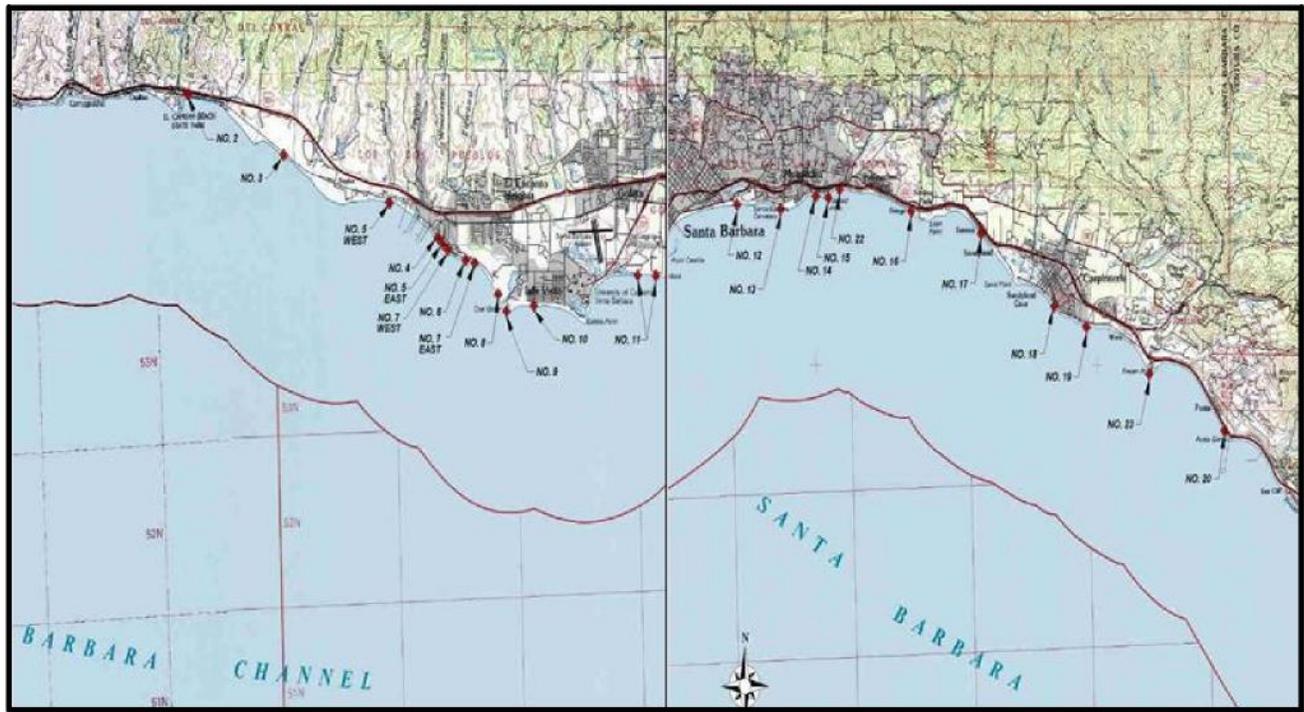


## COASTAL HAZARD REMOVAL PROGRAM STATE LANDS COMMISSION

Weather systems and extreme storms can cause dangerous coastal hazards to surface on shorelines. Hazards also surface during low tide conditions when sand erosion is high. Examples of coastal hazards include remnants of coastal structures, steel beams, wooden posts, oil well casings and pilings, and deteriorated electric cables and pipes. These hazards impede coastal use and endanger public health and safety. The objective of the Commission's hazard removal program is to make California beaches a safe environment for the public to enjoy and to maintain public access to the water.

The first inventory of coastal hazards was performed in the mid-1980s and identified over 400 hazards in Los Angeles, Santa Barbara and Ventura Counties. While some of the hazards were traced to responsible parties, most could not be traced to a surviving party and consequently became the state's responsibility. Through the assistance of grant funding, the Commission, in collaboration with local municipalities and other state agencies, has improved the coastal environment by removing many coastal hazards.



Hazard Sites along Santa Barbara and Ventura County Coastline

The Commission's Hazards Removal program is ongoing, but is dependent on special funding. Most coastal hazards are located in the surf zone, so a specific schedule for removal cannot be predicted. The hazards removal process begins when beach hazards are exposed by winter storms or seasonal sand migration. The hazards removal activity is typically conducted during the winter months when annual sand movement is offshore and when the wave energy is typically greatest. After removal, the Commission continues to observe and monitor sites in case previously undiscovered hazards become exposed.

In 2015, the Commission completed its most recent hazard removal operation, by removing 68 H-piles (beams used as piles), 7 railroad irons, 25 steel tie-back rods and various remnant steel near sites 1, 5 and 10.

In 2014, the Commission completed coastal hazard clean-up of steel anchor tie rods, cables, steel H-piles, rail road irons, wooden pilings, sheet pilings and metal re-bars from old abandoned and decommissioned oil wells and also, other hazards that surfaced after the winter storm. Altogether, the Commission removed: (1) 120 steel H-Piles; (2) 60 Railroad Irons; (3) 60 Steel tie-back rods; (4) 60 wood piles; (5) 60 feet of wood sheet piling; (6) 100 feet of steel pipe; (7) several steel and cables; (8) various scrap metal hazards; (9) several exposed steel re-bars from well casings and caissons; and, (10) 25 tons of wood debris.

In 2010, the Commission received a federal grant of \$700,000 that it used to remove hazards from Ellwood West (Site 4), Ellwood East (Site 5), Fernald Point (Site 15), East of Fernald Point (Site 22), and Rincon Point (Site 23).

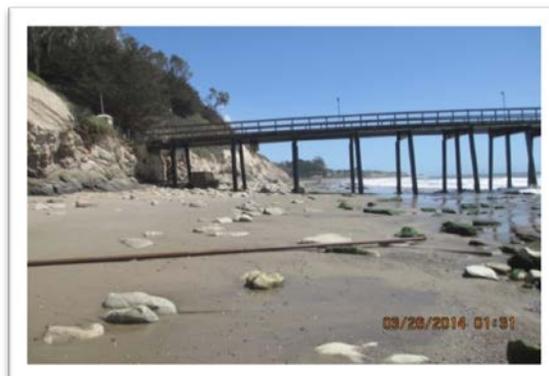
In 2006, the Commission eliminated the hazards associated with four abandoned oil well drill sites at Goleta Beach (Site 11). Each well site consisted of four foundation caissons, a wellhead casing, and H-piles associated with former decking structures. The H-piles were extracted and the foundation caissons and wellhead casings were cut at or below the cobble zone-bedrock contact.

In 2005, the Commission removed corroded sheet pile hazards from Coral Casino/Biltmore Hotel (Site 13) and 850 corroded railroad irons from Padaro Lane/Santa Clause Lane (Site 17).

In 2003, the Commission removed five deteriorated groins and repaired one groin in the Las Tunas County Beach area in the City of Malibu, Los Angeles County. These six groins of corroded steel sheet piles posed hazards to beach users. One of the six groins was still effectively retaining beach sand; it was covered with concrete to eliminate sharp edges or holes while the other five were removed. Funding for the removal/repair of these groins came from a 1993 settlement agreement resulting from litigation between the State and Ticor Title Company.

In 2002, the Commission awarded a construction/demolition and permitting contract. The subsequent General Fund shortfall delayed work until May 2003. At that point, the Commission was able to obtain all the necessary permits from the California Coastal Commission, United States Army Corps of Engineers, California State Water Resources Control Board, other local agencies, and adjacent property owners.

In 2001, the Legislature appropriated \$931,000 for the removal of hazards located along the coastline of Santa Barbara and Ventura Counties.



County of Santa Barbara



County of Santa Barbara



Deteriorated Steel Groin Hazards  
Las Tunas County Beach, Malibu, Los Angeles County



Corroded Sheet Piles, Site 13  
Biltmore Hotel



Corroded Railroad Irons, Site 17  
Padaro Lane/Santa Clause Lane



Site 11, Goleta Beach  
Remnant Caisson Foundations



Site 15 (Fernald Point)  
Removed 200 feet of  
Steel deteriorated steel groin

Sites 4 & 5 (Ellwood Area)  
Removed 70' of wooden sheet pile, 28 wood piles  
15 steel H-Piles, 6 rails road irons, 65' long 6-inch  
steel pipe, and 150' long abandoned pipe



Site 22 (East of Fernald Point)  
Removed 480 Railroad Irons

The Commission continues its surveillance of all known hazard sites for the appearance of additional unknown hazards. Additional hazards that are discovered are added into the Hazard Removal program to be removed as funding becomes available.



Safety sign Displayed during hazard removal in 2014



Wooden debris removed (site 6 and 7) in 2014 for City of Goleta



Wooden Sea Wall removed (site 6 and 7) in 2014 for city of Goleta



Spill containment at the staging area near site 7 in 2014



Steel H Piles excavated at site 5 in 2014



Remnant Pier Structure Excavated at site 5 in 2014



Wooden Piles removed at site 4 and 5 in 2014



Old abandoned well located near site 6



Steel H pile removed at site 10 in 2015



Steel H pile removed at site 5 in 2015