Salmon Creek Estuary Enhancement Project

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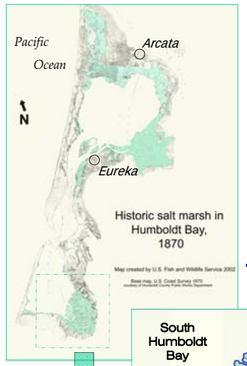
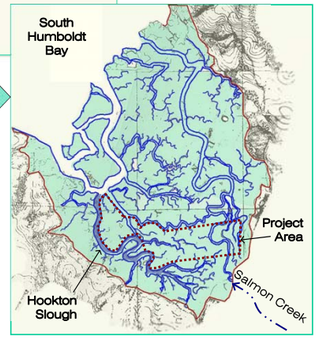
HISTORIC SALTMARSH





Salmon Creek flows from the Headwaters Preserve to the US Fish and Wildlife Service, Humboldt Bay National Wildlife Refuge in Northern California. The HBNWR lies within the dikes and drained tidal marshes of Humboldt Bay.

- 18 mi² drainage area
- 40-65 in. rainfall annually
- Coho, chinook, steelhead, and cutthroat trout present

RESTORED SALTMARSH

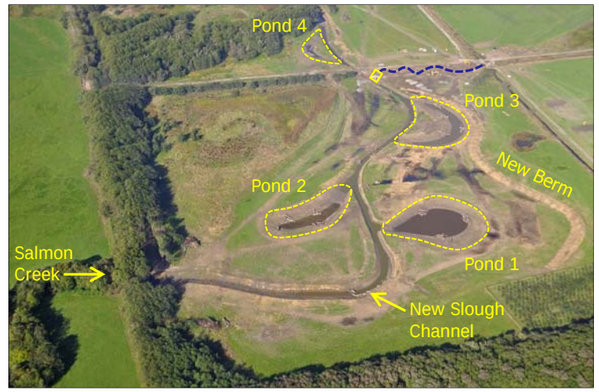
Tidal re-introduction supports new Pickleweed (Sarcocornia) beds in the lower estuary ecotone

New slough channel transitions from brackish to freshwater in the upper estuary ecotone

NEW TIDAL CHANNEL AND WETLANDS

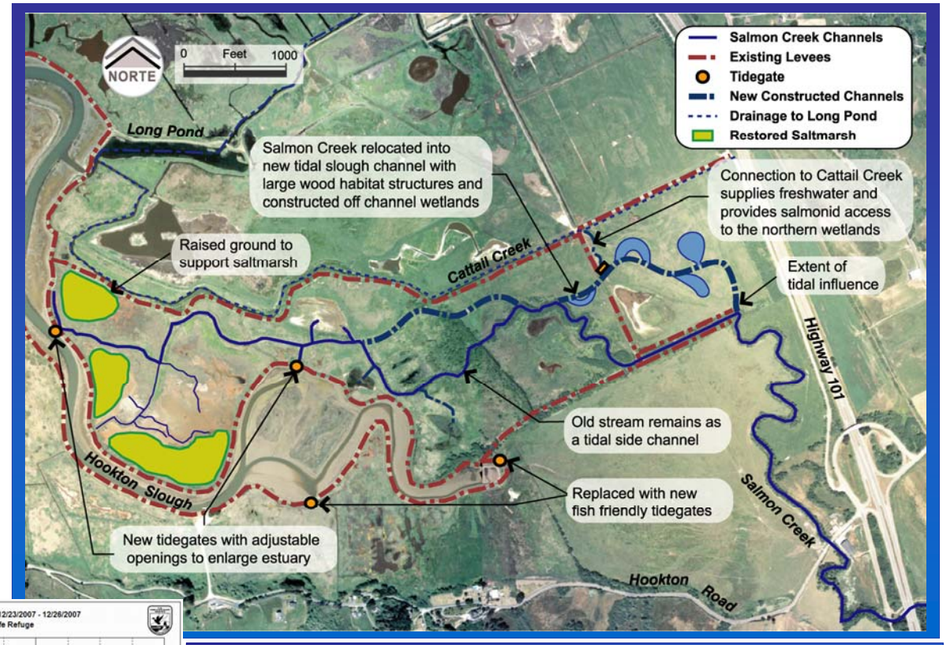
Project Activities Include:

- 4,205 feet of new tidal channel
- 5,000 feet of backwater habitat
- 2.8 acres of new seasonal freshwater side channel
- Restoration of 15.4 acres of salt marsh in subsided mudflats
- 32 large wood structures were constructed in the channel and ponds



Construction of 4,205 feet of new slough channel and four fresh and brackish water ponds were completed 2011.

RESTORATION PLAN



LARGE WOOD HABITAT STRUCTURES

Partially constructed habitat structures in Pond 1

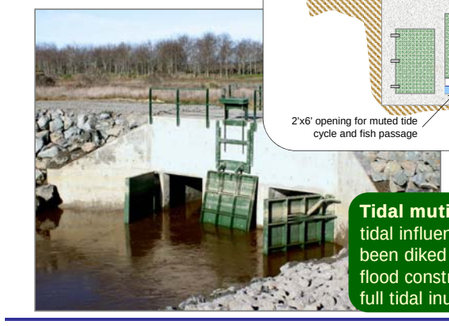
Large Wood Cover Structures keyed into the bank and anchored with rock.

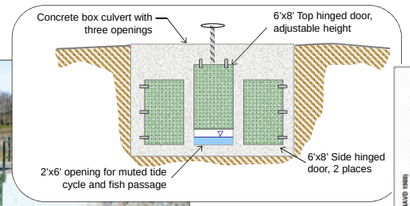
PROJECT GOALS AND OBJECTIVES

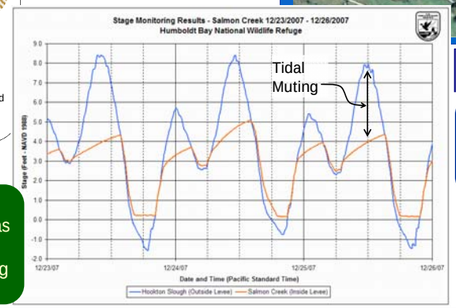
This project aims to restore the function of the **Salmon Creek Estuary** and increase its biological diversity by:

- Re-introducing tidal exchange and creating tidal channels
- Creating off-channel, side-channel, and floodplain habitats for salmonid winter rearing
- Reestablishing salmonid access to Long Pond and adjacent freshwater wetlands.
- Enlarging seasonal waterfowl habitat
- Raising subsided lands to suitable saltmarsh elevations
- Improving routing of sediment and floodwaters through Lower Salmon Creek

NEW FISH FRIENDLY TIDEGATES



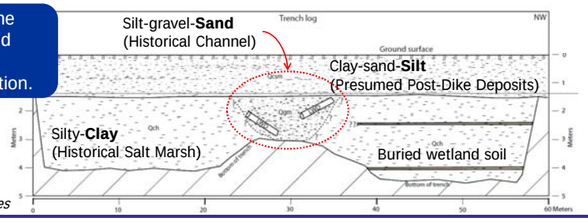




Tidal muting introduces limited tidal influence into an area that has been diked and where upstream flood constraints preclude restoring full tidal inundation.

GEOLOGICAL INVESTIGATION

Trenching through the historical channel and saltmarsh informed design and construction.



Geological studies by Pacific Watershed Associates

PARTNERS

Project Management and Funding
- Pacific Coast Fish, Wildlife & Wetlands Restoration Association (PCFWWRA)
- US Fish and Wildlife Service
- Coastal Conservancy
- CA Dept. of Fish and Game
- Ducks Unlimited
- National Fish and Wildlife Foundation

Design
- Michael Love & Associates
- Pacific Watershed Associates

Construction
- National Wildlife Refuge
- Nehalem Marine
- Wallace Structures
- Humboldt Fish Action Council
- California Conservation Corps
- Cam's Cable Crew