

**United States Department of the Interior  
Bureau of Land Management**



**Arcata Field Office  
1695 Heindon Rd  
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**2012 Expenditure Report  
Stuyvesant-Kure Oil Spill Settlement Fund Trustee Council**



## **Introduction**

This report provides a general overview of the Mike Thompson South Spit Humboldt Bay Wildlife Area (South Spit), and describes projects completed or initiated with funds provided by Stuyvesant-Kure Oil Spill Settlement Fund Trustee Council. The Stuyvesant/Humboldt Coast Oil Spill Final Damage Assessment and Restoration Plan (DARP) (CDFG 2007) provided funding for several years to restore western snowy plover (SNPL) (*Charadrius nivosus*) habitat and maintenance activities at South Spit. The activities undertaken with funding from DARP continue to be BLM priorities. This report details the work completed during 2012 to help recovery of the SNPL. Work included:

- Hand pulling of beachgrass before and during the breeding season.
- Mechanical beachgrass treatment after the breeding season.
- Installation of predator deterrence devices.
- Expanded oyster shell coverage.

## **Background**

Through a Deed of Conservation Easement, the State of California conveyed to the Bureau of Land Management (BLM) an “interest” in and the “right” to manage the South Spit in all aspects of its use in perpetuity. The purpose of the Easement is “to preserve, protect, enhance, and restore the conservation values of the Property; to provide dispersed recreation for the general public; and to prevent any use of the property that will significantly impair or interfere with such conservation values” (BLM 2007). The South Spit was also designated a State of California Wildlife Management Area pursuant to California Department of Fish and Game Code, Chapter 5, Article 2, Sections 1525-1530. This designation is used for management purposes to protect and enhance habitat for wildlife species, and to provide the public with wildlife-related and other recreational uses.

The South Spit is a 4.4 mile long, mostly sandy stretch of land that separates the southern portion of Humboldt Bay from the Pacific Ocean. The northern tip of South Spit is the entrance into Humboldt Bay and the southern end is Table Bluff County Park. The approximately 800 acre South Spit is home to numerous animal species throughout the year. A small resident herd of black-tailed deer (*Odocoileus hemionus*) is often viewed from South Spit Road which bisects the area. Mammals such as striped skunks (*Mephitis mephitis*), gray fox (*Urocyon cinereoargenteus*), short-tailed weasels (*Mustela erminea*) California ground squirrels (*Spermophilus beecheyi*), raccoons (*Procyon lotor*), and feral cats (*Felis catus*) are often observed. Short-tailed weasels (*Mustela erminea*) are sighted several times each year. Song birds, shorebirds, raptors, and ravens (*Corvus corax*) also frequent the area.

Most of the South Spit vegetation is dominated by non-native species such as European beachgrass (*Ammophila arenaria*), yellow bush lupine (*Lupinus arboreus*), and ice plant (*Carpobrotus edulis*). Portions of the area are covered in annual grasses and low lying areas are seasonally flooded and vegetation consists of medium sized rushes (*Juncas sp.*). A few wind-stunted Monterey Pines can also be found in the area. The BLM has been steadily restoring the dunes starting at the southern end and working north. The restoration effort has been entirely based on hand pulling non-native vegetation and requires multiple treatments of the same area. The main benefactors of the restoration effort have been the federally endangered plants

Humboldt Bay wallflower (*Erysimum menziesii*) and beach layia (*Layia carnosa*). Eventually the restoration effort will reach areas of the South Spit where western snowy plovers have recently nested.

Most of the recreational use is concentrated at Table Bluff County Park at the south end and at the jetty at the north end. The jetty is a popular fishing area for various rock fish. The bay (east side of the road) is a popular hunting area for black brant (*Branta bernicla*).

In the time since the BLM has managed South Spit approximately 51 acres of beach habitat has been re-contoured and cleared of European beachgrass to facilitate SNPL breeding. The two restoration areas, the Habitat Restoration Area (HRA) and Fore-dune Restoration Area (FRA), are bound by the Pacific Ocean to the west and beachgrass covered dunes on the other three sides. As a result of the close proximity of the restoration area and beachgrass, the beachgrass is controlled but not eradicated from the restoration areas.

During the SNPL breeding season (March 1<sup>st</sup> –September 15<sup>th</sup>), public access is not allowed in the HRA. The 0.5 mile of wave slope in front of the HRA is also closed to vehicles during the breeding season. The public is allowed to walk in the FRA during the breeding season with leashed dogs. The public is also allowed to drive on the waveslope in front of the FRA with a speed limit of 15 mph.

Following restoration efforts in 2004 which created the HRA, surveys documented the first successfully hatched nest on the South Spit since 1999 (BLM 2010). Successful nests with fledging chicks were documented yearly from 2005-2008, however no nests were initiated during the 2009 breeding season. One nest was initiated in 2010 and hatched three chicks but none of the chicks survived. The 2012 breeding season was the second consecutive year of no nest attempts at South Spit and the Recovery Unit 2 breeding population remains perilously low (Colwell et al. 2012).

### ***Expenditure of Funds***

Though no funds were provided in 2011 or 2012, most of the previously-funded projects are still in progress.

Not all of the oyster shells purchased with 2010 funds were delivered prior to the 2011 breeding season and applied to the HRA. The remaining 160 cubic yards of oyster shells were delivered after the start of the 2011 breeding season and were applied to the HRA in December 2012. The shells were applied to the planned area in December 2012. The location of the shell applications is illustrated in Figure 1.

Figure 1: Oyster shell locations in the HRA (mapped in December 2012), South Spit Humboldt Bay totaling approximately 13 acres. The planned shell polygon has since been covered in oyster shells.



The original alternating sand/shells design of the plot remains but there has not been enough breeding activity to conduct analysis regarding the effectiveness of the oyster shell treatments. The additional acreage was added to the southern most shell plot. The additional shells were applied slightly farther down the wave slope. This area is where the SNPL have been seen most often in the past year. Following the suggestion of several local authorities, a bulldozer was used to break up the remaining shells into smaller pieces prior to application on the beach.

Bird spikes (vertical wires that prevent birds from landing and perching) were again placed on signs, stumps, and other potential avian predator perches near the HRA.

The 12 live traps purchased in 2010 and unsuccessfully deployed in 2011 were returned and exchanged for traditional live traps. Using the “skunk proof” traps resulted in no captures. Skunk proof traps are made using PVC tubing of a diameter that does not allow the skunk to lift it’s tail in order to spray. No predator trapping was undertaken during 2012.

The BLM is assessing the presence of feral cats and other mammalian predators. One feral cat was spotted by the South Spit docent during the breeding season. No predators were observed during one spotlight survey using playback calling of a wounded rabbit. After the heavy equipment work was completed in the HRA, a dragline was employed around the perimeter of the HRA for 4 nights to determine the presence of predators. Gray fox tracks were observed daily while coyote, weasel, and dog tracks were present 1 or 2 days each. No raccoon, skunk, opossum, or feral cat tracks were detected. Figures 2 and 3 show some of the tracks encountered and a freshly dragged line in the sand.

Figure 2. Weasel tracks leading to the dragline.



Figure 3. A chain link fence was used to create the dragline.



***Additional Work Completed in 2012***

A contractor was hired to bulldoze the portion of the FRA that was not treated in 2010. The

bulldozing work total about 14 acres. The beach was cleared of beachgrass and the area was re-graded. The contractor also used the bulldozers to push large root balls down the wave slope and out of the nesting area. Removing the root balls further reduces the available perches in the HRA. A request was made to Humboldt Bay National Wildlife Refuge for assistance with heavy equipment. The Refuge agreed with the request and brought out a large tractor with disc set and re-treated the entire area that was bulldozed in 2010, encompassing about 36 acres. With the work completed by the contractor and the Refuge, the entire HRA and FRA have been mechanically re-treated in preparation for the 2013 nesting season. Discing the area leaves much of the beachgrass in place compared to bulldozing. The photograph on the title page shows the difference between the two methods. The bulldozer cleared area is on the left of the photo while the area on the right was disced. Leaving the beachgrass in place may result in more rapid recolonization. Using the disc may ultimately be much more cost effective. Tractors with discs are cheaper to operate per hour and cover about 2.5-3 acres per hour. Bulldozers cover less than 1 acre per hour.

The South Spit docent pulled beachgrass during the breeding season. She focused her work on the area that was hand pulled by the CCC's in 2011. She was able to maintain several acres of beachgrass-free oyster shell area at the northern end of the HRA. The oyster shells do not appear to impede the growth of beachgrass.

A decoy and sound system was used to entice wintering SNPL to remain at the South Spit to breed. The set included 6 decoys and a 12 volt battery, MP3 player, and associated hardware. The playback call was provided by Amber Transou at Humboldt Redwoods State Park. The normal winter flock of 8-14 SNPL remained on the site for about 1-2 weeks longer than 2011 but eventually left the area.

### ***2013 Request For Funding***

The BLM has successfully maintained the HRA with internal funding and assistance from cooperating agencies. No additional funding is needed to maintain the HRA in 2013.

The BLM and other members of the Western Snowy Plover Recovery Unit 2 Outreach Subcommittee Group 2012 designed a map for dog owners detailing the locations of suitable dog areas and site-by-site seasonal restrictions in place to protect SNPL during the breeding season. The first printing of 5,000 maps was distributed before the end of the breeding season. Additional funds are needed to make corrections and updates and to print another 5,000 maps. The cost for the re-printing is approximately \$3,000.00, which includes \$1,000.00 for the design work and \$2,000.00 for the printing of the maps.

### ***NEPA and ESA Requirements***

Oyster shell application was included in the environmental assessment for the creation of the HRA (CA-330-03-011). The February 13, 2004 Letter of Concurrence resulting from the HRA project listed oyster shell application as a management option.

The South Spit Management Plan includes management of non-native plant species. Categorical Exclusions were prepared and finalized to address the installation of bird spikes (DOI-BLM-CA-N030-2010-0013) and feral cat trapping (DOI-BLM-CA-N030-2010-0012).

### ***2013 Reporting***

An annual progress report will be prepared and submitted to the Stuyvesant Oil Spill Trustee Council by December 31, 2013. The report will summarize all activities implemented with the allocated funds.

### ***References***

California Department of Fish and Game. 2007. Stuyvesant/Humboldt Coast Oil Spill Final Damage Assessment and Restoration Plan/Environmental Assessment. California Department of Fish and Game, California State Lands Commission and U.S. Fish and Wildlife Service. Sacramento, CA. 86pp.

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