

**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE PROPOSED LEHUA ISLAND ECOSYSTEM RESTORATION PROJECT  
BY THE U.S. FISH AND WILDLIFE SERVICE  
KAUAI COUNTY, HAWAII**

Proposed Action

The U.S. Fish and Wildlife Service (Service) proposes to implement the proposed action in the *Final Supplemental Environmental Assessment (EA) for the Lehua Island Ecosystem Restoration Project*, issued October 2008. The proposed action would be implemented by the Service's Pacific Islands Field Office, located in Honolulu, Hawaii, in partnership with the Hawaii Department of Land and Natural Resources and others.

This action will restore the native ecosystem on Lehua Island that has been negatively affected by historical and existing invasive mammal and weed infestations. Restoration would be achieved by eradicating Polynesian rats from Lehua Island by aerial broadcast of bait pellets containing the rodenticide diphacinone and subsequent re-introduction of native species. If diphacinone does not eliminate all rats, applying the rodenticide brodifacoum could be considered the following year.

The eradication of rats from Lehua Island would eliminate numerous significant negative pressures on the native flora and fauna. Prior to the introduction of rodents, Lehua Island's seabird colonies and native species existed in an environment relatively free of aggressive predation or herbivory. Removing introduced rodents would significantly increase the quality of seabird nesting habitat and allow seabird species that are currently not present to recolonize the island. Restoration would likely increase the colony sizes and diversity of seabirds that use Lehua Island as a breeding site, and allow for the re-establishment of some of the native plant and invertebrate communities. Rat eradication would facilitate the re-colonization and re-introduction of plant communities representative of those that existed before invasive rats altered the native plant community through aggressive herbivory. Plant recovery would also reduce soil erosion, improving water quality and nearshore marine habitat.

This is a joint project with the Hawaii Department of Land and Natural Resources' Division of Forestry and Wildlife (DOFAW), who was a co-lead in producing the EA for this project. The EA meets both Federal and State of Hawaii legal requirements for environmental project review.

Documents reviewed in the preparation of this Finding of No Significant Impact (FONSI) were the *Final Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued September 2005, *Draft Supplemental Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued July 2008 and *Final Supplemental Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued in October 2008. These documents are incorporated by reference, as described in 40 CFR § 1508.13.

Description of the Proposed Action: In September 2005, the U.S. Fish and Wildlife Service and the Hawai'i Department of Land and Natural Resources Division of Forestry and Wildlife, as joint lead agencies, and the U.S. Department of Homeland Security, U.S. Coast Guard, as the

cooperating agency published the *Final Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, (Finding of No Significant Impact (FONSI) dated 09/30/05). As documented in the FONSI, the U.S. Fish and Wildlife Service Assistant Regional Director, Ecological Services, Region 1 selected the proposed action, Alternative 2, which included the following:

- 1) Eradication of the introduced alien European rabbit (*Oryctolagus cuniculus*) and Polynesian rat (*Rattus exulans*) on Lehua Island, as these species prevent or suppress ecological regeneration, followed by implementation of a long-term ecological restoration strategy;
- 2) Adoption of a preventive strategy to reduce the potential for invasive species to be accidentally reintroduced to Lehua Island during and after restoration activities occur (island biosafety/quarantine strategy);
- 3) Reintroduce appropriate native species that cannot effectively recolonize on their own; and
- 4) Monitor project actions for effectiveness and overall restoration success.

Alternative 2 of the 2005 EA for Lehua included broadcast of bait pellets containing rodenticide in the summer months. The rodenticide proposed for use was diphacinone (50 ppm), with potential to use brodifacoum (25 ppm) as a backup the following year, but only if it could be determined that any eradication failure is due entirely to the use of diphacinone rodenticide and not other factors.

The Service's proposed action is modeled on other successful island rat eradication and island restoration efforts worldwide. The action entails the eradication of rats using the rodenticide diphacinone (potentially followed by an application of brodifacoum, if diphacinone is not fully effective). Details of the preferred alternative can be found in the 2005 Final EA.

Rats would be eradicated from Lehua Island with the aerial broadcast of bait pellets containing the rodenticide diphacinone. For the highest probability of success, bait must be applied across 100 percent of the entire land area of Lehua Island, into every potential rat territory on the island. Bait would be broadcast from a hopper suspended under a helicopter at rate dictated by the product label. A second bait application would be made 5-7 days later. An additional two applications could be made if rats persist.

Following completion of the 2005 Final EA for ecological restoration of Lehua Island, European rabbits were eradicated from Lehua through intensive hunting efforts in 2005 and 2006. Therefore, this portion of the proposed action was not addressed in the 2008 supplement.

Since the FONSI was signed in 2005, several important modifications to the rat eradication operation on Lehua Island associated with Alternative 2 have been determined to be more effective for rat eradication while also minimizing and/or avoiding adverse impacts to birds and humans. Therefore, the USFWS and DLNR, as joint lead agencies, determined that the original 2005 EA should be supplemented to evaluate the impacts associated with these modifications. Draft and Final Supplemental Environmental Assessments were issued in July and October 2008, describing the modified Lehua Island operation and evaluating the effectiveness and impacts associated with the modified operation.

Project modifications include:

- Changing the season of starting rat eradication from mid-summer to mid-winter (January to March) in order to:
  - increase efficacy of the operation by exposing the rats to rodenticide during winter when breeding ceases or slows, the rat population is at a minimum, and there is a lower probability that young rats in underground burrows will not be exposed to rodenticide,
  - substantially decrease exposure of nontarget bird species to rodenticide since fewer birds are present in winter,
  - avoid exposure of fishermen, limpet-pickers, and tourists, who rarely if ever use the area during winter,
  - reduce chances of helicopter bird strikes, since fewer seabirds will be present at that time, and
  - avoid all Federally listed threatened and endangered seabird species, which are not present on Lehua during the winter.
- Improving effectiveness of bait distribution to all rats on Lehua by modifying or deleting those operational activities and mitigation actions that are not necessary to protect marine organisms, based on the extremely low risk and toxicity of bait to marine organisms as shown by the literature and by marine sampling results from the February 2008 Mokapu Island rat eradication near Moloka'i. Specifically:
  - the deflector originally proposed for the bait applicator will not be used. Such deflectors, as currently designed, make it difficult for pilots to distribute bait pellets uniformly and frequently cause the bait applicator to malfunction;
  - to give the helicopter pilot and project manager discretion to distribute bait in the most effective pattern, the pilot will not be required to fly only from the coastline toward the ridgeline as originally proposed; and
  - the project manager and pilot will not be excluded from applying bait adjacent to coastlines, thus ensuring an uniform and complete distribution of pellets in shoreline areas used by rats.

Mitigation Measures: The following mitigation measures would be adopted as part of the modified Lehua Island project:

- Bait will only be broadcast when no significant rainfall is forecast.
- Bait would not be applied in high wind conditions (exceeding 35 mph) and would only be applied under supervision of certified pesticide applicators following label directions.
- The helicopter pilot will use a differential GPS system coupled with GIS mapping to guide application and keep track of where bait is applied on the island.
- The public will be notified prior to bait application and water samples and marine tissues will be tested for rodenticide residue after bait application.
- Worker safety measures will minimize exposure to rodenticides and project monitoring locations on the island will be restricted to avoid work on steep slopes.

- Project personnel will follow established guidelines for preventing alien species (e.g., rodent, weed, and insect) introductions during and after the operation.
- Bait will be applied in winter months (January to March) when human uses of waters near Lehua are infrequent due to winter ocean conditions and the fewest seabirds are present on Lehua.
- If bait is applied after albatross chicks have hatched, bait pellets within 6 feet of nests with chicks will be manually removed as soon as possible after bait application.
- Ground crew will maintain a 100 foot buffer from monk seals on land.
- The helicopter will be required to avoid flying over or spreading bait onto any monk seals hauled out on Lehua.
- The helicopter will be required to avoid flying over humpback whales.
- Vessels associated with the project will be prohibited from approaching within 100 yards of humpback whales.
- Historical sites have been surveyed and marked and will be avoided by ground crews.

Project Monitoring: To ensure that the proposed action is meeting the goal of rodent eradication and that the environmental impacts are below the criteria for significance, a validation and effectiveness monitoring program will be implemented. Effectiveness monitoring will be done to ensure that the proposed action is meeting the stated goal of rodent eradication. Validation monitoring will be conducted to ensure that any potentially negative environmental effects of implementing the proposed action are avoided or minimized. Evaluation of monitoring results will determine whether further restoration activities are needed and/or to alter the mitigation strategy and/or to continue with the proposed management action.

Alternatives to the Proposed Action: The Service analyzed and rejected a number of alternatives to the proposed action in the 2005 EA. These were summarized in the 2005 FONSI. The 2008 Supplemental EA did not re-analyze these alternatives or select a new alternative. The purpose of the 2008 Supplemental EA was merely to describe proposed modifications to the proposed action (Alternative 2) and to evaluate potential impacts of these modifications, as described above.

#### Effects and Finding of No Significant Impact

In evaluating the modified Proposed Action Alternative the following criteria were considered: (1) consistency with agency guidelines and policies; (2) extent to which it meets the Service's "Purpose and Need" of the project; and (3) extent to which it responds to and/or helps to resolve and minimize the environmental issues raised in the public review process. The modified Proposed Action Alternative continues to meet the criteria in these 3 categories and, in fact, better fulfills criteria (2) and (3) than the original Proposed Action described in 2005. The modified Proposed Action Alternative is not expected to result in significant impacts to physical and biological resources or the human environment.

1. Agency Guidelines: The modified Proposed Action Alternative is consistent with the Service statutes and Presidential Order described below. The Service is directed by the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, to

conserve ecosystems upon which threatened and endangered species depend; and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j, not including 742 d-l, 70 Stat. 119), as amended, gives general guidance which can be construed to include alien species control, particularly, that the Secretary of Interior take steps “required for the development, management, advancement, conservation, and protection of fish and wildlife resources.” In addition, Presidential Executive Order 13112 on Invasive Species (February 3, 1999): Section 2 (a)(1)(2)(iv) states that Federal agencies shall...”provide for restoration of native species and habitat conditions in ecosystems that have been invaded.”

2. Purpose and Need: The purpose of the project is to use rodent eradication to restore the Lehua Island ecosystem, including native seabirds, plants, invertebrates and the nearshore ecosystem. The modified Proposed Action Alternative has a higher probability of achieving the purpose of the project than the original Proposed Action since it will target the rats at the most vulnerable point in their life cycle and will increase effectiveness of bait distribution on the island. This will increase the likelihood of achieving complete rodent eradication, which is pre-requisite to restoration of the island ecosystem.
3. Responsiveness to Environmental Issues Raised During Public Review: After the Draft Supplemental EA was issued for public comment and letters were sent to interested parties requesting comments, eight comment letters were received. Seven letters were fully supportive of the project and did not request any information or changes. One letter, although not in opposition to the project, raised several questions and requested additional information on the following general areas: 1) the existence and adequacy of existing data that would allow analysis of potential risks to marine mammals posed by the use of rodenticides in coastal areas; 2) risks of anticoagulant rodenticides to humans; and 3) technical aspects of aerial bait application that would ensure that bait was evenly distributed on the island while minimizing bait bounce into the ocean. A reply letter was sent, describing the existing data justifying the conclusion that the project, as modified, poses very low risk to marine mammals or humans. The reply letter also described the technology and careful project planning that will result in bait application techniques that will be both effective and pose minimal environmental impact. These issues are also addressed in the Final Supplemental EA.

A public meeting was held in Waimea, Kauai on July 24, 2008. All comments received were supportive of the project. Some people asked about marine testing, possible impacts to birds and whales, bait application logistics, and breakdown of bait pellets. These issues were all addressed at the time they were brought up and are also fully discussed in the Final Supplemental EA. Minimal amounts of rodenticide are expected to be available to birds or marine organisms and, for any organisms that were exposed to rodenticide, the risk is very small due to the low toxicity of the compound and its relatively rapid excretion from the body. The modified Proposed Action Alternative better addresses concerns about environmental effects than the original proposed alternative, since the change in project timing (from summer to winter) will mean that fewer seabirds and humans, and no endangered seabird species, will be present on or near Lehua during the bait application.

## Effects to the Human Environment

The activities proposed are intended to restore the island and improve its habitat for the native plants and nesting seabirds that inhabit or historically inhabited the island, prior to its degradation by invasive rats. Restoration of Lehua Island by eradicating rats would thus improve the range of beneficial uses of the environment, though not significantly.

Kauai and Ni`ihua residents gather intertidal limpets and fish in waters near Lehua. However, the change in project timing from summer to winter will reduce possible interactions since fishing activity is greatly reduced in the winter, when seas are generally very rough.

The Draft and Final Supplemental EAs concluded that the proposed action would not damage sensitive natural resources, nor emit excessive noise or contaminants. Rather, they would improve Lehua Island's environment. Lehua Island is approximately 3/4 miles offshore from Niihau and 20 miles from Kauai. Thus, the proposed actions would not affect any public recreational facilities and would not induce population growth or decline in the area.

Utilizing best management practices would minimize impacts to the environment during the implementation of the proposed actions. The nature of the proposed action and the mitigation measures that would be included (described in detail in the Draft and Final Supplemental EAs) are hereby incorporated by reference and will ensure that no significant environmental impacts to the human environment would occur from the Service's proposed action.

In a letter dated September 3, 2008, NMFS concurred with the USFWS finding that "the proposed project, as currently revised, is not likely to adversely affect ESA-listed marine species." Mitigation measures for avoiding disturbance to monk seals, sea turtles, and whales will be followed.

An informal, internal consultation under section 7 of the Endangered Species Act of 1973, as amended, was completed in 2005 by the Service. The consultation concluded that the proposed action would not adversely affect listed plant or animal species on Lehua Island. The change from a winter, rather than a summer, operation eliminated any potential for adverse impacts on ESA-listed seabirds (which are absent in the winter) so there was no need to re-initiate the internal USFWS Section 7 consultation.

The Service's proposed action is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988. Lehua Island is typically very dry, except for occasional winter storms. Due to the lack of water and its steep, rocky topography, Lehua Island does not have any wetlands or floodplains.

The State Historic Preservation Division (SHPD) of the Hawaii Department of Land and Natural Resources concurred with the USFWS determination that the project will have "No Adverse Effect" on significant historic sites on Lehua Island, provided that the following mitigation measures are implemented: 1) Submission of a completed archaeological inventory survey report; 2) Recovery of data from a hearth site by a qualified archaeologist; and 3) placement of site tags on historic properties prior to restoration. Mitigation measures 2) and 3) are completed and

measure 1) is in progress and will be completed prior to rat eradication.

#### Public Review and Coordination with All Interested and Affected Parties

On July 8, 2008, the Draft Supplemental EA was posted on the Service's Pacific Islands Office website and a notice requesting comment was published in the State of Hawaii's Office of Environmental Quality Control bi-weekly bulletin. Letters were also sent notifying interested parties of the availability of the Draft EA and requesting comments. Press releases were also sent out. The required 30-day comment period closed on August 7, 2008. Eight comment letters were received. Seven letters were fully supportive and did not request information or a response. The eighth letter, although it did not oppose the project, raised several questions, which were answered in a response letter, as described above. The public letters and the response are all included in the Final Supplemental EA as appendices. All issues in the letter are also addressed in the body of the Final Supplemental EA.

A public meeting attended by 26 people was held in Wiamea, Kauai, on the evening of July 24, 2008. The meeting was announced in press releases and on flyers hand-posted around the island of Kauai. All responses at the meeting were favorable to the project. Some people requested clarification on certain issues, as described above. These issues were all addressed at the time they were brought up and are also fully discussed in the Final Supplemental EA.

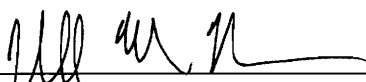
#### Conclusion

In summary, as documented in the Supplemental EA and informal consultations, modifying the proposed action (Alternative 2) selected in 2005 is not expected to result in significant impacts to physical and biological resources. The modified Lehua Island Project, described mitigation, and monitoring are not expected to result in significant impacts to the human environment.

The Service has determined that the modified proposal does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

#### References

*Final Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued September 2005, *Draft Supplemental Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued July 2008 and *Final Supplemental Environmental Assessment for the Lehua Island Ecosystem Restoration Project*, issued in October 2008.

  
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10/10/08  
Date