

Vandenberg Air Force Base Helps Plover Recovery Take Off

by Larry Hill

Western snowy plover. Photo Credit: USFWS

Vandenberg Air Force Base on California's central coast is home to the 30th Space Wing, which provides our nation with unique capabilities for assured access to and from space. But there is much more to the base's sprawling 99,600 acres (40,306 hectares) than rocket launching and missile testing activities. Encompassing nearly 45 miles (72 kilometers) of Santa Barbara County coastline, Vandenberg boasts many unexpected treasures, including more than 1,400 archeological sites, 300 Cold War historical sites, and 17 imperiled plant and animal species—the base has one of the highest concentrations of federally threatened or endangered species in the continental United States.

Vandenberg's 30th Civil Engineer Squadron's (CES) Installation Management team is responsible for maintaining and protecting habitat for a number of the federally protected species, including California least tern (*Sternula antillarum browni*), southern sea otter (*Enhydra lutris*

nerveis), El Segundo blue butterfly (*Euphilotes battoides allyni*), California red-legged frog (*Rana draytonii*), southern steelhead trout (*Oncorhynchus mykiss*), and beach layia (*Layia carnosa*). Most remarkably, the 30th CES team – with help from the California Conservation Corps, U.S. Fish and Wildlife Service, and a cadre of volunteers – has protected and enhanced important nesting habitat for 20 percent of the Pacific coast population of the federally threatened western snowy plover (*Charadrius nivosus*), while increasing awareness and support for the bird's recovery.

Vandenberg has a long history of providing for snowy plover recovery, dating back to 1995 when discussions with USFWS concerning the base's beach management program and the impacts of recreational access on plovers first began. Under an agreement between the 30th Space Wing and the USFWS, public access to Vandenberg beaches was limited from March through September each year

to minimize disturbance to plovers and their nests during the nesting season. Partial closures of three beaches within Vandenberg – Wall, Minuteman, and Surf – were designed to protect areas for plover nesting, while also providing a certain level of beach access for recreation. Violation limits were also established, allowing a maximum of 10 visitors in restricted areas at Wall and Minuteman beaches, and 30 at Surf Beach (later increased to 50). Exceeding these limits would result in the closure of beaches through October, after the nesting season had concluded.

In 2004, the Air Force met with the USFWS to discuss improvements to the beach management strategy. "Through a cooperative effort, we agreed on a proposed five-year beach management plan that would include many of the same protective measures that had been in place during the previous breeding seasons, yet would allow the Air Force to provide recreational access to its beaches seven days a week," says Samantha Kaisersatt, the National Environmental

Policy Act planner and Vandenberg's western snowy plover program manager. "To offset the adverse effects of recreational access on 1.25 square miles [3.2 square kilometers] of western snowy plover nesting habitat, the Air Force proposed to eradicate non-native dune vegetation and control predation."

According to Kaisersatt, beach restoration activities began in 2007, within approximately 422 acres (171 hectares) of suitable snowy plover nesting habitat. To support the return of natural sand dune movement and enhance habitat for the birds, the team implemented a plan to remove invasive vegetation, including European beachgrass (*Ammophila arenaria*), iceplant (*Carpobrotus edulis*) and Sydney golden wattle (*Acacia longifolia*). In October 2008, Vandenberg's wildland firefighting team, the 30th Space Wing Hotshots, conducted a controlled burn on 31 acres (12.5 hectares) in the Surf Beach restoration area. Luanne Lum, a botanist with the 30th CES, then coordinated subsequent herbicide treatments to further control European beachgrass, iceplant, veldt grass (*Ehrharta calycina*), and Sydney golden wattle, which removed a need for any additional burns.

"The initial burn and follow-up treatments were very successful," says Rhys Evans, 30th Space Wing natural

resources lead. "They eliminated beachgrass buildup, and reduced the amount of herbicide necessary during future stages of the work."

In 2014, an additional 50 acres (20 hectares) of coastal dunes at Surf Beach were successfully restored through the removal of iceplant and significant dune re-contouring. Efforts to increase the extent of the sandy surface area and reduce vegetation cover significantly decreased the threat of coyote (*Canis latrans*) predation by making it more difficult for coyotes to locate and raid individual plover nests. This contributed to the dramatic increase in the number of documented nests within the contoured area, from just a single nest in 2013 to 38 in 2014.

Beach restoration activities have been extended over the past few years to include more than 950 acres (385 hectares) between Wall, Minuteman, and Purisima beaches. Now, the 30th CES team looks forward to further expanding the restored beach area to nearly 1,500 acres (607 hectares) from 2015 to 2019.

With the number of plover nests expected to increase across Vandenberg's beaches, public education has become an increasingly important aspect of the conservation program. Vandenberg has been fortunate to have 40 docents volunteer more than 1,000 hours each year to help educate beach

goers about plovers and their delicate nests in an effort to reduce human encroachment on nesting areas.

"The incredible mission at Vandenberg is synergistically compatible with environmental conservation and sustainability," says Beatrice Kephart, installation management flight chief for the 30th CES team. "Vandenberg is a natural resource treasure due to unique operations requiring expansive undeveloped land. This pristine piece of California's coast would not exist if environmental stewardship was not an integral part of the Air Force mission. We all have a vested interest in protecting it for our future!"

The success of these efforts led to the USFWS recognizing the 30th Space Wing with the 2015 Military Conservation Partner of the Year Award, which provides a level of validation that continues to inspire each member of the team. Working closely with Air Force and launch partner engineers and scientists, the 30th CES team has successfully balanced the base's mission, while protecting rare species and finding new ways to push ever closer to meeting recovery goals.

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(left): Re-contoured dunes at Surf Beach on Vandenberg Air Force Base, following restoration work in 2014.
USFWS
(right): Re-contouring of dunes at Surf Beach on Vandenberg Air Force Base in 2014.
Photo courtesy of MSRS