (1978), the former State Archaeologist for California, had a long career of research among the Maidu, dating from the 1940s through the 1970s. Dorothy Hill studied the Maidu both as a student at the California State University at Chico and as a teacher at Butte College. In 1977, Marie Potts, a Maidu from Big Meadow, published her book about the tribe. Leigh Ann Hunt's 1992 California State University at Sacramento master's thesis on the Bear Dance also contained ethnographic information about the Mountain Maidu.

As part of its relicensing efforts, in 2001, PG&E commissioned an ethnographic study of the project area to identify traditional cultural properties (TCPs). The research was conducted by Albion Environmental, Inc. (Albion), according to an MOU signed by Albion, PG&E, and the Greenville Rancheria. Albion reviewed the ethnographic literature, and interviewed nine Maidu informants. The study mentions 14 potential TCPs in the APE (Brickley and Blount, 2002; see table 3-39)

1 Table 3-39. Potential TCPs identified by PG&E's ethnographic study in the APE.
 2 (Source: PG&E, 2002a)

Field No. and Name	Description	Archaeological Correlate	Evaluation	Effects/Management
1 – Big Meadow	Site of numerous ethnohistoric Maidu villages, and historic Maidu allotments; plays role in Maidu Creation Story and other myths, place for fishing, hunting, and gathering activities	Maidu called valley Naga Koiyo or Nakankoyo or Nah-Kahn-ko. Valley contains numerous aboriginal sites	Does not retain qualities of a TCP	Inundated by Lake Almanor. PG&E to develop a public education program.
2 – Eastern Shore Burials	Maidu burials associated with former village location	Maidu village called Manimbaldiki. Sites CA-PLU-30, 1725, and 2090	Retains qualities of a TCP	Inundated by Lake Almanor. If reservoir is drawn down PG&E would try to relocate and assess burial site.
3 – Frog Rock	Place connected to Maidu mythology and stories about Earthmaker	CA-PLU-1729	Retains qualities of a TCP	Partly inundated by Lake Almanor. PG&E would protect site from future impacts by prohibiting construction in area.
4- Prattville	Botanical gathering area; possible burial location; and location of Maidu Big Times ceremony	CA-PLU-1734, and P-32-2093	Does not retain qualities of a TCP	Partly inundated by Lake Almanor, and partly developed as PG&E construction camp, and recreational area. PG&E would develop an agreement with Maidu regarding future gathering and protection of specific plant species.
5 – Big Spring	Maidu village location; named in Maidu myths and associated with Earthmaker; site of Big Times and Bear Dance ceremonies; and	Maidu village called Wisotpinim. Site CA-PLU-32	Retains qualities of a TCP	Inundated by Lake Almanor. PG&E to develop a public education program.

Field No. and Name	Description	Archaeological Correlate	Evaluation	Effects/Management
	important location for Maidu shamans			
6 – Canyon dam spillway	Place associated with Earthmaker in Maidu Creation Story and myths	CA-PLU-1264, 1265, 1726, and 1727	Retains qualities of a TCP	Site developed as dam and spillway, and impacted by associated construction camp, and historic logging activities. No treatment proposed.
7 – Willow gathering area	Maidu botanical gathering area. “Gray” willow used for basketmaking	None	Retains qualities of a TCP	Partly inundated by Lake Almanor. PG&E would develop an agreement with Maidu regarding future gathering and protection of specific plant species.
8 – Fishing hole along Butt Creek	Maidu family fishing location	None	Does not qualify as a TCP	Project may have affected fishery. No treatment proposed.
9 – Roundhouse in Butt Valley	Location of a Maidu roundhouse, probably associated with a village	CA-PLU-1245	Does not retain qualities of a TCP	Inundated by Butt Valley reservoir. If reservoir is drawn down PG&E would try to relocate and assess site.
10 – Maidu Trail	Trail historically used by Maidu to travel between Butt Valley and Humbug Valley	None	Does not retain qualities of a TCP	Partly inundated by Butt Valley reservoir. No treatment proposed.
11 – Gould’s Swamp	Historic Maidu hunting grounds and botanical gathering area	CA-PLU-1709, 1710, 1712, 1719	Does not retain qualities of a TCP	Partly inundated by Lake Almanor. No treatment proposed.
12 – Maidu Church	Location of a former church attended by members of the Maidu	CA-PLU-1714, and 1717	Does not retain qualities of	Church building no longer standing. No effect from the

Field No. and Name	Description	Archaeological Correlate	Evaluation	Effects/Management
	community; also a plant gathering area		a TCP	project. No treatment proposed.
13 – Gravel pit gathering area	Location of a Maidu family botanical gathering area	CA-PLU-1713 and 1715	Does not retain qualities of a TCP	No effect from the project. PG&E would develop an agreement with Maidu regarding future gathering and protection of specific plant species.
14 – Butt Valley	Location of ethnohistoric Maidu villages; botanical gathering, and hunting area	Maidu called valley Kobati or Yakuning Koiyo or Kawati. Five prehistoric sites recorded in the vicinity	Does not retain qualities of a TCP	Inundated by Butt Valley reservoir. PG&E to develop a public education program.

1

2 Based on research conducted by Riddell and Kowta, PAR (Compass, 2001)
3 identified nine ethnohistoric Maidu villages in the Lake Almanor area. Brickley and
4 Blount's (2002) TCP study also mentions Maidu village place names in the project area
5 (see table 3-40).

6 Table 3-40. Ethnohistoric Maidu villages in the UNFFR Project vicinity. (Source:
7 PG&E, 2002a)

Village Name	Place/Source	Archaeological Correlates	Effects/Management
Chaldino	Village in the Lake Almanor area (Brickley and Blount 2002)	Not located	Assumed inundated under Lake Almanor. No treatment proposed.
Chambukunyim	Village near Chester and Stover Ranch (Riddell 1978; Compass, 2001)	P-32-1714	Affected by historic use, grazing, casual visits; and partly inundated by Lake Almanor. Treatment would include signage, elimination of grazing, monitoring, and possibly testing.

Village Name	Place/Source	Archaeological Correlates	Effects/Management
Humodum	Winter village site in Big Meadow (Brickley and Blount, 2002)	Not located	Assumed inundated under Lake Almanor. No treatment proposed.
Kobati or Yakuning koiyo or Kawati	Maidu name for Butt Valley, means "fan the dirt." (Brickley and Blount, 2002)	Too general. Not located	Inundated under Butt Valley reservoir. Proposed treatment would include developing a public education and interpretation program.
Kolyem	Village near a spring west of Big Spring (Riddell, 1978; Compass 2001; Brickley and Blount, 2002)	CA-PLU-31, not relocated	Assumed inundated under Lake Almanor. No treatment proposed.
Kom-hum	Village with a roundhouse in Big Meadow (Brickley and Blount, 2002)	Not located	Assumed inundated under Lake Almanor. No treatment proposed.
Manimbaltdiki	Village at edge of Big Meadow, near Canyon dam, including dance house and associated cemetery (Riddell, 1978, Compass, 2001; Brickley and Blount, 2002)	CA-PLU-30, 333, 1725, and 2089	Affected by recreation, casual visitation; and partly inundated under Lake Almanor. Treatment would include signage, monitoring, and possibly testing.
Naga koiyo, Nakankoyo, or Kahn-ko	Maidu name for Big Meadow (Brickley and Blount, 2002)	Too general, not located	Inundated under Lake Almanor. Proposed treatment would include developing a public education and interpretation program.
Nakan Koyo	Village near Big Spring. Also Maidu name for people of the entire Big Meadow valley (Dixon, 1905; Compass, 2001; Brickley and Blount, 2002))	Compass (2001) associates this village with CA-PLU-33, but the locations do not match	Assumed inundated under Lake Almanor. Treatment proposed for CA-PLU-33 could include data recovery.
Oi-dim koiyum, or Oidim koiyo, or Oiding Koiyo	Maidu name for "upper valley" or "upper end of the meadows," and village north of Chester (Brickley	CA-PLU-284 and 2065	Affected by recreation, casual visitation, logging, and inundation. Treatment of site 284 should be determined by the FS.

Village Name	Place/Source	Archaeological Correlates	Effects/Management
	and Blount, 2002). Compas (2001) thought this village was near Big Spring.		
Potadi	Village west of Canyon dam (Riddell, 1978; Compas, 2001; Brickley and Blount, 2002)	Not located	Assumed inundated under Lake Almanor. No treatment proposed.
Taldinom	Village near new Prattville (Riddell, 1978; Compass, 2001; Brickley and Blount, 2002)	Not located	Assumed inundated under Lake Almanor. No treatment proposed.
Wisotpinim	Village near Big Spring (Riddell, 1978; Compas, 2001; Brickley and Blount, 2002)	CA-PLU-32, not relocated	Assumed inundated under Lake Almanor. No treatment proposed.
Yoatim,	Village near Hamilton Branch (Riddell, 1978; Compass, 2001; Brickley and Blount, 2002)	CA-PLU-87	Affected by vandalism; partly inundated by Lake Almanor. Treatment would include signage, monitoring, and possibly testing.

1

2 Although representatives of the U.S. government negotiated a treaty with various
3 Maidu bands in 1851, it was never ratified. While some Maidu people were forced to
4 relocate to reservations, many Mountain Maidu remained in their ancestral homeland, co-
5 existing with miners, ranchers, loggers, and tourists. Marie Potts (1977) recalled that it
6 was common for the Maidu to work as laborers on the ranches in Big Meadow and
7 adjacent valleys. A census in 1864 counted 262 Maidu in Seneca Township, including
8 Big Meadow and Butt Valley, out of a total population of 800 (Brickley and Blount,
9 2002). The federal census of 1880 enumerated 137 Indians out of a total population of
10 535 people in Seneca Township (Maniery, 1999). In the 1890s, the government
11 established boarding schools for Maidu children in Greenville, Taylorville, and Indian
12 Valley. After the passage of the Dawes Act in 1887, some Maidu people were able to
13 acquire allotments near their traditional villages in the mountain valleys. Kelsey's census
14 of non-reservation California Indians in 1905-1906 enumerated 29 Maidu families
15 owning land in Big Meadow, and an additional 23 Maidu families living in Big Meadow
16 but not owning land (Compass, 2001). The Great Western Power Company had to

1 acquire some allotments from Maidu landowners when it bought up property for its
2 UNFFR hydroelectric project, shortly after the turn-of-the-century.

3 **Historical Research**

4 The Maidu first came into contact with Euro-Americans during the period of
5 Spanish colonization of California. In 1820, Luis Arguello led a Spanish expedition
6 through the San Joaquin Valley and named the Feather River. American and Canadian
7 fur traders explored the Sierra Nevada between 1828 and 1836, making contact with
8 native tribes, but only passing through the region temporarily during their travels. The
9 first Euro-Americans to reside in Maidu territory included John Sutter at modern day
10 Sacramento in 1839, and John Bidwell at Chico in 1847, at a time when California was
11 still part of Mexico.

12 It was the gold rush which led to the permanent Euro-American settlement of the
13 project area. In 1848, Peter Lassen blazed the trail, named after him, through the project
14 area. Miners followed this trail to the upper Feather River drainage. Big Meadow,
15 Prattville, Butt Valley, and Caribou are on Gudde's (1975) list of California gold camps.
16 In the 1850s, the town of Caribou sprung up to support activities at the Caribou Mining
17 District. The community of Buttville (site CA-PLU-1245), centered on William and
18 Lena Miller's hotel and store, and Drake's saloon, including a Chinatown, served the
19 North Fork and Seneca Mining Districts.

20 Some miners turned to agriculture. Although the Lee, Bunnell, and Miller
21 families, who eventually intermarried with each other, were drawn to the upper Feather
22 River drainage in search of gold in the 1850s, they ended up running dairy ranches in
23 Butt Valley (Maniery, 1999). In 1859, the Stover brothers were the first to establish a
24 ranch in Big Meadow (site P-32-1716). Dr. Willard Pratt founded his ranch and hotel in
25 Big Meadow in 1867, and the town of Prattville grew around it. In 1869, Wells Bunnell
26 married Julia Lee, Lena Miller's sister, and they moved from Butt Valley to near
27 Prattville to operate a ranch and hotel. By the 1870s, a road (site P-32-1742) led from
28 Miller's ranch up Butt Valley to Prattville, and then on to Johnson's ranch near modern
29 Chester.

30 The timber industry also was associated with mining activities. In the 1890s the
31 Sierra Lumber Company was a major landowner in Big Meadow. Around the turn-of-
32 the-century, the Red River Lumber Company, from Minnesota, began operations in the
33 project area, and established the town of Westwood at its mill in 1913 (Maniery and
34 Compas, 2002). Timber-related historic archaeological sites in the APE include the
35 remains of logging railroad grades (like site CA-PLU-1211) and camps (like site CA-
36 PLU-1736).

37 The UNFFR Project was the brainchild of engineer Julius Howells, who first
38 visited the region during a geological expedition in 1882 and recognized its potential for

1 hydropower development. In 1902, he helped organize what later became the Great
2 Western Power Company, with the backing of Edwin and Guy Earl. This company had
3 representatives gather together the water rights and easements necessary for the project,
4 and began construction of Canyon dam in 1912, as a multiple arch design by John
5 Eastwood. However, company politics changed this into a hydraulic-fill dam, designed
6 by Howells, which was completed in 1914, creating Lake Almanor. In 1925, the size of
7 Lake Almanor was increased when a new, larger hydraulic-filled dam was put up by the
8 Foundation Company. In Butt Valley, a rock-filled dam was erected by Stone and
9 Webster in 1921. It was replaced by larger hydraulic-filled dam begun in 1923 by the
10 Schultz Construction Company (Jackson Research Projects, 1986). Water from Lake
11 Almanor and Butt Valley was conveyed by tunnels and penstock to the Caribou No. 1
12 powerhouse, which became operational in 1921. PG&E acquired Great Western Power
13 in 1930, and expanded the UNFFR Project. The Belden dam and forebay were built in
14 1956; in 1958 the Butt Valley powerhouse came on line and a second powerhouse was
15 put in at Caribou; the Belden powerhouse was built in 1969; and the Oak Flat
16 powerhouse was built in 1984 (Baker and Bakic, 2001).

17 The earliest history of Plumas County was published in 1882, and mentioned the
18 Miller ranch in Butt Valley and the Stover ranch in Big Meadow (both ranches are within
19 the APE). The first published summary of the creation of the UNFFR hydroelectric
20 system was Coleman's (1952) corporate history of PG&E. In 1986, PG&E
21 commissioned Jackson Research Projects to write a more detailed history of the Great
22 Western Power Company and the UNFFR hydroelectric system. Also for PG&E, Shoup
23 and Cornford (1987) produced a National Register of Historic Places (National Register)
24 evaluation of the Caribou No. 1 powerhouse. Michael Landon, a student at California
25 State University at Sacramento, wrote his 1988 masters thesis about the creation of Lake
26 Almanor. This was also the subject of an article by Teisch (1999). In 1996, PG&E
27 conducted seismic remediation work at both the Butt Valley dam and Canyon dam. This
28 resulted in a National Register evaluation of Canyon dam (Maniery and Baker, 1996).
29 When water behind the Butt Valley dam was drawn down, the historic dam construction
30 camp (Camp 5, recorded as archaeological site CA-PLU-1245) was revealed, so PG&E
31 mitigated impact through data recovery excavations (Maniery, 1999, 2002). Also
32 because of the seismic remediation, PAR documented the Butt Valley dam, Gate
33 Tender's House and outbuildings for the Historic American Engineering Record. As part
34 of its current relicensing effort, PG&E had PAR produce a National Register evaluation
35 of the entire UNFFR hydroelectric system (Baker and Bakic, 2001), and evaluations of
36 historical archaeological sites within the APE (Maniery and Compass, 2002).

37 Table 3-41 lists the historic archaeological sites and standing structures identified
38 within the APE. During PG&E's seismic remediation program in 1996, FERC, in
39 consultation with the SHPO, determined that Canyon dam; Camp 5 (CA-PLU-1245); the
40 Butt Valley Railroad (CA-PLU-1743); and the Gate Tender's House, barn, and shed at
41 the Butt Valley dam were eligible for the National Register. For the current relicensing,

1 the SHPO commented on PAR's recommendations for historic sites and structures, in a
 2 letter dated July 29, 2003. While the SHPO states the UNFFR hydroelectric system as a
 3 whole does not qualify for the National Register as a historic district, it does find
 4 individual elements of the system to be eligible (Lake Almanor and the Canyon Dam
 5 Intake Tower). The SHPO also indicates that one structure at Camp Almanor (Gate
 6 Tender's House), two structures at Canyon Dam Camp (Patrolman's House and Cottage),
 7 and all structures within PG&E's Camp Caribou are eligible for inclusion on the National
 8 Register.

9 Table 3-41. Historic archaeological sites and structures identified in the APE. (Source:
 10 PG&E, 2002a)

Site No./Name	Description	SHPO Opinion	Effects	Management
CA-PLU-334	Red River Lumber Company (RRLC) railroad grade (includes prehistoric component, bedrock mortar)	Eligible for nomination to the National Register	Partly inundated, wave action, recreation, ORV use	Signage, block access, monitor, and possibly test
CA-PLU-713 Caribou No. 1 Powerhouse	Powerhouse building and penstocks, originally built with 2 generating units by Stone and Webster between 1919 and 1921, with a third unit added in 1923-1924	Eligible for the National Register	Operation and maintenance	No treatment proposed
CA-PLU-1028 Belden Cemetery	Cemetery contains at least 14 graves, some of whom are Maidu	Not eligible for nomination to the National Register	Not considered	No further work
CA-PLU-1188	Can scatter, probably related to recreational activities after ca. 1935	Not eligible for the National Register	Not considered	No further work
CA-PLU-1190	Historic artifact scatter, including cans, ceramics, and glass bottles, probably related to post-1930 recreation	Not eligible for the National Register	Not considered	No further work
CA-PLU-1192	Historic artifact scatter, probably associated with the Butt Valley dam caretaker's residence, dating to ca. 1930s	Not eligible for the National Register	Not considered	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
CA-PLU-1195	Historic artifact scatter, dating between about 1910 and 1920, related to the occupation of the construction camp for the first Butt Valley dam (Camp 5)	Not eligible for the National Register	Not considered	No further work
CA-PLU-1196	Historic artifact scatter related to the occupation of Camp 5, ca. 1915 to 1930	Not eligible for the National Register	Not considered	No further work
CA-PLU-1211 RRLC Railroad	RRLC logging railroad system, 1922 to 1924, consists of 17 recorded segments	Not eligible for the National Register	Not considered	No further work
CA-PLU-1236	Can dump probably related to logging activities, ca. 1920s	Not eligible for the National Register	Not considered	No further work
CA-PLU-1245 Buttville/Camp 5	William Miller ranch, founded in 1859, later a hotel, store, and townsite, acquired by Great Western Power in 1902 and used as a workers camp during the construction of the first Butt Valley powerhouse in 1911, and the Butt Valley dams built in 1919 and 1923	Eligible for the National Register	Inundated under reservoir.	Signage. In the event of a draw down, record, test, and conduct data recovery as necessary.
CA-PLU-1265	Historic artifact scatter (cans and ceramics) probably related to logging activities, ca. 1920s	Not eligible for the National Register	Not considered	No further work
CA-PLU-1496	Can dump probably related to logging activities, ca. 1920s	Not eligible for the National Register	Not considered	No further work
CA-PLU-1711	Historic artifact scatter,	Not eligible for	Not	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
(NF-6)	perhaps related to recreational activities, 1930s to 1960s	the National Register	considered	
CA-PLU-1713 (NF-12)	Historic artifact scatter, probably representing post-1926 recreation	Not eligible for the National Register	Not considered	No further work
CA-PLU-1715 (NF-17)	Historic artifact scatter, dated from the 1930s to the 1960s, probably related to the community of Chester. Includes sparse prehistoric component.	Not eligible for the National Register	Not considered	No further work
CA-PLU-1726 (NF-19)	Historic artifact scatter related to the second Canyon dam construction camp, occupied in the mid-1920s by the Foundation Company workers	Not eligible for the National Register	Not considered	No further work
CA-PLU-1727 (NF-20) Foundation Company camp at Nevis, also called Canyon dam Camp	Foundation remains of the administrative building for the second Canyon dam construction camp, occupied between about 1925 and 1930	Not eligible for the National Register	Not considered	No further work
CA-PLU-1734 (NF-21)	Historic artifact scatter related to Camp 1 (also known as Camp Almanor at New Prattville) the construction camp opened in 1919 for the Prattville intake towers and tunnel, later reused by PG&E as a recreational camp	Not eligible for the National Register	Not considered	No further work
CA-PLU-1736 (NF-2) RRLC Camp 34	Historic artifact scatter related to the RRLC Camp 34 logging camp, occupied in the early	Not eligible for the National Register	Not considered	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
1920s				
CA-PLU-1739 (NF-9)	Historic mining remains and later artifact scatter related to the construction of the Butt Valley dam, ca. 1920	Not eligible for the National Register	Not considered	No further work
CA-PLU-1743 Butt Valley Railroad	In 1919 Stone and Webster built a railroad for the construction of the Caribou power plant and Butt Valley dam. The railroad was reused by Schultz during construction of second Butt Valley dam in 1923.	Eligible for the National Register	Inundated under Butt Valley reservoir.	Signage. In the event of a draw down, record, test, and conduct data recovery as necessary.
P-32-1206	Concrete cap over air vent for the Prattville Tunnel 1. Use of this tunnel began in 1919 and it was abandoned in place in 1957.	Not eligible for the National Register	Not considered	No further work
P-32-1638 Canyon dam	Originally begun in 1912 as multiple arch designed by John Eastwood, but finished in 1914 as hydraulic-fill designed by Julius Howells. Replaced in 1925 by larger hydraulic fill dam built by the Foundation Company. Second dam height raised in 1962, and seismically retrofitted in 1996.	Eligible for the National Register	O&M activities. PG&E considering modifications to outlet structures.	No treatment measures proposed by PG&E
P-32-1639 Canyon dam Intake Tower	Lower section of the tower built in 1912, and height raised in 1926. Slight modifications made between 1936 and 1965	Eligible for the National Register	O&M activities	No treatment measures proposed by PG&E
P-32-1640 Prattville	First intake tower begun in 1919 to supply water for Prattville Tunnel 1. It	Not eligible for the National Register	Not considered	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
Intake Towers	was abandoned and replaced by second Prattville Intake Tower in 1957, which connects to Butt Valley Tunnel 1A.	Register		
P-32-1641 Patrolman's House at Canyondam Camp	One of the few remaining buildings left from the construction camp used by the crew which built the second Canyon dam. This house was constructed in 1922 and moved to this location in 1926.	Eligible for the National Register	Operation and maintenance	No treatment proposed
P-32-1642 Cottage at Canyondam Camp	This cabin was constructed in 1922 and moved to this location in 1926. The Canyondam Camp was occupied by the crew which built the second Canyon dam.	Eligible for the National Register	Operation and maintenance	No treatment proposed
P-32-1643 to - 1652 Camp Caribou district (also known as Camp 9)	Originally a construction camp for the crew which built the Caribou powerhouse, ca. 1919-1921. Later became a PG&E recreational camp. Consists of 22 structures, including 10 houses, clubhouse, dormitory, schoolhouse, and 2 garages.	Eligible for the National Register	Operation and maintenance. PG&E considering removing pool and tennis court.	SA requires PG&E to maintain exterior and landscaping of old clubhouse and grounds to preserve historic features and character, and consult with the FS before conducting maintenance and repair activities
P-32-1716 (NF-18) Stover Ranch	Stover family ranch founded in 1859, operated until 1960s. 10 standing structures remain.	Eligible for National Register	Recreation, casual visits, vandalism	Signage, monitoring, possibly testing
P-32-1722 (NF-31)	Portion of a wagon road grade, dating to the 1870s, connecting Big Meadow	Not eligible for the National	Not considered	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
	ranches with the road to Red Bluff.	Register		
P-32-1723 (NF-32)	Fence	Not eligible for the National Register	Not considered	No further work
P-32-1724 (NF-33)	Portion of a local wagon road grade, connecting ranches in Big Meadow, utilized from the 1890s to the 1920s.	Not eligible for the National Register	Not considered	No further work
P-32-1740 (NF-10)	Mine adit. Claim not recorded. May date to the 1930s.	Not eligible for the National Register	Not considered	No further work
P-32-1741 (NF-11)	Mine adit. Claim not recorded. May date to the 1930s.	Not eligible for the National Register	Not considered	No further work
P-32-1742 (NF-35)	Portion of the wagon road grade between Prattville and Johnson's Ranch, dated to the 1860s	Not eligible for the National Register	Not considered	No further work
P-32-1744 (NF-36)	Wood fence	Not eligible for the National Register	Not considered	No further work
P-32-1766 Camp 4	Construction camp, including sawmill, utilized by Stone and Webster from 1919 to 1921 for the first Butt Valley dam. It was reoccupied by Schultz between 1923 and 1924 during construction of second dam.	Eligible for National Register	Partly inundated, wave action, casual visitation	Signage. In the event of a draw down of reservoir level, site should be more fully recorded, possibly tested, and data recovery done if necessary.
P-32-2062 (LA-7)	Fence line	Not eligible for the National Register	Not considered	No further work
P-32-2067	Multi-component:	Not eligible for	Not	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
(LA-17) RRLC Camp 38	prehistoric isolated find and historic artifact scatter related to RRLC railroad and logging camp occupied in the 1920s.	the National Register	considered	
P-32-2070 (LA-21)	Fence line	Not eligible for the National Register	Not considered	No further work
P-32-2078 (LA-35)	Gravel quarry, perhaps used by RRLC railroad in the 1920s.	Not eligible for the National Register	Not considered	No further work
P-32-2088 (LA-48)	Remains of a segment of old State Highway 36, abandoned in 1928 when the new causeway was built.	Not eligible for the National Register	Not considered	No further work
P-32-2091 (LA-1)	Multi-component: prehistoric isolated find and historic artifact scatter dated to about the turn-of-the-century.	Not eligible for the National Register	Not considered	No further work
UNFFR-1H	Remains of hydraulic mining, including cut features, equipment pads, rock walls, test pits, and rock piles. Not a claimed mine, may date to 1920s – 1930s.	Unevaluated	Use of recreational campground and logging	No treatment proposed
UNFFR-2H	Historic artifact scatter, mostly tin cans. Related to sites CA-PLU-1726 and 1727, part of the Canyondam construction camp, occupied in the late 1920s.	Unevaluated	Use of recreational campground	No treatment proposed
Camp Almanor (also called New Prattville or	Construction camp established in 1919 for crews working on the Prattville Intake Tower	Not eligible for the National Register	Not considered	No further work

Site No./Name	Description	SHPO Opinion	Effects	Management
Camp 1)	and Prattville Tunnel 1. Moved when level of Lake Almanor was raised in 1925. Most extant structures erected ca. 1926. Non-eligible elements include the old mess hall, office, 2 bunkhouses, warehouse, meathouse, 2 garages, 2 sheds, and boathouse moved here in 1957. Since the 1930s it has been used as PG&E recreational camp.			
Gate Tender's House at Camp Almanor	Built in 1926 as part of Camp Almanor, the interior retains many original elements.	Eligible under criterion 36 CFR 60.4c	Operation and maintenance	No treatment proposed
UNFR Hydroelectric System	Non-eligible elements include Prattville Tunnels 1 (1919) and 1A (1957), Butt Valley powerhouse (1958), Butt Valley dam and reservoir (1924), Butt Valley Tunnel 1 (1920) and 2 (1956), Caribou Penstock 2 (1958), Caribou powerhouse 2 (1958), Belden dam and forebay (1956), Oak Flat powerhouse, (1984), Belden Penstock (1969), Belden powerhouse (1969).	Not eligible for the National Register	Not considered	No further work
Lake Almanor	When created behind the first Canyon dam in 1914 it was the largest man-made reservoir in the world. Reservoir size increased in 1927 and 1963.	Eligible for the National Register	Operation and maintenance	No treatment proposed

1 **3.3.7.2 Environmental Effects**

2 Effects on cultural resources within the APE can include, but are not limited to,
3 inundation under the waters of project reservoirs, wave action along the edges of the
4 reservoirs, recreational use of the reservoirs and other project lands, other uses of project
5 lands such as livestock grazing, natural wind and water erosion, use and maintenance of
6 roads, vandalism, and modifications or repairs to project facilities. The type and level of
7 effects on cultural resources can vary widely, depending upon site location and setting,
8 features and attributes, visibility of the resource, and public knowledge and access to a
9 resource. Effects can be direct, resulting from operation of the project, or indirect, such
10 as public use of project roads to access lands not used for project purposes.

11 Section 106 of the NHPA, and its implementing regulations at 36 CFR Part 800,
12 guide our consideration of project-related effects on cultural resources. The law and
13 regulations only require FERC to consider potential effects of undertakings we license on
14 historic properties, which are cultural resources that are listed or eligible for listing on the
15 National Register. PG&E has agreed to treat all prehistoric archaeological sites that have
16 not been officially evaluated as potentially eligible.

17 We agree with the SHPO that 35 historic archaeological sites and standing
18 structures in the APE are not eligible for the National Register. The project would have
19 no effect on non-eligible sites, and those resources require no further work. FERC, in
20 consultation with the SHPO, has determined that 13 historic archaeological sites and
21 standing structures in the APE qualify for nomination to the National Register. PG&E
22 proposes measures for the future management or treatment of most of the eligible historic
23 archaeological sites and standing structures (see table 3-40). In addition, there are 57
24 prehistoric archaeological or multi-component sites that have been identified in the APE
25 (see table 3-38), but have not been officially evaluated for the National Register by the
26 Commission or SHPO. We agree with PG&E that these sites should be managed as if
27 they are eligible. PG&E and its cultural resources consultants also identified 5 TCPs and
28 12 ethnohistoric Maidu village locations in the APE (see tables 3-39 and 3-40). None of
29 the TCPs and ethnohistoric Maidu village sites has been officially evaluated for the
30 National Register by the Commission or SHPO. To the extent that the ethnographic
31 resources can be tied to specific on-the-ground locations, we agree with PG&E's
32 philosophy to treat them as if they are eligible for the National Register.

33 **Applicant-Proposed Treatment Measures**

34 PG&E's application included, as Report E4, an HPMP. This plan, which we
35 consider a draft, outlines the measures PG&E proposes to use to avoid, reduce, or
36 mitigate effects on cultural resources within the APE listed, eligible, or potentially
37 eligible for listing on the National Register. Site-specific management or treatment
38 measures are detailed in tables 3-37 through 3-41.

1 The draft HPMP presents a general three-stage strategy for managing eligible and
2 potentially eligible properties. Stage 1 would use signs and dissemination of information
3 to the public and PG&E employees to deter or redirect activities away from sensitive
4 areas. PG&E would assess the effectiveness of Stage 1 measures by monitoring sites. If
5 Stage 1 measures are not effective, PG&E would implement Stage 2 measures, including
6 more restrictions on access and recreational activities, and additional monitoring. If
7 Stage 2 measures fail to protect sites adequately, PG&E would move to Stage 3, and
8 consult with FERC, the FS, Greenville and Susanville Indian rancherias, and other Maidu
9 organizations as appropriate to develop better management or treatment alternatives. The
10 draft HPMP also presents site-specific treatment measures for threatened eligible
11 properties, as discussed above (see tables 3-37 through 3-41).

12 With two exceptions, PG&E has not identified plans for major changes, repairs, or
13 modifications at National Register-eligible historic project structures. PG&E indicated it
14 is considering modifications of the Canyon dam outlet tower to withstand a severe
15 seismic event. The evaluation of this proposed work is on-going, and PG&E has not
16 recommended treatment measures to mitigate impacts from such action. At Camp
17 Caribou (site P-32-1643 to 1652), PG&E would like to remove the tennis court and
18 swimming pool for safety reasons. However, PG&E has not proposed any site-specific
19 measures to mitigate the impacts of that proposal. PG&E would need to prepare a
20 treatment plan for review by FERC and the SHPO prior to receiving approval for actions
21 that may have adverse effects on National Register-eligible properties. The SA requires
22 PG&E to maintain the exterior and landscaping of the old clubhouse and grounds at
23 Camp Caribou to preserve the historic features and character of the facility, and to notify
24 the FS when maintenance or repair activities are to take place. The draft HPMP states
25 that any major repairs or modification to National Register-eligible historic project
26 structures done during the course of the new license would be performed in accordance
27 with the Secretary of the Interior's Standards for Rehabilitation, and in consultation with
28 the SHPO. In addition, table E4-16 identified routine maintenance activities that PG&E
29 believes would have no adverse effects on National Register-eligible historic project
30 structures, and should be exempt from SHPO review.

31 **Recommended Measures from Other Parties**

32 NPS and the FS have raised concerns about PG&E's proposed public education
33 and interpretive program. NPS would like PG&E to develop a plan that addresses the
34 area's unique cultural history, and the history of the hydroelectric system. The FS would
35 like the HPMP to include more details about the public education and interpretive
36 program, including informational kiosks and brochures. The FS, Greenville Rancheria,
37 and Maidu Cultural and Development Group (MCDG) requested that PG&E fund a
38 curation and interpretive center for the Maidu community. The FS 4(e) conditions
39 include a provision (40) requiring PG&E to file with the Commission an FS-approved
40 HPMP within 1 year of license issuance.

1 The FS, Honey Lake Maidu, Greenville Rancheria, and MCDG are concerned
2 about impacts on cultural resources from wave action, changing lake levels, erosion, and
3 inundation under the water of project reservoirs and PG&E's proposed measures to
4 mitigate such impacts. The Greenville Rancheria wants PG&E to monitor the project
5 more often, and execute an MOU with the Plumas County Sheriff for patrols and
6 prosecution of vandals. Both the Greenville Rancheria and the Susanville Indian
7 Rancheria offered the services of their members for monitoring and other cultural
8 resources investigations. The Greenville Rancheria indicated that the HPMP needs more
9 specific details about control of grazing and ORV traffic.

10 The FS listed some site locations that it would like recorded and evaluated by
11 PG&E. The FS would like the APE extended for 1 mile outside the current FERC
12 boundary on FS lands to account for effects on cultural resources due to dispersed
13 recreational activities. The Greenville Rancheria would like the APE expanded for 2
14 miles outside the current FERC boundaries.

15 The FS and Honey Lake Maidu have suggested that unevaluated cultural resources
16 should be archaeologically tested, and FERC should make formal determinations of
17 National Register eligibility for all sites identified in the APE, in consultation with the
18 SHPO. The Greenville and Susanville Indian rancherias object to disturbing prehistoric
19 archaeological sites through archaeological excavations, and would like those sites to be
20 treated as if they were eligible for the National Register, with preservation, education,
21 monitoring being preferable management practices. The Honey Lake Maidu, Greenville
22 Rancheria, Susanville Indian Rancheria, and Mountain Maidu raised concerns about the
23 treatment of Native American human remains.

24 NPS, Plumas County Board of Supervisors, Honey Lake Maidu, Greenville
25 Rancheria, Susanville Indian Rancheria, and MCDG have all requested to be parties to be
26 consulted during the process of complying with Section 106 of the NHPA. The U.S.
27 Bureau of Indian Affairs (BIA) encouraged FERC to consult on a government-to-
28 government basis with federally recognized Indian tribes with an interest in the cultural
29 resources of the project area, including the Enterprise, Mooretown, and Berry Creek
30 rancherias. Plumas County and the FS have requested copies of cultural resources
31 reports, including the ethnography study done by Albion. The MCDG requested that the
32 ethnographic study MOU be revised to include them. The Greenville Rancheria,
33 Susanville Indian Rancheria, and MCDG requested that PG&E allow Maidu people
34 access to project lands for gathering activities and set aside project lands for traditional
35 cultural practices. In addition, the Greenville Rancheria and MCDG would like PG&E to
36 provide them with information about historic Indian allotments that were acquired when
37 Great Western Power initiated the project. In its 4(e) conditions, the FS included a
38 provision (37) that would require PG&E to file with the Commission within 1 year of
39 license issuance a wildlife habitat enhancement plan that includes addressing cultural
40 resources.