



Foundation Document

Lassen Volcanic National Park

California

December 2016





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Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared Stewardship:** We share a commitment to resource stewardship with the global preservation community.
- **Excellence:** We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- **Tradition:** We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park’s purpose, significance, fundamental resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as geospatial data for use in a web mapping environment. The park atlas for Lassen Volcanic National Park can be accessed online at: <http://insideparkatlas.nps.gov/>.



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

Lassen Volcanic National Park encompasses over 106,000 acres of a dynamic and diverse volcanic landscape. Located at the southern extent of the Cascade Range in northern California, the park was established as a unit of the national park system in 1916 shortly after a series of highly publicized, dramatic volcanic eruptions of Lassen Peak in 1914 and 1915. Prior to the park's establishment, Cinder Cone National Monument and Lassen Peak National Monument were established in this area by proclamation of President Theodore Roosevelt in 1907 to be administered by the U.S. Forest Service. These two monuments and surrounding areas were combined into what later became Lassen Volcanic National Park.

More than 85% of park acreage is either designated or proposed wilderness lands. Nearly 79,000 acres of the park were designated as Lassen Volcanic Wilderness in 1972, and another 13,151 acres have since been proposed to Congress as additional wilderness. Both the designated and proposed wilderness lands are managed as designated wilderness.

The park's name is indicative of the dynamic geology and landscape of the area, as nearly every rock at Lassen Volcanic National Park originates from volcanism. Lassen's volcanic domes are part of the Lassen Volcanic Center, located at the southern end of the Cascade Range, which began to erupt about 825,000 years ago and is still active today. The park's diverse array of volcanic resources includes all four types of volcanoes found on Earth—shield, composite, cinder cone, and plug dome. Lassen Peak is one of the largest plug dome volcanoes in the world. With an elevation of 10,457 feet, it is the highest point in the park and dominates the park's landscape. Unlike other volcanoes in the Cascade Range, the park's large plug dome and composite volcanoes are in proximity to the smaller cinder cone volcanoes that surround the volcanic center.

Volcanic activity in this region has been ongoing for about three million years. Most recently, the region has seen eruptions from Cinder Cone (~350 years ago) and Lassen Peak (~100 years ago). The well-documented eruptions of Lassen Peak from 1914 to 1917 and the extensive system of hydrothermal areas in the park illustrate the fact that volcanic activity continues as a dynamic force today. The hydrothermal activity, such as bubbling mudpots, steam vents, and boiling springs, are surface representations of heat at depth, indicating the presence of hot magma and rocks a short distance below the Earth's surface. Thus, while this volcanic landscape now appears relatively dormant, the underlying Lassen Volcanic Center is still active and will likely erupt again. However, at this time, no one can say when or where the next eruption might occur.

Lassen Volcanic National Park also protects a rich diversity of plant and animal life. This unique biological diversity of the park results from a variety of factors, but most notably, its location at the transition zone of three large regional biological provinces: the Cascade Range to the north, the Sierra Nevada Range to the south, and the Great Basin Desert to the east. Plant and animal communities, species, and ecosystems from these three provinces converge across the park's landscape. This biodiversity is further complemented by variations of environmental conditions in the park such as elevation (5,000 to 10,457 feet), moisture (precipitation is greater on the western side of the park), substrate (rock type and soil depth), temperature, and localized amounts of sun exposure. Collectively, the park's location and its environmental variability results in a myriad of habitats, species, and natural communities in Lassen Volcanic National Park. This biodiversity is demonstrated by approximately 300 species of vertebrates (which includes birds, mammals, reptiles, amphibians, and fish), 765 species of plants, and a wide variety of invertebrates.

Four general vegetation communities cover most of the park: yellow pine forests (ponderosa pine and Jeffrey pine), red fir forests, subalpine forests, and alpine fell fields. Yellow pine forests, which typically occur below 6,000 feet, may grow as climax stands of ponderosa and Jeffrey pine or as mixed stands with sugar pine, white fir, incense cedar, or Douglas-fir. Red fir forests are widespread between 6,000 and 8,500 feet and are characterized by mixtures of red fir and lodgepole pine, Jeffrey pine, western white pine, and mountain hemlock. The subalpine forest, at the upper limit of the coniferous forest, is dominated by whitebark pine and mountain hemlock. These two species are highly weather resistant and grow at elevations as high as 10,000 feet. Near timberline are the alpine meadows and fell fields, which are well-known for colorful wildflowers.

Wildlife species that are typically found in the lower elevation forests of the park are black bear, mule deer, marten, brown creeper, mountain chickadee, white-headed woodpecker, long-toed salamander, and a wide variety of bat species. Seasonally wet meadows are also common in valley bottoms, along streams, and at lake margins, providing habitat for the Pacific tree frog, Western terrestrial garter snake, Wilson's snipe, and mountain pocket gopher. In the subalpine zones of the park, wildlife species that are common include Clark's nutcracker, deer mice, and various chipmunk species. Above treeline, conditions are such that little vegetation is found. Species found in this habitat include gray-crowned rosy-finch, pika, and golden-mantled ground squirrel.

Lassen Volcanic National Park also protects a robust human history related to how people inhabited, explored, and traveled through this unique landscape. These cultural resources include important stories (e.g., American Indian ethnographic resources and B. F. Loomis photography of the Lassen Peak eruption), artifacts (historic objects, archived collections), and sites (archeological sites, historic structures, and cultural landscapes). Additionally, the park has several significant examples of human pathways and cultural landscapes, including Drakesbad cultural landscape, Civilian Conservation Corps (CCC) / Park Development, the Nobles Emigrant Trail, the Pacific Crest Trail, and the Volcanic Legacy Scenic Byway – All American Road.

In addition to protecting and preserving the above-described natural and cultural resources and stories, Lassen Volcanic National Park provides a wide array of opportunities for park visitors to experience, enjoy, and learn about these resources, as well as pursue many forms of outdoor recreation across all seasons. On average, the park receives an average of 450,000 park visitors per year. This visitation includes people who camp and spend several days throughout the park, as well as people who only spend a few hours focusing more on educational and scenic opportunities provided at the visitor centers, museum, and scenic byway park highway. Day hiking in the frontcountry and backpacking in the wilderness are popular activities supported by more than 150 miles of hiking trails. These trails provide visitors with access to many of the park's volcanic landforms and features such as Lassen Peak and the hydrothermal areas of Bumpass Hell and Devils Kitchen. Other visitor opportunities include, but are not limited to, auto touring, wildlife viewing, wildflower viewing, stargazing, camping, boating, horseback riding, fishing, and a wide range of educational programs provided by park staff. In addition, during winter months the park also provides access for many winter recreation activities such as snowshoeing, skiing, and sledging.

Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Lassen Volcanic National Park was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established by legislation on August 9, 1916. However, this enabling legislation was preceded by a series of presidential proclamations under President Theodore Roosevelt that included the establishment of Lassen Peak Forest Reserve in 1905 and Lassen Peak National Monument and Cinder Cone National Monument in 1907 (see appendix A for the enabling legislation, presidential proclamations, and subsequent wilderness designation legislation). The purpose statement lays the foundation for understanding what is most important about the park.

LASSEN VOLCANIC NATIONAL PARK preserves dynamic volcanic phenomena, scenic values, outstanding wilderness character, and diverse natural and cultural resources; and provides educational, recreational, and exceptional scientific opportunities for the benefit of the public.



Park Significance

Significance statements express why a park’s resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Lassen Volcanic National Park, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Lassen Volcanic National Park. (Please note that the sequence of the statements does not reflect the level of significance.)

1. Few places on Earth parallel Lassen Volcanic National Park’s concentrated diversity of volcanic features. The park showcases a dynamic geologic landscape containing an intact network of hydrothermal features and 60 extinct and active volcanoes in relative proximity to one another that represent all four primary types: (1) shield, (2) composite, (3) cinder cone, and (4) plug dome. This extent and diversity is complemented by more than a century of scientific study, which enhances global knowledge of volcanic systems and contributes to future research, management, and stewardship.
2. Located at the crossroads of three distinct biological provinces—Cascades, Sierra Nevada, and Great Basin—Lassen Volcanic National Park preserves an exceptional biodiversity of more than 1,050 plant and animal species. This biologically rich transition zone offers many opportunities for scientists to research anthropogenic effects on biological processes and populations.
3. Lassen Volcanic National Park protects valuable archeological sites, historic structures, objects, stories, and traditional places that remain significant to people of various backgrounds. These resources enrich our understanding of people that have lived in, adapted to, and traveled through the southern Cascade region for thousands of years.
4. Lassen Volcanic National Park includes more than 90,000 acres of designated and proposed wilderness, which comprises more than 85% of park lands and are buffered by large expanses of other public lands and a contiguous wilderness area. The park’s wilderness lands provide outstanding opportunities to experience natural quiet, solitude, clean air, clear views, and pristine night skies amidst a distinctive, vast landscape of volcanic landforms.



Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Lassen Volcanic National Park:

- Wide Variety of Volcanic and Hydrothermal Features and Associated Geology.** With the iconic Lassen Peak towering above, Lassen Volcanic National Park contains approximately 170 square miles of volcanic landforms, glacially sculpted terrain, and spectacular hydrothermal features, all occurring at the southern tip of the volcanic Cascade Range. The park contains the four primary types of volcanoes (shield, composite, cinder cone, and plug dome), as well as lava flows, pyroclastic flows (density currents of volcanic gases, ash, and rock), and tephra (deposits of volcanic material ejected from a volcano). Before the eruption of Mount St. Helens in 1980, Lassen Peak was the only Cascade volcano to have erupted in the 20th century. The currently active "Lassen Volcanic Center" (a body of hot or molten rock beneath Lassen Peak) underlies most of the southern half of the park. This heat source of active volcanism drives the remarkable hydrothermal features, including roaring fumaroles, mudpots, boiling pools, and thermal ground. These features are indicators of the ongoing potential for future volcanic eruptions in the Lassen Volcanic Center. Although the park is noted primarily for its volcanic terrain and features, volcanism and glaciation have worked hand in hand in the creation of the park's landscape. Large ice caps covered the mountainous terrain several times during ice ages of the recent geologic past. Glacial landforms, such as moraines and outwash deposits, overlay much of the volcanic foundation. The alteration of volcanic rocks by hydrothermal processes facilitated glacial erosion. Glacially eroded features such as cirques and arêtes occur throughout the park. It should be noted that the prominent hydrothermal and glacial processes also highlight the importance of the park's hydrology. The park lies in the headwaters of four major watersheds that all eventually drain to the Sacramento River, and contains over 200 lakes and ponds and 15 perennial streams. Groundwater systems are also fed by some closed basins near Lassen Peak that drain into lakes.
- Biodiversity and a Distinctive Range of Flora and Fauna.** Lassen Volcanic National Park protects a wide range of intact ecosystems and rich biological diversity that occur at the transition zone between the Cascades, Sierra Nevada, and Great Basin biological regions. The park's location at this transition zone provides essential natural conditions for a distinctively large and unique assemblage of plant and animal species. Healthy populations of native wildlife and plants are found throughout the park, including species that are endemic and unique to this area. This biodiversity lends itself to scientific research on the effects of wildland fire management, climate change, and other stressors on these resources.

- **Human Pathways and Ties with the Landscape (past, present, and future, including artifact collection).** People have traveled through and inhabited the area now known as Lassen Volcanic National Park for millennia. Resources in the area have long been used by American Indians and today the area still retains significance to them and to people who have more recently created ties to this dynamic landscape. Likewise, the historic Nobles Emigrant Trail through the park is associated with the overall history and development of the nation by contributing to settlement access to this region for the settlers' wagon trails. The park's extensive museum and archive collection documents the volcanic history, ethnographic resources, historic artifacts, photos, and stories. Since establishment of the park, designated trails and travel pathways, including the Pacific Crest National Scenic Trail and the Volcanic Legacy Scenic Byway, provide access to many park resources and experiences.
- **Lands with Wilderness Character and Other Backcountry Areas.** The park contains more than 90,000 acres of designated and proposed wilderness lands (accounting for more than 85% of the park), which possess the following qualities of wilderness character: untrammeled, undeveloped, natural, outstanding opportunities for solitude or primitive and unconfined recreation, and other features of value. These wilderness lands, as well as other adjacent backcountry lands that are not designated wilderness, provide both easily accessible and challenging backcountry experiences for park visitors across a diverse and dynamic volcanic landscape. For park visitors, the wilderness lands provide experiences of clean air, natural darkness and sounds, scenic views of wide open expanses, and the sense of solitude amongst nature. These wilderness lands also protect large tracts of important habitat and critical water sources for the benefit of many different plant and wildlife species.
- **Diversity of Traditional Recreational Values and Visitor Experiences.** The park provides visitors with ample experiential opportunities to enjoy clean air and natural scenery offered by the unique expanse of volcanic landforms and the surrounding landscape, which also includes scenic lakes, forests, wildlife, etc. Opportunities to appreciate other experiential values of the natural world, including dark night skies and a natural soundscape, are also available to the visitor throughout the year. In addition, the park provides a diversity of other more active forms of recreation and national park experiences for visitors such as an impressive drive along the scenic byway through the park, many equestrian trails, family oriented frontcountry opportunities (e.g., picnicking, camping, kayaking, hiking, etc.), winter recreation (e.g., cross-country skiing, snowshoeing, sledding), easily accessible gateways to wilderness lands, and a wide variety of educational and discovery opportunities related to natural features and processes as well as cultural and historic values (e.g., Kohm-Yah-mah-nee Visitor Center, Loomis Museum, interpretive media, and artist and photographer exhibits).



Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Lassen Volcanic National Park:

- **Geology.** Lassen Volcanic National Park is a dynamic volcanic landscape providing an awe-inspiring glimpse of Earth's seething power, above and below ground.
- **Biodiversity.** Diverse natural systems coexist in Lassen Volcanic National Park due to the intersection of three distinct biological provinces. Study and research of these ecosystems furthers the understanding about the changing ecological health of the region, nation, and the planet.
- **Pathways.** Lassen Volcanic National Park is part of a network of social and natural pathways that connect the park and its values to surrounding resources and partners.
- **Human Activity.** Stories of human experience from precontact to the present day are reflected in the cultural resources of Lassen Volcanic National Park.
- **Wilderness.** The park's wilderness provides outstanding opportunities for self-discovery in wild soundscapes, natural darkness, and relatively undisturbed ecosystems.



Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Lassen Volcanic National Park.

For more information on the existing special mandates and administrative commitments for Lassen Volcanic National Park, please see appendix B.



Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. analysis of fundamental resources and values (see appendix C)
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value. Please see appendix C for the analysis of fundamental resources and values.

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental resources and values. For example, a key issue may pertain to the potential for a fundamental resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but which still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Lassen Volcanic National Park and the associated planning and data needs to address them:

- **Natural Resource Stressors.** Several stressors combine and interact to threaten natural systems at Lassen Volcanic National Park, including climate change, air pollution, nonnative species, wildland fire, and human use.

The specific effects of climate change are only beginning to be understood. Climate change will alter regional low, median, and high temperatures and alter the timing and magnitude of precipitation events. This could dramatically change habitat quality and the location and amount of water available for plants and wildlife. As a result, there may be a loss of sensitive species, an invasion of species more adapted to the new climate and habitat, an alteration of plant phenology and associated symbiotic relationships, an increase in pestilence, and a degradation/erosion of cultural landscapes, sites, and structures.

Changes in temperature and moisture patterns could result in mesic (i.e., wet) and cold-tolerant species moving to higher elevations and thus lead to immigration (or range extension and contractions) of plants and animals regionally native, but adapted to different climate regimes. Changes in temperature and moisture could also alter plant phenology, impacting migratory (and local) species adapted to specific timing of flowering/fruitlets plants. These changes may also begin to influence pestilence by altering habitats in favor of invasive species, which out-compete native plants for resources.

Potentially hotter temperatures and changes in precipitation will lead to an increased probability of drought. A current drought has already affected some resources, such as the large “legacy” trees, in the park that are being lost. Demands will intensify on already limited water supplies, impacting biodiversity and protected areas. These climatic shifts will influence critical processes, such as hydrologic cycle and wildland fire regimes, which result in landscape-scale disturbances. Diminishing lake levels will change concentrations of pollutants and result in water quality impacts.

Nonnative species and pathogens have the ability to cause harm to park resources and are generally considered to be one of the greatest threats to biological diversity in natural areas. The present distribution and spread of nonnative plant species and the potential threats to native ecosystems are important issues. For park forests, threats include nonnative blister rust, native fungus, and pine beetle infestations that are exacerbated by a warming climate.

A history of wildland fire suppression created a legacy of increased fuels within the park. Fuel conditions in many areas of the park have created challenges for resource protection. Years of intensive wildland fire suppression and human manipulation of natural environments influence types, quantity, and location of vegetation. These influences, coupled with climate change, can dramatically alter wildland fire regimes and vegetation communities, potentially threatening plant and wildlife species.

The park also lies downwind of the populated Sacramento Valley and areas of agriculture and manufacturing. Nitrogen and sulfur pollutants emitted from these sources can harm the park’s natural and scenic resources such as vegetation, surface waters, and visibility. High elevation ecosystems are particularly sensitive since they receive more deposition than lower elevations (due to more precipitation). Short growing seasons and shallow soils limit the capacity of soils and plants to buffer or absorb these pollutants. In addition, acidification may cause loss of sensitive macroinvertebrates and fish, while enrichment may change plant communities. Both can alter lake and stream diversity. Also, ground-level ozone can cause injury to the park’s ozone-sensitive plants, and elevated concentrations of airborne toxics have been found in park air and vegetation, with mercury being found in high-elevation lakes.

Visitor use also places stress on natural systems through wildlife and human interactions such as the park’s recent increase in bear encounters and the increased occurrence of dogs throughout the park. In addition, social trails in many areas impact rocks, soils, and vegetation through erosion and trampling.

- *Associated High Priority Planning and Data Needs:* Strategic plan, visitor use management plan, resource stewardship strategy, updated bear management plan

- **Fire Management and Safety.** The park lacks a workable structural fire response program. Although agreements have been made with outside communities, without a program in Mineral where park headquarters contains many historic wooden structures, response times will be slow and inadequate. Public safety due to wildland fire risk is an issue in several areas of the park, especially those areas with limited egress. In addition, dead and dying trees that result from fires endanger park visitors and employees in these areas. Recent reorganization and reduction of the fire management program under declining budgets is not sustainable or adequate to meet current and future expected needs. The current fire staff has been reduced by more than one-half in the last five years. Assuming additional challenges and difficulties with climate change, risks from fire management practices on adjacent lands, and continued development and interests on park boundaries, this situation will not likely be adequate or well-received socially and/or politically.

- *Associated High Priority Planning and Data Needs:* Strategic plan

- **Aging Facilities and Infrastructure.** The park contains a large number of buildings that significantly add to the deferred maintenance burden of the park and require a substantial amount of funding to maintain. Pests are often found in structures throughout the park. Aging exhibits and designs are often not compatible with accessibility needs. In many cases, historic building designs do not accommodate modern-day needs and pose significant challenges to update, replace, or “green” them. In many cases, the park lacks baseline cultural resource documentation relating to those structures. Although such buildings may not be cost effective to keep, the park lacks a systematic way to make these determinations.

Additional needs include communication infrastructure, both internal and external, which are poorly adapted to current technologies and methods for effectiveness and efficiency. Because of these factors, radio communications and Internet connectivity is poor in many areas. Nonemergency communications are often limited by poor connectivity and road openings (e.g., snow removal) and are hampered by a lack of related positional technologies.

- *Associated High Priority Planning and Data Needs:* Strategic plan, resource stewardship strategy, Manzanita Lake site plan, historic buildings preservation plan



- **Circulation and Use at Developed Areas.** Management of human use at Lassen Volcanic National Park is essential for maintaining healthy ecosystems, preserving cultural resources, and providing quality visitor experiences. Full parking areas at sites such as Bumpass Hell, Hat Lake, and Kings Creek Falls Trailhead lead to unsafe roadside parking and congestion. Poor traffic circulation at Manzanita Lake creates congestion in one of the most heavily used areas of the park and negatively affects the campground and campground store operations. Juniper Lake Campground experiences heavy use and degradation due to its shoreline location and access through a riparian area.

The capacities of these areas to sustain heavy visitor use are poorly understood. The park lacks user capacity analyses to provide management direction. In addition, Lassen Volcanic National Park will have difficulty meeting the demands of increased visitation with fewer staff having the primary job of interacting with visitors, responsibilities for visitor protection, and performing preventive search and rescue and resource protection.

- *Associated High Priority Planning and Data Needs:* Visitor use management plan, Manzanita Lake site plan

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.



Criteria and Considerations for Prioritization

The following criteria were used to evaluate the priority of each planning or data need:

- addresses multiple issues
- emergency/urgency of the issue
- impacts on visitor use and experience
- available funding
- feasibility of completion
- affects health and safety of visitors or park staff

High Priority Planning Needs

Strategic Plan.

Rationale and Scope— Lassen Volcanic National Park lacks a multiyear plan for operations and funding that is guided by a long-term vision for the park. A strategic plan would address this need by setting goals and priorities to address the most pressing operational, organizational, administrative, fire safety and management, and resource issues, including budget resiliency; commercial services; and the alignment of staff, partners, and project funding with park priorities. Specific components of the process include identifying the most significant challenges and opportunities facing the park or program, determining how to address those challenges and opportunities, and following through with effective implementation. The overall intent of strategic planning is to focus employee attention and energy on effectively addressing the biggest issues in a timely manner.

Visitor Use Management Plan.

Rationale and Scope— The visitor use management plan would provide guidance on the management of visitor activities throughout the park, an assessment of the need for new or modified visitor facilities, and identification of strategies for addressing visitor use issues such as crowding, vehicle parking, and resource impacts in both high-use and backcountry areas. The plan would give direction to the park with regard to visitor use proposals and trends, which would help the park connect to new audiences while protecting resources.

Resource Stewardship Strategy.

Rationale and Scope— The park needs to define integrated and specific goals regarding desired future conditions of cultural and natural resources. Developing multidisciplinary, adaptive management approaches to mitigate threats from human land use and changing climate scenarios will increase the resiliency of resources and ecological processes. The strategy would identify priority cultural and natural resources in the park, identify current conditions and trends if possible, and prioritize management strategies to protect the resources. The resource stewardship strategy would identify conservation objectives and potential activities to manage resources as well as implementation strategies, including inventory and monitoring, project management, restoration, and research. This strategic planning product would also consider resource condition in addition to funding and staffing requirements.

Manzanita Lake Site Plan.

Rationale and Scope— Manzanita Lake developed area (the most developed site in the park) with its iconic views of Lassen Peak, numerous CCC-constructed facilities, and extensive concession operations, is in need of an upgrade to improve visitor experience, ensure public safety, and protect resources. Congestion issues in front of the campground store and cabin areas (including bike paths) degrade visitor experience and restrict access in emergencies. Accessibility issues and sustainable facilities need to be addressed, along with improved signage, ingress and egress in emergency situations, water quality issues, radio communication infrastructure, and winter activities. Forest health issues in this area are also in need of assessment and improved management.

Juniper Lake Area Site Plan.

Rationale and Scope— Juniper Lake Campground is poorly developed and impacts wetland and riparian areas due to its location. In addition, residents of adjacent inholdings use lake water to supplement their own water supplies, running waterlines far across the lakebed margins exposed by drought. It should also be noted that a portion of the campground lies in designated wilderness. A site plan would address appropriate campground design, location, and visitor use opportunities at the lake, as well as issues related to inholdings and radio communication infrastructure.

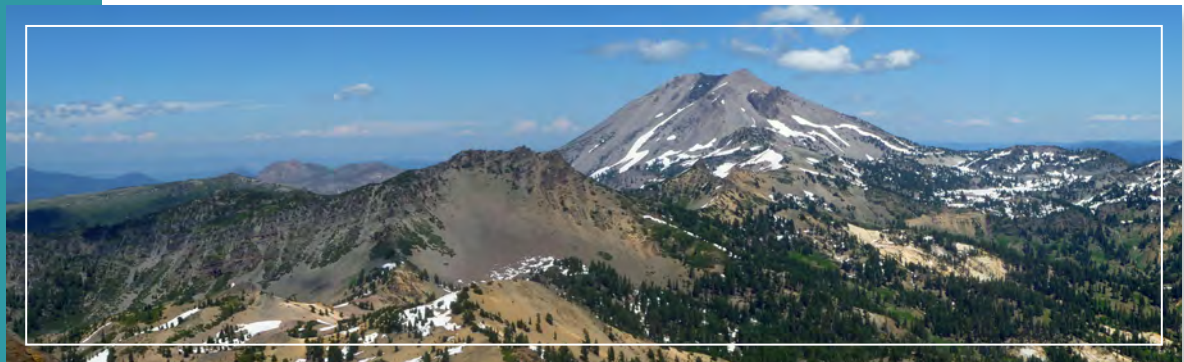
Bear Management Plan (updated).

Rationale and Scope— Lassen Volcanic National Park has previously benefited from few human-bear encounters. However, encounters are increasing and the park lacks updated guidance to address this trend. The previous bear management plan is outdated. This plan update will focus on several management strategies that address dealing with problem bears, monitoring and management of healthy bears, education and outreach, enforcement, and other related visitor management issues.

Historic Building Preservation Plan.

Rationale and Scope— The park contains many historic structures in varying states of use and preservation. This plan would provide a method for sorting and allocating maintenance of these structures. Currently, these structures are impacted by pest issues and failing outdated communication technology. The park uses these buildings for day-to-day operations as primary offices, visitor facilities, and administrative use. Because of the age and condition of the buildings they are inadequate for meeting the requirements of the presidential mandate to reduce energy usage and sometimes do not meet safety codes and standards.

This effort would include inventories of the types and functions of historic structures, identifying issues and needs, prioritizing maintenance and improvements, and establishing thresholds and monitoring processes. In addition, communication and IT needs would be addressed.



Planning Needs And Data Needs

Planning or Data Need	Priority (H, M)
Natural Resources	
Plans	
Resource stewardship strategy	H
Updated bear management plan	H
Fisheries management plan	M
Integrated pest management plan	M
Updated climate change communications plan	M
Climate change response strategy	M
Data management plan	M
Vegetation/invasive management plan	M
Wildlife monitoring strategy	M
Climate change adaptation planning	M
Data Needs and Studies	
Expanded wilderness character assessment	M
Climate monitoring strategy	M
Pollinator survey/studies	M
Rare plant surveys	M
Baseline wildlife monitoring	M
Inventory of restoration needs (dispersed campsites, social trails, disturbance)	M
Hazard trees data	M
Monitoring of geologic features (partner with USGS and other NPS entities)	M
Invasive plant mapping	M
LiDAR elevation data	M
High resolution mapping of active hydrothermal areas	M
Phenology monitoring of key species	M
Fisheries monitoring data (at water bodies beyond Manzanita Lake)	M
Snowpack and other precipitation records to track climate-related changes in hydrogeology	M
Investigation of air pollution impacts to sensitive park ecosystems	M

Planning or Data Need	Priority (H, M)
Cultural Resources	
Plans	
Resource stewardship strategy	H
Historic buildings preservation plan	H
Cultural landscape reports (Manzanita Lake Historic District, Summit Lake Cultural Landscape)	M
Museum collections emergency operations plan	M
Data Needs and Studies	
Review/Update National Register of Historic Places forms	M
GIS baseline data mapping of historic districts and trails	M
Baseline data for museum collections	M
Inventory and monitoring for cultural resources	M
Cultural landscape inventories	M
Visitor Experience, Interpretation, and Education	
Plans	
Visitor use management plan	H
Trail management plan	M
Viewshed management plan	M
Updated long-range interpretive plan	M
Park education plan	M
Transportation plan	M
Climate change adaptation planning	M
Contingency plans for ongoing support of water use	M
Data Needs and Studies	
Visitor experience and transportation assessment	M
Visual resource inventory	M
Accurate trail mapping	M
Trail signage data	M
Visitor use surveys and monitoring (Including separate data for Pacific Crest National Scenic Trail, Volcanic Legacy Scenic Byway, and wilderness users)	M

Planning or Data Need	Priority (H, M)
Facilities	
Plans	
Manzanita Lake site plan	H
Juniper Lake area site plan	H
Historic buildings preservation plan	H
Data Needs and Studies	
Inventory of historic structures (types and functions)	M
Partnerships and Concessions	
Plans	
Park partner action strategy	M
Administration / operations	
Plans	
Strategic plan (includes fire management and safety)	H
Updated communications and IT plan	M
Preventative search and rescue plan	M
Accessibility plan	M
Data Needs and Studies	
Law enforcement needs assessment	M
Geologic hazard identification	M



Part 3: Contributors

Lassen Volcanic National Park

Juanita Bonnifield, Cultural Resource Program Manager

John Fish, Chief of Visitor and Resource Protection

Steve Gibbons, Superintendent

Karen Haner, Chief of Interpretation and Education

Mike Magnuson, Wildlife Biologist

Jason Mateljak, Chief of Resource Management

Gary Mott, Chief of Maintenance

Janet Rogers, Chief of Administration

Steve Zachary, Education Specialist (retired)

NPS Pacific West Region

Brad Phillips, Outdoor Recreation Planner, Regional Liaison

NPS Washington Support Office

Pam Holtman, Quality Assurance Coordinator, Park Planning and Special Studies

NPS Denver Service Center, Planning Division

Greg Jarvis, Project Manager

Wanda Gray Lafferty, Editor

Susan McPartland, Project Specialist

Nancy Shock, Foundation Coordinator

Don Wojcik, Natural Resource Specialist

Angie Wing, (former) Contract Visual Information Specialist



Appendixes

Appendix A: Enabling Legislation and Legislative Acts for Lassen Volcanic National Park

PROCLAMATIONS, 1905.

3063

ognized as a breeding place therefor, and that the hunting, trapping, killing or capturing of game animals and birds upon the lands of the United States within the limits of said area is unlawful, except under such regulations as may be prescribed from time to time by the Secretary of Agriculture.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 2nd day of June, in the year of our Lord one thousand nine hundred and five, and of the Independence of the United States the one hundred and twenty-ninth.

T. ROOSEVELT

By the President:

FRANCIS B LOOMIS

Acting Secretary of State.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

June 2, 1905.

WHEREAS, it is provided by section twenty-four of the Act of Congress, approved March third, eighteen hundred and ninety-one, entitled, "An act to repeal timber-culture laws, and for other purposes"; "That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof";

And whereas, the public lands in the State of California, within the limits hereinafter described, are in part covered with timber, and it appears that the public good would be promoted by setting apart and reserving said lands as a public reservation;

Now, therefore, I, Theodore Roosevelt, President of the United States, by virtue of the power in me vested by section twenty-four of the aforesaid Act of Congress, do hereby make known and proclaim that there are hereby reserved from entry or settlement and set apart as a Public Reservation all those certain tracts, pieces or parcels of land lying and being situate in the State of California, and within the boundaries particularly described as follows:

Beginning at the north-west corner of Section three (3), Township thirty-five (35) North, Range four (4) East, Mount Diablo Base and Meridian, California; thence easterly along the Seventh (7th) Standard Parallel North to the north-east corner of said township; thence southerly to the north-west corner of fractional Township thirty-five (35) North, Range five (5) East; thence easterly along the Seventh (7th) Standard Parallel North to the north-east corner of Township thirty-five (35) North, Range six (6) East; thence southerly to the north-west corner of Section eighteen (18), Township thirty-five (35) North, Range seven (7) East; thence easterly to the north-east corner of Section seventeen (17), said township; thence southerly to the south-east corner of said section; thence easterly to the north-east corner of Section twenty-two (22), said township; thence southerly to the north-west corner of Section thirty-five (35), said township; thence easterly to the north-east corner of said section; thence southerly to the south-east corner of said section; thence easterly to the

The Lassen Peak
Forest Reserve,
Cal.
Preamble.
Vol. 26, p. 1103.

Forest reserve,
California.

Description.

PROCLAMATIONS, 1907.

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entry, or filing, which may have been permitted to remain of record subject to the creation of a permanent reservation.

Warning is hereby given to all persons not to make settlement upon any of the lands reserved by this proclamation, unless and until they are listed by the Secretary of Agriculture and opened to homestead settlement or entry by the Secretary of the Interior under the Act of Congress, approved June eleventh, nineteen hundred and six, entitled, "An Act To provide for the entry of Agricultural lands within forest reserves."

Reserved from settlement.

Vol. 34, p. 233.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 29th day of April, in the year of our Lord one thousand nine hundred and seven, and of the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT

By the President:
ROBERT BACON
Acting Secretary of State.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

May 6, 1907.

A PROCLAMATION

WHEREAS, the elevation in the State of California, within the Lassen Peak National Forest, known as "Cinder Cone", and the adjacent area embracing a lava field and Snag Lake and Lake Bidwell, comprising chiefly public lands, are of great scientific interest, as illustrations of volcanic activity which are of special importance in tracing the history of the volcanic phenomena of that vicinity;

Cinder Cone National Monument, Cal. Preamble. Vol. 34, p. 3063.

And whereas, it is provided by section two of the Act of Congress, approved June eighth, nineteen hundred and six, entitled, "An Act For the preservation of American antiquities," "That the President of the United States is hereby authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected;"

Vol. 34, p. 225.

Now, therefore, I, Theodore Roosevelt, President of the United States of America, by virtue of the power in me vested by section two of the aforesaid act of Congress, do proclaim that there are hereby reserved from appropriation and use of all kinds under all of the public land laws, subject to all prior valid adverse claims, and set apart as a National Monument, all the tracts of land, in the State of California, shown as the Cinder Cone National Monument on the diagram forming a part hereof.

National Monument, California.

The reservation made by this proclamation is not intended to prevent the use of the lands for forest purposes under the proclamation establishing the Lassen Peak National Forest, but so far as the two reservations are consistent they are equally effective. In all respects in which they may be inconsistent the National Monument hereby established shall be the dominant reservation.

Forest uses not affected. Vol. 34, p. 3063.

Warning is hereby given to all unauthorized persons not to appropriate, injure or destroy any feature of this National Monument or to locate or settle upon any of the lands reserved by this proclamation.

Reserved from settlement, etc.

PROCLAMATIONS, 1907.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 6th day of May, in the year of our Lord one thousand nine hundred and seven, and of [SEAL.] the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT

By the President:
ROBERT BACON
Acting Secretary of State.

May 6, 1907.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

Lassen Peak National Monument, Cal. Preamble. Vol. 34, p. 3063. Post, p. 2157.

WHEREAS, Lassen Peak, which is situated upon public land in the State of California, within the Lassen Peak National Forest, marks the southern terminus of the long line of extinct volcanoes in the Cascade Range from which one of the greatest volcanic fields in the world extends, and is of special importance in tracing the history of the volcanic phenomena of that vicinity;

Vol. 34, p. 225.

And whereas, it is provided by section two of the Act of Congress, approved June eighth, nineteen hundred and six, entitled, "An Act For the preservation of American antiquities," "That the President of the United States is hereby authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected;"

National monument, California.

Now, therefore, I, Theodore Roosevelt, President of the United States of America, by virtue of the power in me vested by section two of the aforesaid act of Congress, do proclaim that there are hereby reserved from appropriation and use of all kinds under all of the public land laws, subject to all prior valid adverse claims, and set apart as a National Monument, all the tracts of land, in the State of California, shown as the Lassen Peak National Monument on the diagram forming a part hereof.

Forest uses not affected. Vol. 34, p. 3063.

The reservation made by this proclamation is not intended to prevent the use of the lands for forest purposes under the proclamation establishing the Lassen Peak National Forest, but so far as the two reservations are consistent they are equally effective. In all respects in which they may be inconsistent the National Monument hereby established shall be the dominant reservation.

Reserved from settlement, etc.

Warning is hereby given to all unauthorized persons not to appropriate, injure or destroy any feature of this National Monument or to locate or settle upon any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 6th day of May, in the year of our Lord one thousand nine hundred and seven, and of [SEAL.] the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT

By the President:
ROBERT BACON
Acting Secretary of State.

as specifically stated in writing by the shipper. Such rates shall be published as are other rate schedules.”

be, and the same is hereby, amended to read as follows, to wit:

“*Provided, however,* That the provisions hereof respecting liability for full actual loss, damage, or injury, notwithstanding any limitation of liability or recovery or representation or agreement or release as to value, and declaring any such limitation to be unlawful and void, shall not apply, first, to baggage carried on passenger trains or boats, or trains or boats carrying passengers; second, to property, except ordinary live stock, received for transportation concerning which the carrier shall have been or shall hereafter be expressly authorized or required by order of the Interstate Commerce Commission to establish and maintain rates dependent upon the value declared in writing by the shipper or agreed upon in writing as the released value of the property, in which case such declaration or agreement shall have no other effect than to limit liability and recovery to an amount not exceeding the value so declared or released, and shall not, so far as relates to values, be held to be a violation of section ten of this Act to regulate commerce, as amended; and any tariff schedule which may be filed with the commission pursuant to such order shall contain specific reference thereto and may establish rates varying with the value so declared or agreed upon; and the commission is hereby empowered to make such order in cases where rates dependent upon and varying with declared or agreed values would, in its opinion, be just and reasonable under the circumstances and conditions surrounding the transportation. The term ‘ordinary live stock’ shall include all cattle, swine, sheep, goats, horses, and mules, except such as are chiefly valuable for breeding, racing, show purposes, or other special uses.”

Approved, August 9, 1916.

Liability for actual loss.

Passenger baggage excepted.

Shipments if rates based on declared values.

Vol. 36, p. 649.

Rates to be established.

Ordinary live stock excepted.

August 9, 1916.
[H. R. 348.]
[Public, No. 184.]

CHAP. 302.—An Act To establish the Lassen Volcanic National Park in the Sierra Nevada Mountains in the State of California, and for other purposes.

Lassen Volcanic National Park, Cal. Established.
Description.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all those certain tracts, pieces, or parcels of land lying and being situate in the State of California and within the boundaries particularly described as follows, to wit: Beginning at the northeast corner of section three, township thirty-one, range six east, Mount Diablo meridian, California; thence southerly to the southeast corner of said section; thence easterly to the northeast corner of the northwest quarter of section eleven, said township; thence southerly to the southeast corner of the southwest quarter of section fourteen, said township; thence easterly to the northeast corner of the northwest quarter of section twenty-four, said township; thence southerly to the southeast corner of the southwest quarter of section twenty-five, said township; thence westerly to the southwest corner of section twenty-six, said township; thence southerly to the southeast corner of section thirty-four, said township; thence westerly along the sixth standard parallel north, allowing for the proper offsets, to the northeast corner of section three, township thirty north, range six east; thence southerly to the southeast corner of section twenty-seven, said township; thence westerly to the southwest corner of the southeast quarter of section twenty-eight, said township; thence northerly to the northwest corner of the southeast quarter of said section; thence westerly to the southwest corner of the northwest quarter of said section; thence northerly to the northwest corner of said section; thence westerly to the southwest corner of the southeast quarter of section twenty, said

township; thence northerly to the northwest corner of the southeast quarter of said section; thence westerly to the range line between ranges five and six east; thence southerly along said range line to the southeast corner of township thirty north, range five east; thence westerly along the township line between townships twenty-nine and thirty north to the southwest corner of section thirty-three, township thirty north, range five east; thence northerly to the northwest corner of said section; thence westerly to the southwest corner of the southeast quarter of section twenty-nine, said township; thence northerly to the northwest corner of the southeast quarter of said section; thence westerly to the southwest corner of the northwest quarter of said section; thence northerly to the northwest corner of said section; thence westerly to the southwest corner of the southeast quarter of section twenty, township thirty north, range four east; thence northerly to the northwest corner of the southeast quarter of section eight, said township; thence easterly to the northeast corner of the southwest quarter of section nine, said township; thence northerly to the township line between townships thirty and thirty-one north; thence easterly along the sixth standard parallel north, allowing for the proper offsets, to the southwest corner of section thirty-three, township thirty-one north, range four east; thence northerly to the northwest corner of section twenty-one, said township; thence easterly to the range line between ranges four and five east; thence northerly along said range line to the northwest corner of fractional section eighteen, township thirty-one north, range five east; thence easterly to the southwest corner of section twelve, said township; thence northerly to the northwest corner of section one, said township; thence easterly along the township line between townships thirty-one and thirty-two north to the northeast corner of section three, township thirty-one north, range six east, the place of beginning, are hereby reserved and withdrawn from settlement, occupancy, disposal, or sale, under the laws of the United States, and said tracts are dedicated and set apart as a public park or pleasuring ground for the benefit and enjoyment of the people of the United States under the name and to be known and designated as the Lassen Volcanic National Park; and all persons who shall locate or settle upon or occupy the same, or any part thereof, except as hereinafter provided, shall be considered trespassers and be removed therefrom: *Provided*, That nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States or the rights of any such claimant, locator, or entryman to the full use and enjoyment of his land: *Provided further*, That rights of way for steam or electric railways, automobiles, or wagon roads may be acquired within said Lassen Volcanic National Park under filings or proceedings hereafter made or instituted under the laws applicable to the acquisition of such rights over or upon the national forest lands of the United States when the construction of such roads will not interfere with the objects of the national park, and that the United States Reclamation Service may enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a Government reclamation project; that no lands located within the park boundaries now held in private, municipal, or State ownership shall be affected by or subject to the provisions of this Act: *And provided further*, That no lands within the limits of said park hereby created belonging to or claimed by any railroad or other corporation now having or claiming the right of indemnity selection by virtue of any law or contract whatsoever shall be used as a basis for indemnity selection in any State or Territory whatsoever for any loss sustained by reason of the creation of said park.

Trespassing forbidden.

Provision. Valid claims not affected.

Rights of way.

Reclamation Service use.

Present ownership not affected.

Indemnity selection.

Regulations of control, etc.

SEC. 2. That said park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such rules and regulations not inconsistent with the laws of the United States as he may deem necessary or proper for the care, protection, management, and improvement of the same. Such regulations being primarily aimed at the freest use of the said park 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 so far as is consistent with the purposes of this Act. He shall provide against the wanton destruction of the fish and game found within said park and against their capture or destruction for purposes of merchandise or profit, and generally shall be authorized to take all such measures as shall be necessary to fully carry out the objects and purposes of this Act. Said Secretary may, in his discretion, execute leases to parcels of ground not exceeding ten acres in extent at any one place to any one person or persons or company for not to exceed twenty years when such ground is necessary for the erection of buildings for the accommodation of visitors and to parcels of ground not exceeding one acre in extent and for not to exceed twenty years to persons who have heretofore erected, or whom he may hereafter authorize to erect, summer homes or cottages. Such leases or privileges may be renewed or extended at the expiration of the terms thereof. No exclusive privilege, however, shall be granted within the park except upon the ground leased. The regulations governing the park shall include provisions for the use of automobiles therein and the reasonable grazing of stock.

Leases to accommodate visitors, etc.

Timber disposal.

SEC. 3. That the Secretary of the Interior may also sell and permit the removal of such matured or dead or down timber as he may deem necessary or advisable for the protection or improvement of the park.

Charges.

SEC. 4. That the Secretary of the Interior may exact such charges as he deems proper for leases and all other privileges granted hereunder.

Limit on appropriations.

SEC. 5. That no appropriation for the maintenance, supervision, or improvement of said park in excess of \$5,000 annually shall be made unless the same shall have first been expressly authorized by law.

Approved, August 9, 1916.

August 9, 1916.
[H. R. 482.]
[Public, No. 185.]

CHAP. 303.—An Act Authorizing the Secretary of the Treasury to sell the old post-office building and site thereof at York, Pennsylvania.

York, Pa.
Sale of old public building et.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and is hereby, authorized, in his discretion, to sell the present post-office building and the site thereof, situate at the corner of Philadelphia and Beaver Streets, in the city of York and State of Pennsylvania, either by public or private sale, after proper advertisement, at such time and on such terms as he may deem to be to the best interest of the United States, and to execute a quit-claim deed to the purchaser thereof, and to deposit the proceeds of said sale in the Treasury of the United States as a miscellaneous receipt: *Provided*, That the said property shall not be sold for less than \$10,000.*

Proviso.
Minimum price.

Approved, August 9, 1916.

92^d CONGRESS } HOUSE OF REPRESENTATIVES } REPORT
 2^d Session } } No. 92-1422

DESIGNATING CERTAIN LANDS IN THE LASSEN VOL-
 CANIC NATIONAL PARK, CALIF., AS WILDERNESS

SEPTEMBER 20, 1972.—Committed to the Committee of the Whole House on the
 State of the Union and ordered to be printed

Mr. TAYLOR, from the Committee on Interior and Insular Affairs,
 submitted the following

REPORT

[To accompany H.R. 10655]

The Committee on Interior and Insular Affairs, to whom was re-
 ferred the bill (H.R. 10655) to designate certain lands in the Lassen
 Volcanic National Park, Calif., as wilderness, having considered the
 same, report favorably thereon with amendments and recommend that
 the bill as amended do pass.

The amendments are as follows:

Page 1, strike out all of lines 6 through 9 and insert in lieu thereof:

seventy-eight thousand nine hundred eighty-two acres, and
 which are depicted on the map entitled "Recommended Wil-
 derness, Lassen Volcanic National Park, California" num-
 bered NP-LV-9013C and dated August, 1972, are

Page 2, following line 20, insert a new section as follows:

SEC. 4. Section 1 of the Act of August 9, 1916 (39 Stat.
 443; 16 U.S.C. 201) is amended by deleting the words "that
 the United States Reclamation Service may enter upon and
 utilize for flowage or other purposes any area within said
 park which may be necessary for the development and main-
 tenance of a Government reclamation project" and the semi-
 colon appearing thereafter.

PURPOSE

The purpose of H.R. 10655 by Representative Johnson of California
 is to establish the Lassen Volcanic Wilderness Area in the State of

California.¹ As amended, the legislation provides for the creation and administration of a 78,982 acre wilderness area in the Lassen Volcanic National Park.

BACKGROUND

The Congress established the Lassen Volcanic National Park in 1916 to preserve the natural, scientific and scenic values found in Lassen, Plumas, Shasta, and Tehama Counties at the southern end of the Cascade Mountain Range in northern California. From time to time, the boundaries of the park have been revised and enlarged so that its total size at the present time is about 106,000 acres.

As the name implies, the park is primarily significant as an area of past and present volcanic activity. Although Lassen Peak, the highest peak in the park, last erupted in 1917, it remains the site of the most recent active volcano in the contiguous United States. Steam vents, boiling lakes, hot springs, mud pots and other forms of volcanism are found throughout the park. Some areas have been denuded by volcanic activity in the last half century or so, but most of the terrain is heavily forested, scenic land which contains an abundance of wildlife.

While most visitors come to the park between June and October, parts of it are open during the winter months for skiing, ice skating and other winter sports. Visitor use of the park is nearly 500,000 visitor-use days annually at the present time. Besides winter activities, 150 miles of trails among the thermal areas, old volcanoes, and cinder cones attract many hikers and campers and its lakes and streams challenge fishermen and boating enthusiasts. Scenic waterfalls and peaceful mountain meadows appeal to picnickers and make a driving tour of the park a pleasure.

PROPOSED WILDERNESS AREA

Pursuant to the Wilderness Act mandate requiring the study of roadless areas in the various units of the national park system, two roadless areas in the park totaling over 73,000 acres were identified for review and a preliminary wilderness proposal consisting of 48,587 acres of land in two units was the subject of a public hearing conducted by the National Park Service. As a result of the hearing, the wilderness area was enlarged to include three units totaling 73,333 acres—and, at the time that the hearings were conducted by the Subcommittee on National Parks and Recreation, the recommended size was again expanded to 75,825 acres.

During the congressional proceedings, several public witnesses argued that the suggested wilderness thresholds and buffer strips could not be justified and that other portions of the park merited wilderness designation. As amended, H.R. 10655 would establish a wilderness area consisting of 78,982 acres. This expansion includes all of the so-called buffer strip surrounding the wilderness area and the lands located in the vicinity of the old Emigrant Trail.

¹Another measure (H.R. 10752) by Representatives Saylor, Latta, and Maillard includes provisions which would designate lands at Lassen Volcanic National Park as wilderness.

Public Law 92-510

October 19, 1972
[H. R. 10655]

AN ACT

To designate certain lands in the Lassen Volcanic National Park, California, as wilderness.

Lassen Vol-
canic Wilderness.
Designation.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in accordance with section 3(c) of the Wilderness Act (78 Stat. 892; 16 U.S.C. 1132(c)), certain lands in the Lassen Volcanic National Park, which comprise about seventy-eight thousand nine hundred and eighty-two acres, and which are depicted on the map entitled "Recommended Wilderness, Lassen Volcanic National Park, California" numbered NP-LV-9013C and dated August 1972, are hereby designated as wilderness. The map and the description of the boundaries of such lands shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

Map and descrip-
tion, filing with
congressional
committees.

SEC. 2. As soon as practicable after this Act takes effect, a map of the wilderness area and a description of its boundaries shall be filed with the Interior and Insular Affairs Committee of the United States Senate and House of Representatives, and such map and description shall have the same force and effect as if included in this Act: *Provided, however,* That correction of clerical and typographical errors in such legal description and map may be made.

Administration.

SEC. 3. The wilderness area designated by this Act shall be known as the "Lassen Volcanic Wilderness" and shall be administered by the Secretary of the Interior in accordance with the provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

78 Stat. 890.
16 USC 1131
note.Reclamation
projects, authori-
zation removal.

SEC. 4. Section 1 of the Act of August 9, 1916 (39 Stat. 443; 16 U.S.C. 201) is amended by deleting the words "that the United States Reclamation Service may enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a Government reclamation project" and the semicolon appearing thereafter.

Approved October 19, 1972.

Public Law 92-511

October 20, 1972
[H. J. Res. 984]

JOINT RESOLUTION

To amend the joint resolution providing for United States participation in the International Bureau for the Protection of Industrial Property.

International
Bureau for the
Protection of
Industrial Prop-
erty.
Name change.
22 USC 269f.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the joint resolution of July 12, 1960 (74 Stat. 381), as amended by the joint resolution of July 19, 1963 (77 Stat. 82) is hereby further amended by (1) striking out the words "International Bureau for the Protection of Industrial Property" and inserting in lieu thereof the words "International Bureau of Intellectual Property", and (2) in subsection (b) thereof, deleting the phrase ", not to exceed \$15,000 annually," and the word "thereafter" and inserting after the word "bureau" the phrase "as determined under article 16(4) of the Paris Convention for the Protection of Industrial Property, as revised, except that in no event shall the payment for any year exceed 4.5 per centum of all expenses of the bureau apportioned among countries for that year".

21 UST 1583.

Approved October 20, 1972.

Appendix B: Inventory of Special Mandates and Administrative Commitments

Special Mandates

Designated and Proposed Wilderness. The Lassen Volcanic Wilderness Area became designated wilderness in 1972 and has been managed to fulfill the requirements of the Wilderness Act ever since. Please refer to appendix D for a description of this wilderness area, its wilderness character qualities, and associated management. Also, in 2010, the National Park Service formally transmitted a proposal through the Department of the Interior for an additional 13,151 acres of proposed wilderness in the park. The proposal is awaiting consideration by Congress. In the interim, per NPS policy, this proposed wilderness lands are being managed as if they are designated wilderness.

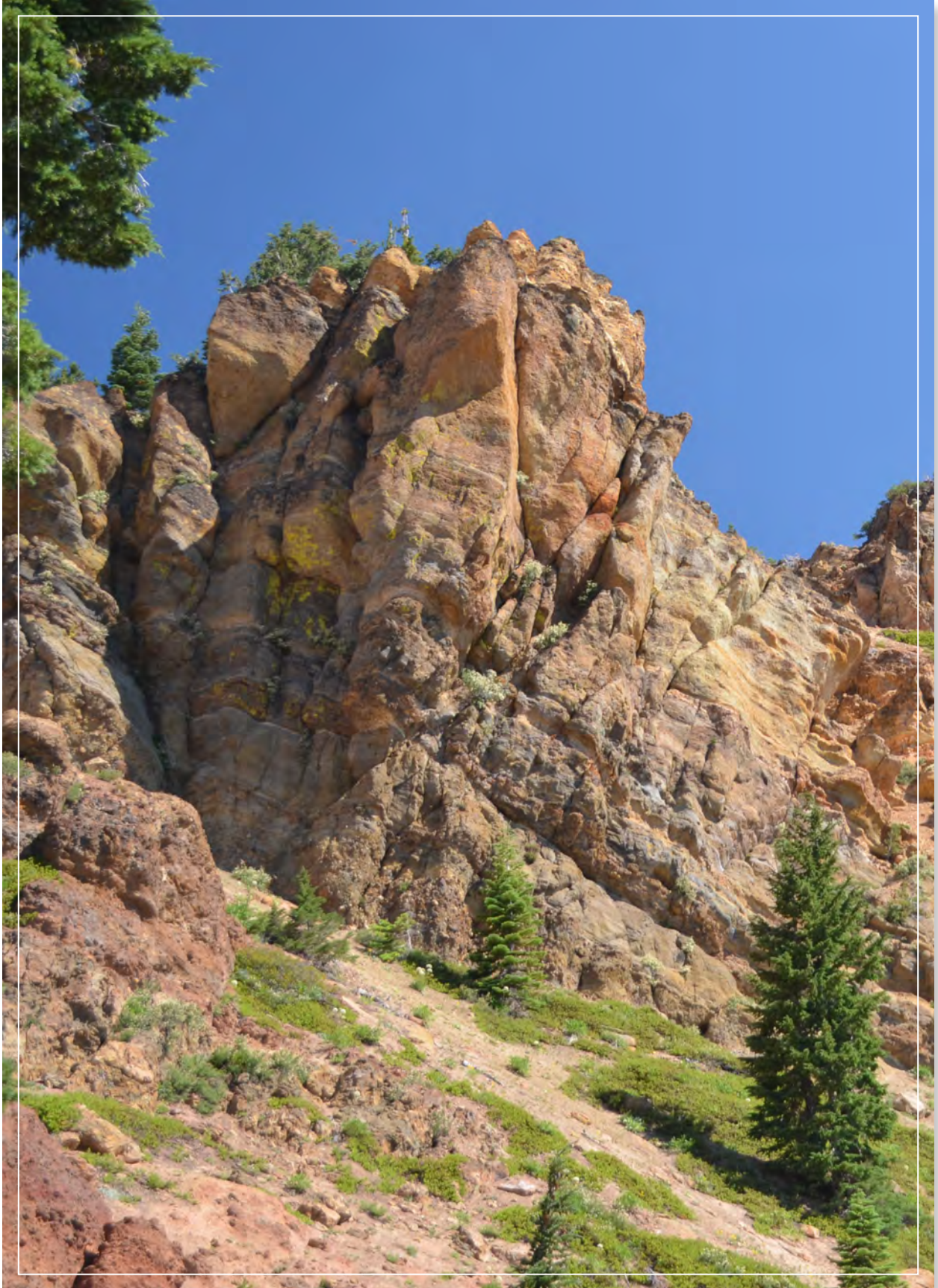
Clean Air Act. Lassen Volcanic National Park is designated a class 1 park under the Clean Air Act. Under section 169A, “Congress declares as a national goal the prevention of any existing impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.” The Clean Air Act bestows an “affirmative responsibility” on the federal land managers to protect these areas from the adverse effects of air pollution. Superintendents are charged with taking management actions consistent with this affirmative responsibility by integrating air resource management into NPS operations and planning. Specifically, the federal land manager is to identify and protect resources sensitive to air pollution, called Air Quality Related Values, including visibility.



Administrative Commitments

Agreement Name	Type of Agreement	Start Date	Expiration Date	Stakeholders	Purpose
General Services Administration (GSA) Maintenance	Cross-service agreement	October 2010	Until cancelled by either agency	GSA	Vehicle maintenance
Lassen Peak Trail Reconstruction	Memorandum of agreement	December 2012	Until work is completed	CalTrans; Federal Highway Administration	Funds for reconstruction of Lassen Peak Trail
U.S. Forest Service (USFS) Fuel	Interagency agreement	October 2014	February 2017	USFS Lassen National Forest	Park allows USFS vehicles access to gas pumps
Concessions contract with California Guest Services	Concessions contract	2008	2018	California Guest Services	Operations in support of commercial services
Lassen Park Foundation	Memorandum of agreement	June 2015	June 2020	Park friends group	Fundraising to support research, education, youth groups, trail management, and other operational needs
Lassen Association	Memorandum of agreement	August 2015	August 2020	Cooperating association	Visitor education and services support
Emergency Services Agreements	Memorandum of agreement	Annual	Annual	Susanville Interagency Fire Center (fire and law enforcement); Yosemite National Park (dispatch); Sequoia National Park (radios); Chester (fire); USFS (Service First)	Support for emergency services in park (fires, law enforcement, emergency response)
County government law enforcement and search and rescue services agreements	Cooperative agreements	Ongoing	Ongoing	Tehama County (Law Enforcement (LE) and Search and Rescue (SAR); Plumas County (LE and SAR); Shasta County (LE and SAR); Lassen County (LE and SAR)	Law Enforcement and search and rescue support
Youth assistance organizations	Memorandum of agreement	Annual	Annual	California Conservation Corps, Student Conservation Association, American Conservation Experience	Trail maintenance, park improvements, and other facility assistance; resource monitoring
Plowing Morgan Summit	Interagency agreement	December 2014	December 2019	Lassen National Forest; CalTrans	Snow removal by park at Morgan Summit, Lassen National Forest

Agreement Name	Type of Agreement	Start Date	Expiration Date	Stakeholders	Purpose
Pacific Crest Trail Association	Memorandum of agreement	2015	2020	Pacific Crest Trail Association, Bureau of Land Management (BLM), USFS, California State Parks	Pacific Crest Trail maintenance
Volcanic Legacy Scenic Byway along Great Shasta Rail Trail	Program supplement agreement to administering agency-state agreement	February 2014	June 2019	Federal Highway Administration (FHWA)	Scenic Byway funds from FHWA to NPS
Volcanic Legacy Community Partnership Corridor Management Plan, Northern California	Program supplement agreement to administering agency-state agreement	June 2014	June 2019	Federal Highway Administration	Scenic Byway funds from FHWA to NPS
Archival Collections Management	Letter of agreement between superintendents	2005	2010	Redwood National and State Parks	Data management cooperation
Ancestral Spiritual Run	Special use permit	Annual	Annual	Pit River Tribe	Traditional uses; facilitate spiritual run
University of California Natural Reserve System	Cooperative agreement	Winter 2015	Fall 2020	University of California system	Collaborative research in park
Manzanita Lake Fisheries Management	Cooperative agreement	Fall 2015	Fall 2020	California Dept. of Fish and Wildlife	Managing fishery in Manzanita Lake
Vector-borne Disease Monitoring	Cooperative agreement	Annual renewal	Annual renewal (This agreement expires, but is generally renewed annually)	California Dept. of Public Health	Inventory and monitoring of park structures to provide mitigation guidance for rodent-proofing structures
Fisheries Management Plan	Memorandum of agreement	In process	In process	NPS – WASO NRSS-Biological Resource Division	Parkwide fisheries management guidance
Charter School	Memo of agreement	In process	In process	Antelope School District	Provide environmental education to Tehama County Charter School



Appendix C: Analysis of Fundamental Resources And Values

Fundamental Resource or Value	Wide Variety of Volcanic and Hydrothermal Features and Associated Geology
Related Significance Statements	Significance statement 1.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Volcanic and hydrothermal features are dynamic and always changing, but in stable condition. • Continued presence of visitor-generated trash in various hydrothermal areas (e.g., Bumpass Hell, Sulphur Works). • Accessible infrastructure and seasonal safety barriers are inadequate for ideal visitor/resource interface. <p>Trends</p> <ul style="list-style-type: none"> • Increased visitation and interest resulting in increased stresses to the infrastructure and facilities that provide visitor access to volcanic/hydrothermal areas. • Dynamic geologic conditions, resulting in continued movement of infrastructure (Bumpass Boardwalk / Devils Kitchen / Warner Valley).
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Social trails that spur off official trails, parking areas, etc. • Climbing activities. • Visitor collection of volcanic rocks (1915 materials, pumice, etc.). • Road deterioration/changes. • The dynamic volcanic and hydrothermal landscape inherently poses a threat to human safety (both visitors and park employees). Geologic safety hazards include hydrothermal explosions, gas accumulation, volcanic eruption, earthquakes, landslides, and lahars (a destructive mud flow on the slopes of a volcano). These will also affect infrastructure, particularly roads, and include potential failure of the Manzanita Dam. • Visitor safety on Lassen Peak Trail. • Climate change impacts on hydrothermal features (e.g., hydrogeology affected by reduced groundwater levels). • Increased volumes and changing types of visitor use. • Off-road vehicles (winter and summer). • Alterations to the biology of hydrothermal features with introduction of trash generated by visitors (e.g., plastic bottles). • Potential geothermal energy development. However, per the NPS Geologic Resources Inventory, the Bureau of Land Management (BLM), National Park Service, U.S. Geological Survey (USGS), and the U.S. Forest Service (USFS) have an interagency agreement in place that ensures that the National Park Service is consulted prior to any leasing, drilling, or other development in an area that may impact a park's hydrothermal features. <p>Opportunities</p> <ul style="list-style-type: none"> • Establishment of a research learning center (Lassen Center for Collaborative Studies). • Continue and expand educational efforts with visitors and pursue joint efforts with other agencies or academic institutions to help interpret park natural and cultural resources. • Enhanced or increased monitoring of geologic and volcanic processes. • Increased partnership opportunities with the U.S. Geological Survey Cascade Volcano Observatory.

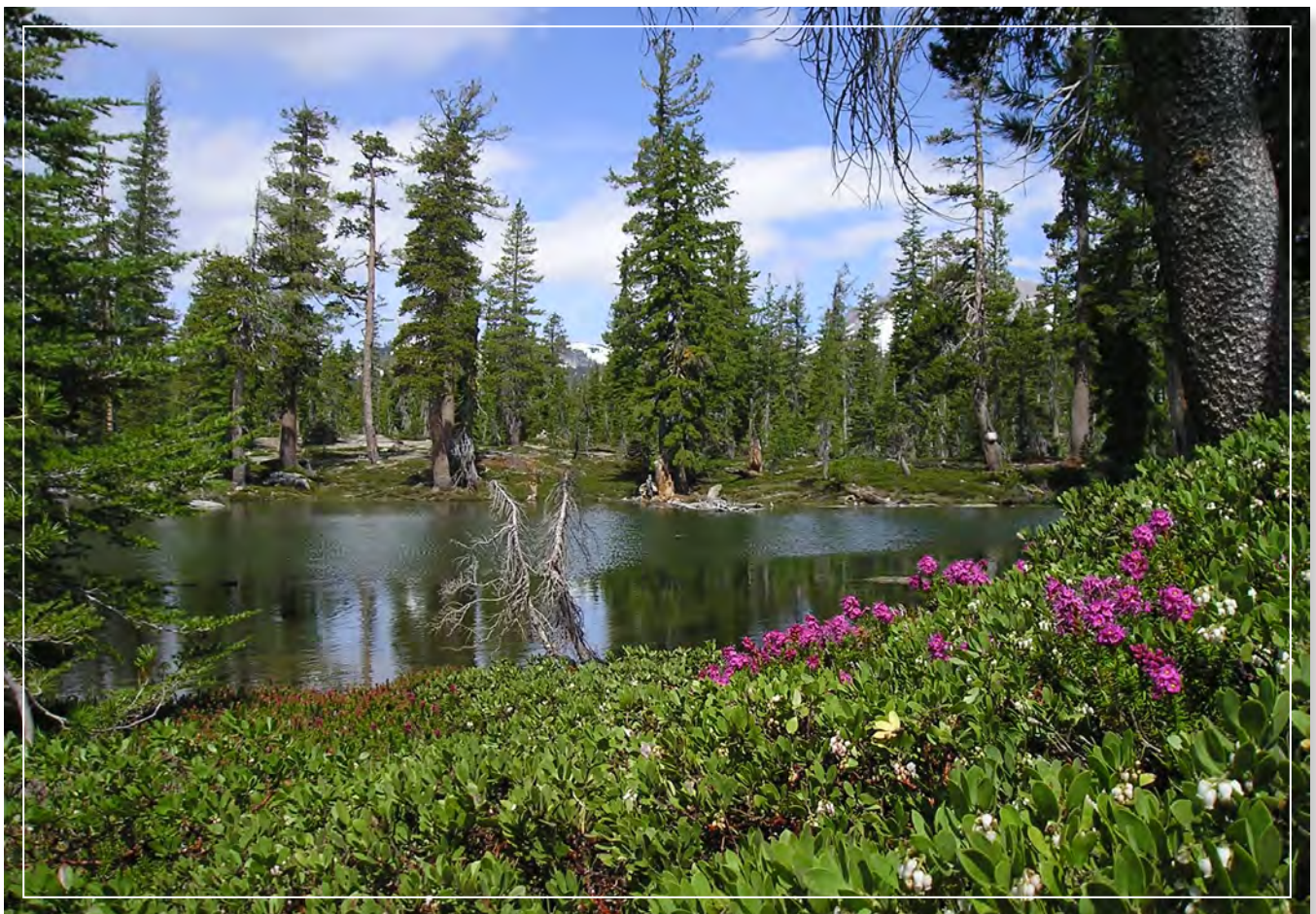
Fundamental Resource or Value	Wide Variety of Volcanic and Hydrothermal Features and Associated Geology
Threats and Opportunities	Opportunities (continued) <ul style="list-style-type: none"> • Provide webcam at Bumpass Hell and possibly view scopes. • Explore options for a temperature gauge readout with a probe in Big Boiler or other heated pools. • Pursue UN Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site designation for geologic uniqueness. • In partnership with the Antelope School district in Red Bluff, develop a park-based science and education curriculum in support of the Lassen Antelope Volcanic Academy (LAVA) charter school.
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Geologic Field Trip Guide to Lassen Volcanic National Park and Vicinity, California – USGS. • Geologic Map of Lassen Volcanic National Park and Vicinity, California – USGS. • Volcano Hazards Assessment (USGS). • 2014 Geologic Resources Inventory Report for Lassen Volcanic National Park, issued by the NPS Geologic Resources Inventory Program (GRI). • Digital geologic map of the park produced by NPS GRI Program, based on the USGS publication: Clynne, M. A., and Muffler, L. J. .P., Geologic map of Lassen Volcanic National Park and vicinity, California: U.S. Geological Survey Scientific Investigations Map 2899, scale 1:50,000.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Enhanced monitoring of geologic features. • Visitor use statistics. • Hazard identification. • Higher resolution map of active hydrothermal areas. • LiDAR elevation data. • Snowpack and other precipitation records to track climate-related changes in hydrogeology. • Sign plan (ongoing).
Planning Needs	<ul style="list-style-type: none"> • Visitor Use Management Plan. • Emergency operations plan.
Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance	Laws, Executive Orders, and Regulations That Apply to the FRV <ul style="list-style-type: none"> • The National Environmental Policy Act of 1969 (42 USC 4321) • Secretarial Order 3289, “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources” • Geothermal Steam Act of 1970 NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders) <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (1.6, 4.1, 4.1.4, 4.4.1, 4.7.2) provides general direction for managing national park system units from an ecosystem perspective • NPS <i>Management Policies 2006</i> (4.8.1, 4.8.2) provides general direction for protection of geologic features • NPS <i>Management Policies 2006</i> (4.8.2.3) provides guidance to preserve/maintain integrity of all thermal resources in parks, work closely with outside agencies, and monitor significant thermal features • NPS <i>Natural Resource Management Reference Manual 77</i>



Fundamental Resource or Value	Biodiversity and a Distinctive Range of Flora and Fauna
Related Significance Statements	Significance statements 2 and 4.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Biodiversity in the park is generally stable to decreasing. • Fisheries at Manzanita Lake are stable. Conditions of fish populations in other water bodies are not known. • Avian and mammalian populations appear to be stable. • Climate change and drought conditions are stressing ecological systems. • Nonnative invasive species are increasing in park. • There are beetle infestations in forests. • Blister rust is occurring on whitebark pines. • There are increasing human-wildlife interactions. <p>Trends</p> <ul style="list-style-type: none"> • Biodiversity in the park estimated to be stable to decreasing, namely due to threats noted below. • Some native species in the park are becoming increasingly rare, so they are of local concern (e.g., Sierra Nevada red fox, Cascade frog, fisher). • California air pollution emissions have declined since 2000 with overall emissions from stationary, mobile, and areawide sources projected to decline by 40% between 2000 and 2020. These emission reductions reflect the maturity of California’s emission control program and should improve air quality conditions in the park.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Climate change effects on ecological processes, changes in phenology, and impacts to species diversity and distribution. • Hantavirus/plague. • Continued wildland fire suppression/management in forests in the region leading to higher fuel levels and risks. • Influx and spread of nonnative species (e.g., plant and animal) in spatial extent and/or populations. • Human disturbances in park (e.g., visitor use, vehicle/animal mortality, human-bear interaction). • Ground-level ozone sometimes reaches levels that cause injury to ozone-sensitive plants. Foliar injury to Jeffrey pine and ponderosa pine have been documented in the park. Other ozone-sensitive plants in the park include quaking aspen, yarrow, and serviceberry. • Elevated concentrations of airborne toxics including pesticides and combustion by-products (PAHs) have been found in park air and vegetation, and mercury has been found in high-elevation lakes. These toxic pollutants accumulate in the food chain and can affect both wildlife and human health. <p>Opportunities</p> <ul style="list-style-type: none"> • Establishment of a research learning center (Lassen Center for Collaborative Studies). • Collaboration with other parks and agencies to increase understanding and management of biological systems and species. • Further reaching out to academic institutions for research opportunities. • Expanded citizen science and stewardship programs such as the ongoing California Phenology Project. • Enhanced bear/wildlife–human interaction educational efforts. • Actively partner with Exotic Plant Management Teams and NPS Invasive Plant Program for improved invasive plant control.

Fundamental Resource or Value	Biodiversity and a Distinctive Range of Flora and Fauna
Threats and Opportunities	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> • Multiple resource/habitat restoration projects. • With wolves moving into California, a potential exists for working with state and federal agencies to manage habitat to improve the recovery of a species that was once present and abundant in what is now Lassen Volcanic National Park. • Expand interpretive and educational tools to communicate the connections between biodiversity, wilderness, air quality/pollution, scenic views, night sky, recreation, human health, climate change, and other associated resources. • Continue working cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park from sources of air pollution. • In partnership with the Antelope School district in Red Bluff, develop a park-based science and education curriculum in support of the Lassen Antelope Volcanic Academy (LAVA) charter school.
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Natural resource condition assessment. • Vital signs monitoring. • Exotic plant management plan. • GIS coverage of nonnative plants. • Bird banding data. • Monitoring synopses for wildlife. • Research permit data results. • Ongoing air quality monitoring providing updated conditions and trends for pollutant deposition and ground-level ozone in the park. • Vegetation mapping data.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Baseline wildlife monitoring. • Rare plant surveys. • Pollinator survey/studies for understanding correlation to plant success. • Phenology monitoring data. • LiDAR elevation data. • Fisheries monitoring data (at water bodies beyond Manzanita Lake). • Phenology monitoring of key species. • Investigation of air pollution impacts to sensitive park ecosystems, including the impacts of airborne toxics on biota in the park such as bird, bat, insect, and fish species.
Planning Needs	<ul style="list-style-type: none"> • Bear management plan (update). • Resource stewardship strategy. • Climate change adaptation planning.
Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Endangered Species Act of 1973, as amended • National Invasive Species Act • Lacey Act, as amended • Migratory Bird Treaty Act (16 USC 703-712) • Eagle Protection Act (16 USC 668)

Fundamental Resource or Value	Biodiversity and a Distinctive Range of Flora and Fauna
<p>Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV (continued)</p> <ul style="list-style-type: none"> • The National Environmental Policy Act of 1969 (42 USC 4321) • Federal Noxious Weed Act of 1974, as amended • The Clean Water Act • Clean Air Act of 1977 (42 USC 7401 et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" • Executive Order 11514, "Protection and Enhancement of Environmental Quality" • Paleontological Resources Preservation Act (2009) <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (1.6, 4.1, 4.1.4, 4.4.1, 4.7.2) provides general direction for managing park units from an ecosystem perspective • NPS Director's Order 18: <i>Wildland Fire Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS <i>Wildland Fire Management Reference Manual 18</i> • NPS <i>Management Policies 2006</i> (chapter 4) "Natural Resource Management" • NPS <i>Management Policies 2006</i> (4.6.1) "Protection of Surface Waters and Groundwater" • NPS <i>Management Policies 2006</i> (4.7.1) "Air Quality"



Fundamental Resource or Value	Human Pathways and Ties with the Landscape
Related Significance Statements	Significance statement 3.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Pacific Crest National Scenic Trail is in good condition. • Volcanic Legacy Scenic Byway / All American Road is in good condition. • Signage in park is poor. • Lassen Crossroads facility is in good condition. • Nobles Emigrant Trail is in fair to good condition. • Museum collections are in good condition. • Archeological sites are in fair to good condition. • Historic structures are deteriorating. • Interpretation of resources is fair to good. <p>Trends</p> <ul style="list-style-type: none"> • Pacific Crest National Scenic Trail is seeing possible increase in use. • Use of the Volcanic Legacy Scenic Byway may be increasing (pending data updates from CalTrans and the Oregon Department of Transportation).
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Aircraft noise impacts to the Pacific Crest National Scenic Trail. • Volcanic Legacy Scenic Byway decreased funding. • Climate change affecting resources. • Increase in hazard trees along trails. • Loomis Museum lacks sufficient climate control. • Visitor impacts to historic sites and structures. • Cumulative impacts of development, specifically at Drakesbad (e.g., guest/hiker conflicts). • Volcanic activity that threatens roads and trails in the park. <p>Opportunities</p> <ul style="list-style-type: none"> • Establishment of a research learning center (Lassen Center for Collaborative Studies). • Interagency and volunteer cooperation (maintenance on Pacific Crest National Scenic Trail). • Partnership with other park units on Volcanic Legacy Scenic Byway (Crater Lake National Park and Lava Beds National Monument) to promote and interpret. • Lassen Crossroads partnership with USFS to inform regional visitors. • Interactive mapping/website access. • Inventory. • Research studies with universities to study human influences of the area. • Historic Preservation Training Center to preserve/stabilize resources. • In partnership with the Antelope School district in Red Bluff, develop a park-based science and education curriculum in support of the Lassen Antelope Volcanic Academy (LAVA) charter school.
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Lassen Volcanic National Park Long-Range Interpretive Plan. • Warner Valley Site Plan – Environmental Impact Statement. • Volcanic Legacy Scenic Byway-All American Road Interpretive Plan.

Fundamental Resource or Value	Human Pathways and Ties with the Landscape
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Visitor survey for Pacific Crest National Scenic Trail. • Visitor survey for Volcanic Legacy Scenic Byway / All American Road. • Sign inventory. • Inventory and monitoring of cultural resources. • GIS baseline data mapping of historic districts and trails. • Baseline data for museum collections. • Review/update National Register of Historic Places forms. • Cultural landscape inventories.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Wilderness and backcountry stewardship plan. • Trails management plan. • Cultural landscape reports. • Strategic plan for facility use and administrative use. • Resource stewardship strategy. • Museum collections emergency operation plan. • Historic buildings preservation plan.
<p>Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • National Historic Preservation Act of 1966, as amended (54 USC 300101 et seq.) • “Protection of Historic Properties” (36 CFR 800) • Antiquities Act of 1906 • Archaeological Resources Protection Act of 1979 • Archeological and Historic Preservation Act of 1974 • “Curation of Federally-Owned and Administered Archaeological Collections” (36 CFR 79) • Historic Sites Act of 1935 • Executive Order 11593, “Protection and Enhancement of the Cultural Environment” • Native American Graves Protection and Repatriation Act of 1990 • Secretarial Order 3289 “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources” <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • Director’s Order 28: <i>Cultural Resource Management</i> • Director’s Order 28A: <i>Archeology</i> • <i>The Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior’s Standards for the Treatment of Historic Properties</i> • <i>The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> • NPS <i>Management Policies 2006</i> (chapter 5) “Cultural Resource Management” • Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)

Fundamental Resource or Value	Lands with Wilderness Character and Other Backcountry Areas
Related Significance Statements	Significance statement 4.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Wilderness character is stable; wilderness boundary possibly expanding. • Generally good air quality and night sky conditions. However, scenic views can sometimes be obscured by pollution (or smoke-caused haze). Also, at night, air pollution sometimes scatters artificial light, increasing the effect of light pollution on the night sky. • Natural soundscape and acoustic environment within the wilderness is good. • Need better signage/less signage in wilderness. • Dangerous wildland fire conditions and weather patterns. <p>Trends</p> <ul style="list-style-type: none"> • Drought and lack of snowfall provided more/longer summer access to wilderness, reduced winter access. • Wildland fire suppression resulted in fuels buildup. • Regional wildland fires leading to reduction (seasonally) of air quality. • In-park visibility monitoring generally shows visibility improving on the clearest days and being relatively unchanged on the haziest days, resulting in an overall unchanging visibility trend.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Airplane and drone overflights impact the soundscape and solitude opportunities of wilderness area. • Human-wildlife interaction (including dogs). • Poaching of plants and wildlife. • Climate change. • Air quality threats. However, California air pollution emissions have declined since 2000 with overall emissions from stationary, mobile, and areawide sources projected to decline by 40% between 2000 and 2020. These emission reductions reflect the maturity of California’s emission control program and should improve air quality/ visibility conditions in the park. • Increased recreation use/type of use (horses) related to lack of snow (impacting solitude). • Increased wildland fire potential. • Invasive plants/wildlife. • Increased summer season—more visitors/potential soundscape impacts. • Growing regional populations may impact night skies, soundscapes, and air quality. <p>Opportunities</p> <ul style="list-style-type: none"> • Establishment of a research learning center (Lassen Center for Collaborative Studies). • Scientific study. • Partner with U.S. Forest Service (Caribou and Thousand Lakes). • Pursue UNESCO World Heritage Site. • Pursue Dark Sky Park status. • Expand interpretive and educational tools to communicate the connections between wilderness, biodiversity, air quality/pollution, scenic views, night sky, recreation, human health, climate change, and other associated resources. • Continue working cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts.

Fundamental Resource or Value	Lands with Wilderness Character and Other Backcountry Areas
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Backcountry campsite assessments in limited years between 1970s and 2010s (generally every five years). • Ongoing park air quality monitoring providing updated conditions and trends for visibility. • Acoustic Monitoring Report (published February 2016). • 2007 night sky monitoring imagery.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Wilderness visitor use surveys (Pacific Crest National Scenic Trail, permits, day use, etc.). • Atlas-GIS layers. • Invasive plant monitoring data. • Mapped locations and descriptions of restoration needs (dispersed campsites, social trails, disturbance). • Hazard trees area monitoring and mapping data.
Planning Needs	<ul style="list-style-type: none"> • Bear management plan (update). • Wildlife monitoring strategy.
Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance	<p>Laws, Executive Orders and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Wilderness Act of 1964 (PL 88-577) • Clean Air Act of 1977 (42 USC 7401 et seq.) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • Director's Order 41: <i>Wilderness Stewardship</i> • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 47: <i>Soundscape Preservation and Noise Management</i> • NPS Reference Manual 41: <i>Wilderness Stewardship</i> • NPS Management Policies 2006 (chapter 6) "Wilderness Preservation and Management" • NPS Management Policies 2006 (1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS Management Policies 2006 (4.9, 4.10) "Soundscape Management" and "Lightscape Management" • NPS <i>Keeping It Wild in the National Parks User Guide</i>



Fundamental Resource or Value	Diversity of Traditional Recreational Values and Visitor Experiences
Related Significance Statements	Significance statements 1, 2, 3, and 4.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Expanding recreational and visitor opportunities (kayaking, equestrian, cabin camping). • Facilities designed or inefficient for changing visitor needs. • Crowded parking areas. • Concession issues (right types and mix). • Hiking trails are in need of maintenance (Kings Creek, Bumpass Hell). • Winter use is increasing in volume and expanding in area. <p>Trends</p> <ul style="list-style-type: none"> • Visitor use volume and the number of recreational opportunities are increasing. • Winter opportunity limited by drought – summer opportunities increasing. • Increased permits for guided services.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Overuse and crowding impacts to visitor experience. • Introduction of invasive species. • Trail closures (Kings Creek, equestrian trails). • Public safety and geologic hazards. The dynamic volcanic and hydrothermal landscape inherently poses a threat to human safety. Geologic safety hazards include hydrothermal explosions, gas accumulation, volcanic eruption, earthquakes, landslides, and lahars. These will also affect infrastructure, particularly roads, and include potential failure of Manzanita Dam. • Competing uses / changing types of uses. • Development around park. • Lake levels, water quality, visitor impacts. • Inability to meet education goals. • Climate change-related increases in wildfire and beetle-killed trees. • Growing regional populations may impact night skies, soundscapes, and air quality. • Scenic views are sometimes obscured by pollution-caused haze. At night, air pollution scatters artificial light, increasing the effect of light pollution on the night sky. • Ground-level ozone sometimes reach levels that can make breathing difficult for sensitive groups including children, the elderly, people with existing health problems, and active adults. • Due to mercury in fish caught in California’s lakes and reservoirs (including park water bodies), there is a statewide fish advisory with consumption guidelines. • Headquarters water use that is particularly vulnerable to calls for curtailment. <p>Opportunities</p> <ul style="list-style-type: none"> • Establishment of a research learning center (Lassen Center for Collaborative Studies). • Inclusion of technology/earth caching. • Greater promotion of fitness. • Greater education and outreach. • Research such as citizen science activities of the California Phenology Project. • Accommodating different recreation activities and user types. • Partnerships and grants with scouts, schools, universities, and others. • Expand interpretive and educational tools to communicate the connections between wilderness, biodiversity, air quality/pollution, scenic views, night sky, recreation, human health, climate change, and other associated resources.

Fundamental Resource or Value	Diversity of Traditional Recreational Values and Visitor Experiences
Threats and Opportunities	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> • Continue working cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts. • Provide fish consumption advisory information to anglers in the park. • Continue park Climate Friendly Parks Action Plan with an operational Environmental Management System (EMS, NPS Director's Order 13A) for park sustainability, environmental leadership, and emission reduction activities (e.g., vehicle fleet and energy efficiencies).
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Lassen Volcanic National Park Visitor Study, summer 1999 (for trends). • Lassen Volcanic National Park Visitor Study, summer 2012. • Lassen Volcanic National Park Visitor Study, winter 2013. • Ongoing park air quality monitoring providing updated conditions and trends for visibility and ground-level ozone.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Accurate trail mapping. • Complete park atlas. • Trails signage. • Visitor use surveys/monitoring. • Visual resource inventory.
Planning Needs	<ul style="list-style-type: none"> • Transportation plan. • Visitor use management plan. • Sign plan. • Development concept plan for Manzanita Lake. • Commercial services prospectus. • Viewshed management plan. • Climate change adaptation planning. • Contingency plans for ongoing support of water use.
Laws, Executive Orders, and Regulations That Apply to the FRV and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Clean Air Act of 1977 (42 USC 7401 et seq.) • NPS Concessions Management Improvement Act of 1998 • Secretarial Order 3289 "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 8) "Use of the Parks" • Director's Order 6: <i>Interpretation and Education</i> • Director's Order 9: <i>Law Enforcement Program</i> • Director's Order 17: <i>National Park Service Tourism</i> • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs, Facilities, and Services</i> • Draft Director's Order 48: (NPS48) <i>Standard Evaluation and Rate Approval for Commercial Services</i> • Director's Order 53: <i>Special Park Uses</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • Director's Order 83: <i>Public Health</i> • NPS <i>Transportation Planning Guidebook</i>

Appendix D: Basics for Wilderness Stewardship

Wilderness Character Narrative for Lassen Volcanic National Park

Lassen Volcanic Wilderness is a colorful collection of volcanic landscapes—from the crimson and violet Painted Dunes to the sea-green Boiling Springs Lake. Dark-green pine and fir forests dotted with neon-green lichen colonize old and recent lava flows. Diverse wildflowers carpet meadows and bloom among rocky crevices. Distant wildland fires glow against the night sky, slowly and intensely ushering in new life. In winter, deep, dazzling white snow blankets the land except wherever-boiling hydrothermal areas expose bare ground. Each mountain peak is a volcano or part of one; cone-shaped, broad based, or jagged, each is silhouetted against a deep blue sky. Lassen Peak or “Kohm Yah-mah-nee,” Mountain Maidu for “Snow Mountain” is visible from nearly everywhere, reverential on moonlit nights.

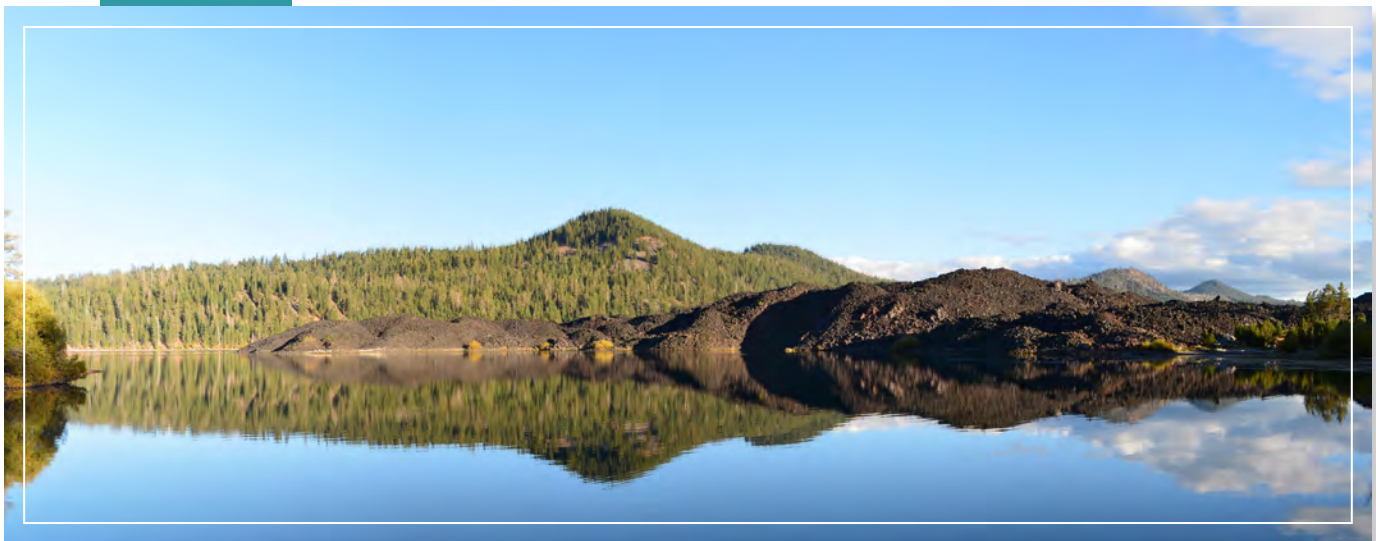
Untrammeled

Wilderness is essentially unhindered and free from modern human actions that control or manipulate the Earth and its community of life.

Prior to the most recent eruptive history, the Lassen area was a wild and rugged landscape underlain by magma arising from the collision of the oceanic Juan de Fuca plate and the continental North American plate; Lassen Volcanic Wilderness is intrinsically untamable. Its continually heated mudpots, fumaroles, and boiling springs make up the most active and extensive hydrothermal system west of Yellowstone National Park. Chemical erosion continues unabated in hydrothermal areas while physical erosion subtly shapes features like Fantastic Lava Beds.

A long history of eruptions, most recently Lassen Peak from 1914 to 1917, has produced an array of volcanic soils and disturbed grounds where vegetation can grow. Devastated Area bears the scars of the 1915 mudflow down the northeast flank of Lassen Peak, which showcases a natural, secondary succession of plant communities a century later. Lightning-caused wildland fires also disturb the ground, leaving behind a mosaic of lightly and heavily burned areas prime for revegetation by trees and shrubs. Frequent wildland fires profoundly shape Lassen’s pine and fir forests.

Wilderness lakes are undammed except by beavers; many dry up by late summer. Unaltered streams support aquatic communities, while reflecting local water conditions such as hydrothermal heating. Unconfined wildlife populations can move freely about the landscape. Pika dart among talus slopes, black bears amble across meadows, and black-backed woodpeckers investigate burned snags. Birds nest in dense lakeside shrubs, tall snags, and old-growth tree limbs; refuge is abundant for all types of birds, from the smallest hummingbird to the largest golden eagle.



Natural

Wilderness maintains ecological systems that are substantially free from the effects of modern civilization.

Scents of lupine, willow, and sulfur, the deep-seated thumping of a mudpot, a sweep of wind in the hemlocks, or the whistle of a northern saw-whet owl after dark engages the senses with the natural world. The dark night sky offers views of three-dimensional constellations, meteor showers, and the Milky Way, nearly unaffected by light pollution. The vibrant azure of Lassen's daytime sky is sometimes disrupted only by pollution-caused haze, smoke from wildfires, and the occasional storm. An exceptionally clear day can offer views more than 300 miles from Lassen Peak.

Lassen Volcanic Wilderness sits at the headwaters of four watersheds. Spring runoff provides clean water to the lower Pit River, North Fork Feather River, Mill Creek, and North Fork Battle Creek. It also recharges the groundwater that feeds fumaroles and hot springs. Snowmelt and summer sunlight cue rare wildflowers to bloom, such as alpine false candytuft (*Smelowskia ovalis*) and golden draba (*Draba aureola*)—the latter found only in the Cascade Range near the summits of volcanoes that include Brokeoff Mountain.

The round-leaved sundew (*Drosera rotundifolia*) opens in boggy areas to attract insect prey, trapping them in sticky leaf hairs and closing as it slowly digests its meal. Lightning-sparked wildland fires rage through thirsty manzanita and tiptoe through deep forests. Autumn's arrival is recognized by the pungent smell of mule's ears (*Wyethia mollis*) and the sound of their dry leaves rustling in the wind. Sandhill cranes circle above, signaling the shift toward winter. As the snow falls and eventually deepens, the sooty grouse—unlike other species—seeks higher elevations where it forages on fir needles.

The wilderness straddles the intersection of the southern Cascades, northern Sierra Nevada, and western Great Basin. Its geographic location as well as its rocky slopes, old-growth forests, lush meadows, solitary lakes, and wetlands provide habitat for an incredible diversity of plants. Chaos Crags and Crescent Crater host unusual alpine plant communities. Tehama copper moss (*Mielichhoferia tehamensis*) is known only from the Lassen area. With more than 700 vascular plant species, the floral biodiversity in and around Lassen Volcanic Wilderness is richer than in similar areas around Mount Shasta and Crater Lake.

Other superior qualities provide unique opportunities for education and scientific research. Lassen's diverse geological features include four distinct types of volcanoes, and the landscape presents a study in over three million years of continuous volcanism. Additionally, thermophilic organisms offer insights on adaptations in extreme environments: bacteria thriving in the hot, acidic water of Boiling Springs Lake, archaea deriving energy directly from sulfur compounds, algae and eukaryotes living in cooler areas surrounding hydrothermal features.



Undeveloped

Wilderness retains its primeval character and influence and is essentially without permanent improvements or modern human occupation.

The feeling of being the first person to visit areas of Lassen Volcanic Wilderness is comparable to that in a much larger, more remote wilderness. Its old-growth forests appear untouched. Scenic vistas encompass largely untarnished views of forested landscapes, undeveloped swaths of land, and rugged mountains.

Trails are absent in large sections of the wilderness. In fact, many peaks are absent trails leading to their summits, some of which remain unnamed. The bubbling and hissing earth retains its mysterious and primeval character through natural hot springs and minimal path infrastructure at Devils Kitchen. The steepness of Little Hot Springs valley keep most people from visiting the valley floor, although this is a popular place for bears to forage in early spring as heat from hydrothermal features frees tufts of grass from winter's firm grasp.

Permanent scientific installations are minimal and include rebar, tags, and USGS sensors. There are some temporary, unobtrusive, and inconspicuous pieces of equipment currently placed around Devils Kitchen and Boiling Springs Lake as part of short-term studies. Most will not find this small presence of human activity. Large, loud, and obvious human developments are nonexistent in the wilderness. One feels far from developed society here.

Often, natural processes reclaim the few developments that have been placed in the wilderness; a tree trunk envelops a boundary marker or layers of forest duff settle over a little-used trail. Elsewhere, they are dwarfed by the sheer immensity of geologic time that makes people seem small. The adjoining Caribou Wilderness allows a continuity of natural conditions across arbitrary agency boundaries. Despite separate agency management across the boundaries, proactive interagency cooperation on wilderness management activities is commonplace, including jointly administered permitting, linked interpretation and camping conditions information, among other shared responsibilities. The park's shared boundary with Lassen National Forest provides insulation from outside development.



Opportunities for Solitude or Primitive and Unconfined Recreation

Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.

Lassen Volcanic Wilderness is accessible through numerous and dispersed trailheads. Seldom does one feel crowded. There is a reason Lassen has been called “the one and lonely.” Perhaps one of the greatest attributes of this wilderness is just how easily and quickly one can access all the benefits of a wild experience.

Visitors can lose themselves on a forested lava plateau or find themselves making solitary tracks in fresh snow. Exploring can be done on horseback, on foot, or even on hands and knees. Steep trails like Brokeoff Mountain Trail afford scenic, challenging mountainous terrain while crisp, clear lakes offer the opportunity for a refreshing plunge. Full-moon hikes present the adventure of night hiking without a headlamp. On the other side of the moon’s cycle, few pastimes feel more primitive and connected with ancient humankind than stargazing on an absolutely dark night. Lassen’s quiet wilderness provides abundant opportunities for growth in a natural setting.

Heavy snow lends the landscape a new openness with opportunities for challenge and freedom on skis or snowshoes. Especially in winter, one can find vast solitude and dampened silence. Lassen Volcanic Wilderness presents truly wild and potentially dangerous experiences—avalanches plummet down slopes, hydrothermal vents exhale sulfurous and superheated gases, mountain lions and black bears defend their territory and young. These risks, and countless others engender awareness, self-reliance, and respect for nature’s ability to prevail.

There are no designated campsites in the wilderness, allowing one to find sleep almost anywhere they choose. However, some regulations impose limits on camping, horses, and travel, mainly to prevent natural resource degradation. Visitors are required to obtain a backcountry permit for overnight trips or stock use, but there are currently no quotas or fees. Pets and campfires are prohibited in order to leave sites as free from evidence of previous occupation as possible. Signs and markers identify lake names and provide mileage and direction at trail junctions. Trail maintenance needs to be done carefully to strike the right balance between preserving the wilderness and providing recreational access.

Other Features of Value

Wilderness preserves other features that are of scientific, educational, scenic, or historical value.

Woven into the fabric of Lassen Volcanic Wilderness is more than 4,000 years of transient human presence including seasonal habitation and transecting human pathways. Lassen Peak has long provided a compass and spiritual center for a number of American Indian tribes. The Yanas and related Yahis, occupied land in the foothills along Mill Creek, Deer Creek, and Battle Creek to the southwest.

Mountain Maidu land is to the southeast in the Feather River basin near Warner Valley. Hat Creek and Lost Creek drainages to the northeast are part of Atsugewi land, and the Achumawi land is northeast of Lassen Peak.

These tribes have traditionally converged on the Lassen area each summer, sharing the highland’s resources and sometimes sharing camps as well. Edible roots, nuts, and berries are found along streams and in the forests. Plants are gathered for medicines, dyes, and raw materials. Abundant deer have provided numerous benefits. Rugged, lava-formed landscapes beyond the camping grounds provide essential isolation and remoteness.

Today, we see only faint human imprints from traditional American Indian summer camps and from later small-scale European American homesteading and grazing. Archeological remains are largely reclaimed by nature, the wildness of the land asserting itself. Historically, natural resources were used without being depleted. There is little evidence of logging, if it even occurred.

Rustic structures (Mount Harkness Fire Lookout, Horseshoe Lake Ranger Cabin, and Twin Lakes Ranger Cabin) remain from the 1930s, representing the early, yet ongoing, struggle to define humankind's place in wilderness—as an observer and a lookout, as a temporary resident, as a member of the natural world. Lassen's special-designation trails, which include Nobles Emigrant Trail, a California national historic trail, and the Pacific Crest National Scenic Trail transect the land rather than loop and meander, conveying a modern cultural meaning to Lassen Volcanic Wilderness as a place people journey through but do not stay.

Moreover, the culture of numerous modern tribes is closely if quietly tied to the Lassen area. People continue to visit for traditional spiritual purposes. An annual multi-tribal spiritual journey from Mount Shasta to Lassen Peak, initiated in 1993, honors ancestral ties to the land. Tribal access is vital for the transmission of cultural and environmental knowledge to future generations.

Lassen's cultural significance will be preserved through operating historic structures, cultivating visitor appreciation for historic features like the Nobles Emigrant Trail and American Indians' continuing traditional practices. Maintaining historic sites as they are, while educating the public about Lassen's history, will further tie visitors to the natural and cultural resources of this wilderness. It should also be noted that the historic structures within Lassen Volcanic Wilderness (noted above) necessitate a careful management balance between the mandates of the Wilderness Act of 1964 and that of the National Historic Preservation Act, two laws that serve differing objectives.

Conclusion

Movement and impermanence characterize Lassen Volcanic Wilderness as well as our own place in it. Human ties to the land pre-date the eruption of Cinder Cone and the collapse of one of the domes at Chaos Crags. For thousands of years, American Indian tribes moved upland as the snow melted, using volcanic landmarks as compass points. People walked and camped among the ridges and craggy pinnacles that stand as eroded fragments of prehistoric volcanoes. They harvested and hunted around the steaming sulfurous vents and serene glacial lakes. Today, the transient, yet continual, presence of people on the landscape is signified by the Mount Harkness Fire Lookout.

Preserving the integrity of Lassen Volcanic Wilderness serves to deeply connect humans to nature's perpetual cycles of disturbance and recovery, activity, and dormancy.



Pacific West Region Foundation Document Recommendation
Lassen Volcanic National Park
November 2016

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Pacific West Regional Director.

Stephen T. Gibbons

11/21/16

RECOMMENDED

Stephen T. Gibbons, Superintendent, Lassen Volcanic National Park

Date

Stephan Bunker

12/1/2016

fj

APPROVED

Laura E. Joss, Regional Director, Pacific West Region

Date



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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