

COASTAL CONSERVANCY

Staff Recommendation
September 15, 2004

AÑO NUEVO ISLAND HABITAT RESTORATION PHASE II

File No. 04-070
Project Manager: Mary Travis

RECOMMENDED ACTION: Authorization to disburse up to \$160,000 to Oikonos Ecosystem Knowledge to carry out habitat restoration on Año Nuevo Island, San Mateo County.

LOCATION: Año Nuevo State Reserve, San Mateo County (Exhibit 1)

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

- Exhibit 1: Project Location and Site Map
 - Exhibit 2: Rhinoceros auklet
 - Exhibit 3: Erosion on Año Nuevo Island
 - Exhibit 4: Habitat restoration underway, November 2003
 - Exhibit 5: Rhinoceros auklet burrow entrances in restored area
 - Exhibit 6: Habitat proposed for restoration in Phase II
 - Exhibit 7: Letters of Support
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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed one hundred sixty thousand dollars (\$160,000) to Oikonos Ecosystem Knowledge (Oikonos) to implement further habitat restoration at Año Nuevo Island in Año Nuevo State Reserve. Prior to the disbursement of any funds, Oikonos shall submit for the review and approval of the Executive Officer of the Conservancy:

1. A work program, budget and schedule, and the names of any contractors to be employed in carrying out the work.
2. Evidence that all necessary permits and approvals have been obtained.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the purposes and criteria in Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) regarding enhancement of coastal resources.
 2. The proposed project is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.
 3. The project area has been identified in the certified Local Coastal Program of San Mateo County as requiring public action to resolve existing or potential resource protection problems.
 4. Oikonos is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the California Public Resources Code.”
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PROJECT SUMMARY:

Staff is recommending that the Conservancy provide up to \$160,000 to Oikonos Ecosystem Knowledge (Oikonos) to implement further habitat restoration at Año Nuevo Island, located within Año Nuevo State Reserve in southern San Mateo County (Exhibit 1). The project is intended to protect one of California’s three principal colonies of rhinoceros auklets.

Oikonos, a Bolinas-based nonprofit conservation organization, has been working with the Point Reyes Bird Observatory (PRBO) to reduce severe erosion that threatens Año Nuevo Island’s seabird colonies, particularly its rhinoceros auklets (Exhibit 2), which nest in burrows underground. During the 1990s and early 2000s the island was denuded of vegetation, resulting in rapid loss of topsoil and causing large-scale collapse of the auklets’ underground burrows (Exhibit 3). In fall 2003 Oikonos began an ambitious effort to restore the island’s central marine terrace, the main habitat for auklets. The project entails planting dense concentrations of mature specimens of saltgrass and other native plants that can withstand the harsh island conditions. It also includes installing a temporary irrigation system to sustain the new plants for the first few years; laying down coconut fiber matting to stabilize the soil until the vegetative cover has been re-established; and, after each season of planting, monitoring plant survival and documenting seabird responses to habitat improvement. Following the restoration work, Oikonos intends to carry out three years of monitoring studies and adaptive maintenance to ensure the project’s success. Additionally, Oikonos will prepare educational materials and exhibits pertaining to marine birds and other aspects of the island ecosystem for use in the state reserve’s interpretive center and docent program.

Assisted by a Conservancy grant of \$88,000, Oikonos has completed Phase I of the project, consisting of revegetation and soil stabilization of about 13,500 square feet on the windward side of the island, where the seabird density is greatest and erosion was most severe, and related irrigation and monitoring (Exhibit 4). So far the project is a success: the coconut matting held the soil through the rainy season; the mature saltgrass and American dunegrass are surviving well, as are native beach bur and an endemic species of goldfields planted as seed; and rhinoceros auklets returned to the restored area to excavate burrows and lay their eggs (Exhibit 5). (As of mid-

August the auklets were still rearing their chicks; Oikonos will continue to monitor their breeding success.)

Meanwhile, unprotected portions of the central marine terrace eroded further this past year. Oikonos is anxious to continue the planting and soil stabilization and, based on the success of Phase I, believes it can restore the remaining 20,000 square feet of habitat in one season (Exhibit 6). Oikonos had hoped to receive funding for the remaining restoration work and subsequent monitoring and adaptive maintenance from the *Command* oil spill settlement fund (in 1998 the tanker vessel *Command* released 3,000 gallons of oil outside of San Francisco Bay, killing or injuring thousands of seabirds along the San Mateo County coast). However, because there was limited direct evidence that Año Nuevo Island auklets were injured by the *Command* spill, Oikonos's funding request was denied. To avoid further erosion of the island's auklet habitat, Conservancy staff recommends that the Conservancy provide the \$160,000 necessary for Oikonos to complete the Phase II restoration work this fall.

Oikonos is highly qualified to manage this project. The organization has conducted avian research and restoration at such diverse locations as Mono Lake, the Gulf of California, and the Rakiura Titi Islands of New Zealand. Oikonos staff have been doing seabird research and conservation on Año Nuevo Island since 1993. By collaborating with PRBO, for whom this project is the top priority for seabird conservation in the Central Coast, Oikonos has the benefit of that organization's nearly 40 years of experience in bird and habitat protection and recovery efforts. Another project participant is Go Native Nursery, a local small business that has worked on several major revegetation and restoration projects on the San Mateo County coast.

This project has the support of the California Department of Parks and Recreation (State Parks), which owns Año Nuevo State Reserve. The 1987 management plan for the reserve recommends revegetation of the island to provide additional bird habitat and slow topsoil erosion. State Parks has been unable to carry out any such effort because of the pressing need to address threatened and endangered species recovery on park property—the rhinoceros auklet is not listed, although the State has designated it a bird species of special concern, meaning that its California population is very small and may be in decline—and to resolve resource problems in park areas that are highly visible to or affected by park users. State Parks will provide at least \$20,000 in in-kind services, including assistance with travel to the island.

Oikonos is seeking funding support for Phase III, the three years of monitoring and adaptive maintenance, from other sources, including the *S.S. Jacob Luckenbach* Trustee Council, which is preparing an oil spill restoration plan for the freighter *Luckenbach*. The *Luckenbach*, which sank in 1953 about 17 miles southwest of the Golden Gate Bridge, has been identified as the source of several “orphan spills” that have killed thousands of seabirds, including rhinoceros auklets, off the San Mateo County coast.

Site Description: Año Nuevo Island lies offshore of Año Nuevo Point in southern San Mateo County (Exhibit 1). Until two hundred years ago the island was connected to the point by a narrow peninsula; now a shallow channel about 0.6 miles wide separates it from the mainland. The island is windswept and low-lying, with a maximum elevation of forty feet, and is incised by small coves containing sandy and cobble beaches.

Before the arrival of Europeans, Año Nuevo Point and Island supported dense populations of marine mammals and seabirds. The area also had one of the largest Ohlone settlements on the

coast. In the 18th century the area was a favored hunting ground for Russian and American sealers and eggers, who decimated pinniped and seabird populations here and throughout California.

In the late 1800s the federal government established a lighthouse facility on the island. A five-story light tower, a two-story residence, and other structures were built, and lightkeepers replaced the native vegetation with gardens of exotic plants that they maintained with fresh water from a cistern. These modifications likely accelerated natural erosion processes. The facility was abandoned in 1948 when an automatic buoy replaced the light tower.

Since 1958, when the State took ownership, Año Nuevo Island has experienced some recovery of its marine mammal and bird populations. Northern elephant seals, which were presumed extinct in 1869, were sighted on the island in 1955, and now hundreds of pups are born there each year. The island is also a breeding ground for Steller sea lions and harbor seals, and each year thousands of California sea lions arrive from their rookeries in southern and Baja California. Seven bird species also have established, or re-established, breeding colonies on Año Nuevo Island: western gulls; pelagic and Brandt's cormorants; black oystercatchers; pigeon guillemots; rhinoceros auklets; and Cassin's auklets, which, like rhinoceros auklets, nest in burrows. Rhinoceros auklets had disappeared from California by the 1860s, but returned to the Farallon Islands in the 1970s, and began colonizing Año Nuevo in the early 1980s.

While the island's marine mammal and bird populations have recovered somewhat, its plant communities have not. The exotic vegetation planted by lightkeepers persisted through the 1980s, and when the rhinoceros auklets first arrived the central marine terrace, where the auklets dig their burrows, was densely vegetated. However, the exotics were unequipped for long-term survival on the island, and by the mid-1990s the vegetation had begun to thin. After the 1998 El Niño event, erosion increased dramatically and the vegetation almost completely disappeared. Researchers attribute the plant die-off to a dry summer followed by heavy winter rains that washed away topsoil together with the remaining exotic seed bank. The El Niño also brought to the island increased numbers of brown pelicans and California sea lions, which had abandoned their breeding grounds in southern California, and the exotic plants were presumably not adapted to trampling by wildlife. Now, outside of the area planted last year, only sparse patches of native saltgrass remain, and each year the island erodes further. In some areas over four feet of topsoil has been lost.

Project History: Año Nuevo Island has been a focus of scientific attention for the past 40 years. The University of California helps maintain the Año Nuevo Island facilities through its Natural Reserve System, and U.C. Santa Cruz uses the island as a field research station. During the 1990s PRBO biologists conducting studies of seabird populations observed the dwindling vegetation and accelerated erosion, and, after 1998, increasing collapse of seabird burrows and failed breeding attempts. In 2001 over half of the burrows collapsed. As a short-term measure to preserve the auklet colony, PRBO has endeavored to repair and stabilize collapsed burrows during the breeding season. Also, researchers have installed 104 nest boxes to provide additional habitat for rhinoceros and Cassin's auklets.

In 2002 Oikonos and PRBO began investigating the feasibility of restoring native vegetation to the island. With funding and assistance from Go Native Nursery they planted ten test plots on the central terrace with saltgrass and several other coastal scrub and strand species, using burlap, stakes, sticks, and large rocks to retain topsoil and protect the young plants. In November native plant seed collected from Año Nuevo Point was spread under burlap in an area of high erosion.

The following spring Oikonos and PRBO found that while the island had lost more topsoil during the winter, the planted saltgrass had survived and was spreading. The burlap ground cover proved effective at retaining topsoil while becoming brittle enough to enable auklets to dig burrows within the test plots. There had been minimal growth from the native seeds; the seed appeared to have blown away, and only one species, beach bur, had sprouted. This indicated that while larger plants could survive if they took root before winter storms begin, the island's windy, harsh conditions would make it difficult for most seed to take hold in the bare soil and sand.

Using the results from the experimental planning, Oikonos and PRBO developed a habitat restoration project to address erosion on the entire central terrace. Last fall, with Conservancy funding assistance, Oikonos completed Phase I of the project, which so far has proven a success. Oikonos hopes to complete the restoration work this fall before more auklet habitat is lost.

PROJECT FINANCING:

The estimated cost of the proposed project takes into account the logistical difficulties of traveling to the island, particularly transporting large numbers of mature plants in a small boat across an often rough channel; the cost of the grown plants; and the need to limit human presence on the island to six or seven people at any one time to minimize disturbance to seabirds and pinnipeds.

Phase I (completed), first year restoration and monitoring,
rainwater catchment improvements:

Coastal Conservancy	\$ 88,000
Oikonos, State Parks, Go Native Nursery, and other sources	<u>71,500</u>
Total	\$159,500

Phase II (proposed), second year restoration and monitoring:

Coastal Conservancy	\$160,000
Oikonos	20,000
State Parks	20,000
Go Native Nursery (in-kind services, materials and equipment donations)	25,000
Other sources	<u>25,000</u>
Total	\$250,000

Phase III (future), monitoring, adaptive maintenance,
educational materials:

S.S. Jacob Luckenbach Trustee Council	<u>\$204,000</u>
Total, all project phases:	\$613,500

The anticipated source of Conservancy funds for this project is the FY 02/03 appropriation to the Conservancy from the California Clean Water, Clean Air, Safe Neighborhoods and Coastal Protection Act of 2002 (Proposition 40). The proposed project is consistent with the purposes of Proposition 40 in that it would (1) restore and enhance habitat on Año Nuevo Island and (2) include matching funds from other sources.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed restoration of Año Nuevo Island would be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Division 21 of the Public Resources Code (Sections 31251-31270), regarding enhancement of coastal resources.

Under §31251, the Conservancy may award grants for the purpose of enhancement of coastal resources that, because of natural or human-induced events, have suffered loss of natural and scenic values. The proposed project is intended to restore natural processes on Año Nuevo Island, which is suffering from severe erosion because of the loss of its native vegetation. The project would benefit rhinoceros auklets and other nesting seabirds.

The proposed authorization is consistent with §31252, in that San Mateo County's certified LCP identifies Año Nuevo Island as requiring public action to resolve resource protection problems, as described in the "Consistency with Local Coastal Program Policies" section below.

The proposed authorization is consistent with §31253, which states that the Conservancy may provide up to the total cost of any coastal resource enhancement project. In the present instance the Conservancy would provide about 64 percent of the total funds needed to carry out this phase of the project.

Oikonos is a private, nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code and whose purposes are consistent with Division 21. As such, under §31013 Oikonos is qualified to receive Conservancy grants.

CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5 Objective A**, the proposed project would promote coastal resource conservation by restoring vegetation on the 25-acre Año Nuevo Island, a critically important nesting ground for several species of seabirds.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support from the public:** This project has the strong support of State Parks, which owns the property. It also has the support of State Senator Byron Sher and Channel Islands National Park. See Exhibit 7 for letters of support. Additionally, organizations that previously submitted letters in support of Conservancy funding for Phase I continue to endorse the project.
4. **Location:** The proposed project site is located within the coastal zone of San Mateo County.

5. **Need:** Oikonos has been unable to secure funding for Phase II of this project from other sources. Conservancy participation is essential to enable Oikonos to complete the planting work this year to forestall further loss of auklet nesting habitat.
6. **Greater than local interest:** Año Nuevo State Reserve’s tremendous wildlife resources attract visitors from around the world, and Año Nuevo Island provides researchers the opportunity to study seabirds, pinnipeds, white sharks, and other aspects of marine ecology and biology. The island supports one of California’s three major colonies of rhinoceros auklets, a bird species of special concern that is in need of protection. In addition to protecting this colony, the proposed project would contribute much needed knowledge about island habitat restoration techniques that could be applied at other small islands suffering similar habitat degradation, such as Castle Rock in Del Norte County and Scorpion Rock in the Channel Islands.

Additional Criteria

7. **Urgency:** Each year Año Nuevo Island loses more topsoil from its central terrace, causing increasing numbers of auklet burrows to collapse, which often results in mortality of chicks and adults. Oikonos believes that the island’s auklet colony will decline without prompt action to prevent further loss of habitat. Within the San Mateo and Monterey Bay regions there is no other predator-free habitat that could support the numbers of burrowing seabirds found on Año Nuevo Island.
12. **Readiness:** Oikonos is ready to begin immediately and hopes to start planting this October.
15. **Cooperation:** This project involves cooperation among two nonprofit organizations, Oikonos and PRBO; State Parks, which owns Año Nuevo Reserve; U.C. Santa Cruz; and Go Native Nursery, a local small business.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the County of San Mateo’s certified Local Coastal Program (LCP), specifically with policies relating to the protection of sensitive habitats. Policy 7.1 of the LCP defines sensitive habitats as including “habitats containing or supporting ‘rare and endangered’ species as defined by the State Fish and Game Commission.” Policy 7.3 of the LCP provides for the protection of these habitats. More specifically, Policy 7.22 calls for the County to “designate all areas including marine and estuarine habitats as requiring protection, including . . . Año Nuevo Island Reserve.” Consistent with these policies, the project entails habitat restoration on Año Nuevo Island for the benefit of seabirds, particularly the rhinoceros auklet, designated by the State as a species of special concern.

COMPLIANCE WITH CEQA:

The proposed habitat restoration on Año Nuevo Island is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15304, in that it would entail only minor alterations to the condition of land and vegetation that would not involve removal of healthy, mature, scenic trees. Section 15304(d) indicates that this exemption applies to such activity on designated wildlife management areas, such as Año Nuevo State Reserve, where the alterations would improve habitat for wildlife resources.

The proposed monitoring is statutorily exempt from review pursuant to §15306, which exempts basic data collection, research, experimental management, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource.

Upon Conservancy approval of the proposed project, staff will file a Notice of Exemption.