

6.12 Cultural Resources

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This section describes the prehistory, ethnography, and history of the Lake Almanor and North Fork Feather River region and provides a general context for understanding the importance, origin, and types of cultural resources documented in the vicinity of the Upper North Fork Feather River Hydroelectric Project (UNFFR Project). The section also analyzes the potential impacts on cultural resources of the operation of the UNFFR Project under a new Federal Energy Regulatory Commission (FERC) license. The following topics are not discussed in this section for the reasons noted:

- **Paleontological resources:** Neither the Proposed UNFFR Project nor either alternative is expected to affect paleontological resources. No paleontological resources have been documented in the activity areas or other potentially affected areas.
- **Unique geologic or archaeological resources:** Neither the Proposed UNFFR Project nor either alternative is expected to affect unique geological or archaeological resources. No unique geological or archaeological resources have been documented in the activity areas or other potentially affected areas.

6.12.1 Environmental Setting

The cultural resources setting is presented in a regional context with a brief description of the prehistory and history of the region and the cultural resources and traditional cultural properties in the vicinity of the UNFFR Project. The information presented in the setting section is summarized from Pacific Gas and Electric Company's (PG&E) Cultural Resources Management Plan (CRMP) (Pacific Gas and Electric Company 2002) and is based on other cultural research of the area, as cited in the CRMP.

Regional Archaeology and Ethnography

Human occupation of lands in the vicinity of the UNFFR Project dates to the Archaic period (6,000 BC–500 AD). Evidence of human occupation from the Middle to Late Archaic periods and more recently from the Emergent period (500 AD–Historic Contact) and Euro-American contact period has been recorded and documented in previous studies in the region. Periods are characterized by their “pattern,” a term that refers to a culture’s technology, which is defined by the type and sophistication of its tools.

Prehistory

Evidence of human occupation during the Archaic period has been recorded at sites around Lake Almanor (Johnson 1980, Peak and Associates 1983, Pacific Gas and Electric Company 2002). Big game hunting, a representative activity during the prehistoric era, appears to be closely tied to lakes and streams, and human occupation prior to the Archaic period may have encompassed the lands around the UNFFR Project, particularly along the North Fork Feather River. Large leaf-shaped and wide-stemmed points¹ and Martis series points (corner-notched, contracting stem, and expanding stem), evidence of the Middle and Late Archaic periods, have been recorded at sites around Lake Almanor (Peak and Associates 1983, Pacific Gas and Electric Company 2002).

¹ Artifacts made from stone or rock.

The Emergent period is represented by permanent villages of societies that occupied California at the time of historic contact with Euro-American cultures. Permanent villages were established by native populations in valleys, and subsistence staples became more broadly based, with acorn, deer, and anadromous fish particularly important. In the UNFFR Project vicinity, the Emergent period is marked by the presence of Gunther-Stemmed points, Cottonwood Triangular points, and Desert Side-Notched points (Kowta 1988, Pacific Gas and Electric Company 2002). The presence of small quantities of these points and the increased use of mortars in the region are possible evidence of the Maidu's arrival into the region around 1,000 AD (Johnson 1980). Other evidence of the Maidu's early presence in the region, specifically around Bucks Lake and upper Lake Almanor, has been found in the form of points and cultural assemblages (Johnson 1980; Peak and Associates 1983; Kowta 1980, 1988).

Ethnographic Overview

The Northeastern Maidu, or Mountain Maidu, were a Penutian-speaking people who inhabited the steep slopes and mountain valleys in the vicinity of the upper reaches of the North and Middle Forks of the Feather River (Pacific Gas and Electric Company 2002). The Mountain Maidu lived in village communities with a main village or a group of smaller settlements led by a chief or headman (Dixon 1905, Kowta 1988). Typically, these communities were permanent and contained three types of structures: a large, semi-subterranean structure that served as a dance house, sweat lodge, and dwelling for the headman; a small, conically shaped, bark-covered dwelling constructed over a shallow depression; and a small dwelling with a roof made of open branches for use during summer months.

The locations of villages were dictated by access to resources and topographic features such as rivers, streams, springs, clearings, meadows, and flat upland areas (Dixon 1905, Kroeber 1976). Most meadows were associated with water bodies of various sizes and tended to remain moist or swampy year round; therefore, villages were usually established on upland areas along the edges of these features. The permanent villages served as a central point from which gathering, hunting, and traveling were conducted. The Mountain Maidu followed a yearly cycle of hunting and gathering. The Mountain Maidu spent the winter, spring, and fall months gathering seeds and fishing in the lowlands along the rivers and in the foothills and the summer months hunting in the higher elevations (Kowta 1988, Kroeber 1976).

Contact Period

The incursion of Euro-Americans into the Mountain Maidu's traditional lands had a significant, transforming effect on Maidu population and culture. By the 1830s, trappers, including Jedediah Smith and men from the Hudson's Bay Company, made contact with the Maidu (Dixon 1905). In 1833, the various Maidu populations were decimated by a malaria epidemic. A rapid influx of gold miners to the Feather River took place in the 1840s and 1850s. Over time, the rivers and forests in the Feather River watershed were modified by various resource management activities, and conflicts arose between Mountain Maidu populations and Euro-American settlers, resulting in a further decline in the Maidu population (Dixon 1905, Pacific Gas and Electric Company 2002).

In an attempt to resolve these conflicts, many of the Maidu were transferred to reservations in Butte, Nevada, and Amador counties and to the Nome Lackee and Nome Cult reservations in Round Valley (Pacific Gas and Electric Company 2002). Although many of the Mountain Maidu were relocated, a number of Maidu were able to remain in the Big Meadows area (present day Lake Almanor), living together with the new settlers. Over time, many Mountain Maidu returned from the reservations and were granted land allotments (Pacific Gas and Electric Company

2002). Employment was found in the ranching and logging industries and with the Great Western Power Company (now PG&E). Many present-day Mountain Maidu continue to live in the communities of Chester and Greenville, where they actively maintain their belief systems and cultural traditions and continue to pass their knowledge down through the generations.

Regional and Local History

Regional Land Uses Before the Twentieth Century

Historical land use in the UNFFR Project vicinity has been dominated by mining, ranching, logging, and hydroelectric generation. Mountain valleys and the region's steep canyons influenced the historical land uses of the area. While settlements and agricultural production have been primarily limited to the valley and lowlands associated with the North Fork Feather River and its tributaries, the development of natural resources, including minerals, wood, and water, has been key to the economy of Plumas County. Extensive mining and the development of hydroelectric generation stimulated the establishment of farms and settlements throughout the watershed, especially during the late nineteenth and early twentieth centuries.

The meadow that occupied what is now inundated by Lake Almanor offered travelers and their animals a place to rest and regain strength before moving on to the Sacramento Valley. News of the meadow's resources quickly spread to other travelers, and it soon became a regular stop on the Lassen Overland Emigrant Trail (Farris and Smith 1882). While the earliest travelers lingered long enough to regain their strength, none of them intended to stay; their goal was to reach the Sacramento Valley (Pacific Gas and Electric Company 2002). Miners established a migratory pattern between the North Fork Feather River area and the Sacramento Valley, retreating to the valley during winter and returning to the area in the spring. Ranchers established self-sustaining, year-round settlements throughout the region in the 1850s.

Mining, ranching, and recreational land uses continued to dominate the region for decades, although mining opportunities began to dwindle in the latter part of the 1800s (Pacific Gas and Electric Company 2002). While ranching and mining continued into the twentieth century, the emerging logging and hydroelectric generation operations soon overshadowed their importance to the county's economy (Pacific Gas and Electric Company 2002). Commodities produced by these two growing, generally unrelated industries had a significant effect on the growth of northern California as lumber and electricity coming out of the UNFFR Project region were used to fulfill the demands of burgeoning cities, such as Redding and San Francisco.

Hydroelectric Projects in the Twentieth Century

The North Fork Feather River's potential for hydroelectric power development was first recognized during a Harvard University geological expedition conducted in the 1880s (Pacific Gas and Electric Company 2002). Recognizing this potential, financiers Edwin and Guy Earl purchased 30,063 acres of land in the early 1900s and incorporated the Western Power Company, the precursor to the Great Western Power Company of California (now PG&E), in 1902. Water appropriation claims were filed on behalf of the Earls in April 1902 (Coleman 1952, Bidwell 1956, Pacific Gas and Electric Company 2002). With additional financial backing from eastern financiers, development of a proposed major hydroelectric generation system along the North Fork Feather River was soon underway. As part of its ongoing effort toward consolidation by acquisition, PG&E purchased the Great Western Power Company in 1930. Construction of the UNFFR Project infrastructure occupied a long period of time, beginning in 1910 with the start of construction on Almanor dam (now Canyon dam). The UNFFR Project was built out in 1969 with construction of the Belden powerhouse. Table 6.12-1 provides a timeline of

community establishment and development and construction of the primary facilities associated with the UNFFR Project and other hydroelectric projects in the vicinity. A description of the components of the UNFFR Project is provided in Chapter 3, PG&E's Upper North Fork Feather River Project, and a discussion of their eligibility for listing on the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR) is provided below.

Table 6.12-1. Development Timeline in the North Fork Feather River Watershed

Primary Communities in the UNFFR Project Vicinity (approximate establishment)	
1850s	Big Meadows
1867	Prattville
1870s	Caribou
1894	Chester
1900	Lake Almanor
1913	Westwood
1920s	Canyon dam
Infrastructure Development	
1902	Western Power Company formed, began purchasing land and water rights
1910	Construction begins on Almanor dam (later renamed Canyon dam)
1912	Original Butt Valley powerhouse constructed
1914	Almanor dam construction completed and Lake Almanor created
1921	Caribou No. 1 powerhouse construction completed
Early 1920s	Prattville tunnel completed
1924	Indian Ole dam constructed, created Mountain Meadows reservoir (aka Walker Lake)
1925	Lake Almanor capacity increased by construction of newer Canyon dam
1926	PG&E converted Caribou powerhouse into a permanent employee compound
1937	Feather River Canyon Highway (State Route 70) completed
1950	Rock Creek powerhouse and dam constructed
1950	Cresta powerhouse and dam constructed
Early 1950s	Lake Almanor storage capacity increased to 47 square miles
1956	Belden dam and forebay constructed
1958	Butt Valley powerhouse constructed
1958	Caribou No. 2 powerhouse constructed
1958	Poe powerhouse constructed
1969	Belden powerhouse constructed
1997	Butt Valley reservoir drained and dam reconstructed to meet seismic safety standards

Sources: Zemke 2006, Pacific Gas and Electric Company 2002

Cultural Resources and Traditional Cultural Properties

Cultural resources include archaeological, traditional, and built environment resources, including buildings, structures, objects, districts, and sites. These resources represent human culture and heritage that have been identified and documented as being significant to local or state history, architecture, archaeology, engineering, or culture. Historic properties are defined by the National Historic Preservation Act as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places” (36 C.F.R. § 800.16(l)(1).) (See Chapter 5 for additional information on the NRHP.) Under the

California Environmental Quality Act, the term historical resource is used when referring to historical or archaeological resources eligible for inclusion in the CRHR.

The term traditional cultural property (TCP) refers to the role that a particular place or property plays in reflecting the beliefs, customs, and practices of a living human community, typically reflecting the heritage of Native American tribes. Both federally and non-federally recognized tribes can identify TCPs. TCPs are considered a type of historic property under the National Historic Preservation Act. Under California regulations, Native American TCPs are generally referred to as “Sacred Sites” and are regulated under Public Resources Code 5097.9–5097.991.

Brief discussions of the cultural resources listed or eligible for listing in the NRHP or CRHR and TCPs known to exist within the UNFFR Project boundary or that could be affected by UNFFR Project activities are provided below.

Prehistoric-Era Cultural Resources

Prehistoric-era cultural resources in the UNFFR Project vicinity can be tied to the presence of the native Maidu people. Many of these resources consist of sparse lithic scatters, while a few appear to be more extensive habitation sites (Pacific Gas and Electric Company 2002). The lithic scatters contain varying combinations and densities of obsidian, basalt, quartz, greenstone, and other types of flakes. The habitations vary in size and contain biface fragments, projectile points, or other artifacts indicative of the prehistoric era and may also contain lithic scatters. Many of the documented cultural resource sites in the UNFFR Project boundary have been modified or adversely affected by environmental factors and human activities, such as recreational uses, wave action, inundation, vandalism, and grazing (Pacific Gas and Electric Company 2002). These ongoing effects could continue to alter the features of the sites and affect their eligibility for listing on the NRHP or CRHR.

Formal evaluation of the prehistoric-era cultural resource sites would require sub-surface archaeological test investigations; however, the Maidu Consultation Group (a tribal representation group) has expressed concerns over the potential effects of archaeological test excavation and data recovery on prehistoric sites (Pacific Gas and Electric Company 2002). These concerns were also voiced in letters received from the federally recognized Susanville and Greenville Indian rancherias. The Maidu prefer that, wherever possible, preservation, education, and monitoring or patrolling of prehistoric sites be conducted regardless of NRHP eligibility. Given the Maidus' concerns and preferences for the management of prehistoric cultural resources, PG&E has elected not to conduct formal NRHP evaluations of the known sites within the UNFFR Project boundary. In the absence of such evaluations, sites within the UNFFR Project boundary containing prehistoric components are considered potentially eligible for inclusion on the NRHP and CRHR.

Traditional Cultural Properties

TCPs are an important part of Native American heritage. Several TCPs in the UNFFR Project vicinity have been identified by Maidu tribal members. These sites continue to be used for resource gathering and ceremonies or have other significance to the Maidu people. Because of the sacred nature of these resources, PG&E has not formally evaluated the NRHP eligibility of the individual sites, but informal recommendations of NRHP eligibility were made in a report prepared by Albion Environmental Inc. for the relicensing application (Pacific Gas and Electric Company 2002). The Albion report identified five TCPs in the UNFFR Project boundary, none of which have been determined eligible for NRHP listing (Table 6.12-2).

In addition to the TCPs considered by Albion, a Maidu cemetery may occur below the ordinary high water mark of Lake Almanor around the Prattville intake area (comments received during public scoping for the environmental impact report, September 27, 2005 meeting transcript). The current condition of any burials associated with the cemetery is unknown; however, the cemetery or burials could be TCPs or archaeological sites and eligible for NRHP listing. Despite being submerged, such resources still figure prominently in the identity of present day Maidu.

Table 6.12-2. Traditional Cultural Properties in the UNFFR Project Area

TCP IDENTIFICATION NO.	NAME	SITE TYPE	NRHP ELIGIBILITY RECOMMENDATION
TCP 1	Big Meadows	Habitation, sacred area, resource procurement	Ineligible as a whole; individual locales that have not been inundated may be eligible
TCP 2	Burial Location	Sacred	Eligibility unknown
TCP 4	Resource Gathering Area	Gathering location, habitation	Ineligible
TCP 10	Roundhouse Location	Sacred	Ineligible
TCP 15	Butt Valley	Habitation, procurement	Ineligible

Source: Pacific Gas and Electric Company 2002

Historic-Era Cultural Resources

Historic-era cultural resources are defined as those resources (e.g., site, building, structure, object, or district) that were created during or after Euro-American settlement in the region. The UNFFR Project, including its powerhouses, tunnels, and dams, is an example of the type of historic-era resources found along the North Fork Feather River (Pacific Gas and Electric Company 2002). Other types of resources in the area include : sawmills; railroads; campsites associated with mining, logging, and hydroelectric projects; and ranch-related structures. Some of these resources have been inundated by the UNFFR Project reservoirs, while others have been affected by environmental factors and human activities in the area.

Most of the historic-era cultural resources were assessed for NRHP eligibility by PAR Environmental Services (Maniery and Compas 2002, Baker and Bakic 2001). Many of the historic-era sites not part of the UNFFR Project were determined ineligible, but one historic-era ranch was determined eligible (Maniery and Compas 2002). Three sites inundated by Butt Valley reservoir contain campsites, a railroad, and a sawmill and were not formally evaluated, although they are considered potentially eligible for listing on the NRHP based on previous studies.

Collectively, the UNFFR Project hydroelectric generation system has been assessed for eligibility as a historic district, and each component of the system (i.e., individual structure or group of related structures) has also been assessed individually (Table 6.12-3). As a single historic district, the UNFFR Project is not considered eligible for listing, although some components may be eligible as smaller, localized districts or individual resources (Baker and Bakic 1996, Pacific Gas and Electric Company 2002). Key components in the vicinity of the

activity areas include Lake Almanor, Canyon dam (referred to as Almanor dam), the Canyon dam outlet² tower (referred to as the Almanor outlet tower), and Caribou No. 1 powerhouse.

Lake Almanor is, by itself, considered an important resource because of its association with the development of California's hydroelectric infrastructure and as the world's largest man-made reservoir for its time (1913 to 1927) (Baker and Bakic 1996, Pacific Gas and Electric Company 2002). Canyon dam is also an important piece of hydroelectric project development history because its construction was considered an engineering feat for the time and generated comment from hydroelectric specialists, engineers, and the media. Seismic remediation on the dam in 1996 modified the dam, but did not significantly alter its appearance or integrity. The Canyon dam outlet structure exhibits the Gothic Revival style preferred by hydroelectric facility architects throughout the United States in the 1920s. The tower has an eight-sided, steep-pitched turret shape, which clearly expresses the European castle and fortress image of the Gothic Revival style (Dames and Moore 1992). The release gates under the surface have been modified over time, but the tower remains intact and largely unmodified.

The Caribou No. 1 powerhouse at Belden forebay, downhill of Butt Valley reservoir, is important because of its association with "the planning and construction of a large, complex, and interrelated power system which serves and made possible the development of a huge urban area, the San Francisco Bay Area" (Shoup and Cornford 1987). The powerhouse represents a piece of history extending from its construction commencing in 1919 to 1924, when the third of its three generators went online, increasing its energy production (Pacific Gas and Electric Company 2002). Other than upgrading and replacing old equipment, no major modifications to the Caribou No. 1 powerhouse have occurred.

Table 6.12-3 provides a summary of the components of the UNFFR Project, by location unit, and the eligibility of each resource for listing on the NRHP, as determined by the findings of PAR Environmental Services (Baker and Bakic 2001) and discussed in the CRMP (Pacific Gas and Electric Company 2002). Resources eligible for listing on the NRHP are also considered eligible for listing on the CRHR, with the assumption that the current condition of the resource has not been adversely affected since the eligibility determination was made.

² Canyon dam "intake" and Canyon dam "outlet" are synonymous.

Table 6.12-3. UNFFR Project NRHP Historic District Components

FEATURE	IDENTIFICATION NO.	CONSTRUCTION DATE	NRHP ELIGIBLE	NRHP INELIGIBLE
Almanor Unit				
Almanor (Canyon) dam	P32-001638-H	1913–1924	X	
Almanor (Canyon dam) intake tower	P32-001639-H	1913–1924	X	
Lake Almanor	—	1913–1924	X	
Prattville intake towers	P32-001640	1913–1924		X
Butt Valley tunnel	—	1958		X
Butt Valley Unit				
Butt Valley powerhouse	—	1958		X
Butt Valley dam	—	1919–1924		X
Butt Lake reservoir	—	1919–1924		X
Butt Valley dam intake tower	—	1924		X
Caribou Unit				
Caribou No. 1 powerhouse	—	1921–1924	X	
Caribou No. 2 powerhouse	—	1958		X
Caribou No. 1 penstock	—	1984		X
Caribou No. 2 penstock	—	1984		X
Belden Unit				
Belden dam	—	1958		X
Belden reservoir	—	1958		X
Belden powerhouse	—	1969		X

Source: Pacific Gas and Electric Company 2002

6.12.2 Environmental Impacts and Mitigation Measures

Methodology

The cultural resources impact analysis was based on information provided in the CRMP that was prepared as part of the relicensing application (Pacific Gas and Electric Company 2002) and an analysis of the anticipated effects of the Proposed UNFFR Project and either alternative on eligible or potentially eligible resources. The CRMP presents the results of previous assessments of cultural resources in the UNFFR Project vicinity, including application-related studies, and discusses consultations and communications with Native American tribes and other agencies, as well as recommended measures to protect cultural resources. The CRMP is an implementing mechanism for the consideration of historic properties prescribed in the *Draft Programmatic Agreement* for the UNFFR Project (see Chapter 5 for a description of the purpose of the Programmatic Agreement). The proposed management strategy for protecting cultural resources will be enforced through the Final Programmatic Agreement once the new UNFFR Project license is issued.

The cultural resource evaluations from previous studies, including application-related studies, were conducted in accordance with National Historic Preservation Act requirements and focus on the eligibility of the resources for listing on the NRHP based on their integrity and the NRHP criteria. The eligibility determinations discussed in the CRMP were used as the basis for determining the significance (or importance) of the resources in the impact analysis in this

section. Despite not having determinations on the eligibility of resources for listing on the CRHR, current state procedure is to routinely accept for placement on the CRHR all resources that are placed on the NRHP. Following the state procedure, those resources determined eligible for the NRHP were also determined eligible for the CRHR (see Table 6.12-3).

The analysis of effects focuses on the potential for the Proposed UNFFR Project, Alternative 1, or Alternative 2 to adversely affect eligible or potentially eligible historical resources and to result in a determination that the resource(s) would no longer be considered eligible (i.e., result in a significant impact). Impacts associated with inadvertent discoveries of cultural resources or human remains were assessed based on the potential for resources to occur and the potential for ground disturbance or other activities to disturb those resources. Mitigation measures were identified to reduce significant impacts to non-significant levels.

Thresholds of Significance

Impacts on cultural resources would be significant if the Proposed UNFFR Project, Alternative 1, or Alternative 2 would:

- cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the California Environmental Quality Act Guidelines;
- cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5; or
- disturb any human remains, including those interred outside of formal cemeteries.

Impacts and Mitigation Measures

This section discusses the anticipated impacts of the Proposed UNFFR Project, Alternative 1, and Alternative 2 on cultural resources and identifies mitigation measures for potentially significant impacts. Table 6.12-4 compares the final level of significance for each impact, with incorporation of mitigation measures if appropriate.

Table 6.12-4. Summary of Cultural Resources (CR) Impacts

IMPACT	PROPOSED UNFFR PROJECT	ALTERNATIVE 1	ALTERNATIVE 2
Impact CR-1: Construction activities associated with the UNFFR Project could disturb or damage underwater historical or archaeological resources listed or eligible for listing in the NRHP or CRHR.	No Impact	Less than significant	Less than significant
Impact CR-2: Construction activities associated with the UNFFR Project could disturb or damage previously undiscovered historical or archaeological resources or human remains.	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation

Impact CR-1: Construction activities associated with the UNFFR Project could disturb or damage underwater historical or archaeological resources listed or eligible for listing in the NRHP or CRHR.

Proposed UNFFR Project

The Proposed UNFFR Project involves multiple minor construction activities (e.g., boat ramps) within the water boundaries of Lake Almanor, Butt Valley reservoir, Belden forebay, and parts of the North Fork Feather River. No properties listed or eligible for listing in the NRHP and CRHR that are known to be present in the UNFFR Project boundary would be affected by any of the Proposed UNFFR Project activities. Therefore, there are **no impacts** on historical resources.

Alternatives 1 and 2

Construction of thermal curtains around the Prattville and Caribou intakes would not require the excavation of material below the high-water line of Lake Almanor or Butt Valley reservoir. Imported fill material would be used to construct the foundation for the bin walls, and anchors would be placed by divers to stabilize the curtains in Lake Almanor and Butt Valley reservoir. All mechanical placement of materials on the inundated surface would occur in a manner that does not require any subsurface excavation, thereby avoiding any impacts to inundated surface or subsurface historical or archaeological resources. Placement of fill over currently inundated surfaces could help preserve sites known to occur in the vicinity of the Prattville and Caribou intakes; this is not expected to adversely affect the features that make the sites potentially eligible. Effects on the inundated cultural resources at these two locations would be **less than significant**.

Canyon dam and the Canyon dam outlet tower are historical resources that have been determined eligible for NRHP listing and, therefore, CRHR listing. Modifications to the outlet structure gates would occur below the water surface and would require bolting steel bulkheads to gates near the bottom of the outlet structure. These modifications would be similar to previous gate modifications implemented by PG&E and would involve the use of divers' barges and cranes to install the bulkheads. The modifications would not affect the visible part of the outlet tower (the turret), which is the feature that makes it eligible, or the dam itself. Because of the eligibility of the outlet tower, PG&E would comply with the CRMP and Final Programmatic Agreement, which would require necessary precautions during construction activities to avoid accidental damage to the turret. Therefore, impacts on historical resources associated with the Canyon dam outlet structure modifications would be **less than significant**.

None of the TCPs known to be present in the UNFFR Project boundary would be affected by the alternatives.

Impact CR-2: Construction activities associated with the UNFFR Project could disturb or damage previously undiscovered historical or archaeological resources or human remains.

Proposed UNFFR Project and Alternatives 1 and 2

The UNFFR Project vicinity has an extensive cultural history, and many prehistoric and historic cultural resources have been documented within the UNFFR Project boundary. Based on the area's history and the extent of cultural resource discoveries, it is possible that previously undiscovered historical and archaeological resources, such as lithic scatters, prehistoric habitations, historic campsites, or remnants of hydroelectric project construction, exist in the

activity areas and vicinity. Buried or previously undiscovered resources, including new features of previously recorded sites, could be encountered during ground-disturbing activities on the shore and in upland areas. None of the activities would involve dredging or excavation in the water; therefore, inundated resources are not expected to be adversely affected (see Impact CR-1 discussion). Ground disturbance along the shores and in upland areas could result from staging activities, equipment storage, vegetation removal, road creation, and other elements of the 2004 Settlement Agreement. These activities would involve minimal soil disturbance and would have a low potential to disturb buried resources. However, if resources are discovered, impacts on the resources could be significant if they are determined eligible for listing on the NRHP or CRHR and the impact would affect their eligibility.

Neither the Proposed UNFFR Project nor either alternative would alter the seasonal water-level elevations in Lake Almanor. The pattern of inundation (e.g., seasonal exposure during periods of low water) to which historical and archaeological resources below the ordinary high water mark of Lake Almanor are currently exposed would be similar to current conditions, with occasional wave action and periodic changes in the water surface elevation. Neither the Proposed UNFFR Project nor either alternative would increase the potential for adverse effects on discovered or undiscovered resources near the lake's surface.

The installation of a thermal curtain around the Prattville intake is not expected to disturb inundated burials that are part of a possible Maidu cemetery. Construction would not entail underwater excavation or dredging, but fill material would be placed in the water for the bin walls, and anchors would be installed along the bottom of the lake to secure the curtain in place. These anchors would be installed by divers to minimize disturbance along the lake bottom.

Should previously undiscovered eligible historical or archaeological resources or human remains be encountered during construction, PG&E would comply with the CRMP and Final Programmatic Agreement to assess the resource(s) and determine appropriate measures to avoid or reduce impacts. In the absence of specific details on such undiscovered resources or specific treatment measures, adverse impacts could be **significant without mitigation**.

Mitigation Measures

Mitigation Measure CR-2a: Implement Treatment Measures and Record Previously Undiscovered Resources

PG&E will comply with relevant measures in the CRMP and Programmatic Agreement if potential cultural resources are discovered during construction activities. If a discovery is made, construction will cease immediately within the vicinity of the discovery and PG&E's Cultural Resources Specialist and Hydroelectric Superintendent will be notified immediately. The find will be examined by a qualified professional archaeologist to determine if it is a cultural resource. Any cultural resources discovered during construction will be recorded according to accepted contemporary standards. If significant impacts to the resource are unavoidable, it will be evaluated to determine eligibility for listing on the CRHR. PG&E will identify any impacts on the resources and will identify specific treatment measures if eligible resources would be significantly affected. PG&E will implement any specific measures necessary to avoid, reduce, or mitigate significant impacts, including protection in place, interpretation, data recovery, or curation of recovered materials.

Mitigation Measure CR-2b: Implement Treatment Measures for Human Remains

PG&E will comply with appropriate measures in the CRMP and Programmatic Agreement if human remains are discovered during construction activities. If removal is necessary, remains will be treated according to the provisions set forth in Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code.

Significance after Mitigation

These mitigation measures fall outside the purview of the State Water Board. However, PG&E has agreed to implement Mitigation Measures CR-2a and CR-2b, as proposed in an email dated March 3, 2014 (Appendix H). Implementation of Mitigation Measures CR-2a and CR-2b would reduce potential impacts on previously undiscovered historical or archaeological resources or human remains encountered during construction to a **less than significant** level.