



Half Moon Bay Dune and Bluff Volunteer Restoration Project

Come pitch in at the Beach! Enjoy fresh air, good exercise, and a spectacular setting including scenic views of the bay, beach, dunes, and mountains. Since 1996 volunteers have been working actively to restore native habitat at Half Moon Bay State Beach.

WHAT Projects focus on removing invasive, non-native plants. Non-native species are the second largest threat to biodiversity next to direct habitat destruction. In San Mateo County, the coastal scrub plant community has been significantly reduced by agriculture and development. Restoration creates habitat for the native plant species that are at the base of the food chain for coastal wildlife.

WHO Volunteers of all ages are welcome to join: individuals, families, and small or large groups.

WHEN Weekday or weekend dates available, projects usually last 2-3 hours. To set up a project date contact the Volunteer Coordinator at: hmbrestore@gmail.com or 650-726-8801

WHERE Work sites include: Francis, Venice, Dunes, and Roosevelt Beaches. Locations will be determined when you sign up.

HOW Invasive plants are removed by hand or with the use of short-and long-handled gardening tools such as hoes or shovels. Volunteers must be prepared for the following physical activities:
* Bending and squatting at least once a minute for project duration
* Lifting and carrying bundles of vegetation up to 20 lbs

BRING Long-sleeve shirt and long pants that can get dirty, warm layers, closed toed shoes, refillable water bottle, sunscreen and a hat

California State Parks
Half Moon Bay State Beach
Department of Resource Ecology
650.726.8801 hmbrestore@gmail.com
95 Kelly Avenue Half Moon Bay, CA 94019



Native Plants used in the Half Moon Bay Restoration Project

Beach Burr	<i>Ambrosia chamissionis</i>
Beach Sagewort	<i>Artemisia pycnocephala</i>
Beach Primrose	<i>Camissonia cheiranthifolia</i>
Coast Buckwheat	<i>Eriogonum latifolium</i>
Yarrow	<i>Achillea millefolium</i>
Coyote Bush	<i>Baccharis pilularis</i>
Lizard Tail	<i>Eriophyllum staechadifolium</i>
Yellow Bush Lupine	<i>Lupinus arboreus</i>
Evening Primrose	<i>Oenothera elata</i> ssp. <i>hookeri</i>
Figwort	<i>Scrophularia californica</i>
Gum Plant	<i>Grindelia stricta</i> var. <i>platyphylla</i>
Seaside Daisy	<i>Erigeron glaucus</i>

Non-Native Plants removed

Wild Radish	<i>Raphanus sativus</i>
Field Mustard	<i>Brassica rapa</i>
Poison Hemlock	<i>Conium maculatum</i>
Bristly Ox-tongue	<i>Picris echioides</i>
Sea Fig	<i>Carpobrotus chilensis</i> and <i>edulis</i>
Cape Ivy	<i>Delairea odorata</i>
New Zealand Spinach	<i>Tetragonia tetragonioides</i>
European Dune Grass	<i>Ammophila arenaria</i>

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ADDITIONAL INFORMATION

Ongoing restoration occurs at four beaches at Half Moon Bay State Beach: Francis, Venice, Dunes, and Roosevelt. These locations consist of beach, dune, coastal scrub, and riparian habitats. Help return this coastal ecosystem to a natural state. Volunteers will receive valuable education regarding the nature and importance of coastal resources and stewardship.

The parks and coastal ecosystem of San Mateo County have been degraded severely by coastal development and agricultural practices. The marine terraces, formerly comprising native coastal scrub, were converted to agricultural fields in the early 1900's. When the State of California acquired the land for Half Moon Bay State Beach in 1955, cultivation of the terrace ceased and the fields were soon dominated by exotic grasses and weeds. When the restoration project started in 1996, the park supported a population of 95% non-native species. Each year the acreage of the restoration area has increased. One hundred and ten acres (65%) of the park's 170 acres currently are in various stages of restoration.

Today many restoration areas within the park contain an impressive 70-90% native species, and the populations of native insects, birds, and other animals have increased dramatically. Native plants supply food and shelter to native wildlife.

Initial treatment of restoration sites involves a three-year process of reducing the seed bank of exotic plant species (mainly wild radish, hemlock, mustard, and thistle) to help ensure the successful re-establishment of native vegetation. The exotic seed is viable for three years. Continual removal of all re-emerging exotics every six weeks is absolutely necessary during the growing season to reduce the seed bank effectively. After three years of depleting the exotic species seed bank in a restoration area, appropriate native vegetation is planted by youth volunteers. Watering and continually monitoring the newly planted gallon-size native plants is necessary to ensure restoration success.

In riparian areas the non-native plants have inhibited the success of native plants and aquatic animals. These altered conditions reduce the natural function of the riparian areas as filters for pollutants that would otherwise flow into the Pacific Ocean. The degraded conditions also contribute to erosion, which further impairs water quality through turbidity. Our restoration project restores riparian areas to native vegetation which enhances the natural quality of streamside vegetation to filter pollutants.

Participants will learn the importance of native ecosystems, the function of wetlands, and the concept of a watershed. Specific educational goals for students can be met upon request.