

DETERMINATION OF NO IMPAIRMENT

Management and Removal Of Feral Animals In Upper Elevations Of Nu'u, Maui

Haleakalā National Park

November 2016

The National Park Service *Management Policies 2006* require analysis of potential effects to determine whether or not actions would impair park resources or values. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of these resources or values. An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment when there is a major or severe adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park
- identified as a goal in the park's general management plan or other relevant National Park Service planning documents as being of significance

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park.

This determination of no impairment has been prepared for the selected action described in the Finding of No Significant Impact (FONSI), for the applicable impact topics that were considered in the 2016 Environmental Assessment: Management and Removal of Feral Animals in Upper Elevations of Nu'u, Maui. Impairment determinations are not necessary for visitor use and experience, socioeconomics, public health and safety, and park operations, because impairment findings relate back to park resources and values. These impact areas are not generally considered park resources or values according to the Organic

Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissal of the above topics, the remaining areas for evaluation for possible impairment include: soils, water resource, air quality, soundscape, vegetation, wildlife, special status species, habitat, and cultural resources.

NATURAL RESOURCE TOPICS

Soils

The selected action will not result in the impairment of soils. Adverse impacts to soils due to disturbance would be confined to specific locations within the project area and be short-term as they would mainly occur within the first year of feral animal removal efforts. Ground-based control efforts involving traversing the terrain on foot may also directly adversely affect soils and geologic resources due to trampling and disturbance. HNP personnel will ensure that only the minimal amount of ground disturbance necessary occurs. The majority of ground disturbance will decrease substantially after the initial one year period of intensive animal removal is over and long-term adverse effects above current levels are not expected. Long-term, beneficial effects are anticipated throughout the entire enclosure as soils recover and erosion decreases due to the reduction of feral animals.

Water Resources

The selected action will not result in the impairment of water resources. The project area is on the leeward side of the Haleakalā Volcanic edifice. As a result rainfall is sparse across most of the area, with annual rainfall averaging 20 inches per year near the coast to 60 inches per year in the middle to upper elevations. Although the project area and NPS Nu‘u lands do not contain any wetlands, a portion of the upper slopes of Nu‘u drain into a wetland near the coast just above Nu‘u Bay on land managed by the Hawaiian Islands Land Trust. The six acre wetland, referred to as Nu‘u Salt Pond, is located just outside (approximately 1,000 ft.) the Park boundary at an elevation of 26 ft.

Implementation of the selected action will not increase erosion and sedimentation of ephemeral streams above current levels. Due to the dry climate, lack of perennial streams, and distance from permanent waterbodies, implementation of selected action is unlikely to directly or indirectly adversely affect water resources.

Air Quality

The selected action will not result in the impairment of air quality. Air quality in this remote area is generally good due to lack of pollution from cars or human inhabitants. Volcanic smog, known as vog, originating from the erupting volcanoes on the Island of Hawai‘i, will occasionally be carried to Maui by winds blowing from the south (Kona winds).

During implementation of the selected action, emissions and dust generated from the use of helicopters and vehicles could cause localized, temporary changes in air quality. Changes would be temporary and localized, and would not substantially adversely affect air quality.

Vegetation

The selected action will not result in the impairment of vegetation. Vegetation in Nu‘u consists

of both native and non-native plants, with non-natives dominating all but the highest elevations. The presence of feral ungulates in Nu‘u promotes non-native plant species through habitat alteration and seed dispersal and subjects native plants to browsing and trampling. Large numbers of non-native plant species have an adverse impact on native plant communities through increased competition for resources and habitat alteration.

Native plant populations will benefit over the long-term as removal of feral ungulates will reduce or eliminate browsing and trampling allowing for natural recruitment. While native plant species will benefit from removal of feral animals, non-native plant species may also benefit, especially in lower elevations. Implementation of the selected action will involve very little disturbance to or elimination of native plants, and plans to control non-native, invasive species will have beneficial results.

Special Status Species and Critical Habitat

The selected action will not result in the impairment of special status species and critical habitat. Five federally listed endangered and threatened species occur within the project area, all of which are expected to benefit from the project. Endangered nēnē (Hawaiian goose, *Branta sandvicensis*), ‘ua‘u, and ‘ōpe‘ape‘a as well as the recently-listed (September 30, 2016) ‘akē‘akē (Band-rumped storm petrel, *Oceanodroma castro*) have been documented within Nu‘u and may occur in the project area. The endangered Blackburn’s sphinx moth (*Manduca blackburni*) potentially occurs but has not been documented in Nu‘u in recent years. Because the HNP Nu‘u parcel is a relatively new acquisition of the NPS, and consists of mostly steep and rough terrain, in-depth vegetation surveys and reconnaissance for special status plants species have not yet occurred over a large portion of the parcel. Based on known individuals or populations in areas adjacent to the Nu‘u parcel within both HNP and the Kahikinui Forest Reserve, it is likely that some special status plants are located within the project area. Nu‘u contains designated critical habitat for three federally listed plant species, māhoe (*Alectryon macrococcus*), the Haleakalā subspecies of ‘āhinahina (Haleakalā silversword, *Argyroxiphium sandwicense* ssp. *macrocephalum*), and ko‘oko‘olau ssp. *kalealaha* (Kalealaha beggartick, *Bidens micrantha* ssp. *kalealaha*). Both māhoe and the Haleakalā subspecies of ‘āhinahina are present in Nu‘u although neither of these species are presently known to occur within the project area. Ko‘oko‘olau ssp. *kalealaha* is not known to occur within Nu‘u.

The selected action will result in long-term, regional benefits for special status wildlife species due to improved habitat conditions and reduced predation by feral dogs providing opportunity for population recruitment and range expansion. Given the low population of special status wildlife species and the mitigation measures to be followed during implementation of the selected action, there will be little to no disturbance of special status wildlife. Thus the selected action will not contribute to any cumulative adverse effects related to past, current, or future projects in the area. The Proposed Action in conjunction with other feral animal control efforts in Nu‘u will likely result in cumulative beneficial effects that support an increase of populations of special status wildlife species across Nu‘u.

Special status plant species will benefit from the selected action. The decrease in feral animals will decrease browsing, trampling, and rooting, which would benefit any existing or future populations of special status plants within the project area. Planned control of non-native plant species will decrease competition with native plant species. The selected action would provide direct, long-term, regional beneficial effects for special status plants due to the potential for population expansion through natural dispersal, re-growth, and out-planting.

Implementation of the selected action would result in long-term, beneficial effects to critical habitat as a result of exclusion of feral animals and the expected habitat recovery and could potentially result in population increases of these federally listed plant species. Implementing the selected action will result in a cumulative beneficial effect for critical habitat for plant species, including the Haleakalā subspecies of ‘āhinahina and ko‘oko‘olau ssp. *kalealaha* as the amount of designated critical habitat protected from feral animals would increase across the region.

Soundscape

The selected action will not result in the impairment of soundscapes. The leeward Haleakalā area is relatively unvegetated with many wide open spaces. The “natural” soundscape consists of noises from native and non-native wildlife species as well as the wind. Tour helicopter flights over Nu‘u are currently part of the soundscape on a regular intermittent basis.

Noise generated by implementation of the select action would include helicopters and gunfire. Increased noise would occur approximately two days a week for one year. Increased noise levels from helicopters and gunfire would be intermittent and temporary occurring approximately twice a day for one hour, and would not be heard in Park areas open to visitors or homes of the neighboring community. Impacts from increased noise due to implementation of the selected action would be negligible because of duration of helicopter use in the area would be approximately 30 minutes each time.

CULTURAL RESOURCE TOPICS

The selected action will not result in the impairment of cultural resources. Archaeological surveys show that the highest concentrations of cultural and historic resources are found in the lower elevations from sea level up to approximately 300 ft. elevation. Although there were some archaeological features found on the steep upper slopes, the number of cultural and historic features decreases with an increase in elevation.

Control and exclusion of feral animals will result in direct, long-term, beneficial effects to cultural and historic features within the HNP Nu‘u enclosure by preventing them from being trampled on or uprooted, and by preventing destabilization of the surrounding soil.

SUMMARY

In conclusion, as guided by the expected outcomes noted above, implementing the selected action does not constitute impairment on any natural or cultural resource or park value whose conservation is: (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park’s general management plan or other relevant National Park Service planning documents as being of significance.