Nihoku Ecosystem Restoration Project Fact Sheet

Nihoku fenceline

Project site facing East

Purpose	To protect and restore the native ecosystem of Nihoku (Crater Hill) at Kīlauea Point NWR, and provide a safe refugium for ʻAʻo (Newell's Shearwater), ʻUaʻu (Hawaiian Petrel) to be translocated into the area, and other ground-nesting native birds.
Resources Protected	• Newly translocated (and recently fledged) ʻAʻo and ʻUaʻu • Native coastal plant communities • Native birds such as the Mōlī (Laysan Albatross) and endangered Nēnē (Hawaiian Goose)
Primary Threats	Introduced predators including cats, dogs, rats, and mice that prey on ground-nesting birds such as Mōlī and Nēnē, and eat seeds of native plants
Fence Dimensions	• Length: 624 meters (2048 feet or 0.39 miles) • Height: 1.95 meters (6.4 feet) • Enclosed space: 2.4 hectares (6.7 acres) • Cost: $300,000 (for both materials and labor); used local labor to build
Fence Features	• Marine grade stainless steel for strength and corrosion resistance • Small chain-link mesh to prevent even 2-day old mice from entering • Rolled hood to prevent animals from climbing over • Mesh extends into horizontal skirt at base to prevent access by digging animals • Gates for access for guided tours and refuge staff and vehicles • Expected to last 15-25 years (fences in similar climates in New Zealand are now 15 years old)
Timeline	• Fence construction completed Sep 25, 2014 (took three months to build) • All predators were removed by January 2015 • Native plant restoration began August 2015; 1.7 acres (~25%) restored to date • First ʻUaʻu translocation occurred in Nov 2015; 9/10 chicks brought to the site successfully fledged. 20 chicks will be brought each year starting in 2016 • Eight ʻAʻo chicks translocated in 2016 and all fledged; will attempt up to 20 in 2017. • Chicks will be fed on site and imprint on Nihoku and return to breed as adults
Control of Introduced Predators	• Began November 2015 • Trapping was used for larger animals – none were detected • Removed using rodenticide (diphacinone) in bait boxes; rats removed within two weeks

	and mice within three months. Nihoku is currently free of mammalian predators. • Methods determined based on 1-year rodent abundance and behavior study
Biological Monitoring	• Comprehensive baseline surveys were performed for two for all species – mammals, invertebrates, plants, native birds - prior to fence construction • Surveys will be done after removal of introduced predators to evaluate the effectiveness of the fence and predator removal in protecting native species • Monitoring is in place at all times to detect if pests have re-entered the protected area for rapid response
Public Outreach	• Three Environmental Assessments (fence construction and two for seabird translocation) were released for public comments. Final versions available on the website • Attended four community meetings, and hosted three one-hour community information sessions to keep the public informed; updates will continue to be presented • Numerous media related articles on the project in both local and national news outlets • Current information will be posted at: www.nihoku.org
Impact to Cultural and Biological Resources	• Nihoku is a culturally significant landscape • No known burials or structures occur along or within fence line. An archaeological survey was conducted in April 2013 to confirm this and determine site uses and significance • Cultural/biological monitor was used to ensure sensitive features were protected and proper protocols were followed if encountered during construction
Project Partners	• U.S. Fish and Wildlife Service (landowner/manager) • Pacific Rim Conservation • Kauaʻi Endangered Seabird Recovery Project • The American Bird Conservancy • National Fish and Wildlife Foundation • National Tropical Botanical Garden • Hawaii Department of Land and Natural Resources

Hawaiian Petrel, left, and Newell's Shearwater, right.