



Replace Drakesbad Wastewater Disposal Field Environmental Assessment



Lassen Volcanic National Park
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Table of Contents

.....	1
Replace Drakesbad Wastewater Disposal Field.....	1
Environmental Assessment	1
How to Comment on this Environmental Assessment.....	3
Chapter 1: Purpose of and Need for Action	4
Introduction.....	4
A. Purpose.....	4
B. Need.....	4
Background	4
C. Issues and Impact Topics from NPS, Tribal and Public Scoping	5
D. Issues and Impact Topics Considered but Dismissed	5
E. Decision to be Made	5
F. Federal, State, Local Permits and Consultation Requirements	6
Chapter 2: Alternatives, Including the Proposed Action.....	7
Description of the Alternatives	7
Impact Avoidance, Minimization and Mitigation Measures.....	10
List of Alternatives and Actions Considered but Eliminated from Detailed Study.....	10
Chapter 3: Affected Environment and Environmental Consequences	12
Introduction.....	12
Cumulative Impacts	12
Soils.....	13
Water Resources.....	15
Vegetation	17
Cultural Resources, including Archeological Resources, Historic Structures and Cultural Landscapes	19
Visitor Experience	23
Chapter 4: Consultation and Coordination.....	25
A. Scoping.....	25
B. Native American Indian Tribes Consulted	25
C. Public Involvement	26
D. Agencies Consulted.....	26
E. List of Preparers, Persons, Agencies Contacted.....	26
Chapter 5: References.....	28

How to Comment on this Environmental Assessment

This EA is being made available to the public, federal, state and local agencies and organizations through press releases distributed to a wide variety of news media, direct mailing, placement on park websites and announcements in press releases as well as in some local public libraries and other public places.

Copies of the document may be obtained from PEPC or Lassen Volcanic National Park:
Internet: <http://parkplanning.nps.gov/lavo/> (PEPC Project Number 80132)

In addition, written comments will be accepted at the above or following locations:
Email: lavo_information@nps.gov

Fax: (530) 595-3262
Phone: (530) 595-6100

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Note to Reviewers: Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment –including your personal identifying information– may be made publicly available at any time. Although you can ask the NPS in your comment to withhold your personal identifying information from public review, the NPS cannot guarantee that it will be able to do so.

Responses to substantive comments on the EA will be addressed in the proposed Finding of No Significant Impact (FONSI) or will be used to prepare an Environmental Impact Statement (EIS) (if warranted).

Note: For more information about specific agency and staff consultation, see Chapter 4: *Consultation and Coordination*, List of Persons and Agencies Consulted / Preparers.

Chapter 1: Purpose of and Need for Action

This chapter describes the purpose and need and introduces the project area, and the planning background for the project. It also includes impact topics, which are the potentially affected resources. Those resources that have been dismissed from further analysis, because there are no or very small impacts, are also identified.

Introduction

Drakesbad Guest Ranch is a National Register of Historic Places (National Register) listed historic district at the end of the Warner Valley Road, about 45 miles outside of Chester, CA, in the south east part of the park. The seasonal facilities, which close in winter, are operated by a concessioner. They include a lodge, dining hall, cabins, duplex units, bath house for the thermal pool, employee housing, laundry facilities, and public restrooms. A surface water treatment plant and 40,000 gallon water storage tank provide potable water and gravity-fed fire protection. The current wastewater treatment system (that is the subject of this environmental assessment) uses gravity to collect wastewater in a septic tank and a force main (effluent pump station) to deliver it to a disposal field. This environmental assessment continues implementation of the NPS decision to provide services at Drakesbad Guest Ranch, which was made in the Warner Valley Comprehensive Site Plan Environmental Impact Statement (NPS 2010).

A. Purpose

The purpose of the proposed project is to replace the failing septic system disposal (leach) field, which serves the Drakesbad Guest Ranch in Lassen Volcanic National Park. The guest ranch is a popular destination for day use and overnight visitors, who enjoy the rustic retreat and access to outdoor recreational opportunities including hiking, horseback riding, and soaking in the natural hot springs pool. The Drakesbad Guest Ranch is part of the Drakesbad Guest Ranch Historic District (440 acres). Other facilities in the area are part of the Warner Valley Developed Area Historic District, which includes the Warner Valley Road and the Warner Valley Ranger Station.

B. Need

The existing leach field that serves the Drakesbad Guest Ranch began to fail during summer 2017. Efforts to repair the deficiencies have been unsuccessful. Therefore, a new leach field is needed to serve this existing visitor facility. The new leach field cannot be located in the same direction as the current leach field. Therefore, a new force main is also needed. Without repair or replacement, the current failing disposal field would be abandoned in place upon notification from Plumas County. If the field fails completely, the NPS would receive a notice of violation of public health codes for improper treatment and disposal of human waste.

Background

In 2010, the NPS published a Final Environmental Impact Statement (EIS) for the Warner Valley Comprehensive Site Plan. The selected alternative included the following components: (i) ecological restoration of wetlands throughout Warner Valley along with permanently filling ditches with appropriate soil in Drakesbad Meadow; (ii) creating a concession housing and service center outside of the Drakesbad Guest Ranch Historic District comprised of tent cabins surrounding a single-story bathhouse building; and (iii) removing Dream Lake Dam and allowing the area to revert to a riparian/wetland complex. With the Warner Valley EIS, the NPS identified a long-term vision for retaining the developed area. That developed area is dependent on a

variety of utilities, including the wastewater disposal field (NPS 2008). The lift station, septic tank and associated piping was last replaced in 2005.

The existing leach field is the third leach field that has served the Drakesbad facilities. Although it was never officially certified, it has been in operation since 2010. The location of this field is not ideal and is likely groundwater influenced, which has resulted in its premature failure.

C. Issues and Impact Topics from NPS, Tribal and Public Scoping

Issues and impact topics are the resources of concern that may be affected by the range of alternatives considered in this EA. Impact topics are used to analyze changes from the current conditions within the project area in the *Environmental Consequences* chapter.

Impact topics were retained if they are directly related to the proposal; if analysis of environmental impacts is important to make a choice between the alternatives; if the environmental impacts were raised as a concern by the public and/or other agencies; or if there are potentially significant impacts associated with the issue.

The following resource topics are considered in this Environmental Assessment (EA): soils, water resources (hydrology and water quality), vegetation, cultural resources (archeology, historic structures, and cultural landscapes), and visitor experience.

D. Issues and Impact Topics Considered but Dismissed

Issues and impact topics are dismissed from further evaluation if:

- they do not exist in the analysis area, or
- they would not be affected by the proposal, or the likelihood of impacts are not reasonably expected, or
- through the application of mitigation measures, there would be no measurable effects from the proposal.

The following topics were eliminated from detailed study because there would be minimal or no impacts: air quality, water resources (water quantity and wetlands), fish and wildlife, socioeconomics, wild and scenic rivers, Indian trust resources, and environmental justice.

E. Decision to be Made

This EA evaluates impacts from the proposed project on park resources and will be used by the NPS Pacific West Regional Director to make a decision, based on a recommendation from the Superintendent of Lassen Volcanic National Park, about whether to replace the Drakesbad septic system leach field. This decision will be documented in the proposed Finding of No Significant Impact (FONSI) for this EA. If the EA reveals significant impacts on park resources from the project, an Environmental Impact Statement and Record of Decision would be prepared.

F. Summary of Public Scoping

During the public scoping period from March 13 to April 10, 2019, one public comment was received regarding a building that used to be located in the Drakesbad meadow, which was visible from the guest ranch. The building was moved adjacent to the road about 15 years ago

to improve the view from the guest ranch. Another pumphouse is located near the pool and would be unchanged by this project.

G. Federal, State, Local Permits and Consultation Requirements

The proposed action to construct a leach field would require consultation with the California State Historic Preservation Office and a Plumas County Septic System permit.

Chapter 2: Alternatives, Including the Proposed Action

This chapter describes the two alternatives. The no action (continue current management) alternative is intended to describe the existing condition of the Drakesbad septic system. The action alternative is intended to achieve the proposed action of replacing the failing septic system, resulting in improved management conditions. Other alternatives were also considered but dismissed from additional consideration based on several factors, including adverse impacts to historic properties. The alternatives were developed by the NPS based on collaborative interdisciplinary analysis derived from the expertise of planning team members, other experts consulted, and the contract developers of the preliminary design. The park also conducted scoping with city, county, state, and federal agencies, interested organizations, and individuals.

Description of the Alternatives

Alternative 1: No Action (Continue Current Management)

The existing Drakesbad Lodge wastewater system uses a pump to move effluent through a 4-inch force main to a disposal field located southeast of the lodge complex. Vault toilets or portable chemical toilets serviced on a regular basis could partially address transient public wastewater needs if the septic system failed, but would not be suitable for overnight accommodations, shower and sink wastewater, etc. If the facility continued to operate, this wastewater would have to be collected and hauled to a sanitary receiving station qualified to accept human waste.

The current septic system leach field was last replaced in 2009, while the pump distribution system was replaced in 2004. The existing disposal field has five zones, each with three lines of infiltrator pipes. Each zone has a shutoff valve to allow alternating use of the areas. The length of the infiltration lines is approximately 2,260 linear feet, with about 5,650 square feet of disposal area. The existing field was designed for wastewater production of approximately 5,500 gallons per day.

Alternative 2: Construct New Drakesbad Disposal Field (Proposed Action/Preferred)

Under Alternative 2, the park would construct a new wastewater disposal field 0.75 miles east of the Drakesbad lift station and 0.55 miles west of the Warner Valley Ranger Station on the south side of Warner Valley Road near an existing campground/day use area (Figure 1). The new wastewater system has been designed for a capacity of 8,000 gallons per day. The proposed location for the wastewater disposal field was selected for its suitable terrain, accessibility from the road, avoidance of a fen (wetland) and meadow and historic properties, and for its acceptable results from percolation tests and ability to meet the regulatory requirements for a suitable disposal field.

The proposed site is located in a white fir (*Abies concolor*)-Jeffrey Pine (*Pinus jeffreyi*) woodland, with a mixed grass understory and infrequent shrubs. The site is generally open with sparse vegetation. The area was logged prior to establishment of the park and efforts to reduce fuel loads have recently been completed (Buckley pers. comm. 2018). The project would include the removal of approximately 45 trees that range in diameter from 11-35 inches and include one 27" snag. Any fallen logs that can be relocated would be removed either outside of the disposal field or to the burn pile, any logs too large to be relocated would be cut into maximum lengths of 15-20 feet, side cast and dispersed in a natural-looking manner, outside the disposal field area.

To access the disposal field, a sewer force main would be constructed within Warner Valley Road. Under the proposed project, a 4-inch high density polyethylene (HDPE) or C900 Polyvinyl Chloride (PVC) force main for wastewater (sewage) would be placed within 2-feet of the northern edge of the road. The sewer line would be located with required setbacks from a waterline that also runs down the south side of the road.

The force main would extend approximately 0.75 miles from the Drakesbad Ranch sewage lift station to the proposed disposal field in a trench up to 4-feet deep, 30 inches wide and 4,200-feet long. There would be approximately three combo air vacuum-release valves and boxes with iron lids and approximately three pressurized clean-outs with traffic-rated iron boxes and covers along the route. To avoid placement in the roadway and additional effects on the Warner Valley Historic District, these would be located off of the northern edge of the roadway and hidden from view.

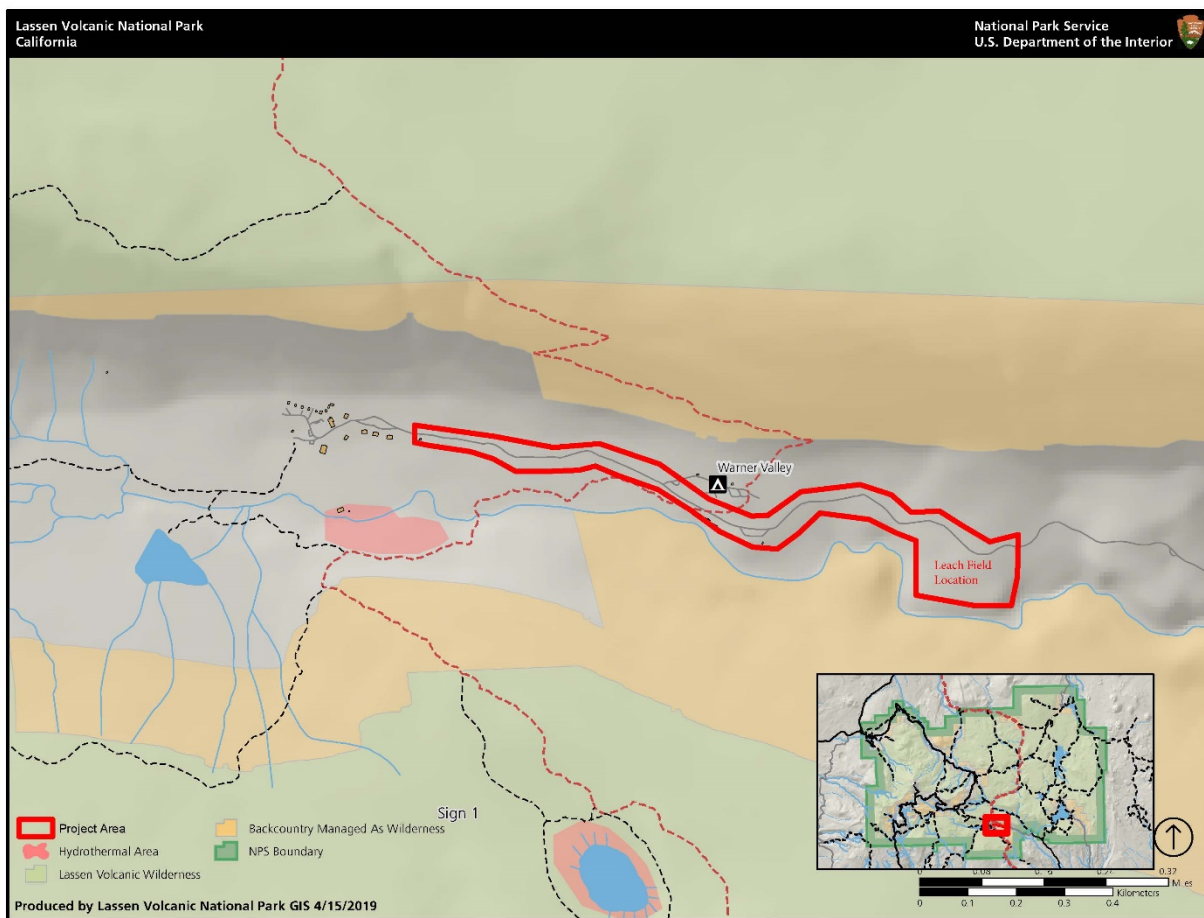


Figure 1: Project Area Vicinity Map

There are approximately 12 culverts along the section of roadway where the force main would be installed. Their sizes and types are listed in Table 1. Where there are existing historic culverts (four) and/or culvert headwall/footwalls (three) (those not changed since road construction), the utility trench would be dug underneath them, providing a minimum 6-inch clearance, so as not to disturb them in place. Construction around non-historic culverts would

also likely be similar. Removing and resetting them would require cutting and banding them, a more difficult installation.

Table 1: Existing Culverts in Area of Potential Effects on Warner Valley Road

Size Inches	Type	Sheet	Size Inches	Type	Sheet
72	Corrugated metal pipe (CMP)	C03	24	CMP	C08
24	CMP	C03	20	CMP	C08
24	Unknown	C04	15*	CMP	C09
15*	CMP	C05	18	CMP	C09
15*	CMP	C05	18	Corrugated Plastic Pipe (CPP)	C09
18	unknown	C06			
18	CMP	C08			

* denotes historic culvert

The trench would be filled with clean backfill consisting of sand, free from clay, frozen lumps, rocks or roots larger than 3-inches. The backfill would also be free from moisture in excess of that permitting required compaction to meet specifications for the roadway. Under the current specifications, use of native excavated material may also be used for backfill if approved by the contracting officer. The last layer would be 8-inches of ¾-inch minus road gravel to match the existing road surface.

The leachfield is located approximately 0.8-miles from Drakesbad Ranch sewage lift station on the south side of the road. To reach the leachfield, the force main trench would extend from the roadway approximately 365-feet to the leachfield, where a flow splitter basin would be installed. Effluent would then flow by gravity to the leachfield gravelless chambers. As required by Plumas County, a second leachfield area has been identified, but would not be disturbed or constructed as part of the current project.

An area of approximately 7,120 square feet would be used for the disposal field. The disposal field itself would be comprised of 4-beds, each having 4 rows of gravelless disposal laterals. Each bed would be 14-feet wide by 77-feet long. Opposite beds would be located approximately 15 feet apart (Figure 2). Each lateral would be a trench excavated to a depth of approximately 3-feet and would include, rodent exclusion wire fabric, infiltrator chambers, and 4-inch PVC capped pipes serving observation and piezometer monitoring portals. The comprehensive disposal field would be suitable for processing up to 8,000 gallons per day of wastewater. Leach field laterals could be constructed using a small backhoe or similar equipment.

Staging for the proposed project would occur in a previously disturbed unpaved parking area near the Drakesbad lift station. Another area identified for staging, if needed, would be at the existing burn pile, an area that has also been previously disturbed and is projected to be used again for a controlled burn.

Under this alternative, visible infrastructure associated with the current leach field would also be removed. This would include visible aeration ports in the leach field. The abandoned leach field area would also be allowed to undergo passive restoration, which could also include planting.

Impact Avoidance, Minimization and Mitigation Measures

The action alternatives include the best management practices, and impact avoidance, minimization and mitigation measures as described in the Environmental Consequences section. Among these include:

- Applying sustainable design criteria to all new and renovated Pacific West Region facilities, integrating sustainable materials and systems to the maximum extent practicable to provide for a cost effective, durable facility with reduced impacts on the environment.

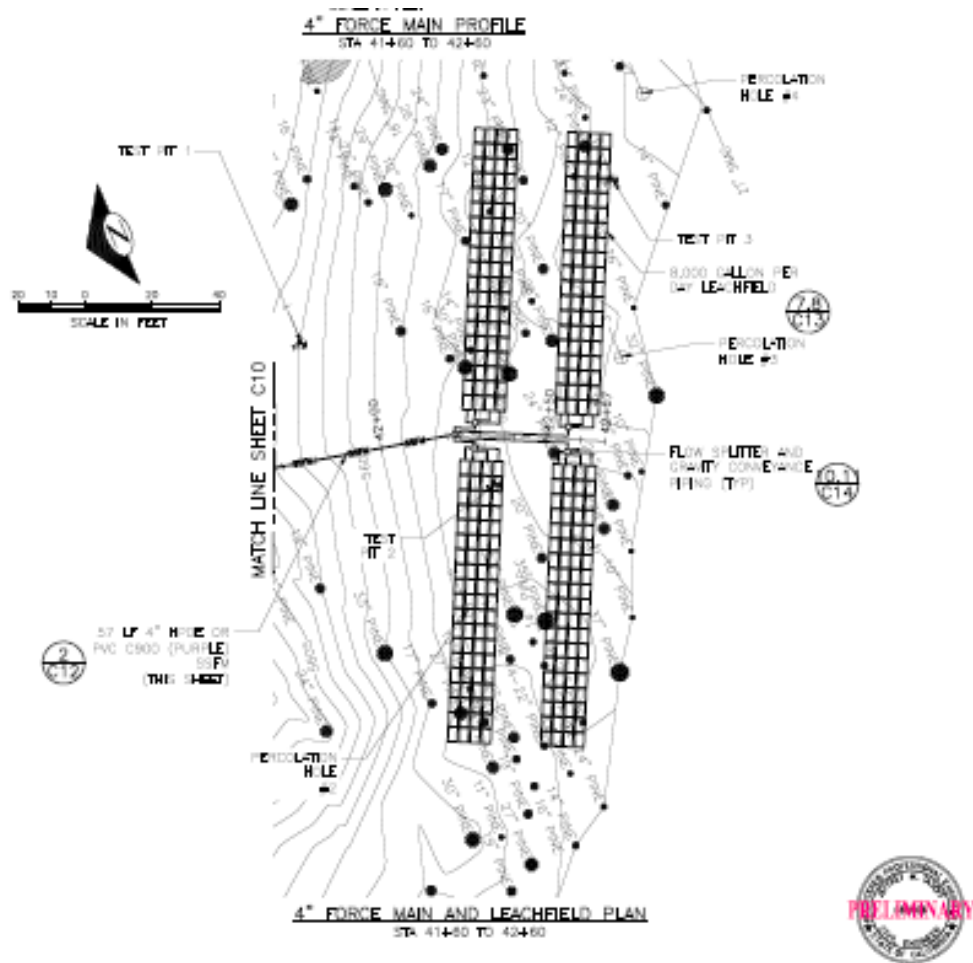


Figure 2: Disposal Field Preliminary Design

List of Alternatives and Actions Considered but Eliminated from Detailed Study

- *Construct the Leach Field Closer to the Existing Leach Field.*

This alternative was explored in preliminary analysis. The most suitable area close to the existing septic system, however, was found to have previously disturbed archeological resources, constructability issues because it was more remote (with limited access for construction equipment and materials staging), potential effects from stream crossings with sewer main, close proximity to a water course, the potential for recurring wastewater surfacing

and improper treatment, and the likely need for more intensive construction monitoring and maintenance operations.

- *Construct the Leach Field in another Area*

Other areas investigated had more rock outcrops, other unsuitable site conditions (such as surface water resources), were not previously disturbed, or were further away than the proposed site. County and state requirements for on-site wastewater disposal fields require minimum distances to surface water courses, wet soils, depth to bedrock, maximum allowable cross slopes, and other factors. Another site was dismissed because it was an area thought to have previously been used as a disposal field in the past.

- *Close Drakesbad Visitor Use Facilities*

This alternative was briefly considered, however, existing facilities provide a unique park experience, result in few other resource impacts, and are under contract for another 10 years. In addition, in 2010, the park reaffirmed its commitment to preserving facilities that are part of the Drakesbad Guest Ranch Historic District and the Warner Valley Developed Area Historic District through the Warner Valley Comprehensive Site Plan Final Environmental Impact Statement.

- *Substantially Modify the Historic District Facilities with Vault Toilets and a Tank-pumped Disposal System*

This alternative was rejected due to the adverse effect it would have on the Drakesbad Guest Ranch Historic District and visitor use (see also the explanation associated with closing the Drakesbad facilities above). This alternative would also result in heavy vehicle traffic from frequent hauling on the historic gravel road.

Chapter 3: Affected Environment and Environmental Consequences

Introduction

Affected Environment: Information in this section is derived from a comprehensive review of existing information pertaining to the project area within the park. It includes information from the Lassen Volcanic National Park General Management Plan (NPS 1999), Warner Valley Comprehensive Site Plan Environmental Impact Statement (NPS 2008), *Weed Management Plan and Environmental Assessment* (NPS 2008a), various other natural and cultural resources management plans, and park planning documents. Information in this section has been gained from management, research, and analysis throughout the history of Lassen Volcanic National Park.

Environmental Consequences: This section analyzes the potential environmental consequences (impacts or effects) that would occur as a result of implementing the alternatives. Cumulative effects are also analyzed for each resource topic carried forward.

Cumulative Impacts

The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7).

Past Projects

- *Preservation Maintenance of Park Roadways (2005-2013)*

Approximately 2.8 miles of the Warner Valley Road was shaped, with its ditches, culvert inlets and outlets cleaned, additional road base material (4-6 inches) applied, and vegetation trimmed. Prior to implementation, the historic culverts and headwalls were marked so that they could be avoided.

- *Restore Current Day Use Parking and Create New Day Use Parking and Picnicking in Lower Warner Valley Campground Loop (2013)*

This project implemented a portion of the Warner Valley Comprehensive Site Plan by restoring the former day use parking area to a wet meadow. Existing day use parking, the toilet and picnic tables were removed. A boardwalk was constructed to bridge the trail connector from the lower campground to the valley floor. It replaced the day use parking in the lower campground loop (20 spaces) by retaining several picnic tables, a water faucet, and the double vault toilet at the lower campground. All but one of the lost campsites, including a new accessible site, were reconstructed in the upper campground.

- *Bumpass Hell Trail and Boardwalk Rehabilitation (2017)*

The Bumpass Hell Trail is being improved and the boardwalk reconstructed to make it easier to move when hydrothermal features shift. This project would likely continue to be implemented concurrently with the proposed replacement and would also affect visitor use.

Current Projects

- *Plug Drakesbad Leach Field as Needed to Correct Blowouts*

The park, working with U.S. Public Health Service, developed a method of adding new bentonite clay to the target area, wetting it, then compacting it. Previously applied bentonite clay, now saturated, is removed and replaced with new clay material (no new ground disturbance). The intent is to mitigate blowouts as they occur, while a long-term solution is developed to repair/replace the leach field.

Future Projects

- *Restore Historic Fire Regime to Flatiron Ridge*

The proposed project would restore low to moderate severity fire to 1,600 acres on Flatiron Ridge adjacent to and above Warner Valley and the Drakesbad area using prescribed fire. The project includes preparation work along existing trails to clear brush and prep containment boundaries that will provide sufficient fire perimeter control around the burn unit. Work will occur adjacent to the Pacific Crest Trail from the Warner Valley Campground to the junction with the Kelly Camp trail, then east and south to the park boundary along the Kelly Camp trail.

Soils

Soils within Lassen Volcanic National Park are rocky, shallow, acidic, and originate almost exclusively from volcanic parent rock (NPS 2002). Soil depths vary from several feet in the valleys to thin veneer at higher elevations. In the Warner Valley area, there are organic-rich soils in the wet meadows. These soils are predominately peat and mucky loams.

Impacts from Alternative 1

There would be no additional impacts on soils. Existing impacts, such as area compaction from use of the impaired leach field would continue. Despite actions, such as plugging the leaks as they occur with sand and clay, the leaks would continue until the system is abandoned or replaced. Leakages are exacerbated by the presence of ground squirrels within the leach field. Their holes are scattered throughout the field and because water follows the path of least resistance, some of the leaks are attributed to the effects of this interaction.

Impacts from Alternative 2

Under Alternative 2, there would be excavation of approximately 42,000 cubic feet (1,555 cubic yards) of soil within the already disturbed footprint of the Warner Valley Road for the force main line installation and another estimated 3,234 cubic feet to excavate each of four leach field laterals (77-feet long, 14-feet wide, and 3-feet deep), a total of approximately 12,936 cubic feet of leach field. Along the roadway, there would also be small areas of excavation for placement of the air release valve boxes and cleanouts. These would be located upslope on a bench on the north side of the roadway and would consist of approximately six areas comprising (4 x 3 x 3-feet) or 36 cubic feet each (for a total of 216 cubic feet).

There would also be excavation for the flow-splitter basin in the leach field area (an estimated 36 cubic feet). The flow-splitter basin and leach field excavation would be in an area adjacent to the road. In these areas soils would be removed, and in the case of the force main, some excavated soil could be reused as backfill, depending on whether it met proposed specifications for properties. The flow-splitter and leach field area would be cleared by felling existing trees and moving existing logs away from the area. Heavy equipment would be used to remove approximately 9-inches of topsoil and duff. Although the use of heavy equipment on the roadway would not be expected to cause additional compaction impacts, use to construct the leach field would affect areas now comprised of natural vegetation, causing compaction and disturbance of the soil surface.

There would be effects from logging and from rolling existing logs out of the way. This compaction would alter the structure of area soils, reducing their infiltration capacity and increasing the probability of erosion during runoff where soils are exposed. As a result, following construction of the leach field, the conserved topsoil and duff would be spread in a thin layer over the top of the leach field. Although trees would not be allowed to repopulate the leach field, other small plants and shrubs would be used to rehabilitate the area (see Vegetation section). There would also be indirect beneficial effects in the area of the existing leach field (Alternative 1) from its abandonment and eventual passive rehabilitation of the area.

Impact Avoidance, Minimization and Mitigation Strategies

To avoid, minimize or mitigate soils impacts, the following strategies would be used during or following construction:

- The project construction areas would be narrowly defined to minimize disturbance outside building footprints.
- Existing roads, trails and established pathways would be used to access construction areas.
- Spill-response materials would be provided on site during construction.
- Soil disturbance would be minimized and re-seeding or revegetating disturbed areas would occur as soon as practicable.
- Any equipment brought to the site would be pressure washed clean of mud, weed, seed, etc.

Equipment used would be inspected for compliance prior to entering the park, including recommending repeat cleaning at the contractor's expense, if needed.

Cumulative Effects: Adverse impacts to soils as a result of other past and ongoing actions include compaction, soil mixing, and soil loss from removal and erosion. Soils have been disturbed as a result of development and concentrated visitor use. In some areas of disturbance, revegetation has not occurred naturally or been undertaken by the park. Localized but distributed impacts include an overall decrease in soil infiltration, where hardening of surfaces (roads, walkways, buildings) has occurred. In the future, additional restoration and development projects (e.g. addition of new visitor service facilities, restoration of old roads or building sites) could occur within the park and project vicinity. Combined, these projects have contributed to and could increase both beneficial and adverse impacts on soils. Because most of the park continues to be undisturbed by human impacts and is designated wilderness, the amount of area affected by past and possible future projects is not substantial, thus overall impacts are small.

When impacts from the no action alternative are combined with impacts from the above actions, there would continue to be cumulative adverse impacts to soils, but because most park resources are substantially preserved, these would continue to be small. Alternative 2 would contribute another small increment to the total cumulative effects on soils from disturbance of the leach field area, while also having some cumulative beneficial effects from allowing some kinds of vegetation to regrow over the leach field. Small cumulative beneficial effects would also continue to be contributed from the no action alternative from the presence of vegetation in the leach field and from eventual microbial activity reducing unnaturally high soil nutrient levels (fecal coliform) from effluent.

Conclusion: There would continue to be a range of short- and long-term localized adverse impacts on soils under Alternative 1, with eventual beneficial effects from abandonment of the leach field and passive rehabilitation/revegetation. Alternative 2 would have adverse impacts from constructing a larger but well-functioning leach field that would not contribute the same degree of soil contamination as long as it remained functional, combined with a small degree of beneficial impacts from long-term disuse (passive restoration) of the former leach field.

Water Resources

Hot Springs Creek: Hot Springs Creek is the largest creek in the valley, running through Drakesbad Meadow and then paralleling Warner Valley Road through coniferous forest. Hot Springs Creek is considered an upper perennial riverine wetland, with mostly unconsolidated shore, some bedrock substrate, and seasonally flooded margins. There are numerous pockets of palustrine scrub-shrub seasonally flooded wetlands along the creek as it flows through Warner Valley. According to the Warner Valley Road Culvert Inventory, there are 21 smaller, intermittent tributaries to Hot Springs Creek that are culverted under Warner Valley Road from the park entrance to Drakesbad Guest Ranch. Some of these streams support pockets of emergent and/or scrub-shrub palustrine wetlands and others do not. Because these tributaries carry the water underneath the roadway and there would be no disturbance to the side ditches that comprise parts of the wetlands along the roadway, they would not be affected by the proposed project under Alternative 2. Past digging within the roadway, such as for a water line, has also not found a groundwater connection beneath the culverts to the wetlands.

Water Quality: Water quality in the park is generally considered to be excellent because of the high elevation headwaters in the park and the lack of upstream development that would impact water within the park (NPS 1999). Surface water from Drakesbad Springs and Warner Valley Springs is treated to provide drinking water for park visitors and staff. Drinking water is monitored daily by the NPS to ensure a safe supply for human use. The park also conducts periodic water sampling where wastewater systems or human use could contaminate or alter water quality.

Impacts from Alternative 1

There would be no additional impacts from implementation of Alternative 1. Until the leach field was abandoned, existing adverse impacts on water quality would continue from small leaks in the existing leach field. To the degree that these are routinely searched for and plugged daily, they require constant monitoring by staff and there would continue to be minimal releases of contaminated water containing fecal coliform. The highest probability for contamination would be during spring runoff, when the system is not yet free of snow cover and when there are precipitation events, however because the facilities are not yet open, contamination potential may be lower.

If temporary operation with imported sanitary facilities (restrooms and wastewater holding tank) replaced the leach field, the restrooms could be self-contained, but a wastewater holding tank would be needed. This tank would need to be periodically emptied and hauled off-site to a permitted facility, resulting in the possibility of environmental impacts from hauling wastewater offsite to a certified sanitary landfill.

Eventually, there would be no additional contamination of the area that now comprises the current leach field. The area would be left to rehabilitate naturally through microbial activity over time. After sometime in disuse, it is likely that additional passive revegetation would occur

because efforts to remove trees growing in the area would cease and the area would not be consistently disturbed during maintenance activities. Eventually this could result in long-term beneficial effects.

Impacts from Alternative 2

Although the Area of Potential Effects (APE) includes a portion of Hot Springs Creek, the creek would not be part of the proposed leach field construction area. In fact, the closest the leach field would be to the creek is approximately 200 feet. In addition, potable uses of water, including the existing drinking water intake are located upstream of the Drakesbad development, approximately 0.75 mile from the proposed leach field. Because the porosity of the leach field soil tests were successful, that means there was no groundwater connection present in the test pits drilled. Therefore, sewage effluent would achieve good treatment during its holding and distribution time in the leach field. As a result, use of the leach field would not be expected to adversely affect either groundwater or water quality in Hot Springs Creek.

With the conversion from the existing force main to the new force main and plugging the current force main during the switchover, there would be no additional contamination of the area that now comprises the current leach field. As in Alternative 1, the area would be left to rehabilitate naturally through microbial activity over time and passive revegetation could increase, with subsequent long-term beneficial effects.

Impact Avoidance, Minimization and Mitigation Strategies

To avoid, minimize or mitigate water quality impacts, the following strategies would be used during or following construction:

- Temporary sediment control devices such as filter fabric fences, or sediment traps would be used as needed during work near water.
- Completion of the project would include naturalizing disturbed areas by adding rocks, soil, or duff to areas without vegetation or needing restoration.
- Staging areas would be located well away from places where runoff could affect nearby water bodies.
- The close confines of the project area would minimize the amount of disturbed earth and the duration of soil exposure to rainfall.
- Swales, trenches or drains would be used to divert stormwater runoff away from disturbed areas.

Cumulative Effects: Other visitor use and facilities in the park and project area contribute sediment and pollutants, including oil and other contaminants from motor vehicles as well as litter, which can enter drainages and adversely affect water quality. Some restoration and development projects (e.g. addition of new visitor service facilities, restoration of old roads or building sites) could occur within the park and would contribute both beneficial and adverse impacts to water quality. Given the minimal and localized nature of these effects parkwide, overall impacts on park waters would be very small. Non- human factors, such as natural erosion of exposed soils can also affect water quality. Impacts of the above actions and factors, in conjunction with the impacts of the no action alternative (Alternative 1), would continue to result in small adverse cumulative effects on water quality. Alternative 1 would also continue to contribute localized cumulative impacts. Alternative 2 would have a range of localized but not cumulative adverse effects during construction, but would end the cumulative adverse effects being contributed by operating and maintaining a failing septic system under Alternative 1.

Conclusion: Long-term adverse impacts under Alternative 1 would continue until the system was either abandoned or replaced with temporary facilities. Alternative 2 would have the potential for short-term adverse impacts on water quality during construction but long-term impacts associated with use would be unlikely, until the system had reached the end of its serviceable life.

Vegetation

Vegetation along the Warner Valley Road from the ranger station to Drakesbad Guest Ranch, near the campground, and at Drakesbad Guest Ranch is generally dominated by mixed coniferous woodland. Mixed conifer or yellow pine forest is the most common, and is comprised of a range of coniferous species, including white fir, Jeffrey pine, lodgepole pine, incense cedar, sugar pine, occasional red fir, and western white pine (NPS 2008). The proposed project area is situated within an ecological setting of this white fir-Jeffrey pine forest and woodland, with a mixed grass understory and infrequent shrubs, such as buckthorn (*Ceanothus cordulatus*), pinemat manzanita (*Arctostaphylos nevadensis*), and various xeric and mesic grasses (Buckley, pers. comm. 2018). There are a number of logs atop the forest duff, with some evidence of ground disturbance from ground squirrels and voles and/or mice.

The proposed leach field is dominated by white fir, a common species that has become predominant in the absence of fire. In general, long-term fire suppression has led to substantial changes from the historical condition in forest composition and structure throughout the park and within the project area. Forest stands have a higher tree density than was historically present, with widespread increases in shade tolerant and fire intolerant species such as white fir. They also have more dead wood on the ground, and fewer openings in the forest canopy, which results in decreased forest understory cover and diversity. Disturbance from recreational use in and around the campground and Drakesbad Guest Ranch and along trails have increased area impacts. Park management efforts are actively working to reduce stem density, improve forest diversity and cover, and to reintroduce fire to the landscape.

Impacts from Alternative 1

There would continue to be small adverse effects on vegetation, primarily grasses and forbs, from repeatedly plugging holes in the leach field. These repeated disturbances that expose bare soil also increase the opportunity for inadvertent introduction of nonnative species. The existing septic system is failing and saturated areas of effluent have arisen, adversely affecting existing vegetation by burying and from excess nutrient introduction and from potentially altering the kinds of vegetation that can grow.

Impacts from Alternative 2

Beginning with the connection of the new force main to the pumphouse, there would be small effects on vegetation from excavation of the new line. There would be no effect on vegetation from excavating the force main line in the Warner Valley Road because there is no vegetation in the roadway. Between the roadway and the hillslope adjacent to it, there would be small adverse effects on vegetation from removal to connect the force main to approximately six locations off the north edge of the road and to construct air release valve boxes and cleanouts.

To construct the flow-splitter basin and leach field, approximately 45 trees between 11 and 35 inches in diameter would be removed. Despite the removal of trees, the leach field would continue to be screened from the road edge, approximately 365 feet south of the Warner Valley Road. Trees removed by the project would primarily be white fir, a species that is unnaturally higher in concentration in the area as a result of fire suppression (McGraw, pers. comm. 2019).

Effects on vegetation would also be from removing topsoil and duff over the 0.2 acres of the leach field, from direct removal of the trees, shrubs and grasses, from excavation of the leach field and from compaction with people and heavy equipment undertaking this work. Species removed to construct the force main and leach field include white fir, with infrequent Jeffrey Pine. Where practicable, white fir will be removed, primarily leaving behind Jeffrey pine. There would also be long-term adverse effects on vegetation from repeated actions to maintain the area without trees.

Impact Avoidance, Minimization and Mitigation Strategies

To avoid, minimize or mitigate vegetation impacts, the following strategies would be used during or following construction:

- The limits of construction would be established narrowly to avoid impacting adjacent vegetation.
- Fill materials imported from outside the park would be from approved sources and would be inspected and/or approved by NPS staff prior to importation into the park to avoid inadvertent importation of invasive species.
- Materials used in project work would be transported and stored so as not to acquire noxious weed seeds from adjacent areas.
- The project area would be monitored for undesirable plant species (exotics) and control strategies implemented if such species occur.
- Revegetation would use only native species, appropriate to the site.

Cumulative Effects: Human activities, particularly fire suppression, have altered the structure and composition of the forest and other area vegetation. In contrast to these broad changes, relatively small patches and corridors of habitat have been disturbed or lost from areas developed for roads, visitor and administrative facilities. Much of the area proposed for disturbance is a relatively open forested area with sparse vegetation.

Under climate change scenarios, areas within the park, including Drakesbad, are expected to warm. Species like white fir that thrive in cooler, moister conditions will likely have high mortality. White fir has also become more prevalent in these forests as a consequence of fire suppression, so removal of this species is a focus of returning park fire regimes to their natural range of variability. This will leave the more drought tolerant and climate resistant Jeffrey, lodgepole and ponderosa pines and will improve fire protection and forest health and resiliency. For both alternatives, impacts from past development, in combination with the impacts of any one of the alternatives, would continue to result in small, localized cumulative adverse effects on vegetation.

Conclusion: There would be continued adverse effects from plugging holes in the failing leach field under Alternative 1. Under Alternative 2, because much of the project area is along the Warner Valley Road, overall effects on vegetation would be small and would primarily affect plants in the leach field (approximately 45 trees in an area of 0.2 acres). Short-term adverse and long-term beneficial impacts could occur with passive revegetation of the former leach field in both alternatives.



Figure 3: Typical Vegetation in the Vicinity of the Proposed Project Area

Cultural Resources, including Archeological Resources, Historic Structures and Cultural Landscapes

Overview: The Area of Potential Effects (APE) is defined as an 80 acre area in the park (within Plumas County) that extends east to west from an existing lift station near Drakesbad Guest Ranch to the proposed location for the new leach field. The extent of the APE is based on the length of new sewer line needed, and is buffered on all sides to accommodate direct and indirect effects of the project, which would include the use of heavy equipment. Excavation is likely to be relatively shallow, not exceeding five feet, for installation of sewer lines, septic tanks, and distribution lines.

All project activities occur within the boundary of the Warner Valley Developed Area Historic District and are adjacent to, but outside of, the western boundary of the Drakesbad Guest Ranch Historic District and Cultural Landscape. Known cultural resources within the APE also include contributing features to the Warner Valley Developed Area Historic District, specifically the Warner Valley Road and associated original culverts and mortared native stone culvert headwalls. The Warner Valley Campground, located within the APE, is listed as a non-contributing feature to the historic district due to lack of integrity.

Drakesbad Guest Ranch Historic District and Cultural Landscape: The historic district is listed on the National Register. Ten of the buildings at Drakesbad Guest Ranch are listed as contributing resources. These include the lodge, dining hall, cold storage, bunkhouse, and six cabins. Individual guest cabins are located east and west of the core building complex. All of the historic buildings are vernacular in style, wood-frame with gable metal roofs. The building cluster also contains more contemporary buildings including: three Mission 66 duplexes, a tack room, a concession office, and a generator building. With the exception of the concrete generator

building, the modern buildings are all wood-frame and are compatible with the architectural character of the historic buildings in terms of material, scale and massing (NPS 2005). Additional features of the area that contribute to the cultural landscape, include the Drakesbad meadow, roads, trails, overall spatial organization and land use.

Warner Valley Developed Area Historic District: The Warner Valley Developed Area Historic District includes the Warner Valley Road, campground (non-contributing) and ranger station. All are located on the north side of Hot Springs Creek. The ranger station and campground are outside the area of potential effects for the proposed project.

The Warner Valley Road is the only automobile access route to Drakesbad Guest Ranch and its character is relatively unchanged from the historic period. The road has been determined to be a contributing structure to the historic district (NPS PWRO 2004: 40). The road was privately constructed

ca. 1880, prior to NPS ownership. Because of its early non-NPS construction, its design does not conform to typical NPS standards of the 1930s (Caywood and Emmons 2004: 2).

The Warner Valley Road provides vehicular access to the interior of the park from the south. It is roughly 10.4 miles in length, but only the north 3.1 miles lie within the park boundary. Branching from the old road to Mineral, the lower part of the Warner Valley Road provides access to the numerous vacation homes that have been constructed within subdivided homestead claims. This portion of the road is paved. The segment of the road within the park boundary is unpaved, with no major stream crossings that require bridges. Many small streams flow perpendicular to the road, all are channeled through culverts.

The road alignment follows a circuitous path contouring into and out of the hill slope above the creek. Within the park, this is basically a one-lane road with pullouts, with a gravel running surface that ranges between 12 and 16 feet in width. In level areas, drainage ditches parallel each side of the road; where the road is cut into the hill slope, drainage ditches on the up-hill side of the road channel flow in the many culverts that are integrated into the road grade.

The road contains both crimped aluminum pipe culverts (mostly 18-inch diameter), and corrugated polyethylene culverts. Some of the metal culverts have mortared stone headwalls. Most are simple headwalls made of locally available stone and concrete mortar. These small-scale features have not been counted as individual structures (Caywood and Emmons 2004: 5, Continuation Sheet: Section 7, page 1).

Based on the National Register nomination, the road and its associated features possess integrity of materials, workmanship and design relative to their specific history. They also possess integrity of location and setting, feeling and association (Caywood and Emmons 2004: 5, Continuation Sheet: Section 7, page 1).

Archeological Resources: A 2001 archeological survey of the park included high intensity reconnaissance using 5-10 meter transects in the project area. The survey identified 33 isolates and several sites in the Warner Valley, but none were identified within the APE of this undertaking.

Since the previous survey of the area is 18 years old and the area has a high likelihood of cultural deposits, park archeological staff undertook a new survey, which was completed in

summer 2018, of the proposed new leach field location. The survey did not identify any eligible archeological sites, but did identify two isolates within the project area, including a non-tooled obsidian chunk, and a small site consisting of a historic can scatter. These historic isolates have been fully recorded and photographed and are unlikely to provide further significant data at this time. The small historic can scatter found in the survey area would be avoided based on the proposed location for the leach field (Alternative 2).

Impacts from Alternative 1

There would be no effect on known archeological resources. Implementation of Alternative 1 would likely result in historic facilities being replaced by temporary facilities, including portable restrooms, showers and an aboveground wastewater tank. The temporary facilities would include the replacement of wastewater from restrooms in the dining hall, lodge, pool house, and all of the historic cabins, as well as from food service facilities in the dining hall and lodge at the Drakesbad Guest Ranch. Because no longer providing water for the dining hall, lodge, and pool house, and installing portable restrooms to service these and the historic cabins would change their historic uses, long-term temporary use of these replacement facilities in Alternative 1 would likely be an adverse effect on these National Register listed properties. Placement of temporary portable facilities, while not on its own an adverse effect, would be unsightly and inconsistent with the Drakesbad Historic District and would likely not be acceptable as a long-term solution in the area.

Impacts from Alternative 2

As in Alternative 1, there would be no effect on known archeological resources. Known archeological resources have been avoided by selection of the proposed location for the leach field. Surveys of areas along the Warner Valley Road for archeological resources were conducted to determine probable locations for relocation of the leach field. Findings from these surveys found several ineligible areas. Surveys of the proposed project area did not find any resources either sensitive or eligible for listing in the National Register. Although reconnaissance surveys have not identified archeological resources, implementation of the project could find unidentified resources, therefore an NPS archeologist would monitor ground disturbance and if something was found, work in the affected area would cease until it could be evaluated by a qualified archeologist in accordance with the park's Inadvertent Discovery Plan and a disposition (avoidance of the area, relocation of the impact, or collection) sought).

There would be no adverse effect on historic districts listed or eligible to be listed on the National Register as a result of the implementation of Alternative 2. Constructing the force main within the Warner Valley Road would be concealed from views along the roadway because it would primarily be underneath the road. Although some components of the new septic system would be above the road (cleanouts and air release valves), their visibility would be limited to a camouflaged (color to-be-determined) box rising approximately two inches above the ground surface on the north side of the road on a bench above (and therefore not visible from) the road. The system connects to an existing lift station and would not have external components that would affect this area. Other changes in the landscape adjacent to the roadway would affect views from the Warner Valley Historic District from construction of the leach field. This would be detected as a slight opening in the forested area on the south side of the roadway. To minimize the effects of this opening, a screen of trees would be left close to the road. Although generally leach fields do not contain aboveground features there would be evidence of disturbance in views from the roadway, since there would be this small opening in the forest canopy visible in the distance adjacent to the roadway.

Impact Avoidance, Minimization and Mitigation Strategies

To avoid, minimize or mitigate impacts to cultural resources, the following strategies would be used during or following construction:

- Should unknown archeological resources be uncovered during construction, work would be halted in the discovery area, the park Cultural Resources Program Manager contacted, the site secured, and the Inadvertent Discovery Plan implemented, including consultation with SHPO and Tribal entities, and provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 implemented. If necessary or possible, relocation of the work to a non-sensitive area would occur to enable more site testing and documentation. Every effort would be made to avoid further disturbance to the site. If relocation could not occur, then mitigation would include exhaustive documentation of the site to appropriate standards based on consultation with the State Historic Preservation Officer and other experts as applicable.
- All project-related ground-disturbing activities will be monitored by an NPS archeological technician with oversight by a professional archaeologist qualified under the Secretary of Interior Standards.
- Identified isolates within the project area will be flagged and avoided.
- Historic culverts and headwalls will be flagged and avoided. All excavation around and under culverts will be done by hand, using shovels. Work adjacent to historic stonework will be monitored by cultural resource staff.
- Disturbance within the existing road corridor will be limited to the existing width to prevent inadvertent widening of the road way. Excavations will be back filled and compacted when work is complete.
- All project area trenches outside of the roadbed will be filled and soil mounded to allow for settling and to eliminate any future erosion.
- Native grasses will be planted in disturbed areas to quickly facilitate soil stabilization.

Cumulative Effects: Archeological resources in Lassen Volcanic National Park have been impacted to varying degrees from past construction-related disturbances (prior to the advent of archeological resources protection laws); visitor impacts and vandalism; and erosion and other natural processes. Historic resources, including CCC-constructed trails have been affected to varying degrees by deterioration during rehabilitation efforts, prior to an understanding of their significance. There has also been a variable degree of maintenance actions on historic roads, such as the Warner Valley Road. High traffic volumes during the summer months cause unpaved roads to deteriorate quickly, causing wash boarding, rutting, and loss of road base materials, adversely affecting driveability and contributing to erosion problems. As a result, routine and cyclic road maintenance occurs often, and includes grading the road, cleaning ditches and culverts, trimming vegetation where needed, and applying new road base material. The Warner Valley Road has been routinely maintained for decades, (including road surface in the APE) and has contributed both cumulative adverse and beneficial effects over time.

When combined with the small range of adverse and beneficial effects on the Drakesbad area from road maintenance, and other activities that have retained the character-defining features of the historic districts, including their component historic structures and landscapes, there would continue to be a small degree of cumulative adverse and beneficial effects from the alternatives. Both Alternatives would contribute to additional cumulative effects, but the adverse impacts of implementing Alternative 1 could be more substantial because it includes not using existing restrooms, changing water use in the lodge, dining hall and cabins, and the addition and servicing of multiple temporary facilities. By contrast, implementation of Alternative 2 would

have more cumulative beneficial effects from maintaining the use of existing permanent facilities.

Conclusion: There would be no effect on archeological resources under Alternative 1 and no adverse effect under Alternative 2. There would continue to be adverse effects on historic resources, including the Drakesbad Historic District, under Alternative 1, from eventually no longer using existing historic facilities and from bringing in incompatible facilities. Alternative 2 would have no adverse effect on historic properties, including the Drakesbad or Warner Valley historic districts. Long-term beneficial effects would be contributed in Alternative 2 from actions that would preserve historic uses at the Drakesbad Guest Ranch.

Visitor Experience

Between 1995 and 2005, there were an average of 380,000 park visits annually (NPS 2005). The park is open year-round, however access through the park on the main road is usually only available from June through October due to heavy snowfall. The park's busiest season is from June - September (80 percent of annual visitation).

Drakesbad Guest Ranch provides rustic overnight accommodations and recreational opportunities, including hiking, horseback riding, wildlife viewing, fishing, canoeing and swimming. There are 19 guest rooms with a capacity of approximately 70 guests per night. Drakesbad Guest Ranch consistently operates at or near full capacity during the summer season, averaging about 5,500 overnight stays per year during 1995-2005. The Drakesbad Guest Ranch clientele tend to be repeat visitors that have been coming back for years or generations (NPS PWRO 2005). Guests stay for an average length of five days in July and August and three days in June, September, and October. The average number of reservations made each year is approximately 800-900 (Johnson 2005 in NPS PWRO 2008).

Warner Valley Campground is open (all services) from June 5th-September 22nd, and then continues (without water) until October 13th, weather permitting. It is located one mile west of the Warner Valley Ranger Station on an unpaved road. Eighteen campsites accommodate up to three tents, with a limit of 6 people per site.

As vehicles enter Warner Valley, drivers first encounter a self-pay fee station. Currently, visitors have to stop their vehicles in the road, or park at the ranger station and walk back 100 feet to access the fee station, which can interrupt traffic flow. Circulation at Drakesbad Guest Ranch is on unpaved roads, defined by rocks/logs. Over time, the edge "creep" of parking areas and roads has created some confusing parking/traffic zones.

In 2005, traffic counts within the Warner Valley were measured on Warner Valley Road, with 920 recorded in July and 1,056 recorded in August. In 2004 the following estimates were calculated: June: 898, July: 1,294, August: 1,480, September: 1,522, October: 1,209, and November: 13.

The Pacific Crest Trail, which traverses terrain between Mexico and Washington State, passes through the park and crosses the Warner Valley Road in the vicinity of the campground. In the park, the trail is used for both long-distance and day hiking opportunities.

Impacts from Alternative 1

Without replacement of the wastewater treatment facilities, the Drakesbad facilities (including the guest ranch, campground, and others), would be unsuitable for visitor use. If use were to

continue without replacement of the leach field, existing restrooms would need to be closed and replaced by temporary portable facilities. Temporary or portable facilities would be unsightly and inconvenient for visitors used to in-room/in-facility restrooms, including toilets, faucets, and showers, and for any food service provided at the ranch. Without high quality restrooms, the resort would be unlikely to continue to attract some of the same guests and prices may need to be discounted, making it a less viable operation for the concessioner. As a result, there would be a range of direct and indirect adverse effects on visitors from not replacing the septic system. Some visitors may choose to avoid the area by making other vacation plans.

Impacts from Alternative 2

During construction, autumn visitors to the Drakesbad area could be inconvenienced by traffic control along the Warner Valley Road, noise and activity related to construction, and possible interruption in use or early closure of facilities served by the wastewater treatment system. As noted above, Drakesbad facilities typically close near the first week of October, however the area remains open until the road is closed by snowfall, typically in November, since it is not plowed. As a result, much of the proposed construction work is anticipated to take place during a slower time of year, such as after Labor Day. In addition, work would generally not be performed on weekends or holidays, affording visitors' unimpeded passage on the Warner Valley Road to reach intended recreational destinations during late summer/fall. To minimize visitor disruption, opportunities for work outside of normal work times, such as on weekends or at night would be by special permission of the superintendent and would be advertised to the public in advance. At other times, there would be up to 15 minute delays on the roadway as equipment to construct the force main is moved. Pacific Crest Trail and other hikers or visitors would also be afforded safe passage through the project area as needed, but may have to wait briefly if work is being performed in the vicinity.

Impact Avoidance, Minimization and Mitigation Strategies

To avoid, minimize or mitigate visitor experience impacts, the following strategies would be used during or following construction:

- Press releases to local media and signs in the park would inform visitors about conditions in the park during the project.
- During construction, signs would inform visitors of the construction activities and of potential closures or delays. Barriers and barricades, signs and flagging, as necessary or appropriate, would be used to clearly delineate work areas and provide for safe pedestrian travel through the construction area.

Cumulative Effects: Visitor access and opportunities in the park have largely expanded over the years. The Kohm Yah-mah-nee Visitor Center is a more obvious and better source of information for park visitors. Alternative 1 could result in adverse cumulative impacts on visitor experience if it changed the availability of or facilities at the Drakesbad Guest Ranch. Because Alternative 2 would not alter the availability of visitor services at Drakesbad Guest Ranch it would contribute continued long-term beneficial impacts from rehabilitation wastewater treatment system.

Conclusion: Alternative 1 would have long-term adverse effects from altering how visitors experience the Drakesbad Guest Ranch and the Warner Valley. These impacts could be reduced slightly by the use of temporary or portable facilities. There would be a range of short-term adverse and long-term beneficial impacts from Alternative 2. Short-term adverse impacts would be from construction, while long-term beneficial impacts would be from maintaining the existing visitor experience by repairing the leach field.

Chapter 4: Consultation and Coordination

This environmental assessment is available for a thirty-day public review period. Notice of it will be mailed or emailed to a list of persons and agencies who have expressed interest in Lassen Volcanic National Park proposed actions and events. This document will also be posted on the park's website located at <http://www.nps.gov/lavo>. It is also available on the NPS Planning, Environment and Public Comment (PEPC) website (www.nps.gov/parkplanning).

Comments on this environmental assessment should be entered into PEPC or directed to:
Lassen Volcanic National Park
P.O. Box 100
38050 Highway 36 East
Mineral, California 96063

A final decision document will be prepared based on the public comments and notice of it sent to reviewers. If substantial environmental impacts are not identified by reviewers, this environmental assessment will be used to prepare a Finding of No Significant Impact (FONSI) which will be sent to the Regional Director, Pacific West Region for signature.

For additional information concerning this environmental assessment, please contact Michael McGraw, Environmental Compliance Specialist at michael_mcgraw@nps.gov or 530-695-6186.

A. Scoping

Internal scoping began in summer 2017, with the suspected failure of the leach field. Archeological surveys were completed in 2001 and 2018, followed shortly thereafter by leach field test pits to determine percolation rates (2018). The park worked with regional NPS, State Historic Preservation Office, and county staff during the development of the proposal for Alternative 2. A 30-day public scoping period was conducted from March 11, 2019 to April 11, 2019. One comment was received during the period which indicated support for the project.

B. Native American Indian Tribes Consulted

Prior to public scoping, scoping was conducted with Native American Indian tribes affiliated with the park. The park sent a letter about the proposed Drakesbad septic system modifications on May 17, 2018 to the following tribes: Greenville Rancheria of Maidu Indians, Mooretown Rancheria (Maidu), Susanville Indian Rancheria, Pit River Tribe, Redding Rancheria, Berry Creek Rancheria, Enterprise Rancheria, Shingle Springs Rancheria, and United Auburn Indian Community. No responses were received from any of the tribes.

Follow-up consultation (in-person meetings) with the Redding Rancheria occurred on August 27, 2019 and with the Susanville Indian Rancheria occurred on October 17, 2018. No objections or changes to the proposal were made. Additional follow-up letters will be sent to each tribe indicated above upon the determination of the Section 106 Assessment of Effect and also when implementation is proposed.

Enterprise Rancheria
Glenda Nelson, Tribal Chair

Greenville Rancheria
Kyle Self, Tribal Chair

Mooretown Rancheria
Gary Archuleta, Tribal Chair

Pit River Tribe

Morning Star Gali, Tribal Historic
Preservation Officer

Redding Rancheria
Jack Potter, Cultural Resources Program
Shingle Springs Rancheria
Nick Fonseca, Tribal Chair

Susanville Indian Rancheria
Melany Johnson, Tribal Historic
Preservation Officer

United Auburn Indian Community
Gene Whitehouse, Tribal Chair

C. Public Involvement

Public comments, however, will be sought for this EA. This EA will be posted on the NPS Planning, Environment and Public Comment (PEPC) website (www.nps.gov/parkplanning) and there will be a link to that site on the park's webpage.

D. Agencies Consulted

California State Historic Preservation Office

In accordance with Section 106 of the National Historic Preservation Act, the National Park Service provided the State Historic Preservation Officer (SHPO) of the California State Department of Archaeology and Historic Preservation an opportunity to comment on the proposed undertaking and the area of potential effects associated with this project (Ref: NPS_2018_0613_001) (SHPO response to June 8, 2018 NPS letter to initiate consultation dated June 14, 2018; SHPO response to September 27, 2018 NPS letter to describe Area of Potential Effects dated December 3, 2018).

As evaluated herein, proposed actions associated with the proposed action/preferred alternative would have no adverse effect on resources listed or eligible for listing in the National Register of Historic Places or on other historic or cultural resources in the park. During the public review period, concurrence with this determination of effect will be sought from the SHPO.

U.S. Fish and Wildlife Service / National Marine Fisheries Service

In accordance with the Endangered Species Act, the NPS contacted the USFWS database to confirm that no federally listed species and no habitat occurs in the park. Because there are no federally listed species that occur in the park, there would be no effect on listed species or their habitat and there is no requirement for additional consultation under the Endangered Species Act.

E. List of Preparers, Persons, Agencies Contacted

NATIONAL PARK SERVICE

Lassen Volcanic National Park

Jim Richardson, Superintendent
Steve Buckley, Vegetation Ecologist
Gary Mott, Facility Manager
Elizabeth Hale, GIS Specialist
Michael McGraw, Compliance Specialist
Jason Mateljak, Chief, Integrated Resources
Mike Magnuson, Wildlife Biologist
Ashley Phillips, Historical Architect/Section 106 Coordinator

Pacific West Regional Office

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Rose Rumball-Petre, Environmental Protection Specialist (preparer)
Alan Schmierer, Regional Environmental and Wilderness Coordinator (reviewer)

Klamath Network of Parks

Cynthia Moscoso, (former) Project Engineer, PMP

Chapter 5: References

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