



# PACIFICA STATE BEACH MANAGED RETREAT, BEACH AND ESTUARY RESTORATION

**Summary:** This award winning managed retreat project reduced flooding hazards by realigning oceanfront property and infrastructure away from coastal erosion hotspots, and restored estuarine functioning on San Pedro Creek.

**Location:** Pacifica, San Mateo County, California

**Client:** City of Pacifica

Coastal erosion at Linda Mar State Beach threatened critical infrastructure and oceanfront property, while at the same time, flood hazards from nearby San Pedro Creek caused periodic flood damage to the City of Pacifica. As an alternative to the Corps of Engineers' proposed concrete-lined flood channel, PWA developed the conceptual plan to enhance the flood management and ecologic benefits of San Pedro Creek. Produced for local citizens in 1989 and funded by the Department of Water Resources (DWR) Urban Streams Program, the enhancement plan was later adopted and implemented by the Corps of Engineers. The 1990 Pacifica State Beach Master Plan called for a combination managed retreat and estuary restoration project to reduce the coastal flood hazards. PWA was retained in 2001 to provide coastal engineering, hydrologic and geomorphic expertise throughout the project. The project focused on the restoration of the natural coastal and wetland processes to reduce the flooding and erosion hazards, as well as to improve habitat and enhance recreation.

PWA developed the conceptual beach restoration plan for removing the fill, relocating infrastructure and restoring the dune and cobble beach system. PWA services included:

- preliminary design,
- beach and wetland monitoring,
- environmental review and permitting,
- design recommendations,
- drafting of construction documents for beach restoration, and
- technical support for dune and wetland restoration.

Following the initial disturbance period, the project has been a success. Flood hazards have been reduced, the wetland habitat is functioning, and the use of this heavily used recreational beach has increased.



## **This project was identified as a Top Restored Beach by the American Shore and Beach Preservation Association in 2005**

"Pacifica State Beach – The committee's top recommendation, Pacifica State Beach is an example of a well-planned, well-executed coastal project that is the product of cooperative efforts of the local community, state and federal agencies, scientists, engineers and citizens. The complex beach and habitat restoration project involved over 10 regulatory and permitting agencies, funding from eight granting agencies and the active participation of eight environmental groups. It is one of the first beaches to utilize managed retreat as a method of shoreline protection. In addition to beach nourishment, it has restored habitat for four threatened and endangered species and enhanced community access with expanded parking lots, trails and new restrooms. Over 1 million people visit this beach annually."