



Aloha Friends of Hawai'i Volcanoes National Park

Hālau o Kekuhi at Halema'uma'u | NPS Photo

Hawai'i Volcanoes National Park is pleased to present for your consideration our draft general management plan, wilderness study, and environmental impact statement (GMP/WS/EIS). This draft document is the result of five years of public scoping and comment, interdisciplinary research, field assessments, stakeholder discussions, and Native Hawaiian consultation.

General management plans are intended to be long-term documents that establish and articulate a management philosophy and framework for decision making and problem solving in our national parks. In this document, three alternatives for Hawai'i Volcanoes National Park are presented for your review. Each alternative offers a different approach to protecting and managing park resources, using facilities, and providing a range of access and visitor experiences to meet the needs of local residents, off-island visitors, and students of all ages. These alternatives were developed with the intent to include and celebrate Native Hawaiian values such as mālama 'āina (nourishing and talking care of the land) and kuleana (responsibility). The park planning team developed these alternatives based upon the park's purpose and significance, issues that need to be addressed, legal mandates, and comments that you provided on the preliminary alternatives.

We hope that you will give these alternatives serious consideration, take the time to comment, and continue to stay involved to help us determine how this national and

international treasure will be protected and managed over the next 20 years.

Inside you will find many different ways you can make your voice heard. You can comment online at <http://parkplanning.nps.gov/havogmp> or join us for a talk story session at the Kīlauea Visitor Center on June 10, 2015. A wilderness hearing will be held during the talk story session to receive comments specifically on the wilderness study. The public comment period is now open and will remain open through June 30, 2015.

The staff, partners, and volunteers at Hawai'i Volcanoes National Park remain committed to fulfilling our kuleana to protect the park's geologic features and native ecosystems, preserve its rich cultural heritage, and provide unforgettable visitor experiences.

Mahalo for your continued interest in the GMP planning process. We look forward to seeing you in the park.

Mahalo nui loa,

Cindy Orlando, Superintendent

Introduction

Hawai‘i Volcanoes National Park is located on the southeastern edge of the Island of Hawai‘i, the southernmost island of the Hawaiian Archipelago. The park was established by Congress on August 1, 1916 as Hawaii National Park (subsequent legislation separated Hawai‘i Volcanoes National Park and Haleakalā National Park).

Today, Hawai‘i Volcanoes National Park protects approximately 330,086 acres (including ‘Ōla‘a) of public land which includes some of the most unique geologic, biologic, and cultural landscapes in the world. Extending from sea level to the summit of Mauna Loa at 13,677 feet, the park encompasses the summits and rift zones of two of the world’s most active shield volcanoes—Kīlauea, representing the newest land in the Hawaiian Islands chain, and Mauna Loa, the largest volcano in the world.

While these two volcanoes are the primary features of the park and the principal reason for its establishment, this volcanic topography also supports one of the most fascinating biologic landscapes in the world, sustaining incredibly diverse populations of plant and animal communities across seven ecological lifezones. Located more than 2,000 miles from the nearest continent, Hawaiian plants and animals evolved in almost complete isolation for the past 30 million years. As a result, over 90 percent of the native terrestrial flora and fauna in Hawai‘i are endemic to this small archipelago – the park provides habitat for 52 federally listed endangered, or threatened species and eight species that are candidates for listing. Included among these species are the nēnē (Hawaiian goose), ‘io (Hawaiian hawk), and ‘āhinahina (Mauna Loa silversword). Considering this diversity of life and its distinction on the planet, Hawai‘i Volcanoes National Park is both a fantastic laboratory for the study of biogeography and evolution within the Pacific Islands and a cornerstone for recovery of native Hawaiian species found nowhere else in the world.

In addition to its geological and biological significance, the park also plays a unique role in the history of human development on the Hawaiian Islands and remains an important home to living cultures in Hawai‘i. Just as the volcanic and biologic features of the land have

shaped the landscape of Hawai‘i Volcanoes National Park, so too have the people who have been a part of its history. Over five centuries before the establishment of the park, Native Hawaiians lived, worked, and worshiped on this sacred ground. Later, in the 19th and early 20th centuries, adventurers, explorers, scientists, philanthropists, and individuals also left their mark on the landscape. Today, ancient petroglyphs, stone walls, and footpaths persist between massive lava flows, and historic housing districts, historic structures, and historic roads dot the developed corridors of the park, together revealing the diverse cultures and history that have been, and continue to play, an integral role on this landscape.

Hawai‘i Volcanoes National Park contains 123,100 acres of federally designated wilderness, set aside in 1978. In 1980, Hawai‘i Volcanoes and Haleakalā National Parks were jointly designated as “Hawai‘i Island International

Biosphere Reserve” by UNESCO, and seven years later, in 1987, the park was also declared a World Heritage Site by the World Heritage Convention of UNESCO. Very few areas in the United States are designated as both a Biosphere Reserve and World Heritage Site.

The last master plan for Hawai‘i Volcanoes National Park was completed in 1975 and no longer provides adequate guidance to address the policy and operational issues now facing park management. Many conditions in Hawai‘i Volcanoes National Park and throughout the region have

changed since the current master plan was completed in 1975, including: continuous eruptions at Pu‘u‘ Ō‘ō on Kīlauea Volcano since 1983 and related impacts on resources and visitor opportunities; increased visitation and changing visitor patterns (approximately 1.6 million visitors annually) and resulting transportation conflicts and parking congestion; the loss of visitor facilities, cultural resources and significant habitat for numerous federally listed threatened, endangered, and candidate species from volcanic activity; the continuing spread of introduced invasive species and avian disease; increased impacts to the soundscape and acoustic environment; expansion of the park with the addition of the Kahuku Unit; impacts on resources due to climate change; and new international designations including designation as a World Heritage Site and International Biosphere Reserve.



Glow from Halema‘ūma‘u Crater | NPS Photo

The purpose of this general management plan (GMP) is to articulate a vision and overall management direction for Hawai'i Volcanoes National Park that reflects contemporary and future issues and challenges facing the park and provides a framework that will guide decision-making for the foreseeable future. The GMP includes management strategies for resource protection and preservation; visitor use; interpretation and education; use of facilities and the need for new facilities; and long-term operations and management of the park. This general management plan also includes a wilderness study (WS), or a formal study of lands eligible in the park for possible recommendation to Congress for wilderness designation as well as a commercial services strategy that articulates goals and strategies for managing commercial services in the park.

Issues

The general public, NPS staff, Native Hawaiian groups, Hawaiian communities, federal, state, and local agencies, organizations and businesses identified issues and concerns during the scoping phase (early information gathering) for this general management plan. An issue is defined as an opportunity, conflict, or problem regarding the use or management of public lands. The general management plan alternatives provide strategies for addressing these issues within the context of the park's purpose, significance, and special mandates.

A detailed description of issues and concerns addressed in the GMP can be found in the Purpose and Need Section of *Chapter 1: Introduction* in the GMP/WS/EIS under the heading "Planning Issues and Concerns."

This general management plan provides direction on the following topics:

- a management framework for park managers to use when making decisions about how best to protect **natural resources**, including desired resource conditions and long-term guidance for protection, restoration and stewardship of the park's natural resources;
- a management framework for park managers to use when making decisions about how best to protect the park's **historic structures, cultural landscapes,**

archeological sites, ethnographic resources, and museum collections, including desired resource conditions and long-term guidance for preservation and management;

- a management framework for park managers to use when making management decisions on issues related to **Native Hawaiian values and ongoing traditional use** as part of preservation, management, and interpretation of park resources;
- overall direction for managing the qualities of **wilderness** character in designated wilderness and a **wilderness study** to assess lands eligible in the park for wilderness designation (*Chapter 4: Wilderness Study and Proposal*);
- guidance for park managers to use when making decisions about the park's **research and monitoring efforts**;



Endangered native haha | NPS Photo

- guidance on how the park will assess, respond to, and interpret the impacts of **global climate change**, including objectives for reducing or offsetting emissions and an evaluation of the impacts of proposed actions for their impacts on the park's carbon footprint;
- a management framework for park managers to use when making decisions about **visitor use, experiences and opportunities** in different areas of the park by identifying the appropriate types of visitor use and experience at

various park sites, incorporating visitor demand and resource sensitivity;

- general guidance for establishing the types and levels of **commercial services** that are necessary and appropriate for Hawai'i Volcanoes National Park, including recommendations for any commercial services in Kahuku (*Appendix F: Commercial Services Strategy for Hawai'i Volcanoes National Park*);
- guidance for **transportation** options and infrastructure, including circulation patterns and visitor access, that will improve visitor experiences, connect park sites, and provide access to neighboring communities while ensuring protection of resources;

- a sustainable vision for **park facilities** that support visitors, park operations, and park partners;
- a vision for sustainable **park operations**, including operations for the Kahuku Unit, and for natural event and disaster planning;
- opportunities to increase efficiency, reduce costs, and create better communication while expanding the park's capacity to accomplish its mission through **interagency coordination and collaboration and partnerships**;
- an evaluation of the adequacy of **park boundaries** based on specific criteria for protecting park resources, providing opportunities for public enjoyment consistent with the purpose of the park, and addressing operational and management issues (*Appendix E: Analysis of Boundary Modification and Land Protection*); and
- integrated planning for the **Kahuku Unit** as part of a cohesive vision for the entire park.

Development of the GMP and Wilderness Study

This *Draft General Management Plan/Wilderness Study and Environmental Impact Statement* (GMP/WS/EIS) was developed in consultation with NPS staff and program managers, Hawai'i Volcanoes National Park visitors, Native Hawaiian groups, local communities, federal, state, and local agencies, organizations and businesses. Public involvement efforts were ongoing throughout the planning process and provided critical input into this plan.

The GMP/WS is based on an analysis of existing and predicted natural and cultural resource conditions, visitor experiences, environmental impacts, and costs. It primarily provides a framework for administration and management and a vision to be realized through future actions. This document also includes an environmental impact statement (EIS), which considers at a general qualitative level the impacts that each of the alternatives could have on the park environment. The EIS sets the framework for future compliance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) for the park. It also assists decision makers and the public in assessing the relative merits and effects of the alternatives.

Alternatives

Three alternatives for future management of Hawai'i Volcanoes National Park are presented in this draft GMP/WS/EIS. Each of the alternatives supports and is consistent with the park's purpose and significance, desired future conditions, and current laws, regulations, and policies. The three alternatives represent the range of ideas that NPS sources, the public, federal, state, and local agencies, and Native Hawaiian and stakeholder groups identified regarding natural and cultural resource conditions, visitor use and experiences, and overall management of Hawai'i Volcanoes National Park. The three alternatives are characterized as follows: Alternative 1 (the No-action Alternative), Alternative 2 (the NPS Preferred Alternative), and Alternative 3.

Several other actions and alternatives were also considered but were eventually dismissed from further analysis. These actions and alternatives, along with the rationale for their dismissal, are described near the end of *Chapter 3: Alternatives* in the GMP/WS/EIS.



A view of the coastline at Hawai'i Volcanoes National Park | NPS Photo

MANAGEMENT ZONES

Management zones define specific resource conditions and visitor experiences to be achieved and maintained in each particular area of the park. Each zone includes the types of activities and facilities that are appropriate in that management zone. For Hawai'i Volcanoes National Park, four management zones were developed by the planning team. These include the following:

- Visitor Services Zone
- Transitional/Semi-primitive Zone
- Wild/Primitive Zone
- Park Support Zone

These zones form the basis of the general management plan's alternatives and are applied to different geographic locations or areas of the park in Alternatives 2 and 3. In Alternative 1, the zones were taken from the 1975 *Hawai'i Volcanoes National Park Master Plan*. Each zone gives a general level of management guidance or direction. A map depicting the application of management zones for each alternative can be found in *Chapter 3: Alternatives*.

ACTIONS COMMON TO ALL ALTERNATIVES

Actions common to all alternatives present management guidance, desired conditions, and actions that would apply to all alternatives (alternatives 1–3) regardless of which alternative is selected for implementation.

Many aspects of natural and cultural resources management (such as an emphasis on restoring native ecosystems, preservation of wilderness character, and continued support for research), visitor use and experience (such as providing access to the iconic places and volcanic processes), and collaboration with partners on a variety of issues (including coastal and shoreline management) are common to all alternatives. The park would continue to operate Volcano HouseSM as a concession operation for lodging, retail, and food and beverage services in all alternatives. Guidance for Kilauea Military Camp (KMC) and use of the 1877 Volcano House should conditions change is also common to all alternatives. The park would continue to provide interpretation at the Jaggar Museum, with improved exhibits, and the Hawaiian Volcano Observatory would continue to operate adjacent to Jaggar Museum.

The park would also continue to implement recommendations in recent planning efforts including: *Fire Management Plan* (2007), *Crater Rim Drive Rehabilitation Environmental Assessment* (May 2010), *Archeological Preservation Plan for Kealakomo Ahupua'a* (2011), and

the *Final Plan/EIS for Protecting and Restoring Native Ecosystems by Managing Non-native Ungulates* (2013).

Situated on two active volcanoes, the need for flexibility in managing Hawai'i Volcanoes National Park is great. Nature is dynamic and volcanic eruptions are possible at any time. Planning for a national park unit in this type of unpredictable environment presents both challenges and opportunities and requires flexibility in how the park may respond to different scenarios. Actual management decisions will likely be guided by the magnitude of an individual event. Rather than provide specific recommendations in the GMP for how the park may respond to a given event, the planning team developed some general guidance for managers facing volcanic activity in the future, notably with respect to facilities and infrastructure in the park. This guidance is also common to all alternatives.

A 5.5 mile segment of the Chain of Craters Road that ran through the park towards Kalapana was buried by lava flows generated by Pu'u 'Ō'ō. Due to a change in the direction of the lava flow in 2014, an unpaved emergency access route was constructed following the historic road alignment. This route is for emergency access only. When this route is no longer needed for emergency access, it would be used as an equestrian, biking, and hiking trail (similar in character and functionality to the Escape Road from the summit to Mauna Ulu) to provide a quality non-motorized visitor use opportunity and future emergency route without compromising natural values and without adding the management complexity of managing a coastal entrance for public vehicles to enter the park.

ALTERNATIVE 1 (NO ACTION ALTERNATIVE)

Under alternative 1, existing programming, facilities, staffing, and funding would generally continue at current levels to protect the values of Hawai'i Volcanoes National Park. There would be no major changes in current management or visitor use. Implementation of currently approved plans would continue as funding allows. This alternative provides the baseline for evaluating actions and impacts in other alternatives.

Kilauea Visitor Center and Surrounding Area

The park would continue to maintain the current use and function of buildings with no expansion to buildings. The park would retain the current function of Kilauea Visitor Center as the main park visitor contact station, as well as park headquarters and administrative offices. The park would continue to upgrade Kilauea

Visitor Center, as needed, for building maintenance and interpretive exhibits.

Crater Rim Drive

The park would continue to maintain Crater Rim Drive as a two-way road in keeping with its historic character and, if and when possible, would reopen the closed section for both public and administrative use. The park would also continue to evaluate the pilot hydrogen shuttle technology. This includes the performance of the shuttles that will service proposed stops along Crater Rim Drive (scheduled to begin in 2015). The park would reopen Halema'uma'u Overlook and parking lot when hazards associated with the volcanic plume are diminished and the park determines through active monitoring that air quality and other hazards are at a level that is consistent with general visitor use. This area would continue to be used and maintained for visitor use.

Thurston Lava Tube and Surrounding Area

The park would continue to implement recommendations from the Thurston Parking Area Improvement Project for specific site improvements at Thurston Lava Tube. Park staff would continue to respond to congestion at Thurston Lava Tube as issues arise and as staff is available. The park would implement transportation congestion management strategies to improve the visitor experience and safety in this area. Kīlauea Iki, Pu'u Pua'i, and Devastation would be maintained in their current configurations to serve existing parking, trailhead, and overlook functions.

Chain of Craters Road

The park would continue to maintain the character of Chain of Craters Road to NPS standards, ensuring a park-like feel to the driving experience, while providing for visitor safety. The park would identify and clear over-vegetated pullouts to restore views and vistas and to encourage stops along the road. Mauna Ulu and Kealakomo would continue to be maintained as day use areas and viewing locations.

The park would continue to work with partners to provide a sustainable and moveable visitor contact station at the current end of Chain of Craters Road for interpretation and safety on a trial basis. If the pilot project is successful, the park would retain the structure for visitor contact at the end of Chain of Craters Road to replace some of the functions provided by the Waha'ula Visitor Center, destroyed by lava in 1989. This contact station could be relocated along Chain of Craters Road if necessary in response to volcanic activity.



Hawksbill sea turtle hatchlings leaving nest | NPS Photo

‘Āinahou Ranch House and Grounds

‘Āinahou Ranch would continue to provide a management area for nēnē recovery. The park would also continue to administer the ranch house and grounds under the existing interim operating plan which emphasized activities necessary for maintaining the house and cultural landscape in good condition so as not to preclude future uses. The water system would be maintained for house fire suppression, and the access road to ‘Āinahou would be maintained as an unpaved road.

Kahuku Unit

Kahuku would continue to be managed under an interim operating plan with limited day use visitation on weekends and for special events, but over time and with adequate funding for staff and infrastructure, the park would open this unit seven days a week. The park would maintain the existing entrance at Kahuku but address safety issues by clearing vegetation, improving signage, and possibly lowering existing berms to improve the line of sight for drivers, in coordination with state highways. The park would also seek to collaborate with the state to evaluate and add a turn lane.

The park would continue to adaptively reuse the site for a mix of visitor services and administrative and operational use, as needed. The park would develop an orientation/interpretive strategy to define and site various media to interpret Mauna Loa geologic and natural history, native species and forest conservation, history of cattle ranching, and Native Hawaiian presence in this area, and also consider broader historical context including WWII military history. The park would maintain a single visitor contact station in lower Kahuku.

The current main road would be maintained for vehicle access to Upper Glover. The park would continue to convert some old pasture roads to trails, and the trail from Kahuku to ‘Ainapō could be considered for future use but would not be improved. Interpretation would be enhanced along the current road system and the park would restore the former paddock and pasture areas to natural conditions and/or native communities, as funding allows.

The area above Upper Glover would remain closed to public access because of safety and resource management concerns, including lack of adequate staff or vehicles to adequately patrol this remote area of the park.

ALTERNATIVE 2 (PREFERRED ALTERNATIVE)

The NPS preferred alternative would strengthen and broaden opportunities to connect people with the volcanic world treasure, Hawai‘i Volcanoes National Park, and provide a wide range of high-quality visitor experiences based on different geographic areas. Kīlauea summit would continue to be the most actively visited area of the park with the greatest concentration of services and amenities for park visitors. Along Chain of Craters Road and Mauna Loa Road, the park would strive to provide visitors with improved opportunities to experience and connect with park resources and values, including new opportunities at places like Mauna Ulu and Kealakomowaena, while dispersing use to create a less congested and more tranquil experience. At Kahuku, although visitor access and recreation opportunities would be expanded from what is currently offered, infrastructure and development would be minimal, gradually phased in over time, and remain rustic in design to allow for a primitive visitor experience.

Natural and cultural resources would continue to be managed and protected with a high degree of integrity, consistent with direction provided by existing laws and policies. The preferred alternative emphasizes the park’s role as a refuge and haven for native biota, people, and cultures in a world constantly adapting to volcanic activity and island building processes. The preferred alternative would honor the Native Hawaiian people

and culture by recognizing Native Hawaiian values such as mālama ‘āina (nourishing or taking care of the land) and kuleana (responsibility) and perspectives from Native Hawaiian land management such as ahupua‘a management (managing land from mauka (mountains) to makai (sea) as important concepts in park stewardship of resources. Native Hawaiian traditional ecological knowledge would be used to enhance current scientific understanding to protect park resources and provide additional interpretive and educational opportunities for visitors.



Halema‘uma‘u Trail | NPS photo by Stephen Geiger

Kīlauea Visitor Center and Surrounding Area

The park would produce a development concept plan and site-specific interpretive strategy to integrate visitor experiences among the complex of buildings on the summit of Kīlauea. This integrated campus, or kauhale, would include the Kīlauea Visitor Center, Ohia Wing, Volcano Art Center, pā hula (place reserved for hula dancing), and other buildings in the vicinity. The priority would be to stay within the existing footprint of development; however modest expansion could be necessary to achieve the overall vision and to accommodate walkways, improve circulation, and reduce conflicts

between vehicles and visitors.

The park would continue to use Kīlauea Visitor Center as one of two primary visitor facilities as well as park headquarters and administrative offices. Additional parking would be provided to address increased visitor use, the current restrooms would be removed and replaced with a facility of similar capacity behind the visitor center to provide more interpretive space, and the park would also construct a 2.5-mile separate shared trail for both pedestrian and bicycle use from Kīlauea Visitor Center to Jaggar Museum.

The park would adaptively reuse the historic Ohia Wing as a cultural museum and administrative offices to also complement the visitor functions of the Kīlauea Visitor Center and Jaggar Museum.



Bicycling along Crater Rim Trail | NPS photo by Jay Robinson

Crater Rim Drive

Assuming eruptive activity ceases or changes in Halema'uma'u Crater and the park determines through active monitoring that air quality and other hazards are at a level that is consistent with general visitor use, the park would reopen the southern section of Crater Rim Drive and keep the road open to the public for two-way traffic, allowing a mix of private vehicles and smaller shuttles (non-mandatory). The historic character and historic alignment of the road would be preserved. To improve safe bicycle access around Crater Rim Drive, the park would also improve signage along the road corridor, provide adjacent bicycle trails when feasible, and consider vehicular traffic closures during specific times of day or days of the week to encourage bicycle use.

As part of a pilot program, large commercial buses or vehicles over 98 inches in width and/or over 38 feet in length would be limited to one-way traffic between Jaggar Museum and Chain of Craters Road junction along the southern portion of road. Administrative use of the road for two-way vehicle traffic would continue to be allowed. Once the Halema'uma'u Overlook is reopened to visitation, the parking lot would be maintained to accommodate the existing capacity but the park could evaluate site modifications to address sensitive cultural issues and values and improve resource protection.

The park would also continue to evaluate the pilot hydrogen shuttle technology, including the performance of the shuttles that will service proposed stops along Crater Rim Drive (scheduled to begin in 2015).

Thurston Lava Tube and Surrounding Area

In the preferred alternative, the park would maintain the current mix of parking for private and commercial vehicles at Thurston and use a suite of tools to address congestion and improve the visitor experience. These tools could include improved visitor information and outreach for trip planning (emphasizing less busy times of day to visit), increased ranger presence to direct traffic, the use of intelligent transportation systems (such as electronic message boards giving real-time information), vehicle size limitations for parking, time of day restrictions on certain vehicles, and/or reservations for commercial vehicles only. Additional restriping and reconfiguration of parking at Thurston Lava Tube along the road may also be required. In addition, the park would consider developing a more specific site plan or development concept plan to integrate trails and parking areas from Kilauea Iki to Devastation.

Large commercial buses would be able to load and unload at Thurston but these buses may be required to park at nearby underutilized lots such as Devastation Trail and Pu'u Pua'i. Some reconfiguration within the existing developed footprint of these parking lots may be needed to accommodate large buses, and improved signing and accessibility ramping would be needed. The park would continue to evaluate implications of implementing one-way traffic between Jaggar Museum and Chain of Craters Road junction on Crater Rim Drive for large commercial buses and requiring buses to only load and unload at Thurston as conditions change.

The park would also improve and increase interpretive opportunities and themes at Thurston while still protecting rainforest resources.

Chain of Craters Road

The park would continue to maintain the character of Chain of Craters Road to NPS standards, ensuring a park-like feel for the driving experience, while providing for visitor safety. The park would identify and clear over-vegetated pullouts to restore views/vistas and to encourage stops along the road.

The park would also explore the option of locating an educational pavilion, in addition to a mobile visitor contact station, along Chain of Craters Road to orient

visitors, communicate visitor safety information, and provide an alternative visitor experience when the summit is closed to disperse visitation. Potential locations include Mauna Ulu or where the 1974 flows first cross Chain of Craters Road.

The park would continue to work with partners to provide a sustainable and moveable visitor contact station at the current end of Chain of Craters Road for interpretation and safety on a trial basis, replacing some of the functions provided by the Waha'ula Visitor Center and administration area that was destroyed by lava in 1989. If the pilot project is successful, the park would retain the structure as a contact station to provide visitor services and emergency operations over the long-term. If the pilot project is unsuccessful, the park would develop a long-term replacement visitor contact station in the form of an open pavilion or similar structure at the end of Chain of Craters Road. The structure would not be mobile, but interior elements could be made to be quickly removable in the event of an active lava flow that threatens the structure, and the framing could be salvaged.

A 5.5 mile segment of the Chain of Craters Road that ran through the park towards Kalapana was buried by lava flows generated by Pu'u 'Ō'ō. Due to a change in the direction of the lava flow in 2014, an unpaved emergency access route was constructed following the historic road alignment. This route is for emergency access only. When this route is no longer needed for emergency access, it would be used as a trail (similar in character and functionality to the Escape Road from the summit to Mauna Ulu) to provide a quality non-motorized visitor use opportunity and future emergency route without compromising natural values and without adding the management complexity of managing a coastal entrance for public vehicles to enter the park.

'Āinahou Ranch House and Gardens

As in all alternatives, 'Āinahou Ranch would continue to provide a core management area for nēnē recovery. Park staff would continue to maintain the house and cultural landscape in good condition. The water system would be maintained for fire protection, and the access road to 'Āinahou would be maintained as an unpaved road.

Under the preferred alternative, the NPS would focus on restoration for nēnē. Additional measures to provide opportunities for public stewardship of the ranch house and gardens and habitat restoration may be allowed through the use of trained volunteers and small service groups under the direction of NPS staff in the field.

Within the formal gardens, the park would work with cultural resource staff to replace invasive nonnatives with native species, minimize any new plantings or cultivation, and prevent any inadvertent introduction of nonnatives. Interpretation of 'Āinahou Ranch and its significance as a cultural resource and important site for nēnē would occur off-site for the general public.

Kahuku Unit

Under the preferred alternative, over time and with adequate funding for staff and infrastructure, the park would strive for operational capacity seven days a week. Recreational infrastructure, such as trails, small-scale campgrounds, and interpretive and educational programs and activities would be developed to optimize visitor access and provide a range of opportunities to experience Kahuku's unique natural and cultural resources and participate in the recovery of species and sites. The focus would be on recreational activities such as hiking, camping, and nature-viewing, with some biking and scenic driving opportunities. The park would offer opportunities for the community, visitors, and school groups to volunteer on restoration projects in Kahuku and participate in hands-on resources management activities.

The park would maintain the existing entrance at Kahuku but address safety issues by clearing vegetation, improving signage, and possibly lowering existing berms to improve the line of sight for drivers. The park would also seek to collaborate with the state to evaluate and add turn lanes on Highway 11 and would work with the state and other partners to expand interpretive and scenic opportunities along Highway 11.



View from Palm Trail at Kahuku | NPS photo by Jay Robinson

The park would produce a development concept plan for the lower Kahuku area to provide detailed guidance on adaptive reuse of existing buildings for specific uses, and would determine the numbers and locations of campgrounds, picnic areas, and trails consistent with the overall vision for this alternative.

The park would upgrade and maintain the main road from the existing developed area to Upper Glover for two-wheel-drive access, primarily as one-lane with pullouts, similar in character to the Hilina Pali or Mauna Loa Roads. The main road from Upper Glover east to a designated location near the 1916 lava flows (approximately three miles) would be maintained for four-wheel-drive access. There would be no public vehicular access west from Upper Glover. No new roads would be developed in lower Kahuku.

The park would develop a trail network in lower Kahuku that would accommodate different visitor abilities across a series of loop trails and trail connections in an effort to promote hiking, biking, and a pilot program for equestrian use. The park would prioritize re-establishing traditional and historic travel routes before any new trail construction; however, new trails could also be constructed in order to create trail connections.

Overnight camping in Kahuku would be allowed and multiple small-scale designated campgrounds with a low level of infrastructure and minimal services, such as water and compost or vault toilets, would be developed. Sites would be developed for both drive-in and walk-in campers, with some handicap-accessible campsites provided.

The park would implement a small pilot program for equestrian use in lower Kahuku pastures to explore allowing equestrian use in Kahuku while managing for resource concerns such as the spread of invasive nonnative species. Under the pilot program, vegetation monitoring would be required and limited equestrian use would be allowed by special permit and potentially through a commercial use authorization (CUA) for guided trips.

Under the preferred alternative, the park would manage upper Kahuku for its wilderness characteristics based on its determination of eligibility for inclusion in the national wilderness preservation system. Recreational access in upper Kahuku would be permitted and visitor opportunities such as hiking and camping would be managed consistent with a wilderness experience.

Trails would provide the primary recreational experience for visitors. The park would also consider developing a small campground in the proximity of the existing cabins, outside nēnē habitat and wilderness, for walk-in users, which could also serve as a launching point for backcountry users. Rainwater catchment/shelter could also be provided.

No commercial services or commercially guided recreation would be permitted in upper Kahuku.

ALTERNATIVE 3

This alternative emphasizes building new connections with the park primarily through expanded education and hands-on stewardship opportunities. Traditional visitor opportunities would

continue and capacity could be expanded at some existing sites to allow for increased visitation, but new development would be very limited and a suite of management tools would be used to disperse visitors and manage congestion throughout the park. A greater focus would be placed on science and learning opportunities for visitors from mauka (mountains) to makai (sea). The park would immerse visitors in the protection and restoration of native species and ecosystems by maximizing opportunities to participate in restoration activities and additional emphasis would be placed on providing opportunities for visitors to engage in research, scientific investigation, and projects associated with natural and cultural resources management, notably in Kahuku.

Similar to the preferred alternative, natural and cultural resources would continue to be managed and protected with a high degree of integrity, consistent with direction provided by existing laws and policies. This alternative also emphasizes the park's role as a refuge and haven for native biota, people, and cultures in a world constantly adapting to volcanic activity and island building processes. This alternative would honor the Native Hawaiian people and culture, by recognizing Native



Kahuku forest restoration volunteers | NPS photo by Jay Robinson

Hawaiian values such as mālama ‘āina (nourishing or taking care of the land) and kuleana (responsibility) and perspectives from Native Hawaiian land management such as ahupua‘a management (managing land from mauka to makai) as important concepts in park stewardship of resources. Native Hawaiian traditional ecological knowledge would be used to enhance current scientific understanding to protect park resources and provide additional interpretive and educational opportunities for visitors.

Kīlauea Visitor Center and Surrounding Area

Same as alternative 2.

Crater Rim Drive

Assuming no eruptive activity, the park would maintain the closure of the southern section of Crater Rim Drive to private vehicle traffic from Jaggar Museum to the Chain of Craters Road junction and explore the feasibility of implementing a mandatory shuttle system that would be owned by the NPS but operated by a concession, CUA, or partner. If implemented, this shuttle would run, with two-way service, the length of Crater Rim Drive and would be mandatory from Jaggar Museum south and east to the Chain of Craters Road junction. Locations for parking would be explored and would likely include expanding existing parking areas at Jaggar Museum and Devastation Trail. Large commercial buses would be allowed to run on Crater Rim Drive but would be limited to one-way traffic on the southern section of Crater Rim Drive from Jaggar Museum to the Chain of Craters Road. The historic character of the road would be preserved.

In addition, the park would continue to allow administrative use of the road for two-way vehicle traffic. The park also would encourage bicycle use of the road with improved signage for safety concerns. Halema‘uma‘u Overlook and parking area would be treated the same as alternative 2.

Thurston Lava Tube and Surrounding Area

Under alternative 3, the park would address congestion and improve the visitor experience at Thurston by increasing reliance on shuttle systems, reducing private vehicle parking, and continuing to allow commercial

vehicles at Thurston. The park would strive to improve visitor information and outreach for trip planning and emphasize less busy times of the day to visit and expand use of intelligent transportation systems.

To circulate visitors and provide visitor access to Thurston Lava Tube, the park would rely on the Crater Rim Drive shuttle, if implemented, and redirect private

vehicle parking to other parking areas such as Kīlauea Iki, Devastation, or Pu‘u Pua‘i. Thurston Lava Tube would be maintained as a stop for large and small buses for commercial or educational groups around Crater Rim Drive as well as a shuttle stop. Except for ADA parking, private vehicle parking at Thurston would be removed. Reconstruction of some of the parking may be necessary to provide compliant ADA parking.

As a way to disperse visitor use and take some of the demand off Thurston Lava Tube, the park would explore the option of expanding public access to other lava tubes for ranger-guided tours that would be focused on science.



Hōlei Sea Arch | NPS photo by Stephen Geiger

Chain of Craters Road

Chain of Craters Road would be managed the same as alternative 1. In addition, the park would use existing trails, historic trails, pullouts, and waysides to improve the visitor experience and limit new development along Chain of Craters Road. New connections between existing trails could create loop hiking opportunities along Chain of Craters Road. To limit informal pullouts, the park would improve signage of features and viewpoints at existing road pullouts.

A 5.5 mile segment of the Chain of Craters Road that ran through the park towards Kalapana was buried by lava flows generated by Pu‘u ‘Ō‘ō. Due to a change in the direction of the lava flow in 2014, an unpaved emergency access route was constructed following the historic road alignment. This route is for emergency access only. When this route is no longer needed for emergency access, it would be used as a trail (similar in character and functionality to the Escape Road from the summit to Mauna Ulu) to provide a quality non-motorized visitor use opportunity and future emergency route without compromising natural values and without adding the

management complexity of managing a coastal entrance for public vehicles to enter the park.

‘Āinahou Ranch House and Grounds

Similar to alternative 2, ‘Āinahou Ranch would continue to provide a core nēnē management area for nēnē recovery. Park staff would continue to maintain the house and cultural landscape in good condition with very limited use of volunteers or other support groups. The water system would be maintained for house fire suppression, and the access road to ‘Āinahou would be maintained as an unpaved road.

Alternative 3 would provide greater emphasis on restoration for nēnē and minimize human presence in the ranch house and gardens only as directly related to the protection of the site. NPS staff would conduct the majority of the project work at ‘Āinahou, with less use of volunteers or other groups, in order to minimize the amount of human presence at the site and emphasize nēnē recovery.

Kahuku Unit

Similar to alternative 2, park management activities in Kahuku would continue to concentrate on protecting and recovering native species, including special status species, and ecosystems, developing interpretive programs, and conducting surveys and inventories of cultural resources. Alternative 3 would also provide additional recreation opportunities in Kahuku from what is currently offered, such as camping, as well as additional trails and interpretive and educational

programs; however, the emphasis would be on a more primitive recreational experience with dispersed recreation and minimal facilities. Opportunities and programs would place additional emphasis on science, stewardship and service-learning and focus more heavily on coordinated group activities.

Similar to alternative 2, a development concept plan would provide detailed guidance on how best to implement the recommendations of the GMP, including adaptively reusing existing buildings for specific uses, and would determine the numbers and locations of campgrounds, picnic areas, and trails consistent with the overall vision for this alternative. Recreation opportunities in lower Kahuku would be similar to alternative 2 related to road access, trails, and establishing overnight camping opportunities; however there would be no commercially guided access for recreation in this alternative. Upper Kahuku would be managed the same as Alternative 2, except there would be no additional campground developed in the proximity of the existing cabins.

Boundary Modifications

Under the two action alternatives, including the preferred alternative, the following boundary modifications are proposed:

- Legislation to include ‘Ōla‘a within the official park boundary since the parcel is not contiguous with the park. The land was donated to the park in 1952 and has been managed by the park since that time.



Historic coastal house site at Keauhou Landing | NPS photo

- The Great Crack parcels (1,951 acres), proposed in the park's previous 1975 master plan, and the Ala Wai'i parcel (3,478 acres), which is located adjacent to the Great Crack parcels and contains important archeological and natural resources.
- Private parcel (222 acres) located along the southern edge of Kahuku (west of present entrance off Highway 11), which would essentially connect the entire Kahuku parcel with Highway 11 and protect lower Kahuku from incompatible development, protect rare dryland forest habitat, and provide access to a historic trail.
- Private parcel at Pōhue Bay (16,457 acres) that extends from lower Kahuku on Highway 11 down to the coast. Acquisition of this parcel would extend the park's portion of Kahuku from mauka to makai, protecting important natural and cultural resources and providing a wider range of options for recreation improvements in lower Kahuku.

No legislation would be needed for acquisition of these parcels contiguous to the boundary; however, acquisition by the NPS would be restricted to a willing seller purchase only. Additional information can be found in Appendix E: Analysis of Boundary Modification and Land Protection.

Wilderness Study

The NPS proposes wilderness designation of the lands found eligible in the Kahuku Unit (121,015 acres (GIS)) as a natural extension of the existing wilderness within the park. This designation of wilderness at Kahuku would further a conservation vision for high-elevation protection of natural and cultural resources and would create connectivity for park wilderness that would span from the summit of Mauna Loa Volcano all the way down its massive Southwest Rift. This rugged and remote environment offers outstanding opportunities for solitude and the potential for high-challenge recreational hiking. Nearly all of this mauka area of Kahuku is a place where the imprint of humans is scarcely noticeable, overpowered by the vast lava expanse and aura of wildness. Consistent with NPS policy, the park would continue to manage these proposed eligible lands for their wilderness qualities prior to formal designation. Additional information including implications for managing lands proposed for wilderness can be found in *Chapter 4: Wilderness Study and Proposal* in the GMP/WS/EIS.

Commercial Services

A Commercial Services Strategy has been produced as part of the GMP that includes criteria for evaluating new commercial services, consistent with existing concession law and other statutes (Appendix F). This strategy would provide broad guidance for future decisions involving commercial services but would not apply retroactively to previously made decisions. The Commercial Services Strategy would not affect the terms of ongoing contracts or authorizations previously signed or issued prior to the completion of the final GMP/WS/EIS.

Environmental Consequences

The potential effects of the three alternatives are analyzed for impacts to natural and cultural resources, wilderness, visitor use and experience, transportation and access, socioeconomics, park operations, and greenhouse gas emissions, climate change, and sustainability. This analysis is the basis for comparing the advantages and disadvantages of the alternatives. Impacts are described in terms of whether they are beneficial or adverse. If adverse, their intensity and duration are described. Cumulative impacts result from the incremental (i.e. additive) impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such actions. Conclusions for each topic area are provided, comparing each action alternative to the no action alternative.

SUMMARY OF IMPACTS

The following discussion summarizes the impacts of the alternatives considered, in accordance with the National Environmental Policy Act.

IMPACTS FROM ALTERNATIVE 1

Under the alternative 1, natural resources would continue to experience adverse impacts in localized areas related to nonnative species, social trails, noise, and disturbances related to park operations, facilities, and visitor use. Cultural resources would continue to be vulnerable to surface disturbance, inadvertent damage, and vandalism. Natural and cultural resources would continue to benefit from ongoing assessment, restoration, treatments, and survey work. Visitor use, including interpretation and education, would continue to benefit from a wide variety of opportunities and programming, but would continue to be hampered by limited staff, overcrowding in some locations, and limited opportunities for some modes of recreation. Visitor access and

transportation would continue to be adversely impacted in high visitor use areas, particularly during peak periods. Park operations would continue to be adversely affected by limited staff and the backlog of deferred maintenance.

IMPACTS FROM ALTERNATIVE 2

Many of the adverse and beneficial effects of alternative 1 would continue under alternative 2. Natural resources would benefit from mitigation measures and restoration activities, as well as improved visitor management. Some adverse impacts would occur due to construction of new facilities and trails in some areas, particularly at Kahuku. Cultural resources could experience adverse impacts due to construction of new facilities and trails, but would be mitigated by strict adherence to departmental policy. Beneficial impacts would result from enhanced ability to document and protect cultural resources. Visitor use, including interpretation and education, would continue to benefit from a wide variety of opportunities and programming, and would be enhanced through improved facilities, expanded opportunities (such as at the Kahuku Unit), and increased staff capacity. There could be adverse impacts due to potential restrictions on vehicles in some areas of the park, but overall the changes would be beneficial to visitor access and transportation due to enhanced visitor

and vehicle management. Park operations would be improved through increased staff capacity, increased environmental sustainability of facilities, and a decrease in deferred maintenance.

IMPACTS FROM ALTERNATIVE 3

Many of the adverse and beneficial effects of alternative 1 would continue under alternative 3. Effects on natural and cultural resources would be similar to alternative 2. Visitor use, including interpretation and education, would continue to benefit from a wide variety of opportunities and programming, and would be enhanced through improved facilities, expanded opportunities (such as at the Kahuku Unit), and increased staff capacity. There would be adverse impacts due to restrictions on vehicles, such as Crater Rim Drive and other areas, and no commercial services at the Kahuku Unit. Overall the changes would generally be beneficial to visitor access and transportation due to enhanced visitor and vehicle management. Under alternative 3, there would be some noticeable changes to facilities, such as the conversion of Volcano House to energy independence, and new facilities such campgrounds and education pavilions could be added, but the overall new development would be less than under the alternative 2. Park operations would be improved through increased

Schedule for GMP and Wilderness Study

Estimated Time Frame	Planning Activity	Public Involvement Opportunities
2009	Conduct Public Scoping — Identify goals and issues that need to be addressed. Host meetings with the public, park partners, agencies, Native Hawaiians, and other stakeholders.	<ul style="list-style-type: none"> Review the Public Scoping Newsletter and send us your ideas and concerns.
2010 - 2011	Develop Preliminary GMP Alternatives and Initiate Wilderness Study Scoping — Based on public scoping results, develop a draft outline of different possible futures for the park. Seek additional comments on issues related to wilderness. Provide opportunities for review and comment by the public, partners, government agencies, Native Hawaiians, and other stakeholders.	<ul style="list-style-type: none"> Review both the Public Comment Summary Newsletter and the Preliminary Alternatives Newsletter and send us your ideas and concerns. Attend public meetings and voice your ideas and concerns. Meet the planning team.
2012 - 2014	Prepare Draft GMP/Wilderness Study/EIS —Revise alternatives based on comments from the public, park partners, government agencies, Native Hawaiian, and other stakeholders. Provide additional details on each alternative, analyze impacts of the alternatives, and identify a preferred course of action for the GMP and recommendation for wilderness designation.	
2015	Release the Draft GMP/Wilderness Study/EIS for Public Review —Print and distribute the Draft GMP/Wilderness Study/EIS and related materials to the public, park partners, government agencies, Native Hawaiians, and other stakeholders for their review. Host a talk story session and wilderness hearing. Accept public comments.	<ul style="list-style-type: none"> Attend talk story session and wilderness hearing. Voice your ideas and concerns. Review the Draft GMP/Wilderness Study/EIS and provide written comments.
2015	Revise Draft GMP/Wilderness Study/EIS and Prepare a Final GMP/ Wilderness Study/EIS —Revise Draft GMP/Wilderness Study/EIS based on comment from the public, park partners, government agencies, Native Hawaiians, and other stakeholders and release Final GMP/Wilderness Study/EIS.	<ul style="list-style-type: none"> Review the Final GMP/Wilderness Study/EIS.
2015 - 2016	Distribute and Implement the Approved GMP/Wilderness Study/EIS — Prepare and issue a Record of Decision and implement the plan as funding allows.	<ul style="list-style-type: none"> Work with the park to implement the plan.

We are currently at this step

staff capacity, increased environmental sustainability of facilities, and a decrease in deferred maintenance.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined as “the alternative that will promote national environmental policy as expressed” in Section 101(b) of the National Environmental Policy Act.” The environmentally preferable alternative for Hawai‘i Volcanoes National Park is alternative 2, the NPS preferred alternative. This alternative best satisfies the national environmental goals by providing the highest level of protection of natural and cultural resources while concurrently providing for a wide range of neutral and beneficial uses of the environment. This alternative maintains an environment that supports a diversity and variety of individual choices, and it integrates resource protection with an appropriate range of visitor uses and understanding.

Implementation

Once the general management planning process is completed, the selected alternative would become the new management plan for Hawai‘i Volcanoes National Park and would be implemented in phases over the next couple of decades. Implementation of the actions and developments proposed within this management plan is dependent upon funding available at the time of need. The approval of this general management plan does not guarantee that the funding and staffing needed to implement the plan would be forthcoming. Instead, the plan establishes a vision of the future that will guide future management of the park. In addition to funding, the implementation of any preferred alternative could be affected by other factors. More detailed planning, environmental documentation, and studies could be required before most actions proposed in the alternatives are completed. Additionally, all of the alternatives were developed on the assumption that certain mitigating actions would be incorporated into the proposed actions in order to reduce the degree of adverse impacts.

How to Comment on the Draft General Management Plan

The public comment period for this draft GMP/WS/EIS will extend through June 30, 2015. We encourage you to review the document and welcome your comments. During the comment period, comments may be submitted using several methods:

- 1) We prefer that readers submit comments online at the Hawai‘i Volcanoes National Park GMP project website at <http://parkplanning.nps.gov/havogmp>; or
- 2) A postage-paid comment form is included in this newsletter. You may use this form and attach additional pages as necessary; or
- 3) Letters may be sent to: Superintendent, Hawai‘i Volcanoes National Park. PO Box 52, Hawaii National Park, HI 96718.

In addition, comments may be made in person at the upcoming talk story session and wilderness hearing on Wednesday, June 10, 2015 at the Kilauea Visitor Center in the park (more information on back).

A limited number of additional paper and digital copies of this report are available from the above mailing address. The full report is available for viewing and downloading at the GMP/WS/EIS project website (<http://parkplanning.nps.gov/havogmp>). This document is also available for viewing at the park, at all public libraries on the Island of Hawai‘i, and at the NPS Pacific West Region’s library in Seattle, Washington.

Your comments and contributions have been a valuable component of this planning process, and we look forward to your additional comments on this draft GMP/WS/EIS

Please note: before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Hawai'i Volcanoes National Park
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Newsletter #4, Executive Summary | May 2015

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<http://parkplanning.nps.gov/havo>

PARK WEBSITE

<http://www.nps.gov/havo>

Join Us for a Talk Story Session!

Please join us for a talk story session to learn more about the GMP/WS/EIS and share your feedback and comments. A wilderness hearing will be held during the talk story session to receive comments specifically on the wilderness study.

LOCATION: Kīlauea Visitor Center, Hawai'i Volcanoes National Park, HI 96718

DATE: Wednesday, June 10, 2015

TIME: 5:30-7:30 pm

Written comments can also be submitted online (see website listed below) or using the attached comment form. More information about how to comment on the Draft GMP/WS/EIS can be found on page 15 in this newsletter.

PLEASE SUBMIT ALL COMMENTS BY JUNE 30, 2015.



ACCESS THE PLAN

<http://parkplanning.nps.gov/havogmp>