

Santa Cruz Littoral Cell

Coastal Regional Sediment Management

...one of several plans of the California Coastal Sediment Master Plan



Coastal RSM Plan Overview

The Santa Cruz Littoral Cell CRSMP delineates several sediment-management objectives for the 75-mile stretch of the central California coastline from Pillar Point in San Mateo County to Moss Landing in Monterey County – the Santa Cruz Littoral Cell. Objectives of this Plan include: (1) restoring, preserving, and maintaining coastal beaches and other critical areas of sediment deficit; (2) sustaining recreation and tourism; (3) enhancing public safety and access; (4) restoring coastal sandy habitats; and (5) identifying cost-effective solutions for the restoration of areas affected by excess sediment.

Regional sediment management (RSM) is an approach to solving or minimizing shoreline and watershed problems caused by human modifications.

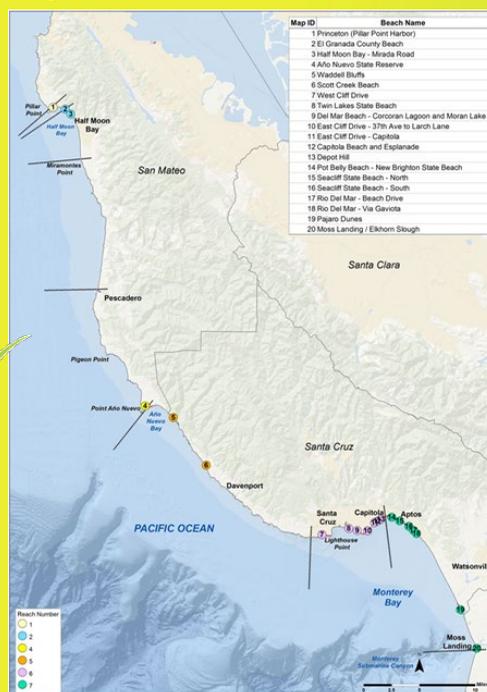
The statewide California Coastal Sediment Master Plan, which is led by the Coastal Sediment Management

Workgroup, endeavors to protect, enhance, and restore California's coastal beaches and watersheds through federal, state, and local cooperative efforts.

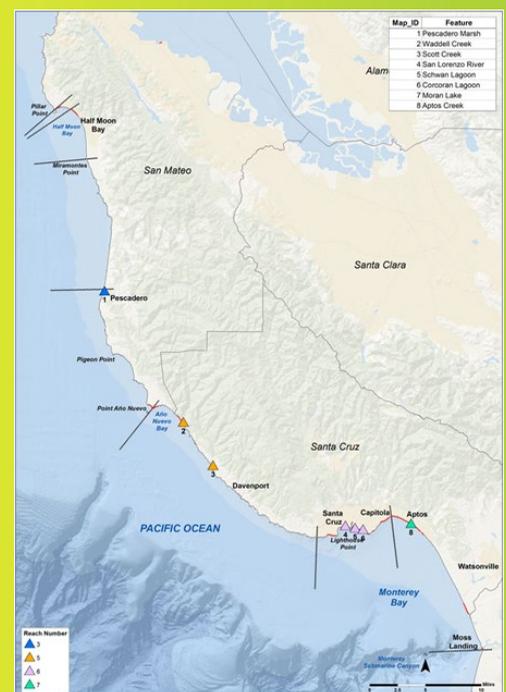
The Santa Cruz Littoral Cell Coastal Regional Sediment Management Plan (CRSMP) is part of this statewide program.

Coastal RSM Focus

An assessment of physical conditions and vulnerable coastal infrastructure was combined with input from a Stakeholder Advisory Group and the public to formulate a list of Beach Erosion Concern Areas (BECAs) and Sediment-Impaired Coastal Habitats (SICHs). The BECAs are primarily concentrated along the heavily developed northern Monterey Bay shoreline, where well-documented beach and sea-cliff erosion threatens both public infrastructure and private development. The SICHs include several coastal lagoons where infrastructure has restricted the natural sediment exchange between the open coast and the lagoons.



Beach Erosion Concern Areas in the Santa Cruz Littoral Cell



Sediment-Impaired Coastal Habitats in the Santa Cruz Littoral Cell

RSM Concerns

A number of RSM measures could be implemented to restore a more balanced coastal sediment budget. Such actions can include both soft and hard engineering measures and relocating development and infrastructure from erosion hazard zones (managed retreat) to facilitate natural beach and sea-cliff erosion processes.

MEASURE: DESCRIPTION

- **No Action:** The “status quo” will continue, often with local interests maintaining existing erosion control measures
- **Managed Retreat:** Relocate development and infrastructure away from coastal-erosion hazard zones
- **Restore Beach and Marsh Environments and Modify Infrastructure:** Restore natural processes to a given coastal environment
- **Beach Nourishment:** Directly place sand on the sub-aerial beach or in the surf zone
- **Nearshore Berm:** Place sand in the nearshore, often at depths of up to 30 or 40 feet
- **Perched Beach:** Utilize a submerged sill to limit offshore sand transport, creating a beach at a higher elevation than surrounding beaches
- **Multipurpose Artificial Reef:** Construct a submerged offshore reef that alters incoming waves to reduce beach erosion and provide recreational benefits
- **Groins and Jetties:** Construct one or more shore perpendicular structures to retain beach sand
- **Cliff Stabilization by Seawall:** Stabilize sea cliffs that are subject to wave attack



Habitat Resources

The Monterey Bay National Marine Sanctuary (MBNMS) abuts the Santa Cruz Littoral Cell shoreline. The littoral cell encompasses several managed areas and protected habitats, including state marine conservation areas, marine reserves, state parks and beaches, and ecologically significant habitats. It is also host to a variety of species, including more than twenty cetaceans (whales, dolphins and porpoises), six species of pinnipeds (seals and sea lions), otters, several species of fish, and resident birds. Being located on the Pacific flyway, it serves as a temporary home to several migratory birds.



Governance

Because of the complexities involved with the Santa Cruz Littoral Cell region and the lack of an obvious governance model and lead agency, this Plan identifies and describes a range of potential scenarios and encourages local jurisdictions, agencies, and other stakeholders to engage in a collaborative effort to further evaluate the options and make an informed decision on the most appropriate governance structure for the region.

Federal /State Sponsor



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The U.S. Army Corps of Engineers and the California Natural Resources Agency established the California Coastal Sediment Management Workgroup (CSMW) in 1999 to develop regional approaches to protecting, enhancing and restoring California's coastal

For more information, see ([https://dbw.parks.ca.gov/pages/28702/files/Santa Cruz Littoral Cell CRSMW Final.pdf](https://dbw.parks.ca.gov/pages/28702/files/Santa_Cruz_Littoral_Cell_CRSMW_Final.pdf) complete plan) or CSMW at https://dbw.parks.ca.gov/?page_id=29239