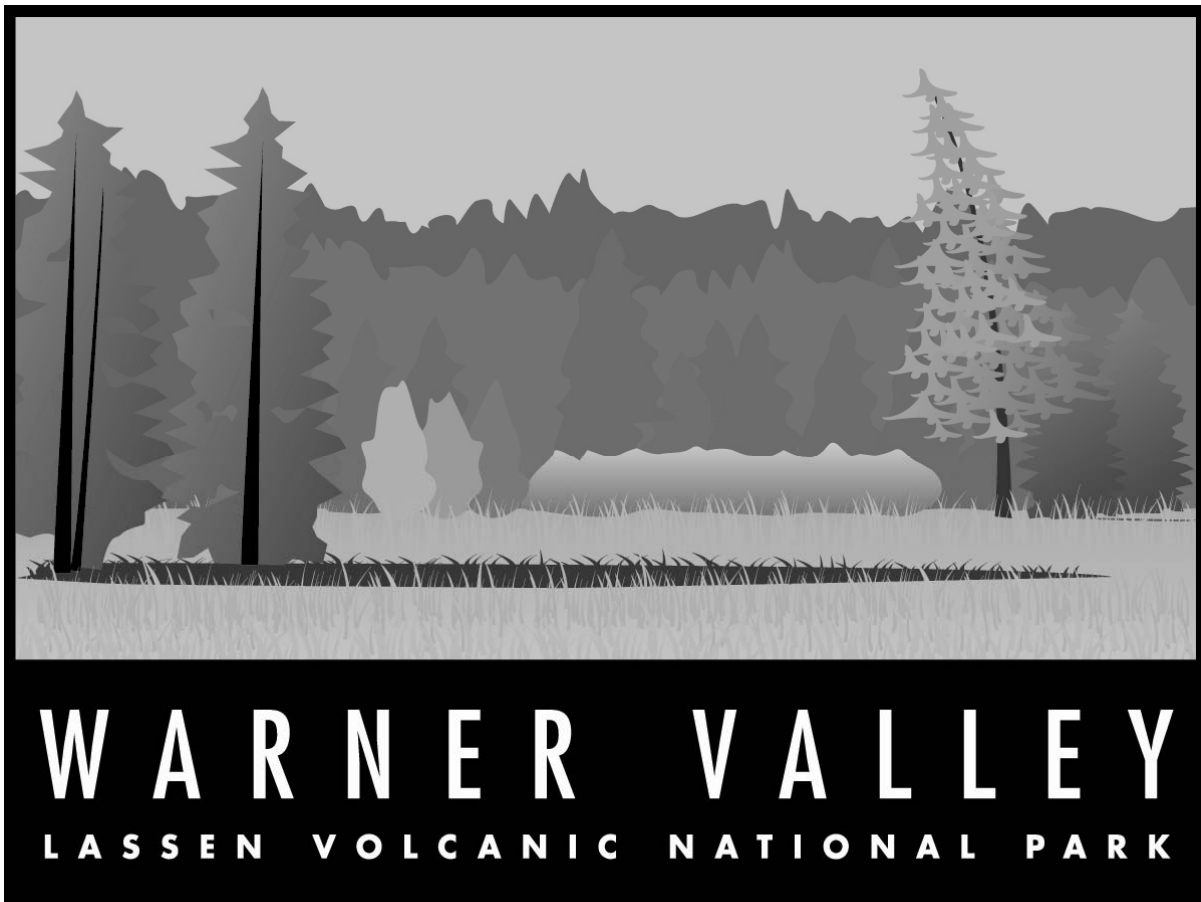




Warner Valley Comprehensive Site Plan Record of Decision



March 2011

Lassen Volcanic National Park
Mineral, California

United States Department of the Interior • National Park Service

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Record of Decision

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**U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

RECORD OF DECISION

**WARNER VALLEY COMPREHENSIVE SITE PLAN
FINAL ENVIRONMENTAL IMPACT STATEMENT**

**Lassen Volcanic National Park
California**

INTRODUCTION

The Department of Interior, National Park Service has prepared this Record of Decision (ROD) regarding the Warner Valley Comprehensive Site Plan Final Environmental Impact Statement for Lassen Volcanic National Park. The following information is included: brief description of the project background and objectives, statement of the decisions made and discussion of the basis for the decision, summary of other alternatives considered and description of the environmentally preferred alternative, measures which will be implemented to minimize or avoid environmental harm, an overview of public involvement and agency consultation in the decision-making process, and findings of no impairment of park resources and values.

PROJECT BACKGROUND

Warner Valley is located in the south central portion of Lassen Volcanic National Park (Park), a unit of the National Park System located in northeastern California. The Park was established by an Act of Congress on August 9, 1916 “...for recreation purposes by the public and for the preservation from injury or spoliation of all timber, mineral deposits and natural curiosities or wonders within said park and their retention in their natural condition as far as practicable and for the preservation of the park in a state of nature...”

Warner Valley is accessible by a rough, partly unpaved road extending 18 miles northwest from the town of Chester. This remote area provides a range of visitor facilities and attractions, including a small campground, the historic Warner Valley Ranger Station, trailheads providing access to geothermal sites and Wilderness destinations, and the Drakesbad Guest Ranch, a concession-operated facility that offers rustic lodging and dining. The guest ranch facilities are part of the Drakesbad Guest Ranch Historic District, which was added to the National Register of Historic Places in 2003. The district is listed at the state level of significance for direct association with regional conservation, and the development of the northern California tourism industry.

Dream Lake, also within the Historic District, is an artificially-flooded palustrine wetland, formed by a human-made earthen dam. The dam impounding Dream Lake has failed twice in the past and has been determined to be at risk of future failure.¹ The Historic District also encompasses

¹ U.S. Bureau of Reclamation, Downstream Hazard Classification, Dream Lake Dam, November 2000.

Drakesbad Meadow, so as to include vistas and acreage altered during the period of significance for the Guest Ranch. Drakesbad Meadow at 35 acres is the largest wetland in the Park. A portion of this spring-fed meadow complex has been identified as a fen, an unusual wetland type for the Cascade and Sierra Nevada mountain ranges. In the early 1900s, the hydrology of the meadow and fen was increasingly altered by constructing and expanding ditches to dewater portions of the meadow, and by the construction of a pool and bathhouse. In addition, roads and trails (built on fill) dissect the meadow and interrupt flow from springs and seeps that provide the primary hydrologic input to the fen.

The *Warner Valley Comprehensive Site Plan* was developed in response to the following management needs identified within the Warner Valley area: restoration of the valley's diminished fen and wetland complex; addressing the issue of the deteriorating Dream Lake Dam; protecting archaeological and cultural sites; enhancing the trail network that traverses the valley's developed areas; and improving vehicle circulation and parking. Key concerns surrounded visitor safety, the effect of non-historic structures within the Drakesbad Guest Ranch Historic District, and balancing the management and stewardship of intermingled natural and cultural resources.

DECISION (Selected Action)

Upon careful consideration of all concerns and issues raised during the planning and environmental impact analysis process, and in light of applicable laws, regulations and NPS guidance, the National Park Service (NPS) has selected a modification of Alternative 2 for implementation. Alternative 2 was identified and analyzed in the September 2010 Warner Valley Comprehensive Site Plan Final Environmental Impact Statement (Final EIS) as the "agency preferred" alternative. Minor changes based on recent requirements promulgated by the Department of Homeland Security and ongoing consultation with the California Office of Historic Preservation are incorporated as noted below.

The Selected Alternative includes the following components: 1) ecological restoration of wetlands throughout Warner Valley, which includes permanently filling ditches within Drakesbad Meadow with appropriate soil; 2) creation of a concession service center and housing area comprised of tent cabins surrounding a single-story bathhouse building located outside of the Drakesbad Guest Ranch Historic District; 3) removal of the Dream Lake Dam and allowing the area's subsequent reversion to a riparian/wetland complex; and 4) rehabilitation and/or repair of facilities and structures within the Drakesbad Guest Ranch Historic District.

The approved actions will be implemented in phases over the course of a number of years and as staffing and funds allow. The following Phase 1 activities are expected to be undertaken in the next several years: 1) rebuild the access road to the Drakesbad water tank; 2) remove the impermeable 'causeway' trail that crosses Drakesbad Meadow and replace with a boardwalk; 3) fill in the historic drainage ditches in Drakesbad Meadow and restore the area with native wetland vegetation; and 4) remove Dream Lake Dam, resulting in the draining of Dream Lake and restoration of the natural stream channel.

Following is a concise summary of the approved course of action for all components of the Selected Alternative.

Entry to Warner Valley

Improvements to this portal area address visitor safety issues and confusion at the entrance. The existing fee station is located in a natural drainage, and is adjacent to a dangerous curve in the Warner Valley Road. In addition, park visitors often mistake the nearby water tank access road as the road into the Park. The current fee station is to be relocated to an existing pullout west of the ranger station; the area will be filled to raise grade, three parking spaces defined with rock borders will be provided at the new fee station location. Use of the existing water tank road will be discontinued -- the road will be removed from the natural drainage and the roadbed restored and reseeded with native plants. A new service road to the water tank will be constructed (8 feet wide by 130 feet long) and two small white fir trees and several standing dead snags will be removed during the new road construction. Although not described in the Final EIS, a gate will be installed at the base of the new water tank road as per Department of Homeland Security and Public Health Service requirements.

Warner Valley Road and General Road Maintenance

Warner Valley Road improvements address visibility, safety and erosion issues associated with the roads' current alignment. Actions to be taken are: replacement or repair of twenty-five undersized or failing culverts, and installation of six new culverts; application of only environmentally approved dust suppressants in high use visitor areas; installation of uniform aggregate to reduce road dust and improve road stability; and installation of rock headwalls at culverts.

Campground, Trails, and Day Use Parking

The existing day-use parking area (which includes a toilet and picnic tables) will be removed and the area restored to a natural meadow/wetland. The lower Warner Valley Campground will be closed to camping and the site converted to a day-use parking area, with twenty gravel parking spaces, three picnic tables, a water faucet and double-vault toilet. Five campsites will be relocated from the lower to the upper campground, one of which will be an Americans with Disabilities Act (ADA)-accessible site. A double-vault toilet will be installed, and parking areas will be delineated with buried boulders or logs. The campground loop road will be expanded and the center loop will be closed. Campsite #19 (near the campground entrance) will be designated for the campground host, and a septic holding tank will be installed. A Pacific Crest Trail connector trail will be created (brush removal will occur, with boardwalks constructed in areas where the connector trail traverses wetland areas).

Drakesbad Guest Ranch

Concessionaire Housing and Service Center: A new service center will be constructed outside (east) of the Drakesbad Guest Ranch Historic District in a relatively flat area several hundred feet north of the Warner Valley Road. A short gravel loop road will be constructed to provide vehicle access to this area. The service center will include concessionaire employee housing comprised of eight double-occupancy tent cabins (each constructed on a wooden deck supported by concrete

piers), surrounding a single-story bathhouse building, an outdoor social space, and thirteen employee parking spots. Small scale features (propane tanks, dumpster, generator, storage) which detract from the historic district will be relocated to the new service center site and the previous locations of these features will be restored. Buried utility services (water, sewer, power and propane) will be extended to the new service center and housing area and back to Drakesbad Guest Ranch along the road corridor. New structures will enclose the relocated generator and cold food/dry goods storage. The new bathhouse building will contain a small apartment for the guest ranch cook. The schematic in the Final EIS showing service center area (Figure 2-12 on page 2-32) is an accurate depiction of this component of the selected alternative.

Volleyball Court, Bathhouse and Pool Area: The volleyball court will be relocated to a site east of the swimming pool, the existing sand court will be removed and the area restored. The non-historic pool bathhouse will be renovated. The filter house will be relocated from the edge of the pool to a filter/pump room inside the renovated bathhouse. The coping and deck around the pool will be replaced with historically-compatible materials. The eroding banks of the adjacent Hot Springs Creek will be stabilized with native riparian plant species.

Alternative energy systems will serve the above project components, including installation of a hybrid power system for the concessionaire service center and housing area, and the addition of photovoltaic panels on the south side of the bathhouse.

Circulation and Parking: Circulation improvements include relocating parking to designated long- and short-term parking areas and spaces shaped by rock barriers. Natural areas impacted by previously unregulated parking 'creep' will be restored. The loop road at the Mission 66 duplexes will be closed, and overnight guest parking will be limited to two cars per unit.

The profile of several trails will be reduced and trail materials replaced to improve subsurface water flow. The trail/service road leading from the guest ranch to the pool house will be narrowed from 12 to 7 feet, its impermeable base replaced with permeable base rock, and the surface of the trail replaced with pedestrian-friendly cell pavers planted with native grasses. In addition, the impermeable 'causeway' trail leading from the corral across the meadow will be removed and replaced with a boardwalk; impacted portions of this site will be reseeded with native plants.

Land Use: Within the historic district, the dining hall service area will be re-graded and the outdoor dining area patio will be resurfaced. If wood decking is selected for the patio surface, a 'least-toxic' (IPM approved) wood preservative or stain will be applied. A small patio with picnic table will provide an employee break area. Concrete block retaining walls at the entry areas of four cabins will be replaced with historically-compatible stone walls. Electrical lines will be buried.

Construction actions within the Guest Ranch area which will be taken so as to protect natural functions in Drakesbad Meadow include rebuilding the water tank access road with permeable roadbed and reducing its width; existing culverts will be maintained. The upper horse corral will be expanded to the west and use of the lower corral will be discontinued (it will be retained as cultural landscape feature). At the corral site, two barrel fire hydrants will be removed, the generator and propane tanks will be relocated from the historic district to the new service area, and

a historically-compatible feed storage barn (24 feet x 40 feet) will be constructed where the propane tanks were located. Use of seed-free feed will be required. In addition, a bio-filtration system will be added to the southern edge of the corral to mitigate impacts from effluent.

Dream Lake Dam

Dream Lake Dam will be removed and the area restored to a channel network stabilized by log and rock step-pools and a functioning floodplain. This work will be the first priority Phase 1 project to be initiated. The lake will be drained by implementing a controlled breach prior to spring snow melt, when flows are lowest. It has been anticipated that breaching would occur in late fall or early winter, however, based on local weather conditions this activity may be initiated as late as April as needed to meet ecological/restoration objectives. A small notch will be created by removing several layers of sand bags from one of the old gullies that was filled during a recent overflow event. The lower sandbags will temporarily be retained to prevent uncontrolled washout. The reservoir water level will be allowed to drop to the level of the retained sand bags. This process will be repeated over a several week period. Several downstream beaver dams would ameliorate effects of any escaping sediment before it reaches Hot Spring Creek, and if further erosion assessments indicate a high potential for sediment transport beyond these natural beaver dams, erosion control and sediment filtration materials will be installed across Hot Springs Creek.

After breaching, the dam material will be allowed to dry out over subsequent months. Dam removal and restoration work includes topographic re-contouring and will require the use of heavy equipment and machinery and powered tools. Heavy equipment will be transported to the site while the ground is frozen and snow-covered to prevent ground disturbance. The machinery will be driven over the meadow, across an existing bridge over Hot Springs Creek, and up the slope to the dam where they will be staged. Airlifting materials and equipment to the dam site may be utilized when necessary to protect the integrity of Drakesbad meadow and associated cultural sites. In late summer/early fall after the dam is breached, the on-site machinery will be used to excavate all remaining dam material and deposit back into the original borrow pit where it was removed in 1931 (or possibly two smaller borrow pits adjacent to the main pit). Most excavated material will only need to be moved a short distance (transport not expected to be further than 600 feet).

The area where the dam currently sits and the reservoir bottom are naturally wet areas and some natural re-colonization by pioneer species will complement the revegetation efforts to be taken by Park staff (see discussion below). However, there is a potential for weeds to establish themselves so for several years, the site will be monitored and weeds controlled using techniques in the Park's Weed Management Plan (FONSI approved 6/17/2008). The erosive force of the stream flowing through the former dam and reservoir site is anticipated to be minor given the low gradient of the site, yet these flow volumes are expected to be sufficient to develop new channels through the former reservoir bottom.

Per a Programmatic Agreement (Attachment A) with the California State Historic Preservation Officer (SHPO), the Park will complete Historic American Engineering Record (HAER)/Historic American Landscapes Survey (HALS) documentation for Dream Lake, Dream Lake Dam and the Drakesbad Meadow prior to the dam removal and restoration work. A qualified archaeologist will

be onsite during earth moving activities. If a new archaeological site is found adjacent to or underneath the reservoir, or a known site has a larger extent than expected, work will be suspended and the California SHPO will be notified. If appropriate, an archaeological treatment plan will be developed in consultation with the SHPO before the area is covered with a geotextile fabric and then capped with material from the dam as a means of protecting the site.

Drakesbad Meadow

The fen-meadow complex will be restored through several methods to reestablish historic stream channels and hydrologic integrity. Drainage ditches will be permanently filled with appropriate soil delivered via trail cart or other small machine, which will cross the meadow on sheets of plywood. All fill material will be derived locally to avoid introducing weeds into the area. Ditches will be filled to regain the natural contour of meadow surface, it is anticipated that the maximum area of disturbance would be 8 feet wide (the width of the ditch, plus the width of the banks) by the length of each ditch, which varies throughout the meadow. An archeologist will be present when earthwork is underway. Per the Programmatic Agreement noted above, if previous unknown archaeological resources are encountered, work will be suspended until the Park can evaluate these resources in consultation with the SHPO. In addition, restoring the site's hydrology could alter the meadow's water table enough that installation of additional boardwalks is needed; these would be constructed of rot-resistant or pressure-treated wood (IPM approved) if needed to avoid seasonal inundation of existing meadow trails

Vegetation Management

Revegetation and Monitoring

Phase 2 revegetation activities at the former Dream Lake reservoir and the Drakesbad Meadow sites will begin almost immediately following ground disturbance at each site and would continue for a number of years (monitoring success of plant establishment typically occurs for 3 years). Plant materials propagated from seed or cuttings collected in the immediate vicinity of the dam or meadow will be out-planted by hand at disturbed sites in each area.

At the former Dream Lake site, revegetation work will also take place at the denuded area from the dam over to and including the borrow pits. Bare ground between plantings will be broadcast seeded by hand, using a native grass and sedge seed mix also collected from the dam or meadow sites. Also, willow shrub stems will be cut upstream of the former reservoir, bundled, and planted along the banks of the new stream which incises in the former reservoir bottom and the dam site. Some natural re-colonization by pioneer species adapted to wet sites is expected to occur; however, given also the potential for weed establishment, these sites will be monitored and weeds controlled as needed using techniques in the Park's Weed Management Plan (noted above).

The Drakesbad meadow restoration work will be guided by an implementation plan, with additional environmental compliance completed as needed. The plan will identify all man-made structures (including roads, ditches and trails) that divert either groundwater or surface water flows. The implementation plan will incorporate all applicable treatment recommendations from the 2005 Cultural Landscape Report (CLR) for Drakesbad Guest Ranch, and will detail

revegetation and monitoring methods, and will outline prescriptions for managing screening vegetation over time to maintain historic views of the meadow.

Tree Removals

In improving the fee station entry area, three trees will be removed from the edge of the road to improve visibility, and two trees and several standing dead snags will be removed during new water tank road construction. All vegetation, including approximately 32 trees, will be removed from Drakesbad Dam, the push path to the borrow pits, and the borrow pits area. Three trees are to be removed during construction of the concessionaire housing and service center (and the stumps removed). Finally three trees will be removed in converting the lower campground to a day-use area. The majority of these approximately 43 trees are between 2-24 inches (dbh); however six of the trees are 24-48 inches (dbh). The scenic quality and the forested wildlife habitat in upper Warner Valley will not be functionally affected. All the logged material will be used beneficially in the area (e.g., used for natural appearing barriers to prevent parking 'creep', milled for lumber to be used in Park projects, or chipping for use as mulch).

Interpretive Media

Per the Park's Programmatic Agreement with the California SHPO (noted above), historic documentation by qualified cultural resource staff will be incorporated into the Park's interpretive media and materials on the Drakesbad Guest Ranch Historic District. Existing interpretive panels in the historic district will be updated to reflect new information as may be discovered during the HAER/HALS process. The Park will also engage an oral historian to conduct oral histories within Warner Valley, and Drakesbad Guest Ranch stakeholders to document history of use in the project area (this latter effort is to begin within four years of project approval).

OTHER ALTERNATIVES CONSIDERED

Alternative 1-The No Action Alternative

Current management practices would be continued under Alternative 1. No physical modifications within Warner Valley or the Drakesbad Guest Ranch Historic District would occur. The Park would continue to conduct routine maintenance and repair of historic structures within the Drakesbad area in accordance with the generic 2008 Servicewide Programmatic Agreement; however, non-contributing features such as the filter house, propane tanks, and generator would remain in the historic district. The Park would continue to maintain the existing two-way gravel road through periodic surface grading and seasonal maintenance of culverts and drainage structures adjacent to the road. Transportation impacts including traffic congestion, lack of adequate parking, and traffic safety conditions would remain unchanged.

The Warner Valley Campground would remain bisected by the Warner Valley Road, resulting in continued disturbance of visitor experience and public safety issues. Proximity of the lower campground to Hot Springs Creek would continue to exacerbate erosion and loss of vegetation along the steep banks of this section of creek. In addition, the Pacific Crest Trail (PCT) enters the eastern side of Warner Valley at the upper campground area, and both campers and PCT hikers

must trek along a hazardous and dusty section of the Warner Valley Road in order to continue on the PCT or access the Warner Valley trail network. The existing undersized trailhead day use parking area would remain in its current location within a wetland.

Trails, boardwalks and signage would continue to be maintained by Park staff. The presence of trails, roads, parking areas, and the upper and lower horse corrals, would continue to impact wetland and fen ecology, hydrology, and water quality within Drakesbad Meadow. Dream Lake Dam would remain unstable, with the potential hazard of sudden failure unabated; however the Park would continue to maintain four pipes, known as “beaver deceivers,” which are currently installed in the lakes’ spillway to keep the water level below the top of the earthen dam.

Alternative 3

Alternative 3 is an “action” alternative that differs from the Selected Alternative in the following ways: 1) restoration of Warner Valley fen would have been undertaken through installation of metal sheets to dam drainage ditches within Drakesbad Meadow; 2) a concession service center and housing area would also have been constructed outside of the Drakesbad Guest Ranch Historic District, however the housing area would have been a two-story dormitory building with bathrooms; and, 3) Dream Lake Dam would have been reconstructed according to Bureau of Reclamation engineering standards.

Alternative 3 also differed from the Selected Alternative in the following proposals for the Drakesbad Guest Ranch area: the outdoor dining area would have been removed, instead of reconstructed, due to its incompatibility with the historic setting and lack of ADA compliance; the concrete block walls at the entry ways to four cabins would have been covered with a stone veneer, instead of reconstructed with stone; and, an alternative interior configuration for the bathhouse renovation was proposed.

Options Considered But Dismissed

Some preliminary options were considered by the interdisciplinary planning team (IDT) or evaluated by NPS staff during two Choosing By Advantages workshops (August 2005 and June 2008). Some options were suggested by the public or park stakeholders for consideration as part of different elements of the alternatives. The original scope of work only addressed concerns regarding Dream Lake Dam (the original Notice of Intent (NOI) was published in April 2003). Based on public feedback, the EIS effort evolved to a comprehensive site planning effort for the upper Warner Valley area which culminated in publishing a subsequent NOI in June 2005 (refer to the Public Involvement and Agency Coordination section below).

Through evaluation of the purpose and need for federal action, project objectives and planning criteria, and available information, the IDT eliminated specific actions or tasks which were considered infeasible due to technical or economic reasons, or were beyond the scope of the EIS, and therefore not carried forward for further analysis. The various options eliminated from detailed analysis were as follows:

Expansion of a section of the Warner Valley Road: Would have improved circulation and vehicle safety by providing two physically separate one-way lanes into Warner Valley at a section of road

containing a blind curve and steep grade. The existing road would have supported outbound traffic, and a new one-lane road constructed for inbound traffic. This concept was dismissed due to the potential for cultural resource conflicts and unacceptable environmental damage.

Alternative location for Drakesbad concessionaire housing: An alternate location for staff housing was suggested along the north side of the Warner Valley Road, near the Mission 66 duplexes. This site was dismissed due to its proximity to the Warner Valley Road and because the site is within the Drakesbad Guest Ranch Historic District, and therefore, would not meet the objective of preserving the historic district.

Alternative treatment of small-scale non-contributing features within historic district: Alternate locations and/or screening were suggested for small scale features, such as propane tanks, storage areas and the dumpster, which are located within the historic district. These options were deemed to be insufficient to meet the objective of preserving the historic district.

Alternative energy development within Drakesbad Guest Ranch area: Replacing the propane tanks with an alternative fuel source was suggested. A complete transition to alternative energy was determined to be infeasible due to the large number of photovoltaic panels required to offset the amount of energy lost. A combination of energy sources was included in the alternatives carried forward in the EIS.

Alternative proposal for guest ranch water tank and removal of water tank road: The concept of abandoning use of the current spring utilized as the water source for Drakesbad Guest Ranch, and developing a new water source closer to the ranch was considered. This option may have allowed removal and restoration of the road that accesses the guest ranch water tank, but was dismissed due to technical infeasibility and the potential for causing new environmental damage.

Alternative treatments of the 'causeway' trail: Narrowing the 'causeway' trail from the corral across the meadow/fen was considered but dismissed because this option would not meet usage demands nor environmental requirements (boardwalk was proposed instead). Installing culverts under the impervious gravel 'causeway' between the pool and bathhouse was also considered (in lieu of converting to permeable design), but below-grade culverts would not adequately meet drainage needs in this particular area.

Alternative location for upper horse corral: Relocation of the corral to the new service center area was considered, but dismissed since this feature is considered integral to the character of the historic district. In addition, corral relocation would have required either the construction of a new horse trail between the guest ranch and service center or the need to manage commingled stock use and vehicle traffic along a section of the Warner Valley Road.

Issues raised but out-of-scope: Issues surfaced which were deemed to be outside the scope of the EIS included: hydrothermal activity; chlorinated pool water entering the creek; setting aside rooms at Drakesbad Guest Ranch for low-income customers; changing demographics in California; campsites accommodating small recreation vehicles and horse trailers; less stringent controls for

designated parking areas; hut for winter ski-in use; and, emergency egress routes out of Drakesbad Guest Ranch and Warner Valley.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

As documented in the Draft and Final EIS, Alternative 2 was deemed to be the “environmentally preferred” course of action due to the longer-term and more extensive actions regarding wetland and riparian restoration. While Alternative 3 would address existing impacts to wetlands to some extent, the actions included under Alternative 2 address multiple existing impacts to wetland resources and riparian areas using permanent restoration methods. Alternative 2 also improves protection and enhancement of historic and cultural resources, and visitor safety within Warner Valley, although Alternative 3 has some merits in these areas as well.

Alternative 2 would more fully restore the hydrologic functions and values of the unique natural resources within Drakesbad Meadow. Alternatives 2 and 3 differ significantly in their treatment of the drainage ditches within Drakesbad Meadow, which were originally constructed to dewater portions of the meadow. Under Alternative 3, metal check dams would be installed in the ditches to impede surface flow and thereby increase water retention. Under Alternative 2, these ditches would be permanently filled with locally obtained native soil, providing a more effective and lasting basis for restoring the fen and hydrology. Additional actions proposed under Alternative 2 include replacing trails that cross the meadow with boardwalks or permeable beds, and reconstructing the guest ranch water tank access road, which currently affects surface water flow from a series of upslope springs to the fen, with a narrower profile and permeable base material.

The two “action” alternatives identified very different actions for dealing with Dream Lake Dam, a deteriorated structure that had been rated by Bureau of Reclamation as likely to fail under a “no action” scenario. Under Alternative 2, wetland and riparian habitat would increase with the removal of the Dream Lake Dam. Dam removal would cause the loss of the historic feature, but this historic element would be documented in HABS/HAER process. Removal would allow permanent restoration of four tributary stream channels and associated wetland habitat and re-establish the sites’ natural ecological functions and complexity. Alternative 3 would reconstruct the Dream Lake Dam and address the existing dams’ safety and instability issues, but would alter the historic character of the dam itself. Dam reconstruction would also require substantially greater amount of temporary infrastructure construction, would entail importing soil and rock fill material from outside the Park to the site, and would commit the Park to long-term and technically difficult maintenance of an intrusive structure in a backcountry setting...

Under Alternative 1, effluent from the corral area and non-native seed present from outdoor hay storage areas are repeatedly introduced into the adjacent wetland. Alternatives 2 and 3 would vary in addressing groundwater quality and exotic plant introduction issues resulting from the use of the upper and lower horse corrals at the Drakesbad Guest Ranch. Under Alternative 2, the lower corral, which is adjacent to Drakesbad Meadow, would be maintained as part of the cultural landscape, but no longer used as a corral, and the upper corral would be expanded to accommodate the current number of stock. A historically-compatible enclosed feed storage structure would be

constructed adjacent to the upper corral in the reclaimed propane tank location. Similarly, Alternative 3 proposed to abandon active use of the lower corral, and utilize the upper corral as a staging area for rides. Under Alternative 3 a new corral and tack shed would be constructed outside of the historic district on the north side of the Warner Valley Road. Alternatives 2 and 3 offered environmental benefits through the installation of biofiltration systems to mitigate nutrient-rich effluent into the meadow as well as from eliminating active use of the lower corral. Alternative 3 moved stock housing further from the meadow area, however, Alternative 2 was identified as environmentally preferable due to its smaller construction footprint, as well as a closer alignment to historic conditions.

Along the Warner Valley Road, both Alternatives 2 and 3 proposed replacing and adding culverts to improve drainage. Additionally, under Alternative 2 the existing water tank road would be relocated out of a seasonal drainage, whereas Alternative 3 called for the installation of a culvert beneath the existing road.

Alternatives 2 and 3 would differently implement treatment recommendations from the Cultural Landscape Report (CLR 2005) for the Drakesbad Guest Ranch. These treatments include decreasing visual impacts on the historic district from road dust, improperly designated parking areas, and the current volleyball court location; controlling erosion along Hot Springs Creek near the pool; and moving the non-historic storage, pump house and visitor amenities into one bathhouse structure in the pool area. Both Alternatives would alter the concrete exterior porch walls of four historic cabins to make them more historically-compatible: Alternative 2 would replace the concrete walls with stone walls, while Alternative 3 would cover the concrete with a stone veneer. Alternative 2 closely followed CLR recommendations for rehabilitating historic character of the trail between the guest ranch and pool area, while Alternative 3 would replace the trail with a boardwalk.

Both Alternatives 2 and 3 would improve the core building area of the National Register historic district per CLR treatment recommendations, by removing non-contributing features from the District. Most significantly, concessionaire staff housing and service facilities (food and equipment storage, dumpster, propane tanks, and generator) would be relocated to an appropriate location outside of the district. In addition, utility lines, which detract from the historic character of the area, would be buried. Both Alternatives 2 and 3 would also have an adverse effect on the entire District, as a result of actions that would affect Dream Lake Dam (either reconstruction or removal) and reclaiming the historic drainage ditches within Drakesbad Meadow. These adverse effects would not eliminate the area's status as a Historic District listed in the National Register of Historic Places. And the Park and SHPO have entered into a project-specific Programmatic Agreement to resolve the adverse effect, by identifying Park responsibilities for documenting the affected portions of the Historic District, as well as for identifying, evaluating and protecting cultural and archaeological sites from further impact.

Alternatives 2 and 3 would have comparable benefits with respect to improving visitor safety through the relocation of the fee station and parking area from their current location near a sharp bend in the Warner Valley Road, the relocation of the lower campground which places visitors in

close proximity to both the road and Hot Springs Creek, and the construction of a connector trail which will keep Pacific Crest Trail hikers on a trail and off of the Warner Valley Road.

Alternative 1, the No Action Alternative, would not adequately address the resource stewardship and safety issues identified in the EIS. While there would be no new effects on the historic district, existing cultural resource impacts, such as the detraction of non-contributing features within the district, would not be addressed under current management. The Park would seek funding needed to minimally implement the 2005 CLR. Alternative 1 would not alter Dream Lake Dam.

Therefore, this human-made impoundment would continue to impede natural surface water flow, and public risk of exposure to dam failure would be unabated – but the historic feature would not be disturbed until eventual failure of the structure. Water quality degradation resulting from use of the lower horse corral and inadequate alignment of the Warner Valley Road would continue. In addition, there would be a continuation of impacts to the hydrologic integrity of wetland and fen areas due to the presence of artificial features within these areas.

MEASURES TO MINIMIZE ENVIRONMENTAL HARM

Mitigation measures to reduce or avoid the adverse effects and potential impacts associated with implementing the approved actions include Best Management Practices (BMPs) for construction, biological and cultural resource protection; traffic management; noise and dust abatement; and pollution prevention measures. Monitoring and enforcement programs will ensure proper and timely implementation of these measures. In addition, the NPS will apply for and comply with all federal and state permits required to undertake the actions described in the Selected Alternative (refer to Public Involvement and Agency Coordination Section).

The NPS has investigated all practical means to avoid or minimize environmental consequences that could result from implementing the Selected Alternative; all such measures incorporated into the Selected Alternative are identified in Attachment B. The key safeguards include, but are not limited to:

Measures to Protect Cultural Resources

- Prior to commencing work, the Park will complete Historic American Engineering Record (HAER)/Historic American Landscapes Survey (HALS) documentation for Dream Lake, Dream Lake Dam and the Drakesbad Meadow and this information will be incorporated into interpretive media and materials.
- A qualified archaeologist, who meets the Professional Qualification Standards as listed in 36 CFR 61, will monitor construction activities. Should any previously unknown archaeological resources be encountered during construction, work will be immediately suspended and procedures outlined in Stipulation IV (Unanticipated Discoveries) of the Warner Valley Comprehensive Site Plan Programmatic Agreement (see Attachment A) will be followed.
- Within or adjacent to the Drakesbad Guest Ranch Historic District or other historic sites, all new construction work will be designed and completed in an historically compatible

manner, in terms of architectural elements, scale, massing, materials, and orientation. Applicable treatments set forth in the 2005 CLR will be integrated into project implementation.

Measures to Protect Native Vegetation and Wetlands

- Heavy equipment will be steam-cleaned and inspected, prior to entry in the Park, to prevent importation of non-native plant species.
- Heavy equipment will cross the Drakesbad Meadow during the winter when the ground is frozen and covered with snow. In other seasons, sheets of plywood will be laid down to prevent compaction of the meadow while using trail carts or other small machines to transport materials and equipment during construction or/and deconstruction activities.
- Work within wetlands will be avoided to the extent feasible, and wetlands will be clearly demarcated prior to construction work in their vicinity.
- Revegetation work will be accomplished using only plant material grown from seeds or cuttings collected within Warner Valley. Planted sites will be monitored (adapted as necessary) for three years after completion of plantings to determine successful plant establishment and meet restoration goals.
- Conserve and salvage topsoil for reuse; such materials will be reused as much as possible.

Measures to Protect Wildlife

- Work areas will be surveyed for nesting raptors and passerines prior to construction, and standard BMPs will be adhered to at construction sites (i.e. placing ramps in trenches to allow egress and establishing no disturbance buffers around nests).

Measures to Protect Water Quality

- Only conduct major construction activities in wetland and riparian areas during periods of low water flow (the winter season and the dry season). Generally the use of mechanical equipment will be scheduled during periods of low precipitation to reduce the damage of any accidental leaks or spills. When mechanical equipment is necessary outside of low precipitation periods, use NPS-approved methods to protect soil and water quality.
- Use approved siltation and sediment control devices in construction areas to reduce erosion and surface scouring.
- Properly dispose of volatile wastes and oils and inspect equipment for hydraulic and oil leaks on a regular schedule. Materials used to clean up spills (absorbent pads, booms, etc.) will be kept on-site available for rapid deployment in the event of a spill or leak.

Measures to Protect Recreational Use and Scenic Resources

- To the extent possible, all necessary 24-hour or after-hours construction work in the immediate vicinity of campgrounds and lodging units is to be scheduled during periods when these facilities are closed or not in use.
- To the extent possible, all on-site noisome equipment use will be limited to normal construction hours to minimize disruption to park users (work hours typically are 7:00am

to 5:30pm, Monday through Friday). Requests for exceptions must be approved by the Superintendent well in advance.

- Remove flagging, fencing, and other construction site demarcation materials as soon as work in an area is completed.

All mitigation measures will be consistently applied to all future actions undertaken per the approved plan. Moreover, the Park will provide for additional compliance (e.g., Endangered Species Act, National Environmental Policy Act, National Historic Preservation Act) for these future actions, as appropriate.

PUBLIC INVOLVEMENT AND AGENCY COORDINATION

Scoping

Public meetings to discuss future management options for Dream Lake Dam were held November 4-7, 2002 in the towns of Chester, Chico, Red Bluff, and Redding. Formal scoping for the project began on April 4, 2003, when a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Dream Lake Dam Management Plan (DMP) was published in the Federal Register. Nine-hundred letters announcing intent to prepare the EIS/DMP were distributed and 100 scoping comments were received. Central themes identified during this scoping period were: 1) how could the Park balance natural and cultural resource management at the Dream Lake site, and, 2) concerns about impacts to Park visitor experience, and effect on long-time Drakesbad Guest Ranch visitors. Commentary at the public meetings also surfaced the need for the Park to develop certified engineered alternatives for Dream Lake Dam. The Park hired a licensed engineering firm to conduct technical analysis of two principal alternatives (reconstruction/repair of the dam to Bureau of Reclamation standards, and, removal of the dam and re-naturalization of the channel network and borrow pit area) and the Title 1 schematic design report was completed in April 2007. Additional analysis of the Dream Lake Dam alternatives was followed by a separate park staff workshop using a Choosing By Advantages (CBA) process in June 2008.

Information received during public and internal scoping activities for the EIS/Dream Lake DMP also indicated a need for a larger, more comprehensive planning effort in the Warner Valley area. As a result, in 2004, the Park determined it would be expedient to incorporate the initial Dream Lake DMP concepts into a broader Warner Valley Comprehensive Site Plan EIS process. All oral and written comments derived from the Dream Lake DMP scoping process were duly considered in the development of the Warner Valley Comprehensive Site Plan EIS.

Informal scoping for the Warner Valley Comprehensive Site Plan was initiated on June 1, 2004 with the posting of a request for comments about potential issues and concerns at the Drakesbad Guest Ranch Lodge. In addition, announcements for public meetings were printed in the Red Bluff Daily News, Chester Progressive, Redding Record Searchlight, and Sacramento Bee; radio and television stations were notified via press release. Public meetings were held on June 13-15, 2005 in the towns of Chester, Red Bluff, and Vacaville. On June 24, 2005, a NOI to prepare an EIS for the Warner Valley Comprehensive Site Plan was published in the Federal Register. Scoping letters were mailed to 1,131 individuals and organizations to announce the EIS effort, and 15 written comments were

received as a result of this mailing. The formal scoping period closed on October 14, 2005, and all issues identified during this second scoping phase (as well as prior scoping information) were considered in the development of the Draft EIS.

Central themes raised during the 2005 public scoping period fell into four topic areas: natural resources; cultural resources; visitor experience, health and safety, and transportation; and socioeconomic environment. These four topic areas were the basis for initiating the environmental impact analysis and formulating the preliminary range of alternatives identified for the Draft EIS/Warner Valley Comprehensive Site Plan.

Public Comment

Review of Draft EIS

On August 21, 2009, the Environmental Protection Agency (EPA) published their notice of filing of the *Warner Valley Comprehensive Site Plan* Draft Environmental Impact Statement (Draft EIS) in the Federal Register; the NPS' Notice of Availability (NOA) was published on August 25, 2009. The 90-day formal comment period on the Draft EIS closed on November 21, 2009.

The Park distributed 85 printed copies and 200 CDs of the Draft EIS to local, state, and federal agencies, and to interested individuals and organizations for review. In addition, notification letters containing return postcards (allowing recipients to request a copy of the document) were mailed to an additional 670 individuals and organizations. The mailing list included individuals and families who had previously stayed at Drakesbad Guest Ranch. The Park hosted three public open houses during the comment period: 9/2/2009 in Chester, 9/3/2009 in Anderson, and 9/8/2009 in Vacaville. These public meetings were advertised in the cover/notification letters mailed with or regarding the Draft EIS, via flyers posted at local post offices (Mineral, Chester, Red Bluff), and through press releases sent to newspaper, radio and television outlets.

Copies of the Draft EIS were available for public review at the public open houses and an electronic version was posted on the Park and the NPS PEPC websites. Copies were available at the Park Headquarters in Mineral, and at local libraries in the communities of Burney, Chester, Chico, Red Bluff, Redding, Shingletown, Susanville and Quincy. During 2009 the Superintendent made a campfire presentation at the Drakesbad Guest Ranch to discuss the Draft EIS, and the Chief of Resources Management had several onsite meetings with interested members of the community regarding the alternatives and project planning.

Altogether the Park received comments from thirty-three entities, including a Native American Tribe, two federal agencies, two state agencies, one local government agency, an organization, and 26 individuals. All comments received (and Park responses) are documented in the Final EIS, Chapter 6 *Comments and Responses*.

Seven comments from individuals in support of Alternative 2 (identified as both the agency-preferred and environmentally-preferred alternative in the Draft EIS) mentioned the need to protect natural resources, including returning Dream Lake to a riparian habitat and restoring Drakesbad

Meadow. The Greenville Rancheria endorsed Alternative 2 and asked to be kept apprised of the project's progress and to be notified in the event that remains are located during the course of work.

Federal and state agency comments were either in support of the project, or neutral, and included discussion on the Draft EIS' technical aspects and/or the need for permits and plans (discussed below) as project work commenced. The U.S. Environmental Protection Agency (EPA) indicated support for the proposal, and stated that "...the proposed project will significantly improve the hydrologic and ecological processes and functions in the Warner Valley." The EPA "Lack of Objections" (L.O.) rating for the Draft EIS was noticed in the Federal Register on December 4, 2009.

Comment letters received from nineteen individuals and one organization did not support all or portions of Alternative 2. The majority of these respondents were individuals or families having a long-standing connection to Warner Valley and/or are repeat visitors to the Drakesbad Guest Ranch. In general, these respondents expressed dissatisfaction with the prospect of disrupting their visitor experience and opposed removal of the volleyball court and changes to use at the horse corrals. Concerns were expressed about impacts to the cultural landscape resulting from the removal of Dream Lake Dam, and effects of increasing water levels in Drakesbad Meadow. Several comments also questioned validity of the background data and research used to develop restoration actions for Drakesbad Meadow.

Release of Final EIS

On September 24, 2010, the EPA published their notice of filing of the Final EIS in the Federal Register; the requisite "no action" wait period ended on October 25, 2010. The NPS' NOA was published in the Federal Register on October 4, 2010.

A press release regarding release of the Final EIS was sent on September 23, 2010 to local radio, newspaper and television stations and posted at local post offices (Mineral, Chester, and Red Bluff). Beginning September 24, 2010, the Park mailed 56 printed and 220 CD copies of the Final EIS to individuals, organizations and government agencies. Notices were posted in the Mineral, Chester and Red Bluff post offices. In addition, 625 notification letters (and 8 emails) were also mailed, and these letters directed recipients to two online postings of the final document (the Park and PEPC websites) which was done to enhance availability of the document. Printed copies of the Final EIS were also made available at public libraries in Burney, Chester, Chico, Red Bluff, Redding, Shingletown, Susanville and Quincy.

Changes between the Draft and Final EIS include the addition of a project-specific Programmatic Agreement with the California State Historic Preservation Officer (SHPO) which supplanted the 2008 Servicewide Programmatic Agreement. In addition, Alternative 2 in the Final EIS proposed the relocation, not removal, of the volleyball court located within the Drakesbad Guest Ranch Historic District to a site east of the swimming pool, in order to maintain recreational opportunities in a manner compatible with cultural landscape resources.

Developments following the release of the Final EIS

Between October 22, 2010 and December 15, 2010 the NPS received 23 letters and 16 emails from individuals opposed to the proposed actions presented in the *Warner Valley Plan Comprehensive Site Plan* Final EIS. These written and electronic communications reiterated past concerns about the draining of Dream Lake Dam, and advocated not making any changes to Drakesbad Meadow and Drakesbad Guest Ranch facilities. Correspondence in favor of the preferred alternative was received from one organization and one agency. Each piece of correspondence was carefully analyzed to determine if any new issues were raised that would require additional consideration, or would require modification to the document.

On November 15, 2010 staff from the office of Congressman McClintock visited the upper Warner Valley area to become familiar with the proposal.

Neither any new issues or concerns, nor relevant new information, surfaced during the “no action” period that required any reassessment of impact determinations, nor warranted a change in any actions included in the Selected Alternative.

Federal, State & Tribal Consultation and Coordination

The following describes compliance with relevant federal and state laws, regulations, and executive orders. Comment letters referred to below from federal and state agencies and American Indian Tribes responding to the Draft EIS are published in the *Warner Valley Comprehensive Site Plan* Final EIS, Chapter 6, *Comments and Responses*. All project stipulations and mitigations included in any permits acquired for implementation of the Selected Alternative are incorporated by reference in this Record of Decision.

Consultation with American Indian Tribes:

The Park contacted the eight American Indian tribes and Rancherias affiliated with Lassen Volcanic National Park during the scoping phase associated with project planning and notification periods for release of the Draft and Final EIS documents. Annual consultation with the five tribes and Rancherias directly associated with the park (Greenville Rancheria of Maidu Indians, Mooretown Rancheria, the Pit River Tribe, Redding Rancheria, and Susanville Indian Rancheria) occurred in 2003 and 2004, concerning the Dream Lake Draft Management Plan/EIS. Annual consultation letters were also sent these five tribes and Rancherias in 2005 and 2006 describing the proposed Warner Valley Comprehensive Site Plan as one of the ongoing park projects.

Scoping notification letters and either hardcopy or CD versions of the draft and final documents were mailed to the Greenville Indian Rancheria of Maidu Indians, Pit River Tribal Council, Redding Rancheria, Berry Creek Rancheria, Enterprise Rancheria, Mooretown Rancheria, Shingle Springs Rancheria, and Susanville Indian Rancheria. The Greenville Rancheria responded during the Draft EIS comment period with a letter dated 11/2/2009 and requested that they be kept apprised of project progression and notified immediately if human remains are found during the course of work. This information was incorporated into the Cultural Resources mitigation

measures documented in the Final EIS. The Greenville Rancheria supported Alternative 2. No other responses were received from the tribes or Rancherias.

National Historic Preservation Act of 1966 (NHPA)

The Park submitted the Warner Valley Comprehensive Site Plan Draft EIS to the California SHPO for review on September 23, 2009. The Park indicated in its correspondence that the proposed action would adversely affect the Drakesbad Guest Ranch Historic District, which is listed on the National Register of Historic Places. Additional adverse effects on historic properties, including archaeological sites, could result from the proposal; however, detailed design information was insufficient for NPS to make a final determination of effect in accordance with §800.8 of the Advisory Council on Historic Preservation's regulations (36 CFR Part 800) and additional consultation was sought.

As a result, on July 8, 2010 the NPS drafted a Programmatic Agreement with the ACHP and the California SHPO which outlined a process which would be sufficient for mitigating adverse effects to the Drakesbad Guest Ranch Historic District pursuant to 36 CFR 800.14(b). This draft document was disclosed for public information in the Final EIS. On September 7, 2010, the Park received a response from the ACHP, stating that the Council had reviewed the project and declined to participate in further consultation to resolve adverse effects. After receipt of the ACHP response, the Park continued consultation with California SHPO, and on November 17, 2010, forwarded the revised Programmatic Agreement to SHPO for signature. The final agreement (see Attachment A) was executed with the California SHPO on December 20, 2010.

The Warner Valley Comprehensive Site Plan Programmatic Agreement specifically details NPS responsibilities for the Phase 1 components of the Selected Alternative, and also outlines the specific process whereby NPS will consult with the California SHPO on each additional undertaking to be implemented in subsequent phases. This agreement stipulates a process for the treatment of historic properties, including identification, evaluation, and, if necessary, mitigation of adverse effects (and addresses the recommendations for treatment in the 2005 CLR). Standard mitigation measures may be used in situations where an undertaking would adversely affect an historic property, including documentation, interpretation, materials salvage, and National Register re-evaluation. The California SHPO indicated that execution and implementation of the Programmatic Agreement would satisfy NPS' §106 responsibilities and obligations. Consultation with the California SHPO will be ongoing through-out project implementation (ACHP has indicated their continued involvement is not warranted).

Federal Water Pollution Control (Clean Water Act) of 1977, as amended (33 USC 1251 et seq.)

The Clean Water Act provides for restoration and maintenance of the physical, chemical and biological integrity of the nations' waters – subject work activities under the Selected Alternative include breaching Dream Lake Dam, filling ditches in Drakesbad Meadow, replacing culverts under roads to restore drainages, and removing and/or replacing fill material used as substrate for several trails. Per 11/9/09 letter from the U.S. Environmental Protection Agency Region IX (EPA), since these activities would affect waters of the United States, the NPS is required to

consult with the U.S. Army Corp of Engineers regarding compliance with §404 of the Clean Water Act. Per 10/25/10 letter, the EPA reiterated the need for the NPS to consult with the US Army Corp of Engineers to ensure that the proposed project complies with Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), pursuant to §404 (b)(1) of the Clean Water Act. Through this consultation, the NPS will demonstrate that no cumulative net loss of wetlands will occur as a result of project activities, and then determine whether a permit will be required.

The California Regional Water Quality Control Board, Central Valley Region (RWQCB) commented in a letter dated 9/2/09 and advised that a Clean Water Act §401 Water Quality Certification permit would be required for the removal of the Dream Lake Dam. The Park will consult with and timely obtain the permit from the RWQCB before proceeding. Additionally, the NPS will consult with the RWQCB regarding the need for a Construction Activities Storm Water General Permit and/or a Storm Water Pollution Prevention Plan for activities affecting waters and wetland areas.

Floodplain Management and Protection of Wetlands (CFR 44, part 9)

CFR 44, part 9 gives the Federal Emergency Management Agency (FEMA) responsibility to implement and enforce measures to avoid long and short term adverse impacts associated with the occupancy or modification of floodplains (Executive Order 11988) and wetlands (Executive Order 11990). FEMA on 9/3/09 requested that the NPS review current effective countywide Flood Insurance Rate Maps (FIRM) for the County of Plumas (Community Number 060244) to ensure that project activities will not increase base flood elevation levels and that new construction be elevated equal to or above base flood elevation levels. The NPS has reviewed the effective countywide FIRM maps for the County of Plumas and determined that there are no flood zones within the project area.

Federal Clean Air Act of 1970, as amended (PL 101-549)

Clean Air Act §118 requires all federal facilities to comply with existing federal, state and local air pollution control laws and regulations. Activities affecting air quality under the Selected Alternative include the use of heavy equipment to restore the Dream Lake Dam site, the relocation of a diesel powered generator to the Concessionaire Housing and Service Center site, and Warner Valley Road improvement work. In an 11/19/2010 the EPA recommended best practices that minimize exhaust emissions from construction equipment during project activities. BMPs, including those designed to reduce diesel particulate matter, are incorporated in the mitigation measures specified for project implementation.

The Northern Sierra Air Quality Management District (NSAQMD) indicated (email dated 11/3/09) that the NPS will need to obtain an Authority to Construct/Permit for the relocated diesel powered generator (if greater than 50 hp), planned for the service center area. In addition, the NPS will submit a dust control plan to the NSAQMD in the event that more than one acre of ground is disturbed at any one time during project implementation.

Endangered Species Act of 1973, as amended (16 USC 1531 et seq.)

The Endangered Species Act of 1973 requires all federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. The Park received information from USFWS (10/3/08) including listing of federally listed endangered and threatened species that may be present or affected by undertakings per the Warner Valley Comprehensive Site Plan. Site specific evaluation of USFWS information determined that there are no known occurrences of any federally listed or proposed species within the area of potential effect for any project actions. The project is unlikely to affect any federally listed or proposed species or have direct or indirect affect on critical habitat for such species. No further consultation with the USFWS is required for actions included under the Selected Alternative.

BASIS FOR DECISION

After careful consideration of each alternative and its foreseeable environmental impacts, the expressed purpose and need for federal action, and all public and agency comments received throughout the planning process, including responses to the *Warner Valley Comprehensive Site Plan* Draft EIS, Alternative 2 has been selected for implementation. This alternative best complies with NPS management policies, the legislated purposes of Lassen Volcanic National Park, and the statutory mission of the park to provide long-term protection of Lassen Volcanic National Park's resources and values while allowing for visitor use and visitor enjoyment.

Balancing management priorities in an area as rich in both natural and cultural resources as Warner Valley requires careful analysis and consideration. Long-time visitors to the Drakesbad Guest Ranch area are understandably committed to the Warner Valley area in its present state, and have expressed their dedication to maintaining its character through eloquent correspondence and during meetings with park staff regarding the project.

The NPS has evaluated the conflicts between natural and cultural resource preservation in upper Warner Valley and has determined that Alternative 2 provides the greatest balance in preserving key components of both the natural and cultural environment. The NPS acknowledges that removing of Dream Lake Dam and the drainage ditches within Drakesbad meadow will adversely affect the Drakesbad Guest Ranch Historic District, and has determined that the implementation of these actions will significantly benefit the hydrology and wetland resources of Warner Valley. Adverse effects to the historic district will be balanced by other components of the Selected Alternative, particularly those designed to enhance the districts' core building area. Moreover, the cultural landscape itself will remain intact, and all park visitors to the area will continue to experience a landscape that is evocative of the area's period of significance.

Therefore, the NPS has determined that Alternative 2 best achieves the expressed purpose and need for federal action in Warner Valley as presented for public consideration early in the scoping phase and clearly stated in the Draft and Final EIS.

Further, the NPS has determined that Alternative 2 fully addresses goals identified in the 2002 Lassen Volcanic National Park General Management Plan (GMP). The GMP states “...*a comprehensive site plan will be developed for Warner Valley to address natural and cultural resource conflicts, and to improve parking and circulation.*” and that “...*natural systems and processes are perpetuated. Cultural resources and their significance are documented and appropriate preservation standards are applied.*”

The EIS/Warner Valley Comprehensive Site Plan articulated the vision set forth in the GMP as follows: “...*the protection of the cultural landscape at Drakesbad and the historic and cultural resources in the Warner Valley, protection of the unique natural resources including sensitive wetlands ...and the provision of visitor access, facilities and programs, while protecting these resources.*”

Alternative 2 also incorporates recommendations from the 2005 Cultural Landscape Report (CLR) for Drakesbad Guest Ranch, which outlines a ‘preservation framework’ in part to guide detailed design work which would subsequently be developed under the Comprehensive Site Plan. The goals of the treatments recommended in the CLR are “...*first, to preserve and stabilize remaining historic features and second, to allow as necessary, compatible additions or alterations to the cultural landscape for contemporary use and visitor safety.*”

The Draft and Final EIS for the Warner Valley Comprehensive Site Plan also described and analyzed park management actions which could be taken to respond to specific needs within the Warner Valley area, which include:

- Natural resource concerns arising from the placement of existing facilities within sensitive wetland areas and the degradation of Drakesbad Meadow due to the presence of roads, trails, day use parking, drainage ditches, stock effluent, and non-native plant species.
- Cultural resource concerns arising from the need to protect a cultural/historical resource which is actively used by the public and currently contains non-historic infrastructure such as dumpsters, storage, and parking, along with utilities and concession employee housing which are inefficient, inadequate, and substandard.
- Safety and visitor experience issues arising from the alignment and surface material of the road, and the locations of the entrance fee station, Pacific Crest trailheads, parking, and bifurcated campground area.

An important function of the EIS/Comprehensive Site Plan process was to comprehensively address these issues in a manner that informed park stakeholders about the balancing necessary for most effectively improving visitor experience and protecting public health and safety, while also enhancing sustainability of park operations and preserving Warner Valley’s natural and cultural heritage.

The NPS has determined that the Selected Alternative will:

- Restore the largest amount (among the “action” alternatives) of degraded wetland and riparian habitat within Warner Valley by removing, replacing or altering human-made infrastructure and facilities from these habitats,
- Implement restoration projects designed to permanently restore and maintain the hydrology and ecology of the Warner Valley’s sensitive 4,000 year old fen,
- Protect water quality and the biologic and hydrologic integrity of Drakesbad Meadow,
- Improve visitor experience through enhancements of interpretive displays, trailhead areas, and improvements to the visual aesthetics within the historic district,
- Preserve and maintain the extent of, and historically open character of, Drakesbad Meadow as a contributing resource to the historic district,
- Enhance the integrity of the core building area of Drakesbad Guest Ranch Historic District by relocating non-contributing features outside of the District, and rehabilitating or repairing conforming facilities and structures retained within the District,
- Actively pursue treatment recommendations contained in the Cultural Landscape Report for Drakesbad Guest Ranch, including those pertaining to trail and road rehabilitation, parking layout and design, horse corral operations, maintenance of historic views, and streambank stabilization,
- Replace and consolidate inadequate and aging utilities and concession employee housing, and
- Promote public health and safety through improving the Warner Valley Road, trails and trailhead areas, and campgrounds and parking areas.

FINDINGS OF NO IMPAIRMENT

The NPS has determined that implementation of actions encompassed within the Selected Alternative will not impair Park resources and values. This conclusion is based on a thorough analysis of the environmental impacts presented in the Draft and Final EIS documents, with due consideration for the public comments received, the applicability of relevant scientific studies, and the professional judgment of the decision-maker guided by the direction of the 2006 NPS Management Policies.

In most cases, actions identified within the Selective Alternative will exert minor to moderate, long-term, beneficial effects upon most park resources and values, including vegetation, wetlands, hydrology, geologic resources, transportation, and public health and safety. In those instances where the Selected Alternative does have environmental consequences, most of these are

associated with construction and are short-term in nature. Mitigation measures have been developed to minimize these construction-related, short-term impacts.

The Selected Alternative may have long-term minor impacts on archaeological sites, and will have a long-term major adverse effect on the Drakesbad Guest Ranch Historic District. The Programmatic Agreement specifically developed for this undertaking with the California SHPO contains measures designed to mitigate and minimize these effects. Some project activities will also result in long-term beneficial effects to cultural and archeological resources. Cumulatively, the overall effect of undertaking the Selected Alternative does not constitute an impairment because the broader cultural significance of the Drakesbad Guest Ranch's contribution to regional conservation and tourism development remains and will be accessible to present and future generations of park visitors.

While the Selected Alternative does result in adverse effects to certain cultural features, the NPS has deemed these consequences to be acceptable because removal of Dream Lake Dam and restoring the former reservoir site, and the area surrounding the historic drainage ditches within Drakesbad Meadow, will result in substantial benefits to natural hydrologic processes and wetland resources in Warner Valley. Moreover, while some effects of dam removal and ditch restoration are adverse, these effects do not rise to the level of impairment because the broader cultural significance of the area is nevertheless retained, and due to the fact that no cultural resources specific to the Park's purpose would be affected. Finally, visitor enjoyment of the area is not curtailed, rather visitor experience is transformed, with the human-altered landscape replaced with natural conditions evocative of the scene that historically existed during earlier settlement.

CONCLUSION

Alternative 2 provides the most comprehensive, long-term, efficacious strategy among all the alternatives considered for meeting the National Park Service's purposes, goals, and criteria for managing Lassen Volcanic National Park and for meeting national environmental policy goals. Implementing Alternative 2 protects the long-term ecological health of the upper Warner Valley area and assists the Park in the restoration of native ecosystems and resumption of natural processes. The selected course of action allows the National Park Service to balance the enhancement park cultural and natural resources, and fosters enjoyment of the entire Warner Valley area by all park visitors.

As documented in the Final EIS, the following key factors support implementation of the Selected Alternative:

- The environmental impact analyses demonstrate that the Selected Alternative will have short-term impacts and some adverse effects, but will ultimately secure long-term benefits for Lassen Volcanic National Park's resources;
- The Selected Alternative has a high likelihood of achieving the expressed purpose, need, goals and objectives as articulated in the Draft and Final EIS;

- The Selected Alternative fulfills the vision for restoring park resources as envisioned in the 2002 General Management Plan, and will maintain a natural condition as far as practicable as called for in the August 9, 1916 Act of Congress establishing the Park;
- The Selected Alternative is fully compliant with NPS's mission and policies, and other pertinent laws and regulations, and in particular fosters the preservation of the park in a state of nature as set forth in the 1916 Act;
- The Selected Alternative specifies all feasible and prudent measures to minimize environmental harm;
- The Selected Alternative was crafted through nearly 10 years of public involvement and agency coordination, and is a reasonable and rational course of action supported by park partners, researchers, and local communities; and,
- Undertaking the Selected Alternative will not impair park resources and values.

Therefore, I approve the Warner Valley Comprehensive Site Plan. Component projects will occur in phases, with some work beginning as soon as practicable. All aspects of the Selected Alternative will be implemented under the direction of the Superintendent, Lassen Volcanic National Park.



Christine S. Lehnertz, Regional Director
Pacific West Region, National Park Service

3/11/11

Date

ATTACHMENT A

Warner Valley Comprehensive Site Plan Programmatic Agreement

PROGRAMMATIC AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE, LASSEN VOLCANIC NATIONAL PARK
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
REGARDING
THE WARNER VALLEY COMPREHENSIVE SITE PLAN IN
LASSEN VOLCANIC NATIONAL PARK, LASSEN COUNTY, CALIFORNIA

WHEREAS, Warner Valley (see map, Appendix A) is managed by the National Park Service (NPS) as part of Lassen Volcanic National Park (Park); and

WHEREAS, the Superintendent is the responsible agency official for purposes of compliance with Section 106 of the National Historical Preservation Act as defined in 36 CFR 800.2 and is accountable to the Regional Director for full performance of Section 106 compliance through the NPS Management Policies, and procedures for performance and program evaluation; and

WHEREAS, the Park proposes to implement a Comprehensive Site Plan for Warner Valley (the Undertaking), to address natural and cultural resource issues, enhance educational, interpretive and recreational opportunities; improve the design and accessibility of the Warner Valley Campground; improve circulation and parking within Warner Valley; and address the appropriateness and adequacy of existing infrastructure, such as utilities and concession employee housing (see Appendix A for vicinity map); and

WHEREAS, a Preferred Alternative for the Project was identified in the August 2009 Warner Valley Comprehensive Site Plan Draft Environmental Impact Statement (DEIS) based on the analysis of environmental consequences; and

WHEREAS, the Project will be implemented in phases as funding becomes available and may take numerous years to complete; and

WHEREAS, the Park has consulted with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. § 470f); and

WHEREAS, the Park and SHPO have agreed pursuant to 36 CFR 800.4(b)(2) and 800.14(b), that NPS compliance with Section 106 for the Undertaking will be evidenced by execution and implementation of this Programmatic Agreement (PA); and

WHEREAS, the Park has determined that the Area of Potential Effect (APE) for the Undertaking, as defined in 36 CFR Part 800.16(d) of the Advisory Council on Historic Preservation regulations, is the project area as defined in the Warner Valley

Comprehensive Site Plan Draft Environmental Impact Statement (see APE map, Appendix B); and

WHEREAS, Phase 1 of the Undertaking is planned to be implemented in the next 1 – 2 years, in which the Park will rebuild the access road to the Drakesbad water tank, remove causeway material in meadow and construct a boardwalk, fill in historic drainage ditches in the meadow, and remove Dream Lake Dam resulting in the drainage of Dream Lake, and restore the stream to its natural channel (see Appendix C for detailed description); and

WHEREAS, the APE for this Phase includes a portion of the Drakesbad Guest Ranch Historic District (see map, Appendix D); and

WHEREAS, the Park has conducted cultural resource documentation at Drakesbad Guest Ranch Historic District including a National Register Nomination, a Cultural Landscape Report (CLR), a draft Historic Structures Report (HSR) and an Archeological Overview and Assessment that included a complete survey of Warner Valley (see Appendix E for a list of archeological sites within the APE); and

WHEREAS, Dream Lake Dam, Dream Lake, the meadow and associated structures (ditches) are contributing features to the Drakesbad Guest Ranch Historic District, and the Drakesbad water tank and causeway are not contributors; and

WHEREAS, the Park has determined that Phase 1 of the Undertaking will have an adverse effect on the Drakesbad Guest Ranch Historic District, diminishing its integrity as a historic district (36 CFR 800.5(2)(i)); and

WHEREAS, the Park has determined that Phase 1 of the Undertaking will have an adverse effect on archeological resources within Warner Valley; and

WHEREAS, for all subsequent phases of the Undertaking (identified in Appendix F), the Park will follow the standard Section 106 process as outlined in 36 CFR 800 or the 2008 NPS Servicewide Programmatic Agreement (Servicewide PA), if the activity meets the criteria outlined in the Servicewide PA; and,

WHEREAS, the Park, in accordance with Section 800.2(d)(3), used the agency's procedures for public involvement under the National Environmental Policy Act (NEPA) to inform the public of the undertaking and solicit their views on historic properties and has distributed the draft Environmental Impact Statement (DEIS) to appropriate state, tribal and federal agencies and the public; and,

WHEREAS, the Park has invited the Advisory Council on Historic Preservation (Council) to participate in the consultation to resolve adverse effects, pursuant to 36 CFR part 800, and the Council has elected not to participate in the consultation at this time; and,

WHEREAS, the Park has consulted with the Pit River Tribe, Susanville Indian Rancheria, Greenville Indian Rancheria of Maidu Indians and Redding Rancheria to inform them of the project and determine their level of interest in the project. None of these groups have chosen to be parties to this PA; however, the Greenville Rancheria requested immediate notification if human remains are found during the project and regular project updates; and

WHEREAS, pursuant to 36 CFR Section 800.13, the NPS and the California SHPO have developed procedures in this PA to ensure that the identification and evaluation of historic properties, assessment of effects and development of treatment and mitigation plans for unforeseen effects to previously identified historic properties and/or historic properties discovered during implementation of the Undertaking are properly coordinated with all phases of the design and construction of the Undertaking; and,

WHEREAS, the definitions of 36 CFR 800.16 are applicable throughout this Agreement;

NOW, THEREFORE, the NPS and the California SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account foreseen and unforeseen future effects to historic properties.

STIPULATIONS

The NPS shall ensure that the following stipulations are carried out prior to taking any action that could have an effect on properties listed on or eligible for the National Register:

I. Project Scheduling

- A. The schedule for Project implementation will be developed as funding becomes available and, once developed, will be coordinated with the SHPO. As a result, the stipulations in this PA may be carried out over a period of several years.
- B. Appendix C contains a description of the proposed Phase 1 projects, and Appendix F contains a list of all other proposed Phases and projects under the preferred alternative in the Warner Valley Comprehensive Site Plan.

II. Area of Potential Effect

Should revision of the APE become necessary, NPS shall notify the California SHPO, and NPS shall consult with the SHPO for concurrence on the sufficiency of the APE. If the SHPO has not responded within 30 days of receipt of the revision, NPS may proceed by following the stipulations for evaluation and treatment of historic properties within the APE.

III. Mitigation for Phase I

- (1) Update the CLR and the National Register nomination to reflect changes to the Historic District within 12 months of the dam removal. The updated CLR and nomination, together with the HSR (in draft), will be submitted to the SHPO for review and concurrence. Updates to these documents will include treatment recommendations for remaining contributing features in the district impacted by the Phase I projects. With SHPO concurrence, the CLR and HSR will become the framework for managing the remaining contributing features within the district.
- (2) HAER/HALS documentation for the Dream Lake Dam and Dream Lake will be completed prior to removal of the dam at a level stipulated by the NPS Regional HALS/HABS/HAER Coordinator. HAER/HALS documentation for the Drakesbad meadow and all associated structures, including historic drainage ditches, will be completed prior to the meadow restoration project implementation at a level stipulated by the NPS Regional HALS/HABS/HAER Coordinator. All HABS/HAER/HALS documentation completed for this project will be submitted to appropriate federal, state, and local repositories.
- (3) Historic documentation will be incorporated into the Park's interpretive media and materials on the historic district prepared in consultation with qualified cultural resource staff.
- (4) Existing interpretive panels in the historic district will be updated to reflect new information discovered during the HAER/HALS process. New panels will be installed at the site of removed contributors to the district to assist visitors in understanding land use history in the area. Any installation associated with these interpretive materials will be provided to the SHPO for review and comment. This effort will be completed within two years following the removal of Dream Lake Dam and Dream Lake and the meadow restoration.
- (5) A qualified archeologist, who meets the Professional Qualification Standards as listed in 36 CFR 61, will monitor construction activities, especially those that have a potential to affect archeological resources. If previously unknown archeological resources are encountered during construction, work will be suspended and the procedures outlined in Stipulation IV of this agreement will be followed.
- (6) In accordance with 36 CFR 800.4(b)(2), the Park will conduct determinations of eligibility according to the criteria of the National Register for archeological sites within the APE (see Appendix E) within 3 years of project implementation. An archeologist, who meets the Professional Qualification Standards, as listed in 36 CFR 61, will conduct these determinations. In accordance with 36 CFR 800.1(c) the park may conduct or authorize some Phase 1 activities before completing determinations of eligibility for archeological sites within the APE, provided that

such actions do not restrict the subsequent consideration to avoid, minimize, or mitigate the undertaking's adverse effects on historic properties.

- (7) Within four years of the signing of the ROD for the Plan, a qualified oral historian, who meets the Professional Qualification Standards as listed in 36 CFR 61, in consultation with the NPS Regional Historian will conduct oral histories with Warner Valley and Drakesbad Guest Ranch stakeholders to document history of use in the project area. The resulting documentation will be shared with the SHPO and placed in appropriate regional repositories.

IV. Unanticipated Discoveries

- A. If previously unidentified historic properties are identified during construction of Phase 1, then project implementation will cease in that area and the SHPO notified. If appropriate, archeological treatment plans will be developed in consultation with SHPO. The plans will describe protection measures for affected archeological features, relevant research questions to be answered, methods for data recovery, monitoring during construction, responsibilities and coordination, and the interpretation and curation of recovered materials.
- B. NPS, in consultation with the SHPO, shall evaluate the historic properties to determine if they meet the National Register criteria and shall request SHPO concurrence. The SHPO has 30 days to review and respond to the request (36 CFR 800.3(C)(4)).
- C. In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during project implementation, work on the project will be suspended until their appropriate disposition is determined under the provisions of NAGPRA and other appropriate federal and state laws and regulations.

V. Dispute Resolution

- A. Should either Signatory Party to this PA object at any time to the manner in which the terms of this PA are implemented, or to any documentation prepared per and subject to the terms of this PA, the parties will immediately proceed to consult for no more than 30 days thereafter to resolve the objection.
- B. If at the end of the 30-day consultation period, the Signatory Parties determine that the objection cannot be resolved through such consultation, the NPS will forward all documentation relevant to the objection to the Advisory Council on Historic Preservation per 36 CFR §800.2(b)(2). Any comments provided by the Council within 30 calendar days after its receipt of all relevant documentation, and all other comments received, will be taken into account by NPS in reaching a final decision regarding the objection.

- C. NPS will notify the California SHPO in writing of its final decision within fifteen (15) calendar days after it is rendered. NPS shall have the authority to make the final decision resolving the objection.
- D. NPS may proceed with the portions of Phase I that are not the subject of the dispute.

VI. Amendment and Termination

- A. Either Signatory Party to this agreement may request that it be amended, whereupon the parties will consult to reach a consensus on the proposed amendment. Where no consensus can be reached, the agreement will not be amended.
- B. Either Signatory Party to this agreement may terminate it by providing thirty (30) days notice to the other party, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.
- C. In the event of termination, the NPS shall comply with 36 CFR Part 800, or the Servicewide Programmatic Agreement (2008) with regard to all remaining actions under this agreement.

VII. Documentation and Reporting Requirements

- A. The NPS will prepare a management summary and report for Phase I and provide it to the SHPO as part of the park's annual report on Section 106 activity under the Servicewide Programmatic Agreement.
- B. All archeological reports must meet the Secretary of the Interior's "Standards and Guidelines for Archeology and Historic Preservation" and the standards for fieldwork and report writing for the state of California.
- C. The NPS and the SHPO will ensure that site location information will be made available only to qualified persons in accordance with state and federal guidelines as defined in 36 CFR Part 800.11(c).

VIII. Duration of this Agreement

- A. The duration of this agreement shall be five years from the date of final execution.
- B. Six months before the date on which the agreement will expire, the NPS shall notify the California SHPO of the impending expiration of the agreement. If the parties so choose, the agreement shall be extended for five additional years.

- C. If the California SHPO does not agree, the NPS shall comply with 36 CFR Part 800 or the applicable Servicewide Programmatic Agreement with regard to all remaining actions under this agreement.

X. Anti-Deficiency Act

All requirements set forth in the PA requiring expenditure of NPS funds are expressly subject to the availability of appropriations and the requirements of the Anti-Deficiency Act (31 U.S.C. §1341). No obligation undertaken by NPS under the terms of this PA shall require or be interpreted to require a commitment to expend funds not appropriated for a particular purpose. If NPS cannot perform any obligation set forth in this PA because of unavailability of funds, that obligation must be renegotiated among NPS and the SHPO.

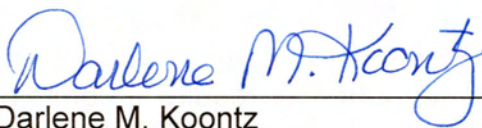
XI. Effective Date

This PA shall take effect on the latest date upon signature by the California SHPO.

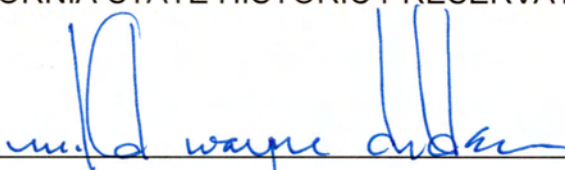
Execution of this PA by NPS and the SHPO and subsequent filing of the executed document and related documentation with the Advisory Council on Historic Preservation, pursuant to 36 CFR 800.6(b)(1)(iv), and subsequent implementation of its terms, evidence that NPS has afforded the Council a reasonable opportunity to comment on the undertaking and its effects on historic properties, that NPS has taken into account the effects of the undertaking on historic properties and has satisfied its responsibilities under section 106 of the NHPA and applicable implementing regulations for all aspects of the undertaking.

SIGNATORY PARTIES

NATIONAL PARK SERVICE, LASSEN VOLCANIC NATIONAL PARK

By:  Date: 11/17/10
Darlene M. Koontz
Superintendent

CALIFORNIA STATE HISTORIC PRESERVATION OFFICE

By:  Date: 20 DEC 2010
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

APPENDIX A

Park & Warner Valley Vicinity Map

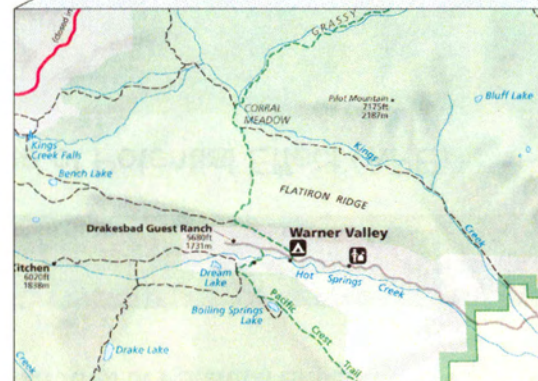
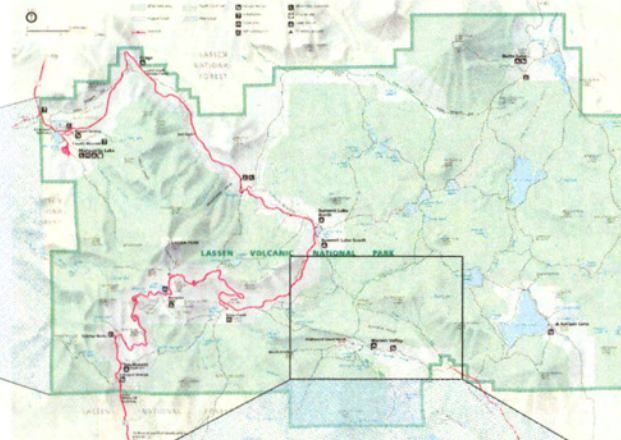
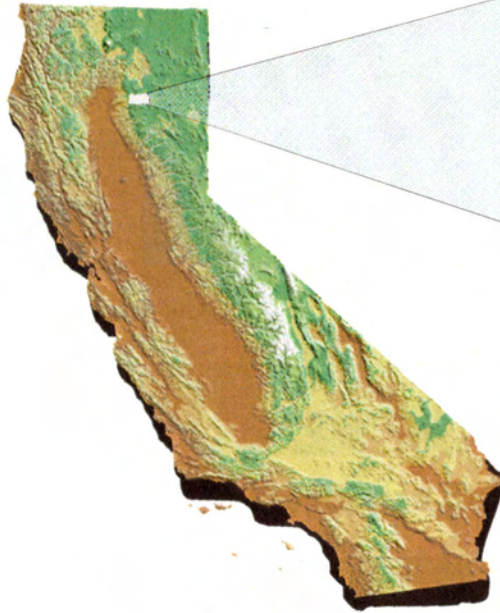
Lassen Volcanic

National Park Service
U.S. Department of the Interior



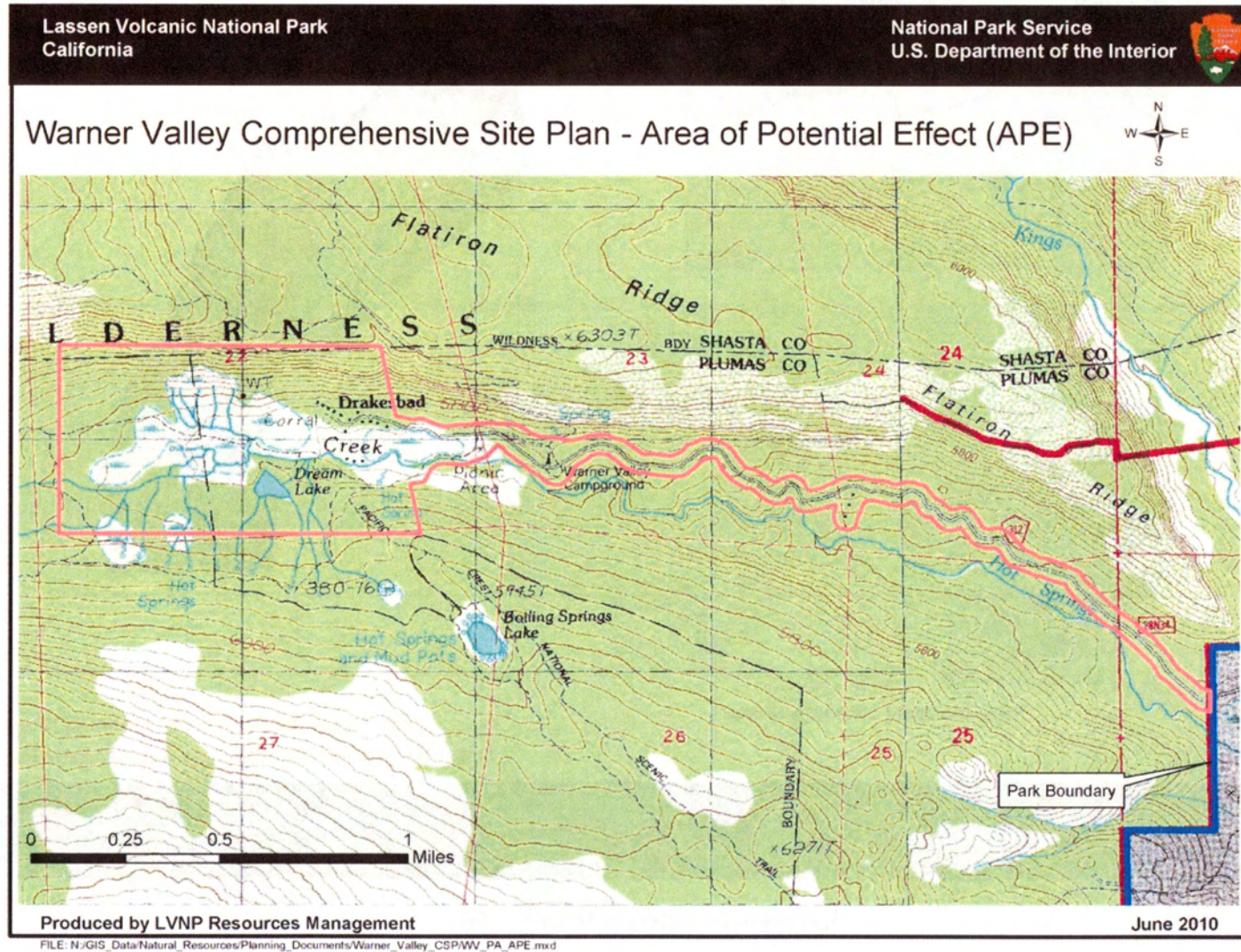
Warner Valley Comprehensive Site Plan Final Environmental Impact Statement

Lassen Volcanic National Park



APPENDIX B

Warner Valley Comprehensive Site Plan Area of Potential Effect



APPENDIX C

Detailed Description of Warner Valley Comprehensive Site Plan Phase I Projects

1. Drain Dream Lake, remove Dream Lake Dam and restore the natural channel

Dream Lake dam would be breached in sequential steps in the late fall when flows are lowest. A small notch would be created by removing several layers of sand bags from one of the over wash gullies that was filled using sand bags during a recent overflow event. The lower sandbags would remain to prevent uncontrolled washout. The reservoir water level would be allowed to drop to the level of the remaining sand bags and the process will be repeated several times over a 2-3 week period. Several downstream beaver dams will help catch any escaping sediment before it reaches Hot Spring Creek, and if further erosion assessments indicate a high potential for sediment transport beyond these natural beaver dams, sediment collection fencing will be installed across Hot Springs Creek.

During the subsequent winter, two pieces of machinery (within weight specifications that will allow them to cross Hot Springs Creek using the existing bridge) would be driven over the winter snow pack across the meadow, across the bridge and up the slope to the dam where they will be staged. By breaching the dam in late fall this will allow the area to drain and the dam material to dry out over the winter. In late summer/early fall the following year, the machinery would then be used to excavate and remove all remaining dam material back into the original borrow pit where it was removed from in 1931. There are two smaller borrow pits adjacent to the main pit. These were probably excavated the two times the dam failed. Most soil would only need to be moved 200 to 300 feet, with the maximum being 600 feet. All trees and vegetation will need to be removed from the dam, the push path to the borrow pits and from the three borrow sites.

If a new archeological site is found adjacent to or underneath the reservoir, or a known site has a larger extent than expected, an updated site record will be prepared and submitted to the SHPO for concurrence on a determination of eligibility before it may be covered with a geotextile fabric and then capped with material from the dam as a means of protecting the site.

The area where the dam currently sits and the reservoir bottom are naturally wet areas and some natural re-colonization by pioneer species will complement the revegetation efforts of park staff. Plants grown from seed or cuttings collected from the immediate vicinity will be planted into these disturbed areas (including the denuded area from the dam to the borrow pit and the borrow pit itself). Herbaceous plants will consist of plugs with root wads approximately 7 inches long by 1 inch in diameter. They will be planted using hand tools with 12" spacing between plugs. Bare ground between plugs will be broadcast seeded by hand with a native grass and sedge seed mix created from local sources. Willow shrub stems will be cut upstream of the former reservoir, bundled, and planted along the stream bank where it cuts through the reservoir bottom and the dam site.

This revegetation work would start with broadcast seeding and willow planting almost immediately. Plugs would be installed the following fall and then planting might continue for several summers. There is a potential for weeds to establish themselves so for the first couple years the site will be monitored and weeds controlled using techniques in the Park's Weed Management Plan EA. The erosive force of the stream is anticipated to be minor given the low gradient at the site though flow volumes should be enough to develop new channels through the reservoir bottom.

The restoration plan will be flexible so it can adjust to either high flow events or a series of drought years.

2. Drakesbad Meadow Restoration - Fill in Ditches in Meadow

Historic ditches built to drain Drakesbad Meadow will be filled in order to restore the original hydrologic integrity to this wetland system. These ditches were primarily hand-dug and it is reasonable to assume that some of the removed material is still piled on the ditch bank. The lower 2/3 of the ditch will be filled

with the fill material from the causeway. This material will probably be delivered by trail cart or other small machine, which would cross the meadow on sheets of plywood. Then the ditch bank piles, which contain original meadow soil, will be shoveled by hand back into the ditch until the original meadow surface is reached and the natural contour is restored to ditch and bank. In most cases, this should result in disturbing an area no greater than 3 feet on either side of the existing ditch. Impacts could extend to 8 feet, but in these situations it will be only moving soil which has been previously disturbed. The area of disturbance will usually be 8 feet wide by the length of the ditch, which varies throughout the fen portion of the meadow.

All fill material used in the ditch restoration will be derived locally, in order to avoid introducing weeds. Plants grown from seed collected from the immediate vicinity will be planted into the disturbed areas. These plants will consist of plugs with root wads approximately 7 inches long by 1 inch in diameter. They will be planted using hand tools with 12" spacing between plugs. Bare ground between plugs will be broadcast seeded by hand with a native grass and sedge seed mix created from sources within the meadow. Weed infestation should be minimal but the disturbed areas will be monitored and any weeds will be promptly mitigated.

A meadow management/ ditch restoration implementation plan will be developed that could indicate a different fill material or a different species mix for restoration. These specifics will not alter the potential effect on cultural resources.

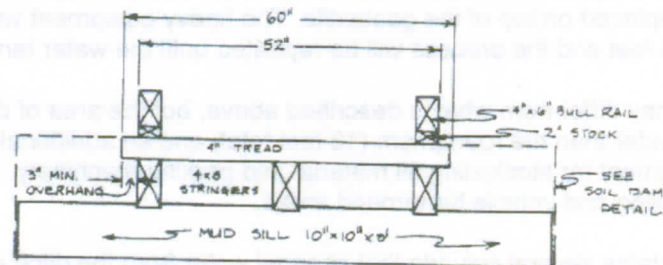
3. Remove causeway material (non-contributing) in meadow and build boardwalk

The causeway that is to be removed is currently 8-9 feet wide, 2-3 feet high and 140 feet long. It obstructs the natural flow of surface water through the meadow and is an eyesore. Two small pieces of equipment would be utilized to remove this material, one for excavating and one for hauling, each with tracks 3 to 4 feet wide so they can pass one another on the causeway. One will be similar to a mini excavator; the other will be a large-sized trail cart. Starting at the end of the causeway furthest from the Drakesbad stable, the existing causeway material will be dug up by the excavator and loaded into the dump vehicle. Material removed from the causeway will be stockpiled off site and a portion of it may be used to fill in ditches elsewhere in the meadow (meadow restoration above). The causeway material will be removed to the point where the darker meadow soil appears. The machinery should not need to leave the causeway. The plan is not to drive across the former causeway alignment once it is removed, but a few trips by a small light trail cart may be needed to construct the boardwalk.

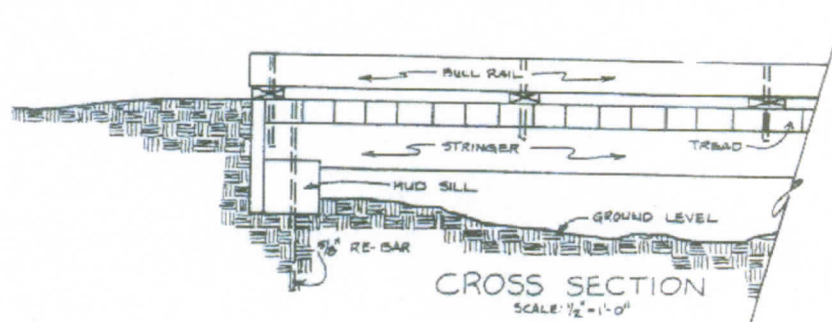
After the first 10-20 feet of causeway have been removed, the lumber to construct the boardwalk will be delivered to the site. The new boardwalk will be designed to support the weight of stock. The typical design of a walkway supported on vertical posts is therefore not practical. The posts would need to be set in concrete holes that descend 5 to 10 feet into the meadow soil. The Park is proposing a boardwalk that is supported on sill plates which sit (float) on the meadow surface (see typical equestrian puncheon diagram below). These would be rot-resistant or pressure-treated timbers approximately 10" wide, 10" thick and about 6' long. Engineering drawings are needed for exact spacing; however, initial design estimates are that a sill board would be needed at a spacing of every 3 to 6 feet. This design would not require any post hole digging. Some causeway fill might be left in the 10" strip beneath each sill plate, as it would slow the sinking of the sill plates into the meadow. Water will be able to pass under the boardwalk, and some plants would eventually establish themselves.

In wet meadows, the freeze-thaw processes should reduce compaction naturally, so that mechanical de-compaction below the original causeway surface would not be necessary. Re-vegetation of the meadow will be limited to areas disturbed by causeway removal and not covered by the new boardwalk. This will probably be a 1 to 3 foot-wide strip on either side of the new boardwalk. Plants grown from seed collected from the immediate vicinity will be planted into these disturbed areas. These plants will consist of plugs with root wads approximately 7 inches long by 1 inch in diameter. They will be planted using hand tools with 12" spacing between plugs. Bare ground between plugs will be broadcast seeded by hand with a native grass and sedge seed mix created from sources within the meadow.

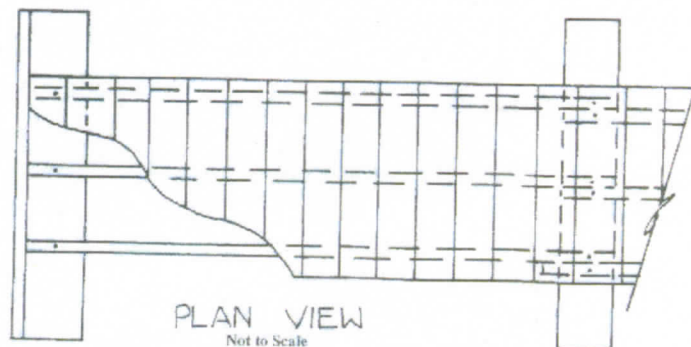
TYPICAL EQUESTRIAN PUNCHEON



END VIEW
NOT TO SCALE



CROSS SECTION
SCALE: 1/2" = 1'-0"



PLAN VIEW
Not to Scale
Figure 12.2

4. Rebuild the access road to Drakesbad water tank (non-contributing)

The access road to the water tank at Drakesbad is currently 300 feet long and 12 feet wide. It has a gravel surface atop a prism of fill material that obstructs the natural flow of water from numerous springs on the slope above the road. A ditch on the uphill side of the road carries surface water emerging from these springs away from the road surface.

Probably starting at the lower end of the road near the cabins, the road prism material will be removed by heavy equipment for approximately 20 feet. A permeable geotextile membrane will be rolled out on the excavated surface. The exact material has not been selected, but it will be about ½ inch thick. The prism material will then be replaced on top of the geotextile. The heavy equipment will then remove the road prism from the next 20 feet and the process will be repeated until the water tank is reached.

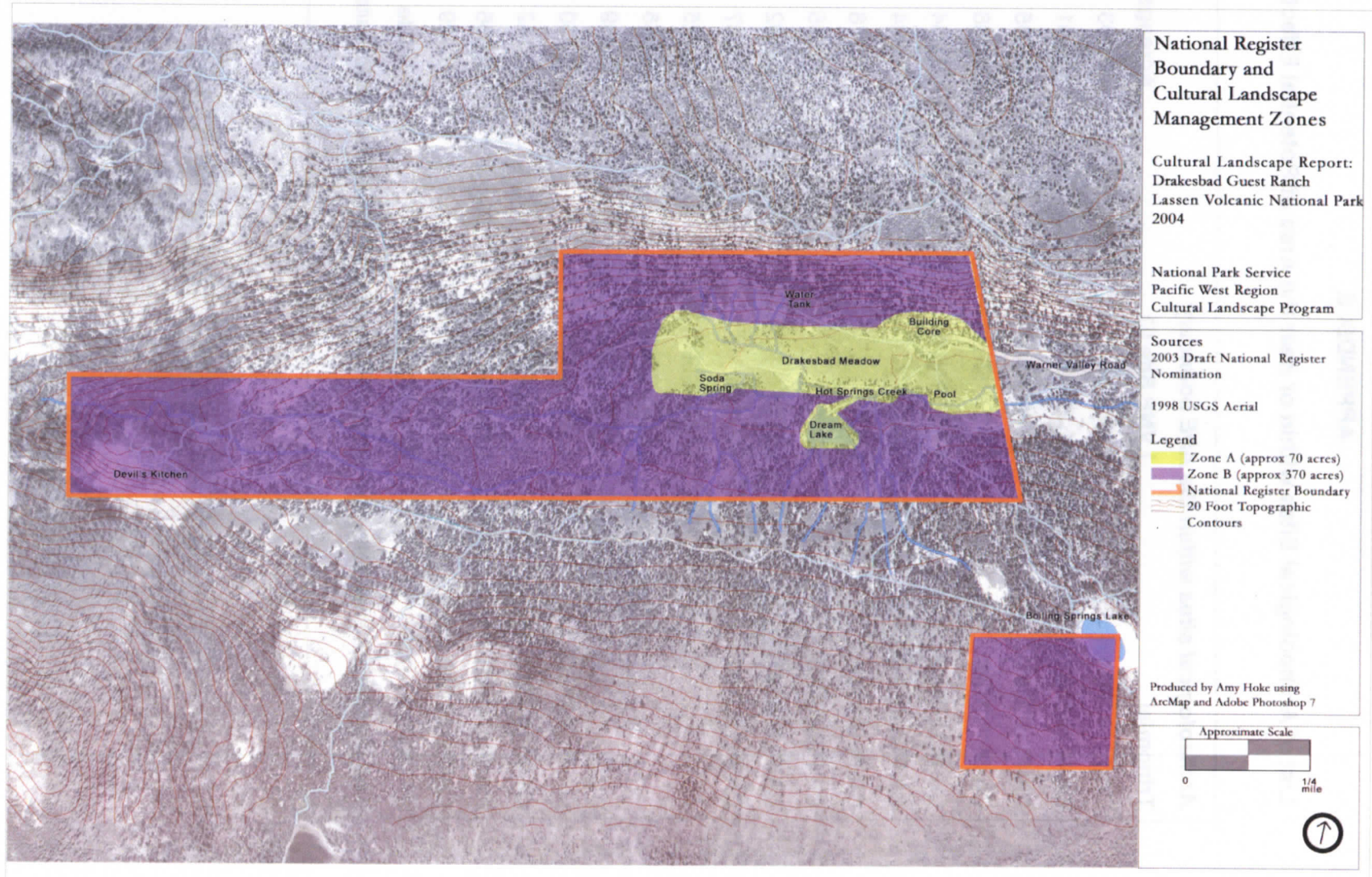
The exact sequence may differ from what is described above, but the area of disturbance will be approximately 2 feet wider than the road prism (16 feet total) and an additional area at both the top and bottom of the road segment for stockpiling fill material and parking machinery. Previously disturbed areas will be used for stockpiling and vehicle turnaround areas.

The road currently contains several culverts that channel water from the ditch above the road to the slope below the road; these are likely to be retained. They will most likely be removed and then reinstalled at the same level as the permeable geotextile but this detail may change in the final design. When the project is complete, a fresh layer of gravel will be laid on top. The culverts are desirable where spring flows exceed the geotextile's ability to transfer water.

APPENDIX D

Drakesbad Guest Ranch Historic District

(Management Zone A comprises the primary developed area of the Historic District; Zone B comprises the remainder of the District)



APPENDIX E

List of Archeological Sites within or near the Area of Potential Effect (APE)

<i>Archeological sites within the APE boundary</i>		
Trinomial	LVNP Site ID	Acreage
CA-PLU-0969/H	LAVO-88-1	6.993
CA-PLU-0101	Plu-D12	0.091
CA-PLU-0851	LAVO-87-3	0.085
CA-PLU-0146	LP-25, SFSC-Plu-3	1.088
CA-PLU-0108	SFSC-Plu-4	0.084
CA-PLU-0143/H	LP-19	0.084
CA-PLU-0144	LP-20	0.218
CA-PLU-0142	LP-18	0.085
CA-PLU-0141	LP-17	0.192
CA-PLU-0100	Plu-D11	0.087
	LAVO-2000-24	0.025
	LAVO-2000-23	0.065
	LAVO-2000-20	0.209
CA-PLU-2704	LAVO-2000-12	0.150
CA-PLU-2690	LAVO-2000-06	0.132
CA-PLU-2689	LAVO-2000-05	0.066
CA-PLU-2688	LAVO-2000-04	0.429
IF-LAVO-87-03	IF-LAVO-87-3	isolate
Two unrecorded sites also exist within APE, south of the CA-PLU-0969/H site		

APPENDIX F

Warner Valley Comprehensive Site Plan Future Proposed Undertakings

This list is adapted from the list of actions in the Preferred Alternative in the Warner Valley Comprehensive Site Plan Draft Environmental Impact Statement. These actions are proposed for the future as funding becomes available. NPS will follow the standard Section 106 process as outlined in 36 CFR 800 or the 2008 NPS Servicewide Programmatic Agreement for these actions.

ENTRY TO WARNER VALLEY

Fee Station

- Move fee station to west of ranger station, at existing pull-out
- Fill area to raise grade
- Provide three parking spaces defined with rock borders
- Remove three trees at edge of road to improve visibility

Access Road to Water Tank at Ranger Station

- Remove the existing road from the drainage and discontinue use
- Construct new service road to the water tank on the ridge to the east of the existing road with dimensions of 8 feet by 130 feet with 1 to 2 foot cuts as needed for a rock road base
- Restore existing roadbed by reseeded with native plants
- Remove two small diameter white fir trees and standing dead snags

WARNER VALLEY ROAD AND GENERAL ROAD MAINTENANCE

Warner Valley Road

- Replace undersized or failing culverts and follow actions outlined in the Warner Valley Road culvert inventory, which recommends adding (6) new culverts, replacing (16) existing culverts and repairing (9) culverts. No action at the curve one-half mile west of ranger station
- Application of environmentally-approved dust suppressants in high use visitor areas (e.g. campground/day use parking zone, along some road sections, in front of the ranger station, and near Drakesbad Guest Ranch lodge/dining hall)
- Maintain two-way traffic on the existing road
- Install uniform aggregate to reduce road dust and improve stability
- Install rock headwalls [at culverts]

CAMPGROUND, TRAIL, AND DAY USE PARKING

Day Use Parking

- Eliminate existing day use parking, toilet and picnic tables and restore area to a natural meadow / wetland
- Create new day use parking area in lower campground consisting of 20 gravel parking spaces
- Retain three picnic tables, water faucet and double vault toilet at the lower campground
- Remove three trees
- No earthwork required at new parking area

Hiking Trails

- Provide uninterrupted Pacific Crest Trail connection with a new trail down slope from Warner Valley Road paralleling Hot Springs Creek, between new day use parking / old lower campground and old day use parking / trailhead at the meadow
- Install new trail by clearing brush; no tree removal
- Construct boardwalks over wetland areas

Campgrounds

- Close lower campground and convert to day use parking
- Relocate five campsites from lower campground to upper campground and designate one as an ADA-accessible site

- Add new double vault toilet across from campsite #17
- Expand loop road and close center loop
- Designate campsite #19 at entrance for camp host.
- Provide septic holding tank for camp host
- Designate parking areas with buried boulders or logs and restore areas impacted by informal parking

DRAKESBAD GUEST RANCH

Concessioner Housing and Service Center

Construct new service center outside the historic district and relocate concessioner staff housing:

- Eight double occupancy tent cabins to accommodate 16 people
- Bathhouse with apartment unit for cook
- Four single-occupancy bathrooms with showers (one ADA compliant facility), and kitchen unit
- Install hybrid power system
- Create short loop road for vehicle access
- Remove three trees during construction
- Create 13 employee parking spaces

Small Scale Features

The following features are currently located in the historic district at Drakesbad Guest Ranch:

- Relocate dumpster to new service center
- Relocate generator and enclose in a building at the service center
- Relocate and screen propane tanks and site storage at the new service center
- Construct new storage and delivery building in the service center
- Restore areas where existing small scale features are located

Bathhouse and Pool

Bathhouse renovation design would incorporate:

- ADA-accessible women's restroom (two toilets, one sink)
- ADA-accessible men's restroom (one toilet, one urinal, one sink)
- One accessible shower
- One bathtub/shower
- Six standard showers
- One massage room
- Remove four changing stalls
- Storage closet

Filter house (noncontributing structure in the historic district) is located on the pool deck. Concrete coping and deck at pool are not in keeping with historic character

Additional modifications:

- Relocate filter house to a filter/pump room in the bathhouse
- Install photovoltaics to south side of roof
- Replace coping and deck with historically compatible material such as stone paving
- Stabilize eroding stream banks with native riparian plant species

Circulation at Drakesbad Guest Ranch Parking

- Relocate parking to designated areas
- Designate parking with rock barriers
- Limit overnight guest parking to two cars per unit
- Designate short-term and long-term parking
- Close loop road at the Mission 66 duplexes
- Restore impacted areas

Pedestrian Circulation at Drakesbad Guest Ranch

Access Road/Path to Pool and Bathhouse

- Replace existing road/path to pool and bathhouse with a narrower profile pathway approximately 7 feet
- Replace base of path with permeable base rock
- Replace surface of path with grass cell pavers with native grasses

LAND USE

Corral

- Expand upper corral into existing 'boneyard' with a footprint of 24 feet by 40 feet and historically-compatible design
- Maintain tack shed in existing location
- Maintain lower corral as a part of cultural landscape, but no longer use
- Add bio-filtration system to southern edge of corral to mitigate effluent

- Enclose seed-free feed in a new storage structure at existing propane tank area

Volleyball Court

- Remove sand court and restore disturbed area with native plants

Dining Hall Service Area

- Re-grade dining hall service area to direct surface flow away from building, directing flows to adjacent wetland
- Provide a picnic table on a small patio as an employee break area
- Bury electrical lines

Outdoor Dining Area

Gravel surface is not visually compatible with park setting and the surface is not ADA-compliant

- Resurface patio with material that is more compatible with the site and ADA-compliant

Walls at Cabins # 9,10,11,12

Replace concrete block walls with stone walls. Cover existing exterior porch concrete block walls with stone veneer.

ATTACHMENT B

Mitigation Measures for the Warner Valley Comprehensive Site Plan

Impact Resource Area	Mitigation Measures
Federal and State Permit Requirements	The NPS will apply for and comply with all federal and state permits required for construction-related activities prior to project construction.
Construction Measures	Prior to entry into the park, steam-clean heavy equipment to prevent importation of non-native plant species, tighten hydraulic fittings, ensure hydraulic hoses are in good condition and replace if damaged, and repair all petroleum leaks. Inspect the project to ensure that impacts stay within the parameters of the project area and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms with all applicable permits or project conditions. Store all construction equipment within the delineated work limits. Confine work areas within creek channels to the smallest area necessary. Implement compliance monitoring to ensure that the project remains within the parameters of National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) compliance documents. Provide a project orientation for all construction workers to increase their understanding and sensitivity to the challenges of the special environment in which they will be working. If deemed necessary, demolition/construction work on weekends or federal government holidays may be authorized, with prior written approval of the Superintendent. Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Remove all debris from the project site, including all visible concrete, timber, and metal pieces. Cover and/or seal truck beds and stockpiles to minimize blowing dust or loss of debris. Maintain adequate dust suppression equipment and using clean water to control excess airborne particulates at staging areas, active construction zones, and unpaved roads leading to/from active construction areas. Develop an emergency notification plan that complies with park, federal, and state requirements and allows contractors to properly notify park, federal, and/or state personnel in the event of an emergency during construction activities. This plan will address notification requirements related to fire, personnel, and/or visitor injury, releases of spilled material, evacuation processes, etc. The emergency notification plan will be submitted to the park for review/approval prior to commencement of construction activities Limit truck and related construction equipment speeds in active construction areas to a maximum of 15 miles per hour and strictly adhering to park regulations and posted speed limits in other areas while inside park boundaries.
Air Pollutant Emissions Reduction	Contractors will use the following best management practices as appropriate: • Visible emissions from all heavy duty off road diesel equipment should not exceed 20 percent opacity for more than three minutes in any hour of operation; • Consider, where appropriate, particle traps and other appropriate controls such as specialized catalytic converters to reduce emissions of diesel particulate matter (DPM) and other air pollutants; • After June 2010, use diesel fuel with a sulfur content of 15 parts per million or less, or other suitable alternative fuel that substantially reduces DPM emissions; • Minimize construction equipment idling time by turning off engines when vehicles are stopped for more than a few minutes; • Use newer, cleaner equipment (1996 or newer model);

Impact Resource Area	Mitigation Measures
Air Pollutant Emissions Reduction (cont.)	• Employ periodic, unscheduled inspections to ensure that construction equipment is properly maintained at all times and does not unnecessarily idle, is tuned to manufacturer's specifications, and is not modified to increase horsepower except in accord with established specifications; and • Minimize construction-related trips of workers and equipment, including trucks and heavy equipment.
Geologic Resources and Hazards	An Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan shall be prepared by the Construction Contractor for the project to address hazardous materials storage, spill prevention and response. The Plan shall be submitted for park review and approval prior to construction.
	Store and use all hazardous materials in compliance with federal regulations. All applicable Materials Safety Data Sheets will be kept on site for inspection.
	Hazardous or flammable chemicals shall be prohibited from storage in the staging area, except for those substances identified in the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan. Hazardous waste materials shall be immediately removed from project site in approved containers.
	Comply with all applicable regulations and policies during the removal and remediation of asbestos, lead paint, and polychlorinated biphenyls.
	Develop and implement a comprehensive spill prevention/response plan that complies with federal and state regulations and addresses all aspects of spill prevention, notification, emergency spill response strategies for spills occurring on land and water, reporting requirements, monitoring requirements, personnel responsibilities, response equipment type and location, and drills and training requirements. The spill prevention/response plan will be submitted to the park for review/approval prior to commencement of construction activities.
	To minimize the possibility of hazardous materials seeping into soil or water, check equipment frequently to identify and repair any leaks. Standard measures include hazardous materials storage and handling procedures; spill containment, cleanup, and reporting procedures; and limitation of refueling and other hazardous activities to upland/nonsensitive sites. Provide an adequate hydrocarbon spill containment system (e.g., absorption materials, etc.) on site, in case of unexpected spills in the project area. Ensure equipment is equipped with a hazardous spill containment kit. Ensure that personnel trained in the use of hazardous spill containment kits are on site at all times during construction activities.
Hydrology and Water Quality	Use approved siltation and sediment control devices in construction areas to reduce erosion and surface scouring.
	Use approved siltation and sediment control devices appropriate to the situation in grading areas to capture eroding soil before discharge to riparian channels.
	Conserve and salvage topsoil for reuse. Materials will be reused to the maximum extent possible.
	Develop and implement a comprehensive stormwater pollution prevention plan for construction activities that complies with federal and state regulations and addresses all aspects of stormwater pollution prevention. The plan will be submitted to the park for approval prior to construction activities. The plan will include measures such as: controlling erosion, sedimentation, and compaction, and thereby reducing water pollution and adverse water quality effects; and using silt fences, sedimentation basins, etc. in construction areas to reduce erosion, surface scouring, and discharge to water bodies.
	To the extent possible, schedule the use of mechanical equipment during periods of low precipitation to reduce risk of accidental hydrocarbon leaks or spills. When mechanical equipment is necessary outside of low precipitation periods, use NPS-approved methods to protect soil and water from contaminants.
	Dispose of volatile wastes and oils in approved containers for removal from construction sites to avoid contamination of soils, and drainages. Inspect equipment for hydraulic and oil leaks prior to use on construction sites, and implement inspection schedules to prevent contamination of soil and water. Keep absorbent pads, booms, and other materials on site during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous material spills.

Impact Resource Area	Mitigation Measures
Vegetation	Replace vegetation removed with appropriate species grown from seeds or cuttings collected in Warner Valley.
Wetlands	Avoid all existing wetland areas to the extent feasible; clearly demarcate wetlands prior to construction in their vicinity.
	Protect wetland areas during construction through the use of best management practices (BMPs) such as erosion control fencing or wattles.
	Restore all wetland areas impacted during construction to natural conditions using native stock.
	Heavy equipment required for Dream Lake Dam removal and replacement should be airlifted into the project site; brought in over a temporary platform road through Drakesbad Meadow; or brought in over the snow, prior to complete snowmelt and ground thaw to minimize impacts to wetlands and vegetation.
Wildlife	Survey for nesting raptors and passerine birds prior to construction.
	Use standard BMPs to protect wildlife during construction, i.e., place ramps in trenches to allow egress, establish no disturbance buffers if active bird nests are found.
Special-status Species	Survey for nesting special-status birds prior to construction.
	Survey for special-status bat maternity colonies prior to construction.
	Survey for special-status plants prior to work in Drakesbad Meadow, other wetlands, and in riparian areas.
	Inform Park Biologist immediately of any special-status species sightings. Stop work if there is potential threat to species.
Soundscapes	Ensure that all construction equipment has functional exhaust/muffler systems.
	Submit a construction work plan/schedule that minimizes construction-related noise in noise-sensitive areas to the park for review/approval prior to commencement of construction activities.
	Use hydraulically or electrically powered construction equipment, when feasible.
	Locate stationary noise sources as far from sensitive receptors as possible.
	Limit the idling of motors except as necessary (e.g., concrete mixing trucks).
	To the extent possible, perform all on-site noisy work above 76 A-weighted decibels (dBA) (such as the operation of heavy equipment) during normal construction hours to minimize disruption to nearby park users. Normal construction work hours on contracts and day labor projects in the park are between 7:00 am and 5:30 pm, Monday through Friday, and requests for extended hours or weekends must be approved by the superintendent.
Cultural Resources	A qualified archeologist, as directed by the Secretary of the Interior and National Park Service standards, will monitor construction activities, especially those that have a potential to affect cultural features.
	If additional, previously unknown cultural resources are encountered during construction, temporarily suspend work in the immediate area to document discovered resources according to National Park Service standards.
	Should presently unidentified archeological resources be discovered during construction, work in that location would be halted, the park Cultural Resources Program Manager contacted, the site secured, and the park would consult according to 36 CFR 800.11 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990. Any archeological site would be properly recorded by an archeologist and evaluated under the eligibility criteria of the National Register of Historic Places.
	If the resources are determined eligible, appropriate measures would be implemented either to avoid further resource impacts or to mitigate their loss or disturbance (e.g., by data recovery excavations or other means) in consultation

Impact Resource Area	Mitigation Measures
	with the California State Historic Preservation Office.
Cultural Resources (cont.)	In compliance with the Native American Graves Protection and Repatriation Act of 1990, the NPS would also notify and consult concerned Native American representatives for the proper treatment of human remains, funerary and sacred objects, should these be discovered during the course of the project.
	Conduct site-specific reconnaissance for cultural resources to avoid potential impacts to resources that may occur as a result of the removal of trees and vegetation conducted for the maintenance of the view corridors.
	Design all new construction within historic districts or adjacent to historic sites to be compatible in terms of architectural elements, scale, massing, materials, and orientation.
	Install interpretive signs about Native American use of Warner Valley
	Undertake all treatments within cultural landscapes in keeping with the <i>Secretary of The Interior's Standards for the Treatment of Historic Properties</i> .
	Install interpretive signs highlighting the significance of the Drakesbad Guest Ranch Historic District and Dream Lake Dam.
Visitor Experience	Develop and implement a visitor outreach and communication plan that addresses means for effectively communicating construction and other visitor facility closure, relocation, and detour schedules to the public.
	To the extent possible, schedule/phase construction activities to allow for continued visitor access to the Drakesbad Guest Ranch and its associated facilities.
	Schedule construction activities that would interrupt operations at visitor serving, orientation, and interpretation facilities (food service, retail, tour, activity desk, information kiosk, and interpretive programming) during lower visitor-use periods (late fall and winter), to the extent possible.
Public Health and Safety	Outline measures to largely offset the potential for public exposure to noxious materials or contaminants that may be present during construction in the project area (i.e., by providing established and maintained walkways and bridges across the site, covering walking paths with clean soil and asphalt, and providing barrier fencing along trails).
	Provide protective fencing enclosures around construction areas, including utility trenches, to protect public health and safety.
Transportation	Develop and implement a comprehensive traffic control and visitor protection plan for park review/approval that: - Complies with necessary U.S. Department of Transportation, Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI-Traffic Control for Construction and Maintenance Operations, and California Department of Transportation Standard Specifications, Section 12; - Provides procedures for preparing and submitting specific road closure, traffic control, and detour plans for each specific area of project construction not less than three weeks before commencement of construction activities in each area; - Provides procedures for managing staging areas to restrict public access and maintain site safety; and - Ensures that visitors are safely and efficiently routed around construction areas in Warner Valley.
	Install appropriate traffic signs.
	Locate construction worker parking outside of Warner Valley, with the exception of key supervisory personnel.

Impact Resource Area	Mitigation Measures
Scenic Resources	To the extent possible, schedule necessary 24-hour construction activities in the immediate vicinity of campgrounds and lodging units such that they occur during periods when those areas are closed or not in use.
	Direct and shield night lighting associated with construction equipment to minimize light scatter effects.
	Design interior and exterior lighting in new or renovated facilities to prevent escaped light
	Use low-height, lighted bollards in parking areas in lieu of overhead pole lighting
	Use downward-facing and unobtrusive luminaries at facilities and building entrances and exits.
	If necessary NPS will conduct a view management assessment to ensure minimal impacts to viewsheds in Warner Valley.
Park Operations and Facilities	Develop and implement a comprehensive waste management plan that complies with federal and state regulations and addresses all aspects related to the transportation, storage, and handling of construction-related hazardous and nonhazardous liquid and solid wastes and submit the plan to the park for review/approval prior to the commencement of construction activities.
	Require construction personnel to adhere to park regulations concerning food storage and refuse management.
	Properly secure food waste during the workday and remove all food waste from site at the end of each workday.