

**Hawai`i Volcanoes National Park  
Air Tour Management Plan  
Planning and NEPA Scoping Document**

August 1, 2005

Prepared by  
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**DEPARTMENT OF TRANSPORTATION**  
**Federal Aviation Administration**

**Notice of Intent to Prepare an Environmental Impact Statement (EIS)**

**AGENCY: Federal Aviation Administration, DOT**

**ACTION: Notice of Intent to Prepare an Environmental Impact Statement (EIS) and Initiation of Public and Agency Scoping for the Hawai'i Volcanoes National Park Air Tour Management Plan**

**SUMMARY:** The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), began development of an Air Tour Management Plan (ATMP) and associated Environmental Assessment (EA) for Hawai'i Volcanoes National Park in February 2003. The ATMP is being established pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Management*. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources, and visitor experiences of Hawai'i Volcanoes National Park.

The FAA and NPS have now decided to proceed with development of an Environmental Impact Statement (EIS) for this project. This decision is based on information received through the EA scoping process, the environmental analysis completed by the Agencies to date, the consideration of preliminary ATMP alternatives, and through consultations conducted pursuant to Section 106 of the National Historic Preservation Act.

By this notice the FAA and NPS are initiating a 30-day scoping period for this EIS. The FAA and NPS are now inviting the public, agencies, and other interested parties to provide written comments, suggestions, and input regarding the scope of issues and the identification of significant issues to be addressed in the Environmental Impact Statement (EIS). Comments previously submitted in response to the EA scoping will not need to be re-submitted, as they will be considered as part of the EIS process and record. No additional scoping meetings are scheduled.

**DATES:** The 45-day scoping comment period will commence upon publication of this Notice. Please submit any written response you may have within 45 days from the date of this Notice or no later than September 15, 2005. |

**ADDRESSES:** Please address your written comments to:

Docket Management System  
Doc No. FAA-2005-21938  
U.S. Department of Transportation  
Room Plaza 401, 400 Seventh Street, SW.  
Washington, DC 20590-0001

You must identify the docket number FAA-2005-21938 at the beginning of your comments. If you wish to receive confirmation that FAA received your comments, include a self-addressed, stamped postcard. You may review the public docket containing comments in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the above address.

You may also submit comments and review public dockets on the Internet at <http://dms.dot.gov>. Comments previously received in response to the EA scoping may also be reviewed at this website under Docket No. FAA-2004-17174.

**FOR FURTHER INFORMATION CONTACT:** Brian Armstrong, Air Tour Management Plan Program Manager, Executive Resource Staff, AWP-4, Federal Aviation Administration, Western-Pacific Region. Mailing address: P.O. Box 92007, Los Angeles, California 90009-2007. Telephone: (310) 725-3818. Street address: 15000 Aviation Boulevard, Lawndale, California 90261. Email: [Brian.Armstrong@faa.gov](mailto:Brian.Armstrong@faa.gov). Park specific information can be obtained from Cindy Orlando, Superintendent, Hawai'i Volcanoes National Park, P.O. Box 52, Volcanoes, HI 96718. Telephone: (808) 985-6025. Email: [Cindy.Orlando@nps.gov](mailto:Cindy.Orlando@nps.gov).

**SUPPLEMENTARY INFORMATION:** In developing an ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969 (NEPA), which calls on Federal agencies to consider environmental issues as part of their decision making process. For the purposes of compliance with NEPA on this project, the FAA is the Lead Agency and the NPS is a Cooperating Agency. The ATMP Program Office and the NPS Natural Sounds Program Office are responsible for the overall implementation of the ATMP Program. Brian Armstrong is the FAA's principal program manager responsible for all parts of the EIS and performance of required consultation regarding cultural and historic resources and endangered and threatened species. For the park, Superintendent Cindy Orlando is responsible for park operations and management and for recommending the draft and final EIS and Record of Decision to the Pacific West Regional Director.

The EIS is being prepared in accordance with FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures, and NPS Director's Order # 12: Conservation Planning, Environmental Impact Analysis, and Decision-making, and NPS Management Policies*. The FAA is now inviting the public, agencies, and other interested parties to provide written comments, suggestions, and input regarding: (1) the scope, issues, and concerns related to the development of the ATMP for Hawai'i Volcanoes National Park; (2) the scope of issues and the identification of significant issues regarding commercial air tours and their potential impacts to be addressed in the environmental process; (3) the potential effects of commercial air tours on natural resources, congressionally designated wilderness, cultural resources, and the visitor experience; (4) preliminary ATMP alternatives; and, (5) past, present, and reasonably foreseeable future actions which, when considered with ATMP alternatives, may result in significant cumulative impacts. The FAA requests that comments be as specific as possible in response to actions that are being proposed under this notice.

Scoping documents that describe the Hawai'i Volcanoes National Park ATMP project in greater detail and the preliminary ATMP alternatives under consideration are available at the following locations:

- FAA Air Tour Management Plan Program Website, [http://www.atmp.faa.gov/Hawaii\\_Volcanoes.htm](http://www.atmp.faa.gov/Hawaii_Volcanoes.htm)
- Hawai'i Volcanoes National Park, 1 Crater Rim Road, Hawaii National Park, HI 96718
- National Park Service, Pacific Islands Network, 300 Ala Moana Ave., Box 50165, Honolulu, HI 96850
- Hawai'i State Library, Hawai'i Documents Center – 478 South King Street, Honolulu, HI 96813
- Bond Memorial Public Library – 3903 Akoni Pule Hwy, Kapaau, HI 96755
- Hilo Public Library – 300 Waianuenue Avenue, Hilo, HI 96720
- Holualoa Public Library – 76-5936 Mamalahoa Highway, Holualoa, HI 96725 Honoka'a Public Library – 45-3380 Mamane Street, Bldg. #3, Honoka'a, HI 96727
- Kailua-Kona Public Library – 75-138 Hualalai Road, Kailua-Kona, HI 96740
- Kea'au Public Library – 16-571 Kea'au-Pahoa Road, Kea'au, HI 96749
- Kealakekua Public Library – Mamalahoa Hwy, Kealakekua, HI 96750
- Laupahoehoe Public Library – 35-2065 Old Mamalahoa Hwy, Laupahoehoe, HI 96764
- Mountain View Public Library – 1235 Volcano, Mountain View, HI 96771
- Na'alehu Public Library – 5669 Mamalahoa Hwy, Na'alehu, HI 96771
- Pahala Public Library – 315 Pikake St, Pahala, HI 96777
- Thelma Parker Public Library – 67-1209 Mamalahoa Highway, Kamuela, HI 96743-8429

Issued in Los Angeles, CA on July 25, 2005

Brian Q. Armstrong  
FAA, Air Tour Management Plan Program Manager

## **Part 1 - Introduction to the Project**

### **A. Introduction**

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), initiated the development of an Air Tour Management Plan (ATMP) for Hawai`i Volcanoes National Park (Hawai`i Volcanoes) in February 2003 pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Management*. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources (including native Hawaiian practices), and visitor experiences of Hawai`i Volcanoes.

A commercial air tour operation is defined as a flight conducted for compensation or hire in a powered aircraft where the purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park or over tribal lands, during which the aircraft flies below a minimum altitude of 5,000 feet above ground level (AGL) (except for the purposes of takeoff or landing, or as necessary for the safe operation of the aircraft), or less than 1 mile laterally from any geographic feature within the park unless more than ½ mile outside the boundary. A commercial air tour operator is any person who conducts a commercial air tour operation.

In accordance with the National Parks Air Tour Management Act, the Hawai`i Volcanoes ATMP may prohibit commercial air tour operations in whole or in part; may establish conditions for the conduct of commercial air tour operations; shall apply to all commercial air tour operations within ½ mile outside the boundary of the National Park; shall include incentives for the adoption of quiet aircraft technology; and shall provide for the initial allocation of opportunities to conduct commercial air tour operations if the plan limits the number of such operations. The need for implementation of any of these measures must be justified and documented in the ATMP and within the Record of Decision.

### **B. Air Tour Management Plan (ATMP) Development Process**

The ATMP development process is initiated in a particular location following the receipt of an Application for Air Tour Operating Authority from an existing or new entrant commercial air tour operator. The FAA has received applications for Commercial Air Tour Operating Authority from 14 existing operators and one new entrant for Hawai`i Volcanoes.

In developing the ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969 (National Environmental Policy Act) and its implementing regulations contained in 40 CFR Parts 1500-1508 (hereafter referred to as "the regulations"). The regulations mandate that the FAA and NPS shall, to the fullest extent possible, interpret and administer the policies, regulations and public laws of the United States in accordance to the policies set forth in the National Environmental Policy Act and these regulations (1500.2(a)). The regulations also mandate that the FAA and NPS shall, to the fullest extent possible, use the National Environmental Policy Act process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment and use all practical means, consistent with the requirements of the National Environmental Policy Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment (1500.2(e) and 1500.2(f)). For the purposes of complying with sections 1501.3 and 1501.5 through 1501.8 of CEQ regulations, the FAA is the lead agency and the NPS is a cooperating agency.

In March 2004, the FAA, in cooperation with the NPS, initiated the scoping process for a proposed Environmental Assessment (EA) for the Hawai`i Volcanoes ATMP, in accordance with FAA Order 1050.1E. The FAA and NPS have now decided to proceed with development of an Environmental Impact Statement (EIS) for this project. This decision is based on information received through the EA scoping process, the environmental analysis completed by the Agencies to date, the consideration of preliminary ATMP alternatives, and through consultations conducted pursuant to Section 106 of the National Historic Preservation Act. Prior to appropriate implementation of the selected ATMP alternative and following any Federal rulemaking actions, a Record of Decision will be prepared.

Additional information on the ATMP Program is available on the FAA's ATMP website located at [www.atmp.faa.gov](http://www.atmp.faa.gov). Interested parties may request information regarding the development of the ATMP for Hawai`i Volcanoes', as well as other parks', on this website.

**C. Relationship to other Air Tour Management Plan Projects**

The FAA and NPS are also developing Air Tour Management Plans (ATMPs) for Haleakala National Park and Kalaupapa National Historical Park. The decision to prepare an EIS for the Hawai`i Volcanoes National Park Air Tour Management Plan project has no bearing on the conduct of Environmental Assessments (EA) for the Haleakala and Kalaupapa projects. The FAA intends to continue development of EAs for these projects, unless determined otherwise necessary on a project-by-project basis.

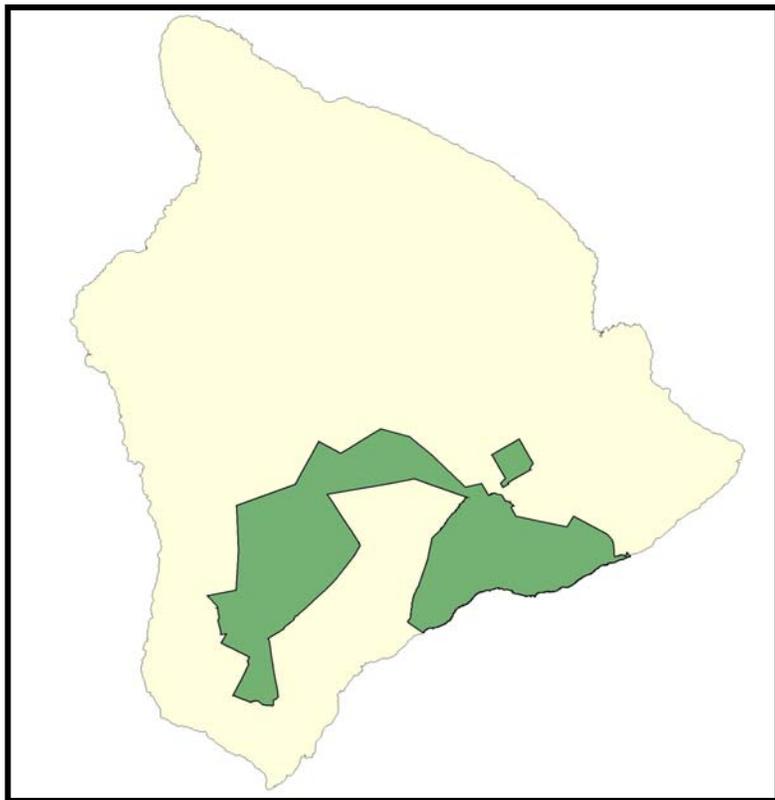
The FAA and NPS had previously initiated development of Air Tour Management Plans for Pu`uhonua O Honaunau National Historical Park, Pu`ukohola Heiau National Historical Site, and Kaloko-Honokohau National Historical Park, all located on the west coast of the island of Hawai`i. Recently, all of the existing commercial air tour operators withdrew their applications for air tour operating authority indicating their intent not to conduct commercial air tours below 5,000 feet above ground level over or within ½ mile of these park units. Since we now have no current applications for air tour operating authority on file, the overarching purpose and need for development of ATMPs for these park units no longer exists. As a result, the FAA and NPS have stopped work on the ongoing ATMP projects and associated Environmental Assessments for these park units. Action to establish ATMPs for these park units may be required in the future if any applications are received from a new entrant or if any operator who qualifies as an existing air tour operator for these park units reapplies and is allowed to resume commercial air tour operations.

\*\*\*\*\* **End Part 1** \*\*\*\*\*

## Part 2 – Setting

### **A. Introduction**

The discussion below summarily describes the setting for the Hawai`i Volcanoes ATMP project. A description of the park's natural resources, cultural resources, visitor experiences, and commercial air tour activity is provided to assist the public and agencies in the preparation of meaningful comments. The most useful comments are those that address the scope of analysis, present significant issues, and suggest reasonable alternatives or comments on the preliminary alternatives with the greatest specificity possible.



The Hawai`i Volcanoes ATMP project planning area is depicted on Figure 1. The area encompasses Hawai`i Volcanoes and the area within ½ mile outside its boundary. The National Parks Air Tour Management Act limits the applicability of the ATMP to operations conducted within this area. Although the scope of authority is limited, the FAA recognizes its responsibility under applicable environmental laws to consider impacts on potentially affected resources located in the vicinity of Hawai`i Volcanoes but in excess of ½ mile outside the boundary of the park.

### **B. Hawai`i Volcanoes National Park - Natural Resources, Wilderness, Cultural Resources, and Ground-Based Visitor Experience**

Hawai`i Volcanoes is located in the southeastern portion of Hawai`i, often called the “Big Island,” in the State of Hawai`i. The park has an area of approximately 330,000 acres, of which over one-third is designated wilderness. Encompassing a diversity of environments and displaying the results of 70 million years of volcanism, migration, and evolution, the park was established with the purpose to preserve and to

provide for the sustainable study and enjoyment of the following resources and values:

- Unique and geologically recent volcanic landscapes, sculpted by natural erosional processes
- Fragile ecological processes, represented by unique and varied native vegetation and rare endemic birds and insects and the environmental conditions that sustain them
- Clean, clear air and water resources
- Highly important structures, sites, and areas associated with the unique traditional Hawaiian culture and continuing use and reverence of these resources by Native Hawaiians
- Congressionally-designated wilderness, and other nationally recognized biological preserves and historic districts, and the cultural and environmental conditions that make them suitable for these designations
- Scenic qualities, solitude, and varied recreation and research opportunities

### ***Natural Resources***

The slopes and summits of Mauna Loa and Kilauea Volcanoes, two of the world's most active volcanoes, dominate Hawai`i Volcanoes. These shield volcanoes (a gently sloping volcano in the shape of a flattened dome and built almost exclusively of lava flows) exhibit constantly changing features and present unique examples of island building through ongoing volcanic processes. The volcanoes represent some of the most recent activity in the continuing process of the geological origin and change of the Hawaiian Archipelago.

Mauna Loa is the world's largest volcano. From the sea floor to the summit, Mauna Loa Volcano is more than 17 km (56,000 ft) tall, and from sea level to the summit it is 4,169 m (13,699 ft) tall. The collapse of Mauna Loa's summit left behind a three-mile long basin-shaped depression, called a caldera, as well as smaller craters located within and

surrounding the caldera. The summit caldera and two prominent zones of fracturing (rift zones) are the source of many of the thousands of thin lava flows that built up the Volcano. At 40 miles long (28 miles of which are in the park), the southwest rift zone of Mauna Loa is the largest fissure eruptive zone above sea level on Earth and the most extensive rift zone in the alpine environment. Since written record of eruptions began in 1843, eruptions have occurred on Mauna Loa as frequently as every few years. Though Mauna Loa does not currently have active lava flows, the U.S. Geological Survey noted signs of renewed activity beginning in spring of 2002.

Kilauea Volcano (sea floor to summit elevation of more than 6 km, or 20,000 ft) is one of the world's most active volcanoes. Kilauea caldera, at the summit of the volcano, is roughly 2.5 miles long by 2 miles wide and is covered by nearly 2,600 acres of lava flows. The Halema`uma`u crater is located near the southern edge of Kilauea caldera and is the primary vent for Kilauea. Like Mauna Loa, Kilauea is built almost entirely by the accumulation of thousands of thin lava flows, which primarily originate from two rift zones. The southwest rift zone, in the Ka`u Desert area to the southwest of Kilauea Caldera, is characterized by the presence of cracks, cinder and spatter cones, pit craters, and remnant fissures. The most recent lava flow from this rift zone occurred in 1978. On the southeastern slopes of Kilauea Volcano, the east rift zone, which is lined with a number of large craters, extends from the area near Chain of Craters Road in a northeasterly direction. Eruptive activity along the east rift zone has been nearly continuous since 1983, and lava is currently flowing from the Pu`u`O`o eruption of Kilauea Volcano along the east rift zone into the ocean. On the southern side of Kilauea are a number of fault scarps known as the Hilina fault system.

Because of great differences in elevation and climate zones, Hawai`i Volcanoes encompasses seven distinct ecological zones: coastal strand and coastal lowlands, mid-elevation seasonal woodlands, mesic (moist) forests, rainforests, montane seasonal, subalpine, and alpine and Aeolian. Many threatened and endangered species of plants and animals are known to occur within and in the vicinity of Hawai`i Volcanoes. Within these zones, the NPS has identified 23 areas (approximately 26305 ha or 65002 acres) within Hawai`i Volcanoes as Special Ecological Areas (NPS 2003b). These areas were selected on the basis of their unique nature, biological richness, resource protection, rare plant recovery, manageability, and potential for research and interpretation.

The ecological zones within and nearby the park also contain great ecological diversity, some of which is represented by a number of threatened and endangered plant and animal species. *Endangered species* are animals that are in immediate danger of becoming extinct and need protection to survive; *threatened species* are those species that are declining in numbers and might become endangered if conservation efforts are not immediately taken (USFWS 2003). In Hawai`i Volcanoes, these species include 25 plants and 7 vertebrates, representing nearly 10% of the native vascular plant flora and nearly half of the resident native vertebrate species of the park. Threatened and endangered native bird species in the park include the nene, or Hawaiian goose (*Branta sandvicensis*), the `ua`u, or Hawaiian petrel (*Pterodroma sandwichensis*), and `a`o, or Newell's Townsend's shearwater (*Puffinus auricularis newelli*). The endangered Hawksbill turtle (*Erptomochelys imbricata*) nests regularly on park beaches, and the endangered Hawaiian hoary bat (*Lasiurus cinereus*), Hawai`i's only indigenous terrestrial mammal, has been observed in the park by NPS staff. Park staff has also regularly observed the endangered humpback whale (*Megaptera novaeangliae*) during its wintering months from December through April.

### **Wilderness**

Approximately 131,540 acres of the park's 333,000 acres are designated wilderness actively managed by the NPS (NPS Management Policies 2001) to take into account wilderness characteristics and values, including the primeval character and influence of the wilderness; the preservation of natural conditions (including the lack of human-made noise); and assurances that there would be outstanding opportunities for solitude, that the public would be provided with a primitive and unconfined type of recreational experience, and that wilderness would be preserved and used in an unimpaired condition. Lands within the Kahuku District have not yet been evaluated for wilderness designation.

### **Cultural Resources**

The park's cultural resources are varied and have been documented to include nearly 1,500 years of past human activity. The resources exemplify a wide range of indigenous island cultural adaptations to a unique lava landscape. Native Hawaiians consider Kilauea to be the home of Pele and believe that her presence is manifested throughout the park. Also found throughout the park are the historic resources associated with post-contact exploration, settlement, ranching, tourism, scientific research, and national park development.

### **Archeological Resources**

Evidence of Native Hawaiians living on an active lava landscape can be found in many places in the park; over 14,000 archeological features have been recorded. The Native Hawaiian archeological resources within the park range from large

coastal settlements to scattered subalpine resource procurement areas. A partial list of resource types include habitation; agriculture; animal husbandry; resource procurement such as fishing, bird collecting, quarries, and water collection; petroglyphs; trails; and religious uses. Other archeological resources include those sites and features associated with historic era explorers, settlement, ranching, tourism, scientific research, and park development.

### ***Ethnographic Resources***

Native Hawaiians have an association with the area now encompassed by the park that pre-dates park establishment by nearly 1500 years. This association is demonstrated through Native Hawaiian traditions, beliefs, practices, lifeways, arts, crafts, and social institutions, which have been passed down through the generations. Kilauea has been listed on the National Register of Historic Places for its association with Native Hawaiians, in addition to the volcano's association to science. Native Hawaiians consider red lava to be sacred; however, the Native Hawaiian association extends beyond the land. In Native Hawaiian thinking, the sacredness of a place is not only found on the ground on which one walks, but also includes the heavens above. There are nine specific terms designating the divisions of air space. Native Hawaiians are also deeply aware of the sounds of nature. Natural sounds of the ocean, winds, birds, rain, trees, etc., play a very important part in Hawaiian poetry, chants, and contemporary music. For example, the serenity and peacefulness of the rainforest or the caldera are some of the attributes that make those places special.

### ***Historic Structure Resources***

In addition to numerous Native Hawaiian structures that give evidence of their long association with what is now the park, there are a number of structures associated with post-contact exploration, settlement, ranching, tourism, scientific research, and national park development. The 1800's were a particularly active time for Kilauea; numerous eruptions and lava flows drew explorers, visitors, and scientists to the caldera rim. Remnants of these early visits can be found in the trails and historic roads that cross the park. The historic 1877 Volcano House, which overlooks the Kilauea Caldera, was one of the early guesthouses in the park. The 1941 Volcano House, which is perched on the caldera rim, continues to provide lodging for park visitors. The United States Geological Survey's Hawaiian Volcano Observatory (HVO), founded in 1912, preceded the establishment of the park by four years. The Whitney Seismograph Vault, part of the 1912 HVO facility, still remains. The current HVO administrative facility continues to be a center for the research of active volcanism and volcanic processes, with research occurring throughout the park. Kilauea Military Camp, which preceded the park establishment by only a few months, was developed as a rest and relaxation camp for military personnel and this use continues today. During World War II, it served various roles, including housing Prisoners of War. There are a number of historic structure resources in the park related to the early years of park development including roads, rustic wayside shelters, trails, and the park housing, maintenance, and administrative areas.

### ***Cultural Landscape Resources***

A cultural landscape is the interface between the natural environment and human adaptation. This interface may result in physical modifications to the landscape or other more intangible changes. Hawai'i Volcanoes comprises a vast landscape of past, recent, and ongoing volcanism from below the surface of the ocean to the summit of Mauna Loa at 13,677 feet, the park's highest point. On this landscape, diverse ecosystems developed, which, in combination with the island's volcanism, influenced unique Native Hawaiian cultural adaptations—one of which is a particular respect for red lava. The park landscape is a crucial component of Native Hawaiian traditions, beliefs, and practices. The landscape also figured predominantly in the area's settlement, ranching, tourism, scientific research, and national park development. When the National Park Service was developing master plans for the park, careful consideration was given as to where facilities should be placed in relation to their use, other facilities, surrounding resources, and the landscape setting.

### ***Ground-Based Visitor Experience***

Hawai'i Volcanoes is the largest single visitor attraction on Hawai'i Island with approximately 2.3 million recreational and non-recreational visitors per year. Approximately 75% of the park visitors arrive by private vehicle and 25% arrive on a commercial tour. The park offers a wide range of recreational opportunities for the ground-based visitor including day hikes, wilderness trips/backpacking of several days duration, nature walks, auto touring with scenic overlooks, picnicking, wildlife viewing, camping, stargazing, and cycling. Approximately 1.3 million visitors participated in these activities in Fiscal Year 2004.

Visitation is primarily focused on viewing and understanding volcanic processes and activities. Other popular attractions include: Kilauea Visitor Center, which contains numerous educational and interpretive exhibits and programs; the Volcano Art Center, a retail sales gallery for local artists and craftspeople; the Jaggar Museum, with geological and cultural educational displays; Thurston Lava Tube, a cave formed within a lava flow that is accessed via a trail that passes through a small, jungle-filled crater; and volcanic features such as the eruption site, Kilauea Caldera, Halema'uma'u Crater, Sulphur

Bank, and Steam Vents. Additionally, scenic drives and lookouts abound, especially along Crater Rim Drive, a road located along the rim of Kilauea Caldera, and Chain of Craters Road, a road extending from Crater Rim Drive southeast towards the coast then northeast along the coast until it terminates under recent lava flow cover. The park also contains an extensive system of hiking trails, the longest of which are the Ka'u Desert Trail, Crater Rim Trail, Mauna Loa Trail, and the 'Ainapo Trail.

### **C. Commercial Air Tour Activity and Visitor Experience**

There are currently fourteen existing operators providing commercial air tours over and within ½ mile outside the boundary of the Hawai'i Volcanoes. As of July 15, 2005, these 14 existing operators have Interim Operating Authority to conduct a maximum of 28,441 commercial air operations annually. This figure is based on the operator's applications for Air Tour Operating Authority submitted pursuant to Title 14, Code of Federal Regulations (CFR), Part 136. In the applications, each existing operator was required to report the greater of the number of commercial air tour operations conducted during the twelve-month period preceding April 5, 2000, or the average number of commercial air tour operations conducted by the operator during the three-year period preceding April 5, 2000. In accordance with the National Parks Air Tour Management Act and Title 14, CFR, Part 136, the annual air tour operations over and within ½ mile outside the boundary of the Hawai'i Volcanoes are currently capped at the number of operations reported in the operator's application, unless otherwise authorized by the FAA and NPS, or until the ATMP is implemented.

It should be noted that the level of operations authorized by the IOA (28, 441) is not the level of operations currently being conducted annually. Some operators are conducting less than the maximum number of operations that they are authorized. This is indicated by (i) IOA was based on activity levels that are now five years old (a time period during which air tour activity was known to have dropped substantially (after September 11, 2001) and may not have recovered), (ii) data submitted by operators in response to a July 2003 FAA request for detailed operational data indicates a lower level of activity, and (iii) the NPS staff at Hawai'i Volcanoes indicate that the number of operations reported in IOA applications is vastly different from the number of operations observed by the NPS. Thus, for the sake of analysis, present-day conditions would be represented, for those operators who responded to the July 2003 data requests, by the annual operations level indicated in their responses, and, for those operators who did not respond to the July 2003 data requests, by their reported IOA application levels. An annual industry growth rate would be applied to this starting point to forecast future activity (expected air tour industry growth for existing operators and future new operators) through the planning time frame (currently proposed to be 10 years). For this No-Action Alternative, growth would stop at the IOA maximum activity cap level and remain steady at that maximum throughout the remainder of the planning time frame unless otherwise forecast.

All existing commercial air tour operations at Hawai'i Volcanoes are certificated by the FAA in accordance with the requirements of Title 14 CFR Part 135. Special Federal Aviation Regulation, Part 71 applies to all fixed-wing and rotor-wing air tour flights conducted under Visual Flight Rule conditions within the State of Hawai'i. Special Federal Aviation Regulation, Part 71 provides procedural, operational, and equipment requirements, including the specification of minimum flight altitudes, beyond those required under Code of Federal Regulations Parts 91 and 135. The FAA has proposed national safety standards to govern commercial air tours (Docket No. FAA-1988-4521; Notice No. 03-10) (See Federal Register 60572, October 22, 2003). If this proposed rule is adopted the rule will replace the requirements of Special Federal Aviation Regulation, Part 71 in Hawai'i and apply throughout the country.

Currently, commercial air tour operators may apply for authorization to fly below the 1500 feet above ground level minimum altitude prescribed by Special Federal Aviation Regulation, Part 71. To do so, commercial air tour operators must submit to the FAA Special Federal Aviation Regulation procedures documents depicting routes and sites below 1500 feet. The FAA may authorize fixed-wing aircraft to fly no lower than 1000 feet above ground level and helicopters no lower than 500 feet above ground level, in order to maintain 500 feet of separation between helicopters and fixed-wing aircraft.

The majority of commercial air tour operations that fly over Hawai'i Volcanoes currently originate from Hilo International Airport, Kona International Airport, and two private heliports located on the west side of the island. A relatively small number of commercial air tour flights originate from the islands of Maui and Oahu. Current commercial air tour flight tracks over the park (See Figure 2, Page 20) are concentrated along the northeast border of the park and over and in the vicinity of the current eruption and lava flow which is the primary park feature of interest to the air tour visitor. Additionally, commercial air tours fly along the southeast coastal border of the park. Helicopter air tours are allowed to fly 500 feet above ground level along one flight track beginning at the Hawai'i Volcanoes National Park boundary and moving along and southwest of the Chain of Craters Road before crossing to the east of the road into an area around the southeast

border of the park. Along all other flight tracks over the park, air tour operators must maintain an altitude of 1500 feet above ground level.

Although their experience of the park resources and values is quite different in most cases from that of the ground-based visitor, those who experience the park solely by means of a commercial air tour are considered, in the ATMP Program, as legitimate park visitors. The air tour visitor experience often varies depending on weather conditions and the desires of the air tour client/visitor (i.e., length of flight, geographic features of special interest, etc.).

Commercial air tour operations conducted over Hawai`i Volcanoes are assessed a fee by the NPS under authority provided in 16 U.S.C. 4601-6a (n)(5)(B). The fee assessed per entry is \$25.00 per aircraft with a passenger capacity of 25 persons or less and \$50.00 per aircraft with a passenger capacity of more than 25 persons. As per the Congressionally-approved Recreational Fee Demonstration Program, 80% of the revenues are used for facility improvement and ecosystem enhancement projects within Hawai`i Volcanoes. The fee is only assessed on air tour operations that enter the airspace above the park (within the park boundary). Commercial air tour operations that are conducted in the vicinity of the park but which do not cross the park's boundary are not assessed this fee. Approximately one third of the operators are in compliance with the recreational fee program; however, the NPS is working with the other operators to bring them into compliance. The FAA is not a party to this fee collection and is not granted any authority by the National Parks Air Tour Management Act to impose, increase, decrease, modify, or otherwise alter or enforce the fees assessed pursuant to 16 U.S.C. 4601-6a (n)(5)(B).

\*\*\*\*\* **End Part 2** \*\*\*\*\*

### **Part 3 - Federal Action and Range of Alternatives**

#### **A. Federal Action**

The Federal action associated with this project is the establishment of an Air Tour Management Plan (ATMP) for Hawai'i Volcanoes, which accomplishes the objective set forth in the National Parks Air Tour Management Act of 2000. This objective is to establish acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, and visitor experiences of Hawai'i Volcanoes. The Purpose and Need for this project stem from the enactment of the National Parks Air Tour Management Act of 2000, wherein the U.S. Congress directed the FAA, in cooperation with the NPS, to establish an ATMP for any national park or tribal lands for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. Fifteen persons (fourteen existing operators and one new operator) have applied to the FAA for operating authority to conduct commercial air tour operations over Hawai'i Volcanoes, triggering the need to develop an ATMP at this park. Following completion of the ATMP planning and environmental process, appropriate implementation actions will be taken for the selected ATMP alternative. This may include Federal Rulemaking. The FAA and NPS are actively preparing to make a decision on one or more alternative means of meeting the Air Tour Management Plan objective while also complying with the existing legislative, regulatory, and policy mandates of both agencies. While the FAA in cooperation with the NPS will determine the significance of impacts to natural and cultural resources and visitor experiences, the NPS alone will determine impairment of park resources and values per NPS policy.

In Section 802 of the National Parks Air Tour Management Act of 2000, Congress found, in relevant part, that (1) the FAA has sole authority to control airspace over the United States; (2) the FAA has the authority to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands; and, (3) the NPS has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and of providing for the enjoyment of the national parks in ways that leave the national parks unimpaired for future generations. The relevant FAA legislative, regulatory, and policy mandates are primarily defined by the Federal Aviation Act of 1958 (49 USC 40103(b)), the Air Tour Management Act of 2000 (49 U.S.C. 40128), and the Department of Transportation Act of 1966 (49 USC 303(c)). The relevant NPS legislative, regulatory, and policy mandates are primarily defined by the Organic Act of 1916 (16 USC 1, 2-4), the General Authorities Act of 1970 (16 USC 1a-1 through 1a-8), the Redwoods Act of 1978 (P.L. 95-250, 92 Stat. 163, 16 USC 1a-1), and the enabling legislation specific to Hawai'i Volcanoes. The determination of significant adverse impacts, if any, for this ATMP will be made by the FAA and the NPS, based on the National Parks Air Tour Management Act of 2000 as well as the aforementioned legislative, regulatory, and policy mandates of the FAA and the NPS, other pertinent environmental laws, and the purposes and values of Hawai'i Volcanoes.

The National Parks Air Tour Management Act of 2000 specifies that the ATMP be developed by means of a public process. This scoping process is one of the elements of that public process. A specific proposed action alternative will be identified following scoping and following the completion of a comprehensive environmental impact analysis. Thus, the FAA and NPS will identify a specific proposed action alternative in the Draft Environmental Impact Statement, which will be made available for public review and comment.

#### **B. Range of Alternatives**

Preliminary ATMP Alternatives have been developed and refined by an Alternatives Development Team, consisting of FAA, NPS, and other specialized staff. These alternatives are subject to refinement and/or change in consideration of public and agency comments during scoping, impact analysis, and consultation during the EIS process. The initial alternatives development process consisted of (i) the identification of park-specific issues with commercial air tours through a process of public and agency scoping comment analysis (scoping comments received during the EA phase of this project were used, as at the time, the decision to prepare an EIS had not yet been made), Section 106 consultations held with select consulting parties in July 2004, background research, and discussions with relevant NPS and FAA experts; (ii) the convening of a two-day Alternatives Development Meeting (ADM), held January 12-13, 2005 at Hawai'i Volcanoes; (iii) the collecting of comments from some Section 106 consulting parties on the preliminary alternatives developed at the ADM; and (iv) consensus by the Alternatives Development Team on alternatives going forward for detailed analysis.

While the alternatives development process was primarily issue-driven, the Alternatives Development Team also checked that the alternatives were practicable and met the following four basic reasonableness criteria: (1) that they were safe, (2) that they satisfied the Purpose and Need for Federal action (to be described in the National Environmental Policy Act document), (3) that they were technically and economically feasible, and (4) that repetition of similar alternatives was

avoided. However, the Team was not able to conclusively determine during the ADM whether all alternatives met or did not meet all four criteria.

The range of alternatives presented below represent the full spectrum of possible alternatives, from unrestricted air tour activity to no air tour activity. Alternatives determined to be not practicable or otherwise found to not satisfy the Purpose and Need for the project will not be carried forward for detailed analysis within the Environmental Impact Statement. If any of these alternatives are not carried forward for detailed analysis, the reasons for it not being carried forward will be described in the Environmental Impact Statement. A reasonable number of alternatives and the No-Action Alternative will be carried forward for detailed analysis.

### **C. Elements Common to All Alternatives**

#### **Applicability**

The requirements specified by the ATMP apply to all commercial air tour operations conducted over or within ½ mile of the boundary of Hawai'i Volcanoes National Park.

Commercial air tour operations are defined in the Section 803 of the National Parks Air Tour Management Act of 2000 as “any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park, or over tribal lands, during which the aircraft flies (i) below [5,000 feet] above ground level (except solely for purposes of takeoff or landing, or necessary for safe operation of an aircraft....), or (ii) less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary).”

Therefore, the ATMP only applies to the airspace below 5,000 feet (ft) above ground level (AGL) and above the area encompassed by the park and the ½ mile buffer zone outside of the park boundary. The ATMP applies to all commercial air tour operations in this airspace, unless, for the purposes of safe operation of an aircraft as determined under the rules and regulations of the FAA, the pilot-in-command is required to take action to ensure the safe operation of the aircraft.

#### **Relationship to Other Federal Aviation Regulations**

Commercial air tour operators must continue to comply with all applicable requirements of Special Federal Aviation Regulation Part 71 (SFAR 71) and all other applicable Federal Aviation Regulations. However, the ATMP may alter the minimum altitude requirements of SFAR 71 for specific areas of the park. For example, the ATMP may provide authorization for operations below 1,500 ft AGL or may require minimum altitudes in excess of 1,500 ft AGL.

As mentioned above, any actions the pilot-in-command of a commercial air tour aircraft takes to ensure the safe operation of the aircraft are allowed as safety supersedes any restrictions placed by the ATMP.

#### **Temporary Flight Restriction In Case of New Lava**

FAA and NPS are considering the establishment of a temporary flight restriction for all aircraft over and in the immediate vicinity of any new eruption within the National Park. The purpose of the temporary flight restriction is to allow the National Park Service an opportunity to conduct an initial assessment of the eruption, which may require extensive aerial survey operations, and allow for FAA to review the safety of aircraft operations. FAA would be responsible for enforcing any such flight restrictions.

#### **Enforcement of the ATMP**

Several comments were received during EA scoping regarding the procedures to be used to enforce air tour operator compliance with the ATMP.

Once completed the ATMP will be incorporated either directly or by reference into Title 14, Code of Federal Regulations, Part 136, National Park Air Tour Management.

The FAA's authority and responsibility for enforcement of Part 136 and the ATMP stems from its authority established under the Federal Aviation Act of 1958, as amended by the National Parks Air Tour Management Act of 2000. The FAA will monitor air tour operator compliance with an ATMP through issuance and management of Part 136 Operating Authority, through periodic and random surveillance of air tour operators, and through appropriate investigation of credible reports of suspected noncompliance.

Any person that knows of suspected noncompliance with Part 136 or the ATMP should report it to appropriate personnel of the local FAA Flight Standards District Office or the park Superintendent's Office. Any credible reports received or generated by the National Park Service should be forwarded to the local FAA Flight Standards District Office. The FAA, in accordance with current FAA protocols, will conduct all monitoring, investigation, and enforcement of the Air Tour Management Plan.

### **Quiet Technology**

Section 803 of the National Park Air Tour Management Act of 2000 states that an ATMP "shall include incentives...for the adoption of quiet aircraft technology by commercial air tour operators conducting commercial air tour operations at the park". In the development of preliminary alternatives, several ideas regarding quiet technology incentives were discussed. These included:

- Creating smaller no-fly zones for those aircraft utilizing quiet technology.
- Establishing, time-of-day or day-of-week restrictions for those aircraft without quiet technology (those aircraft with quiet technology would not be subject to such temporal restrictions); such restrictions would be phased in over time.
- Require the use of quiet technology aircraft for any new growth in commercial air tour operations over the park .

It was decided that further information was needed before the FAA and the NPS could develop justifiable and mutually agreeable quiet technology incentives to include in the ATMP.

### **Managed Growth Stipulation and Maximum Operations Caps**

Consideration is being given to a requirement for air tour operators to replace air tour aircraft with similar or quieter aircraft technology as aircraft are replaced over time as a normal course of business. No mandatory phase-out of non-quiet technology aircraft is being considered.

While managing growth of commercial air tour operations over Hawai'i Volcanoes, the FAA in cooperation with the NPS will consider a maximum activity cap on commercial air tour operations. Any such cap will be established at a level of operation below which significant impacts or impacts requiring mitigation are known or expected to occur to cultural and/or natural resources, and/or visitor experiences. As the FAA in cooperation with the NPS have not yet determined a level of operations above which impact may occur, nor have they yet developed thresholds of significance that may be used to judge impacts, the actual number of operations associated with these caps is left, for the time being, to be decided.

### **Temporary No-Fly Periods for Special Events**

NPS may request specific periods during which commercial air tour operations are prohibited in all or part of the airspace regulated by the ATMP in order to accommodate special events (e.g., cultural events, wildlife surveys). Under the procedures being considered for the ATMP, the NPS would give 2-week notice to the FAA Flight Standards District Office as well as to commercial air tour operators with ATMP operating authority to fly over the park.

### **Interpretive Guidance**

NPS has proposed a requirement that commercial air tour operators who conduct operations in the airspace regulated by the ATMP obtain interpretive guidance, training, and/or media from NPS Hawai'i Volcanoes staff or their representatives.

## **D. Preliminary Alternatives**

### **1. No-Action Alternative**

#### **Introduction**

The No-Action Alternative is defined as current and existing conditions, with no change to the existing operations under the conditions of the current Interim Operating Authority (IOA). An ATMP would be developed that would not change any existing management practices.

#### **Operators Under the No-Action Alternative**

There are 14 existing operators who have been granted IOA and who conduct commercial air tour operations over and/or within ½ mile outside of the boundary of Hawai'i Volcanoes. Unless otherwise indicated at the time of the analysis, the No-Action Alternative will assume continued operations by these existing operators, and IOA would not be granted to any new entrants.

### **Number of Operations Under the No-Action Alternative**

The 14 existing operators who have been granted Interim Operating Authority (IOA) are currently authorized a cumulative total of 28,441 air tour operations per year over and within ½ mile of Hawai`i Volcanoes. The No-Action Alternative will assume no growth beyond this level of annual operations. That is, under the No-Action Alternative, commercial air tour operations are essentially capped at 28,441 (with these operations allocated only among the 14 existing operators who currently have IOA and who would only be allowed the number of operations granted by their IOA).

It should be noted that the level of operations authorized by the IOA (28,441) is not the level of operations currently being conducted annually. Some operators are currently conducting less than the maximum number of air tour operations that they are authorized. This is indicated by: (i) IOA was based on activity levels that are now five years old (a time period during which air tour activity was known to have dropped substantially (after September 11, 2001) and it may not have recovered), (ii) data submitted by operators in response to a July 2003 FAA request for detailed operational data indicates a lower level of activity, and (iii) the NPS staff at Hawai`i Volcanoes indicate that the number of operations reported in IOA applications is vastly different from the number of operations observed by the NPS. Thus, for the sake of analysis, present-day conditions would be represented, for those operators who responded to the July 2003 data requests, by the annual operations level indicated in their responses, and, for those operators who did not respond to the July 2003 data requests, by their reported IOA application levels. An annual industry growth rate would be applied to this starting point to forecast future activity (expected air tour industry growth for existing operators) through the planning time frame (currently proposed to be 10 years). For this No-Action Alternative, growth would stop at the IOA maximum activity cap level and remain steady at that maximum throughout the remainder of the planning time frame unless otherwise forecast.

### **Operating Parameters Under the No-Action Alternative**

The typical flight routes and authorized minimum altitudes that are expected to continue under this alternative are depicted in Figure 2. Under the existing conditions, and thus, under the No-Action Alternative, there are no existing mandatory flight routes or no-fly zones for Hawai`i Volcanoes. Commercial air tour operations over Hawai`i Volcanoes would be required to comply only with existing applicable Federal Aviation Regulations, including SFAR 71.

This lack of formal regulations notwithstanding, Hawai`i Volcanoes currently has an informal agreement with commercial air tour operators to not fly above Kilauea Caldera. While the no-fly zone above Kilauea is strictly voluntary, most commercial air tour operations over Hawai`i Volcanoes do adhere to the informal agreement. Based on information collected by the FAA, data regarding operating parameters (including routes) of commercial air tour operations over Hawai`i Volcanoes do exist. Unless otherwise indicated at the time of analysis, the No-Action Alternative will assume continued use of these flight routes.

Recognizing again that these operating parameters are strictly voluntary, highlights of the operating parameters under the No-Action Alternative include:

- No-fly zone above Kilauea Caldera
- The high altitude of Mauna Loa (summit elevation is over 13,000 ft above mean sea level (MSL)) keeps most commercial air tour operators from conducting flights over the summit area (operations conducted over 12,000 ft MSL for more than 30 minutes require operators to provide oxygen).
- Pilots generally come to Hawai`i Volcanoes from Kona International Airport either directly, entering the park from the north, skirting Kilauea Caldera, and, flying between 500 ft to 1500 ft AGL, cross the Chain of Craters Road eastbound towards Pu`u`O`o, where they show their clients red lava. Alternatively, they leave Kona International Airport, and fly a route that follows the coastline the whole way to Pu`u`O`o at Hawai`i Volcanoes to see red lava.
- Pilots coming from Hilo International Airport generally fly directly west/southwest to Pu`u`O`o, located on the east side of Hawai`i Volcanoes.
- Above the active lava vents at Pu`u`O`o and elsewhere in this easternmost section of the park, pilots are allowed to maintain an altitude of 500 ft AGL.

## **2. No Restrictions Alternative**

### **Introduction**

In order to examine the full spectrum of possible alternatives, an ATMP Alternative that prescribes no restrictions or limitations on commercial air tour operations will be examined.

### **Operators Under the No Restrictions Alternative**

Under the No Restrictions Alternative, there would be no cap on the number of commercial air tour operators allowed. Thus, all new entrants as well as the 14 existing operators who have been granted IOA, would be granted operating authority to conduct commercial air tour operations over and/or within ½ mile outside of the boundary of Hawai'i Volcanoes.

### **Number of Operations Under the No Restrictions Alternative**

Under the No Restrictions Alternative, the ATMP would allow an unlimited number of operations to take place over and/or within ½ mile outside of the boundary of Hawai'i Volcanoes. An annual industry growth rate would be applied to this starting point to forecast future activity (expected air tour industry growth for existing operators and future new operators) through the planning time frame (currently proposed to be 10 years). For this No Restrictions Alternative, growth would continue to occur throughout the planning time frame unless otherwise forecast.

### **Operating Parameters Under the No Restrictions Alternative**

Under the No Restrictions Alternative, commercial air tours (using both fixed-wing and rotor-wing aircraft) would be allowed to fly anywhere above the park and the ½-mile ATMP buffer. However, applicable Federal Aviation Regulations, including SFAR 71, would still apply.

Unless the existing commercial air tour operators voluntarily agreed to not fly over Kilauea Caldera (as per the informal agreement that exists today), the ATMP would supersede the provisions of the voluntary agreement.

## **3. No Air Tours Alternative**

### **Introduction**

In order to examine the full spectrum of possible alternatives, an ATMP that completely bans commercial air tour operations in the airspace below 5,000 ft AGL over the park and the ½ mile buffer zone will be examined.

### **Operators Under the No Air Tours Alternative**

Under the No Air Tours Alternative, there would be no commercial air tour operators allowed to conduct commercial air tour operations in the airspace below 5,000 ft AGL over and/or within ½ mile outside of the boundary of Hawai'i Volcanoes. Thus, the 14 existing operators who have been granted IOA, would have their operating authority revoked after the implementation of an ATMP based on the No Air Tours Alternative, and no new entrants would be granted operating authority.

### **Number of Operations Under the No Air Tours Alternative**

Under the No Air Tours Alternative, no commercial air tour operations would be allowed in the airspace below 5,000 ft AGL over and/or within ½ mile outside of the boundary of Hawai'i Volcanoes.

### **Operating Parameters Under the No Air Tours Alternative**

Under the No Air Tours Alternative, the airspace below 5,000 ft AGL over the entire park and ½ mile buffer zone would be a designated no-fly zone for commercial air tours.

## **4. Red Lava and Rift Alternative A**

### **Introduction**

The Red Lava and Rift Alternative A's emphasis was to show red lava in remote rift zones. This minimizes commercial air tours over the park while still allowing commercial air tour operators to show the clients active (red) lava and rift zone areas.

### **Operators Under the Red Lava and Rift Alternative A**

Under the Red Lava and Rift Alternative A, there would be no caps on the number of commercial air tour operators allowed to conduct operations over Hawai'i Volcanoes, as long as the operators' cumulative operations are under the maximum activity cap. The FAA will decide how to allocate opportunities to conduct operations among commercial air tour operators.

### **Number of Operations Under the Red Lava and Rift Alternative A**

Under the Red Lava and Rift Alternative A, there would be a maximum activity cap on the number of commercial air tour operations allowed over Hawai'i Volcanoes. However, the FAA in cooperation with the NPS have not yet determined the number of operations associated with the maximum activity cap.

### **Operating Parameters Under the Red Lava and Rift Alternative A**

Figure 3 depicts the flight zones described in the Red Lava and Rift Alternative A. Highlights of these operating conditions include:

- The Red Lava and Rift Alternative A will apply to both rotor-wing and fixed-wing aircraft. For safety reasons, fixed-wing aircraft must fly at altitudes 500 ft higher than rotor-wing aircraft.
- In order to protect to the maximum extent possible the resources of the park (culturally important sites, bird and other wildlife habitat, wilderness areas, visitor areas) air tour flights would be limited to areas where red lava emerges or is emerging. At the time of this document's publication, the only area over which flights would be allowed under the Red Lava and Rift Alternative A would be the airspace over Pu`u`O`o, in the southeast area of the park.
- Figure 3 also depicts currently known rift zones within the park – these are areas of the park with relatively higher potential to have red lava emerge at some point in the future. Under this alternative, if any of these other rift zones (e.g., Mauna Loa's southwest rift zone) becomes active, or indeed if new red lava emerges anywhere in the park, after an initial temporary restriction on flights, the FAA and the NPS will open up the airspace above the eruption to commercial air tour operations. The FAA and the NPS will cooperatively decide and specify appropriate operating specifications (e.g., entry and exit points into the park airspace, altitude restrictions, etc.), and make the necessary adjustment to the ATMP.

## **5. Red Lava and Rift Alternative B**

### **Introduction**

This alternative evolved from the Red Lava and Rift Alternative A described above as a secondary alternative that provides an opportunity for air tour operations to occur in visual range of, but not directly over or in close proximity of active (red) lava flow. This alternative was developed following consultations with certain Native Hawaiians who indicated that red lava was the most sacred resource to Native Hawaiians, and allowing air tour operations to be conducted over the lava would be offensive to them.

### **Operators Under the Red Lava and Rift Alternative B**

Operators and the number of operations under this Alternative would be the same as those allowed under the Red Lava and Rift Alternative A.

### **Number of Operations Under the Red Lava and Rift Alternative B**

Operators and the number of operations under this Alternative would be the same as those allowed under the Red Lava and Rift Alternative A.

### **Operating Parameters Under the Red Lava and Rift Alternative B**

The operating parameters of the Red Lava and Rift Alternative B are somewhat different from those for the Red Lava and Rift Alternative A, and are as follows:

- The Red Lava and Rift Alternative B will apply to both rotor-wing and fixed-wing aircraft. For safety reasons, fixed-wing aircraft must fly at altitudes 500 ft higher than rotor-wing aircraft.
- Air tour flights would be limited to areas in the vicinity of the eruption site and red lava flows but would not be allowed to fly directly over the eruption site or lava flow itself. Thus, under the Red Lava and Rift Alternative B and at the time of this document's publication, the only area over which flights would be allowed under this Alternative would be the airspace within visual range of Pu`u`O`o, in the southeast area of the park. Because FAA and NPS have not yet had an opportunity to decide where this airspace would be located, a map specifically depicting the this Alternative has not been prepared.
- Figure 3 depicts currently known rift zones within the park – these are areas of the park with relatively higher potential to have red lava emerge at some point in the future. Under this alternative, if any of these other rift zones (e.g., Mauna Loa's southwest rift zone) becomes active, or indeed if new red lava emerges anywhere in the park, after an initial temporary restriction on flights, the FAA and the NPS will open up the airspace within visual range of the eruption to commercial air tour operations. The FAA and the NPS will cooperatively decide and specify appropriate operating specifications (e.g., entry and exit points into the park airspace, altitude restrictions, etc.), and make the necessary adjustment to the ATMP.

## **6. Zones Alternative**

### **Introduction**

The Zones Alternative is based on protecting the primary natural, wilderness, cultural, and visitor resources within Hawai'i Volcanoes while still allowing commercial air tour operations to take place in the majority of the airspace above the park and the ½ mile buffer zone.

### **Operators Under the Zones Alternative**

Under the Zones Alternative, there would be no caps on the number of commercial air tour operators allowed to conduct operations over Hawai'i Volcanoes, as long as the operators' cumulative operations are under the maximum activity cap. The FAA will decide how to allocate opportunities to conduct operations among commercial air tour operators.

### **Number of Operations Under the Zones Alternative**

Under the Zones Alternative, there would be a maximum activity cap on the number of commercial air tour operations allowed over Hawai'i Volcanoes. However, the FAA in cooperation with the NPS have not yet determined the number of operations associated with the maximum activity cap.

### **Operating Parameters Under the Zones Alternative**

Figure 4 depicts the various flight zones and no-fly zones allowed under the Zones Alternative. Under the Zones Alternative, airspace over the park was divided into "fly" and "no-fly" zones with fly zones allowing flights at a minimum altitude of 1500 ft AGL with certain exceptions where flights were allowed lower. Highlights of these operating conditions include:

- The Zones Alternative will apply to both rotor-wing and fixed-wing aircraft. For safety reasons, fixed-wing aircraft must fly at altitudes 500 ft higher than rotor-wing aircraft.
- No-fly areas include: the ½ mile buffer zones outside of the southwestern boundary of the park's Kahuku Ranch area (in order to close off this entry area to the park's airspace so that flights over the adjacent Ocean View residential community would be minimized); the area around Mauna Loa summit above the 12,000 ft MSL topographic contour (in order to preserve an important cultural use area as well as bird habitat); a circular area one-mile in radius centered around Red Hill (in order to preserve wilderness area and wilderness experience for visitors); the area around Kilauea's summit (including Halema'uma'u Crater)/ Pu'u Huluhulu and Napau Trail Corridor area/ Ainahou Ranch area (in order to preserve important cultural use areas as well as wildlife (especially birds) habitat and wilderness areas); the coastal area from the end of Ka'aha Trail to just east of Apua Point Wilderness Camp (in order to preserve this wilderness area and habitat for a variety of coastal wildlife); and the ½ mile buffer zone outside of the southeastern boundary of the park below Pu'u 'O'o (in order to restrict entry to the airspace over the very popular Pu'u 'O'o so that flights over the adjacent residential communities would be minimized).
- The minimum altitude that commercial air tour aircraft would be able to fly would be raised to 2000 ft AGL above the following areas: Kahuku Forest (in order to protect the wildlife in this area); above Mauna Loa Lookout (in order to preserve the ground-visitor experience to this serene and isolated area); above Kipuka Ki and Kipukapuauulu (in order to protect the wildlife (especially birds) in these special ecological areas, as well as preserve ground-visitor experience here); and above a portion of the northern Ka'u Desert (in order to preserve the wildlife in this area).
- Commercial air tour aircraft would be allowed to fly as low as 1000 ft AGL above the Ka'u Desert west of Hilina Pali Road, Hilina Pali Overlook, and Ka'aha Trail in order to minimize the noise footprint (contours that display cumulative noise exposure) of commercial air tours flying over this area (containing important cultural, natural, and visitor resources) while still allowing flights from Kona to more easily reach Pu'u 'O'o.
- Commercial air tour aircraft would be allowed to fly as low as 500 ft AGL above Pu'u 'O'o in order to minimize the noise footprint of the flights while still allowing air tour visitors to view active red lava.

## **7. Corridors Alternative**

### **Introduction**

The Corridors Alternative is somewhat of a compromise between the Red and Zones Alternatives in that most of the airspace above the park is restricted as a no-fly zone with the exception of certain corridors that cut across the park at fairly high altitude in order to allow commercial air tours operating out of Kona to more directly reach the area of the park where there is currently active volcanic activity and fly at a lower altitude.

### **Operators Under the Corridors Alternative**

Under the Corridors Alternative, there would be no caps on the number of commercial air tour operators allowed to conduct operations over Hawai'i Volcanoes, as long as these operators cumulative operations are under the maximum activity cap. The FAA will decide how to allocate opportunities to conduct operations among commercial air tour operators.

### **Number of Operations Under the Corridors Alternative**

Under the Corridors Alternative, there would be a maximum activity cap on the number of commercial air tour operations allowed over Hawai'i Volcanoes. However, the FAA in cooperation with the NPS have not yet determined the number of operations associated with the maximum activity cap.

### **Operating Parameters Under the Corridors Alternative**

Figure 5 depicts the various fly areas allowed under the Corridors Alternative. Under the Corridors Alternative, most of the airspace over the park would be a designated no-fly zone, with the exception of a few "corridors" of airspace that allow commercial air tours to fly at a minimum altitude of 1500 ft AGL until they reach Pu'u 'O'o, where they may fly as low as 500 ft AGL. Highlights of these operating conditions include:

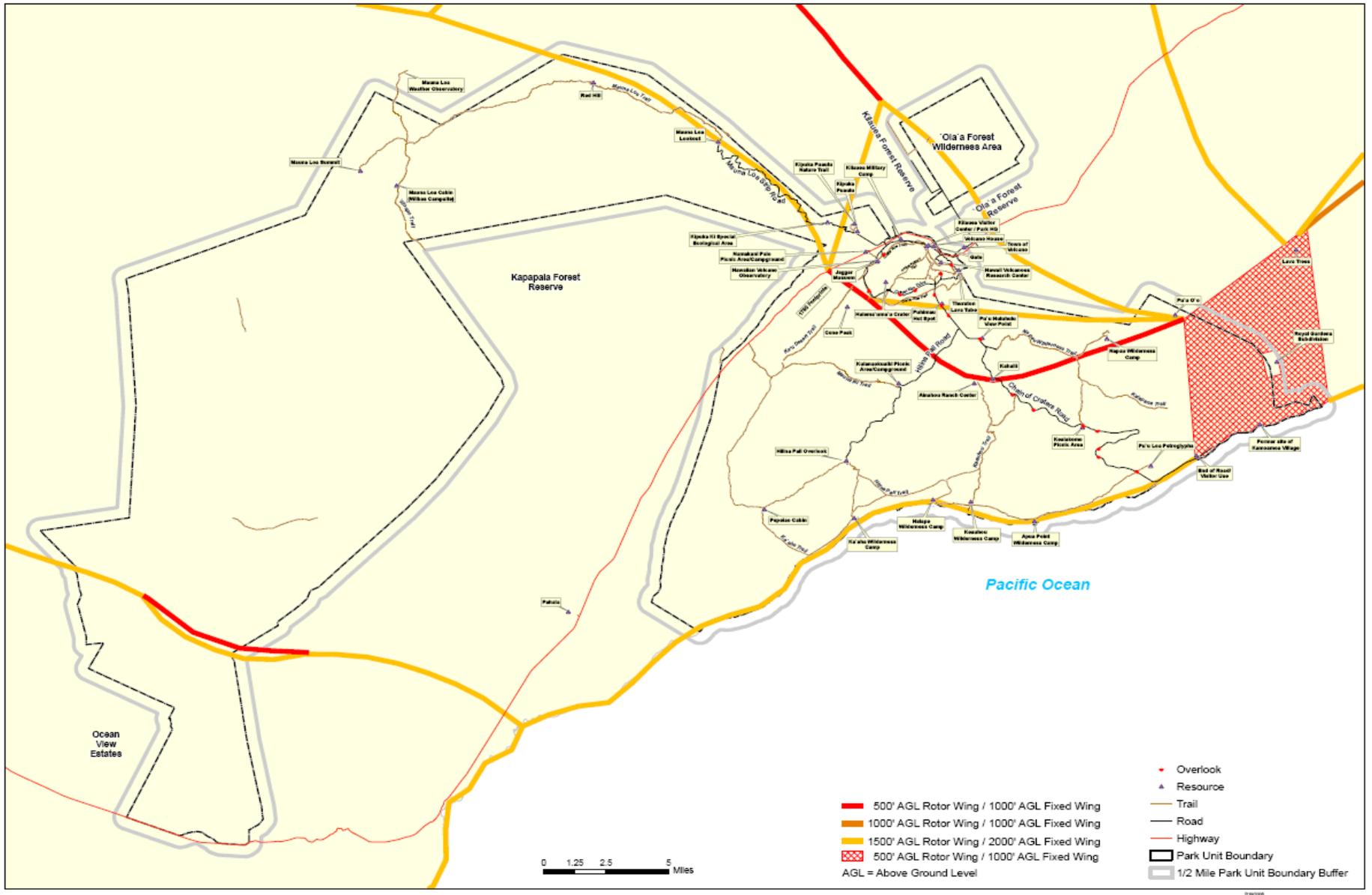
- The Corridors Alternative will apply to both rotor-wing and fixed-wing aircraft. For safety reasons, fixed-wing aircraft must fly at altitudes 500 ft higher than rotor-wing aircraft.
- The width of the corridors is currently depicted as two miles; however, it should be noted that this width is subject to change upon further safety analysis on the part of the FAA, as the NPS would prefer a narrower corridor.
- Restrictions over the majority of the park in order to provide maximum protection for the resources contained within.
- Controlled entry points via also designating much of the ½ mile buffer zone around the park as a no-fly zone (in order to minimize noise to residential communities around the park).
- Commercial air tour aircraft would be allowed to fly as low as 500 ft AGL above Pu'u 'O'o in order to minimize the noise footprint of the flights while still allowing air tour visitors to view active red lava.

### **8. Other Alternatives**

At the conclusion of the EIS scoping process, the FAA and NPS will re-examine the seven alternatives that were carried forward into scoping. The FAA and NPS will ensure that any new issues raised during this scoping period are addressed by either refinement of these initial alternatives or development of new, additional alternatives. The public will have an opportunity to view the alternatives analysis and any new alternatives when the Draft Environmental Impact Statement is distributed for public review and comment.

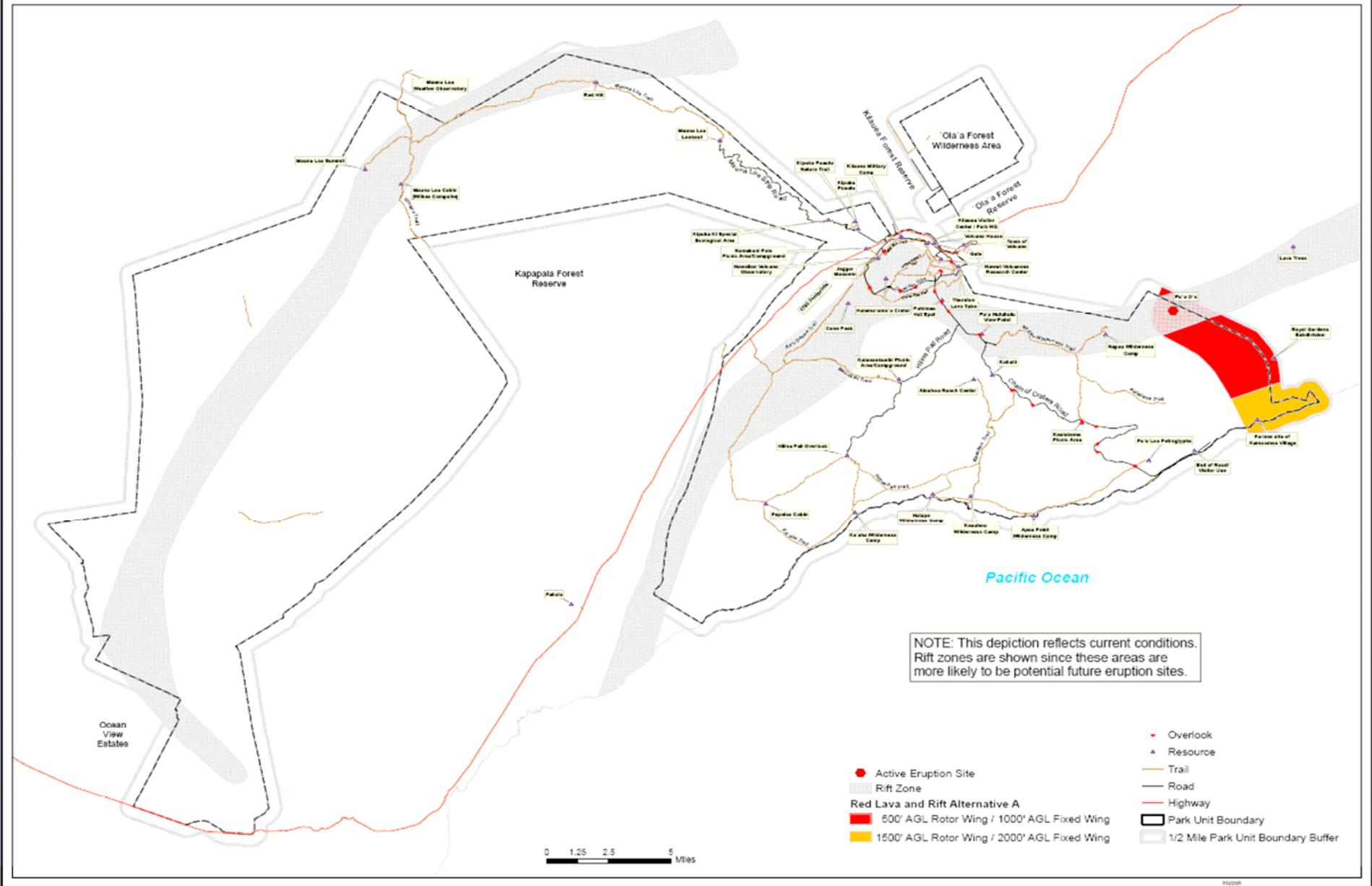
# Hawai'i Volcanoes National Park

Figure 2. No-Action Alternative, Depicting Existing Voluntary Commercial Air Tour Routes

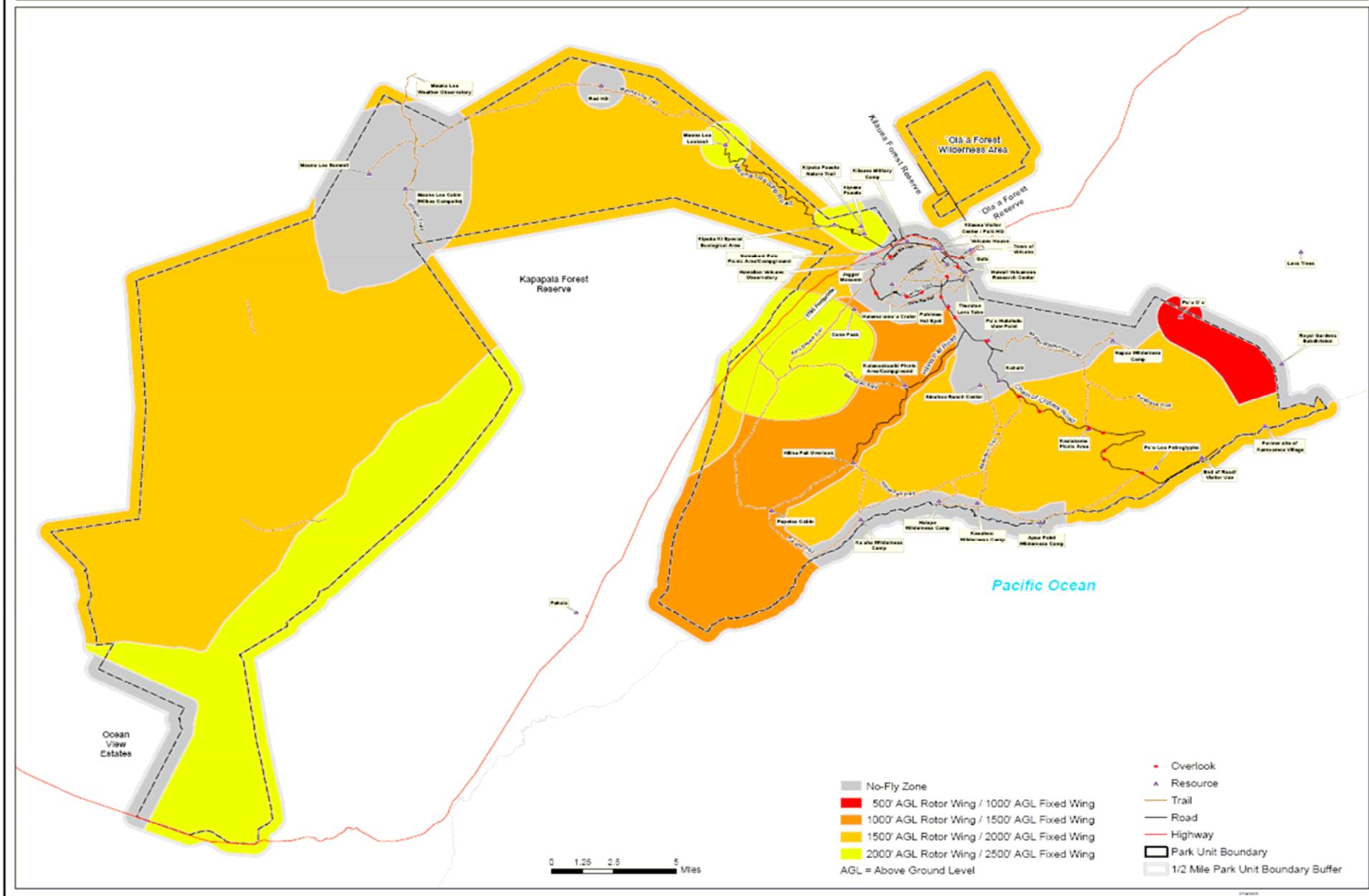


# Hawai'i Volcanoes National Park

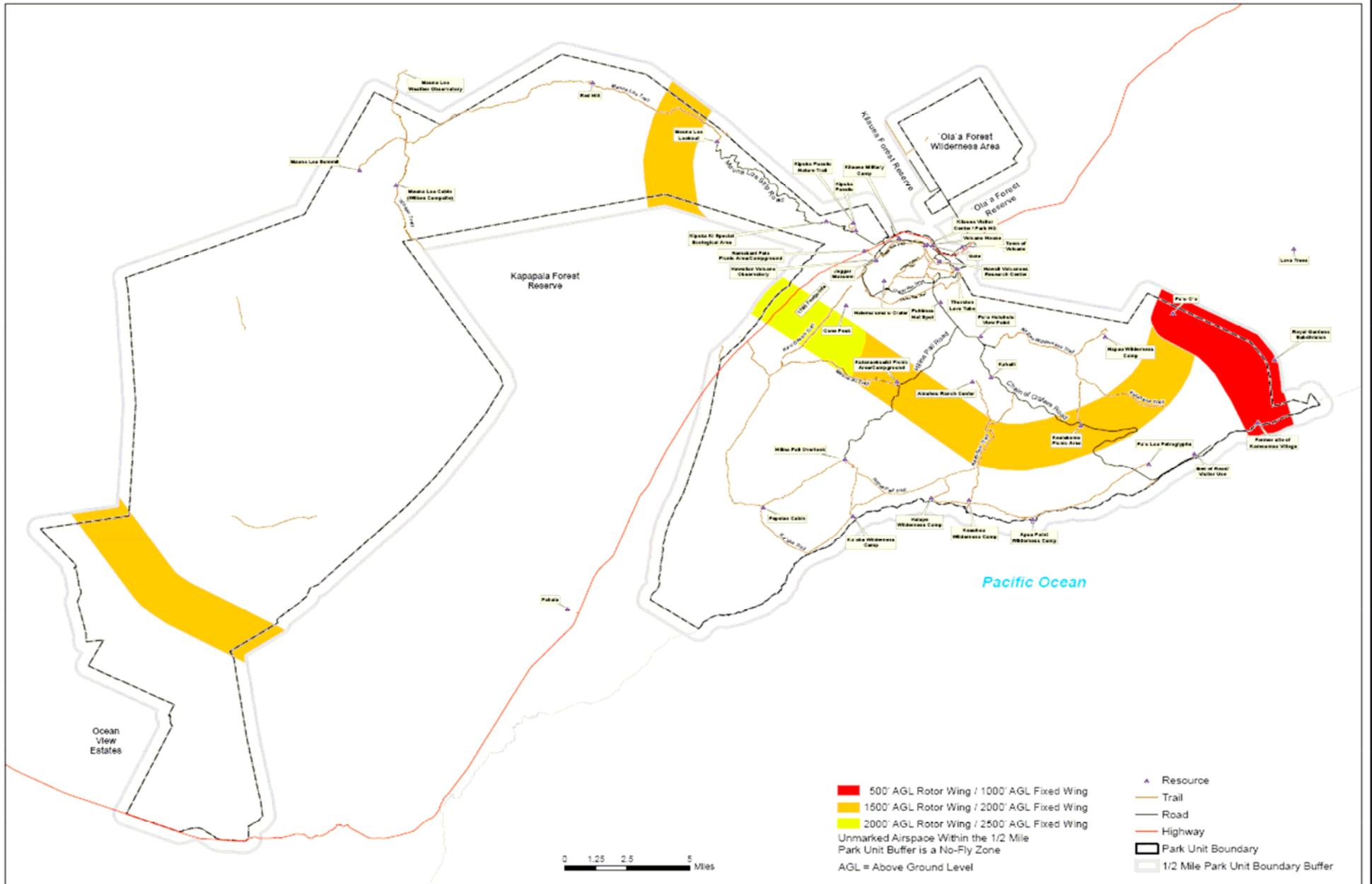
Figure 3. Red Lava and Rift Alternatives A and B



**Hawai'i Volcanoes National Park**  
**Figure 4. Operating Parameters Under the Zones Alternative**



**Hawai'i Volcanoes National Park**  
**Figure 5. Operating Parameters Under the Corridors Alternative**



## Part 4 - Initial List of Environmental Issues

### **A. Introduction**

For the purposes of preparing an Environmental Impact Statement for the Hawai'i Volcanoes ATMP under the National Environmental Policy Act, the FAA is the lead agency and the NPS is a cooperating agency. The FAA and NPS have executed a Memorandum of Understanding regarding implementation of the Air Tour Management Act and development of ATMPs. The Agencies have agreed, among other things, that the development of ATMPs and associated environmental document(s) under the National Environmental Policy Act will be a fully cooperative process recognizing and complying, to the greatest extent possible consistent with the FAA's responsibility as lead agency, with the existing legislative, regulatory, and policy mandates of both agencies. The National Parks Air Tour Management Act specifically requires that "...the Administrator and the Director shall each sign the environmental decision document required by section 102 of the National Environmental Policy Act of 1969 (42 USC 4332) which may include a finding of no significant impact, an environmental assessment, or an environmental impact statement, and the record of decision for the air tour management plan."

FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, sets forth specific environmental analysis procedures to be used in preparing Environmental Assessments and Environmental Impact Statements. A copy of the Order is available via the FAA's Website at [www.aee.faa.gov/aee-200/1050-1E/1050-1E.htm](http://www.aee.faa.gov/aee-200/1050-1E/1050-1E.htm).

### **B. Initial Issues Identified in EA Scoping**

Alternatives to be carried forward as "practicable" must address fundamental issues surrounding commercial air tour operations at Hawai'i Volcanoes. One objective of the scoping process is to assist the FAA and NPS in determining the scope and significant issues to be analyzed in depth in the Environmental Impact Statement. As a result, the FAA and NPS may identify and eliminate from detailed study the issues which are not relevant thereby narrowing the discussion of these issues in the Environmental Impact Statement. Scoping comments on potential environmental issues and alternatives have previously been received during meetings with the public for a proposed Environmental Assessment (EA) for the project. Given the comments received during these scoping meetings, the FAA and NPS are initially considering the following environmental issues related to park commercial air tours to be particularly important:

- Potential noise and visual impacts;
- Potential wildlife (including birds) impacts;
- Potential impacts on congressionally designated wilderness;
- Potential impacts on Native Hawaiian ceremonies and uses of park resources;
- Potential impacts on resident communities in the vicinity of the park;
- Potential impacts on ground-based park visitor experience;
- Potential impacts on air tour park visitor experience;
- Potential socioeconomic impacts to air tour operators;
- The changing nature of volcanic resources; and,
- Potential safety issues

### **C. Environmental Impact Topics**

FAA Order 1050.1E establishes requirements and procedures to be used in environmental impact analysis according to specific impact categories or topics. These impact topics are:

1. Air Quality (including potential visibility impairment)
2. Historical, Architectural, Archeological, & Cultural Resources
3. Coastal Resources
4. Light Emissions and Visual Impacts
5. Compatible Land Use Impacts
6. Natural Resources and Energy Supply (consumable)
7. Construction Impacts
8. Noise Impacts
9. Impacts on properties protected under 49 U.S.C. 303 (DOT Act 4(f))
10. Secondary (Induced) Impacts
11. Farmlands
12. Socioeconomic Impacts (including Environmental Justice)
13. Fish, Wildlife, and Plants (including Threatened and Endangered Species)
14. Water Quality
15. Floodplains
16. Wetlands
17. Hazardous Materials and Solid Waste
18. Wild and Scenic Rivers

Visitor Experience is not an impact category that FAA traditionally examines. However, the National Parks Air Tour Management Act specifically references the mitigation or prevention of significant impacts, if any, of commercial air tour operations on visitor experience as a key element of the Air Tour Management Plan objective. In addition, the NPS customarily assesses impacts on visitors and visitor experience from a proposed action. For these reasons, visitor experience has been added to the list of environmental impact topics to be addressed in the EIS.

An initial review of the potential environmental impacts was conducted to guide the development of the alternatives and the environmental consequences chapter of the EIS. A review of scoping comments received to date and preliminary consultation with park staff and resource experts indicated that many of the impact categories identified in FAA Order 1050.1E may not be affected by any of the alternatives being considered. Consideration is being given to eliminating the following topics from detailed analysis within the EIS:

- Coastal Resources
- Construction Impacts
- Farmlands
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Natural Resources and Energy Supply (Includes fuel, electricity, and other consumables)
- Water Quality
- Wild and Scenic Rivers

### **Coastal Resources**

The Coastal Barriers Resources Act (CBRA), the Coastal Zone Management Act (CZMA), and Executive Order 13089, *Coral Reef Protection*, govern federal activities involving or affecting coastal resources. There are no coastal areas subject to the CBRA or the CZMA in the ATMP Planning Area.

### **Construction Impacts**

Local, State, Tribal or Federal ordinances and regulations address the impacts of construction activities, including dust and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution. No construction activities or federal approval of any construction is anticipated.

### **Farmlands**

The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert farmland to non-agricultural uses. No direct or secondary construction activities or other physical development that would result in the use of prime and unique farmland is anticipated.

### **Floodplains**

Executive Order 11988, *Floodplain Management*, directs Federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by floodplains. DOT Order 5650.2, *Floodplain Management and Protection*, contains DOT's policies and procedures for implementing the Executive Order. No direct or secondary construction activities or other physical development that would result in filling or encroachment on a base floodplain is anticipated.

### **Hazardous Materials, Pollution Prevention, and Solid Waste**

Four primary laws govern the handling and disposal of hazardous materials, chemicals, substances, and wastes. These are the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Pollution Prevention Act of 1990, the Toxic Substances Control Act, and the Resources Conservation and Recovery Act of 1976. Hazardous materials are any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Executive Order 12088, as amended, directs Federal agencies to comply with applicable pollution control standards. The largest component of solid waste includes garbage refuse and similar solid-waste material discarded from residential, commercial, and industrial sources. No changes in the use, generation, disturbance, transportation, treatment, storage, or disposal of hazardous materials or solid waste is anticipated.

### **Natural Resources and Energy Supply (Includes fuel, electricity, and other consumables)**

The term "natural resources" for the purposes of this discussion includes the use of renewable or non-renewable energy such as fuel or electricity, and other consumable resources. The use of the term "natural resources" in this context is standard practice for FAA and is not to be confused with the term as it is used in the National Parks Air

Tour Management Act, which has been determined to encompass other resources of the National Park including air resources, coastal resources, wildlife resources, etc. FAA Order 1053.1, *Policies and Procedures for Energy Planning and Conservation*, provides for assessing energy demands. No measurable effect on local supplies of energy, water, renewable or non-renewable energy resources or other consumable natural resources are anticipated.

#### **Water Quality**

The Federal Water Pollution Control Act, as amended (commonly referred to as the Clean Water Act), provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, location with regard to an aquifer or sensitive ecological area such as a wetlands area, and regulate other issues concerning water quality. The Fish and Wildlife Coordination Act applies to any proposed Federal action that would impound divert, drain, control, or otherwise modify the waters of any stream or other body of water greater than ten acres in size. No measurable changes in demands for waste water treatment, discharges in any local water supply or aquifer, use of any wetlands, or impoundment, diversion, drainage, control or other modification of waters of any stream or other body of water are anticipated.

#### **Wild and Scenic Rivers**

The Wild and Scenic Rivers Act (FPPA), as amended, describes those river segments designated or eligible to be included in the Wild and Scenic Rivers System. Under section 5(d)(1), the National Park Service maintains a Nationwide Rivers Inventory of river segments that appear to qualify for inclusion in the National Wild and Scenic River System but which have not been designated as a Wild and Scenic River or studied under a Congressionally authorized study. There are currently no designated Wild and Scenic Rivers or Nationwide Rivers Inventory segments within the ATMP planning area.

\*\*\*\*\* End Part 4 \*\*\*\*\*

## Part 5 – References

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- NPS 2003. Personal communication with the National Park Service staff at Hawai`i Volcanoes National Park during the ATMP Kickoff Meeting on February 24, 2003, and subsequent correspondence.
- NPS 2003b. Personal communication with the National Park Service staff at Hawaii Volcanoes National Park – Aleta Knight and Sarah Creachbaum via emails dated 12/02/2003 and 01/12/2004 to Amishi Joshi, Volpe Center.
- USFWS 2003. U.S. Fish and Wildlife Service, Pacific Islands. Website: <http://pacificislands.fws.gov/default.htm>. 2003.

\*\*\*\*\* **End Part 5** \*\*\*\*\*

\*\*\*\*\* **End of Document** \*\*\*\*\*