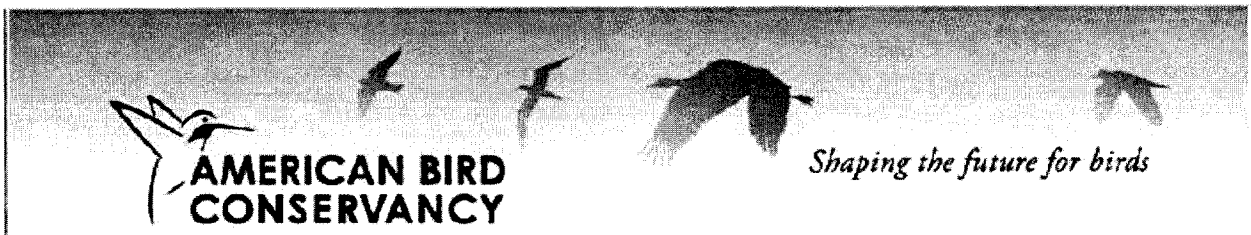


Mary Abrams, Field Supervisor
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May 18, 2017

RE: Lehua Island Ecosystem Restoration Project – Public Comments

To whom it may concern,

American Bird Conservancy wishes to submit the following comments to the US Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office on the Draft Environmental Assessment for the Lehua Island Ecosystem Restoration Project (April 2017; released May 5).

American Bird Conservancy (ABC) is a 501(c)(3), not-for-profit organization whose mission is to conserve native birds and their habitats by working throughout the Americas to safeguard the rarest bird species, restore habitats, and reduce threats. ABC recognizes the severe and pervasive threat of non-native mammals to 35 federally and state listed Hawaiian birds, particularly the ground-nesting fresh water birds and seabirds.

Actions such as the Lehua Restoration Project are critical in reducing impacts to species such as Laysan Albatross and Black-footed Albatross, which face multiple threats, including fisheries bycatch (Eich et al. 2015)[i] and loss of predator-free nesting habitat due to increasing sea level rise (Hatfield et al. 2014)[ii] Importantly, eradicating the rat population would also benefit six additional species of breeding seabirds, endemic plants, and the entire island ecosystem. The island could also serve as a future translocation site for the endangered Hawaiian Petrel ('Ua'u). When done correctly, non-native pest eradications have proven extremely beneficial to island conservation worldwide (Jones et al. 2016)[iii] Eradicating rodents from Lehua will be a landmark achievement for conservation throughout the Hawaiian Islands.

As a bird-focused conservation organization, we are highly supportive of reducing impacts to the native birds. ABC acknowledges the importance of landscape-level use of toxicants as one of the tools in addressing specific island conservation needs – particularly the eradication of non-native species – but minimizing and monitoring non-target effects is vital.

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ABC strongly supports the management objective of eradicating rats from Lehua because of the many conservation benefits for the seabird populations (as detailed in the EA). This EA provides a convincing case for rodent eradication on Lehua, however **it does not clearly justify selecting between Alternative 2 and 3.** It states that the environmental consequences of these two alternatives would be the same (pp. 74, 77). Presumably, Alternative 2 is the favored option because of the possibility of successfully eradicating the rats without needing to use brodifacoum and using only diphacinone would have fewer non-target impacts and release less toxicants into the environment. We request that the EA explicitly compare the two action alternatives, compare and contrast the use of the different toxicants, and use this information **to select and justify a preferred alternative.**

We support the goal of eradicating rodents from Lehua, but as currently written we have substantial concerns with the EA. The EA needs to provide more information on the following critical aspects of this project:

1) **Justification for Alternatives 2 vs. 3.** The current EA does not have a sufficient analysis of the biological benefits versus environmental risk for the two action alternatives, and justification for selecting the initial toxicant of choice. The EA could be improved by more clearly detailing the ecological costs and benefits of the very different approaches in Alternative 2 versus Alternative 3.

2) **The decision threshold for toxicant applications.** For Alternative 2, it says there will be at least three diphacinone applications and one or two applications of brodifacoum (3.4.2.13, pg. 39). Alternative 3 states that at least two applications of brodifacoum would be made (3.4.3.3, pg. 39). If there are situations where there will be more than three diphacinone or two or more brodifacoum applications, those need to be explicitly stated. As currently written, it is impossible to calculate the actual ecological impacts because the maximum permitted amount of toxicant is not stated. These are critical pieces of information, and must be included to determine the actual risk to non-target animals. The EA needs to explicitly present and compare the impacts of the maximum toxicant that could be applied over the course of the project.

3) **Monitoring protocols for rodents.** The EA states the post-application monitoring will last approximately 6 weeks and then continuous monitoring will be conducted by Lehua Bird Sanctuary (3.4.2.10, pp. 38–39). The purpose of this monitoring should be made more explicit. It needs to be very clearly stated how the monitoring data will affect the timing of toxicant applications and be used in the decision process throughout the entire series of eradication activities. If, and how, the data will be used to determine if

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more than three applications of diphacinone are required (3.4.2.13, pg. 39), or the actual number of brodifacoum applications are made (3.4.2.13, pg. 39; 3.4.3.3, pg. 39), needs to be stated and the impacts evaluated. Additionally, if more than three applications occur (see #2 above) the total application period could exceed 42 days (if each application is 20 days apart; pg. 39), it is unclear if the six weeks (42 days) of intensive monitoring described by the EA will be sufficient to detect any rats that remain. Similarly, the EA states that ***"If rats persist after one year of the diphacinone treatment as prescribed below, bait containing 25 ppm brodifacoum will be used to complete the eradication"***, but it is not clear the monitoring will be sufficient to detect remaining rats. It is also not stated if any monitoring will occur after the brodifacoum drops, and there must be post-application monitoring to determine if these later applications were successful. The EA says ***"robust monitoring protocols would be incorporated into the operation,"*** (3.5.1, pg. 40), yet earlier it states that the ***"robust monitoring protocols...appear not to have been employed"*** following the failed eradication (1.3.1, pg. 15). The current EA needs to provide explicit details of the "robust" monitoring protocols for the planned eradication, and explain why this time will be different to provide confidence the monitoring would be implemented.

The number of applications, overall amount of toxicant applied, and final evaluation of the eradication's effect depends directly on the effectiveness of the monitoring. The current monitoring plan (3.4.2.10, pg. 38) is so general it cannot be evaluated or assessed. It is crucial that such a critical component of the eradication be more thoroughly described so that it can be reviewed to determine if it is sufficient to confidently make these important management decisions. Further emphasizing its importance, ineffective post-eradication monitoring was explicitly identified as a potential reason for the failure of the earlier effort (1.3.1, pg. 15).

As part of the monitoring, it is imperative that there are long-term monitoring, biosecurity, and response plans in place, and that the managers and regulators fully support them. These plans should include protocols and funding for rapid response in the case of a possible "rat spill" or re-invasion. They also should include "spill kits" (e.g., permits, toxicants, other necessary supplies, etc.) that are in place and maintained for quick deployment (e.g., Alaska Maritime rat spill program[iv]). Without a robust biosecurity strategy that has proven effective on maintaining other islands rat-free (e.g., Appendix E, pp. 103-104), and that is rigorously applied for all future visits to Lehua, this project should not be implemented.

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An additional monitoring component to include would be assessing rat abundance and food resources before any toxicant application. One possible cause of the earlier failure was heavy winter rains that resulted in plentiful alternative foods, so rats did not consume sufficient quantities of the bait (1.3.1, pg. 14). Before the first application for the proposed eradication, the food and rat abundance should be assessed to ensure that the likelihood of bait consumption is maximized.

4) **Monitoring protocol for non-targets.** Similar to #3 above, the monitoring of the non-targets is qualitatively described at the most general level, *"potential risks and expected impacts of the rodenticide in the environment and to nonnative species are documented and in compliance with applicable permits and guidelines (e.g., NEPA and HEPA permits and labels). It is anticipated that at a minimum sampling of marine water, fish, birds, and rodents would be made"* (3.4.2.10, pg. 38).

Monitoring non-target impacts and publicly releasing the results is essential to building transparency and a record of this conservation action, as well as providing data and a template for similar actions elsewhere in the state. Because of expected non-target impacts to shorebirds and non-native birds, the protocols for the monitoring, collection and analysis of mortalities of any and all wildlife found dead after the bait drops should be explicit. ABC recognizes that seabirds and shorebirds may be exposed to toxicants, and although there may be short-term losses of individuals during the operation, the long-term population gains of the proposed management action may justify the ecological costs.

A more detailed analysis of Lehua's food web that examines the secondary poisoning risk from eating lizards to predatory birds, or other consumers, should be included. The relative insensitivity of lizards to anticoagulants could allow them to survive and accumulate an extremely concentrated dose of the toxicant (5.5.3.5, pg. 66), and then potentially be consumed by a predatory bird. The monitoring during the eradication should also sample the lizards to determine if bioaccumulation is occurring, and to evaluate the risk of this threat.

The EA also needs to include a description of the long-term monitoring protocols that will be conducted by the Lehua Bird Sanctuary (3.4.2.10, pp. 38–39). This is important to include in the EA because it will document the changes in native birds and plants over time, and the full ecological results of the eradication. The long-term monitoring will also provide crucial data for other proposed eradication efforts state-wide.

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ABC recognizes that "Alternative 1: No Action" would result in the continuing loss of seabird eggs, chicks, and adults to rats, and a further degradation of the native vegetation of Lehua. Therefore, ABC urges the USFWS to provide the necessary operational details (described above) to safely and responsibly proceed with one of the two action alternatives.

Although somewhat outside the scope of the environmental concerns in the EA, the communications and outreach are critical components to a successful eradication. People are justifiably concerned about the potential impacts of toxicants to the marine and terrestrial resources. It is critical that the USFWS fully explain the risks and ecological benefits of both diphacinone and brodifacoum, and their interactions with the environment. There needs to be a comprehensive communications plan to ensure these concerns are researched, anticipated, and addressed with relevant stakeholders before, during, and after the eradication efforts. Communications with the public, particularly on Kaua'i and Ni'ihau, must be part of the overall management approach to highlight the need, benefits, risks, and specific activities that will occur with this conservation action. There are large knowledge gaps, misunderstandings, misinformation, and suspicion among the public about any eradication project, the methods that could be employed, the origins of Hawai'i's rodent problem, and the status of the State's native species. It is critical to share information with the public about the connection between wildlife conservation needs and the severe threat of non-native rodents. As researchers with an organization working on similar conservation issues throughout the state, we would be happy to assist or review any of the future communications efforts.

Mahalo for the opportunity to offer our comments and recommendations – although the two-week comment period is surprisingly short, and a more detailed review would have been possible with a longer comment period. Please do not hesitate to contact us if you have follow-up questions.

Sincerely,

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