Sensitive Site Strategy Evaluation Program: A Review

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SSSEP Introduction

The Sensitive Site Strategy Evaluation Program (SSSEP) is a program by which the Dept. of Fish and Game Office of Spill Prevention and Response (OSPR) tests and evaluates the effectiveness of oil spill response strategies that are designed to protect environmentally sensitive resources in the coastal marine waters of California.

Environmentally sensitive resources include:

- Wetlands
- Estuaries
- Lagoons
- Eelgrass beds
- Listed Species Habitat
- Large Concentrations of Birds/Mammals

SSSEP History

The program was created because there was a need to verify that ACP booming strategies would work as designed.

The program started in 2002.

There are over 400 sensitive sites and associated response strategies.

The program has tested over 100 strategies.

44% of those tested have been validated.
56% required change – the reason for the program!

Most of the testing has been in the San Francisco Bay.
Recently more testing in Southern California.

SSSEP Limitations

The program will not test the following strategy types:

- Offshore protection strategies (ex. Vessel towed boom arrays).
- Berming or diking of streams or other waterways.
- Booming strategies which would cause disturbance to sensitive areas.
- Strategies which would cause an interruption in commerce/marine traffic.

SSSEP Case Studies

4-665 – Santa Barbara Harbor, Santa Barbara

5-210.2 – Cabrillo Wetland, San Pedro

5-250.2 – Los Cerritos Wetland, Long Beach

5-330.2 – Talbert Marsh, Huntington Beach

6-150.1 – San Luis Rey River, Oceanside

4-665 – Santa Barbara Harbor, Santa Barbara

Sensitive site because of numerous seabirds and seasonal snowy plover nesting.

Site was tested in September 2010.

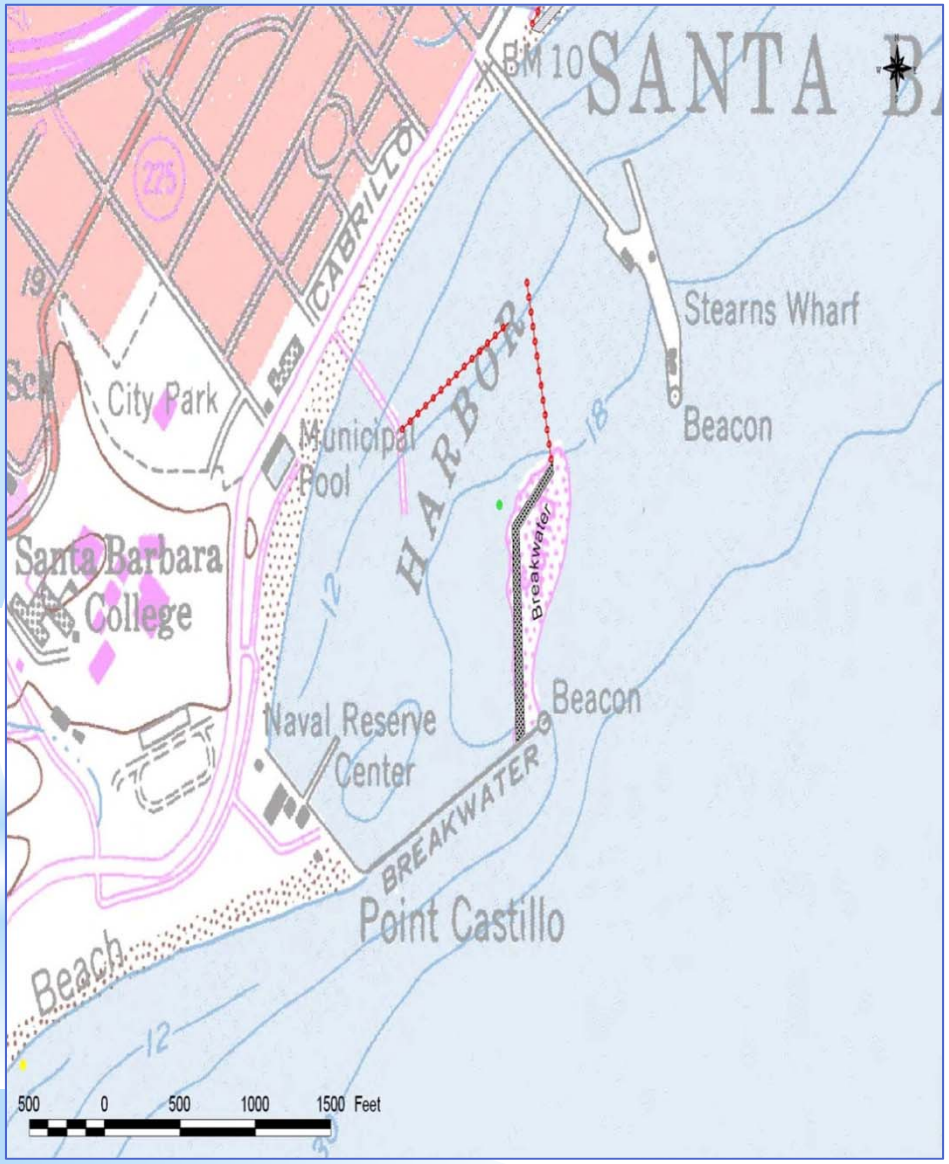
The testing team was told that the breakwater surrounding the harbor is porous.

An additional strategy would need to be developed to address porous breakwater.

The site was retested in November 2011.

Both strategies were successful!

4-665 – Santa Barbara Harbor



2008 ACP

Note:
New Strategy
Lining Breakwater

2011 ACP

4-665 – Santa Barbara Harbor
Harbor Entrance Strategy

4-665 – Santa Barbara Harbor
Breakwall Strategy

5-210.2 – Cabrillo Wetland, San Pedro

Small wetland within the Los Angeles Harbor.

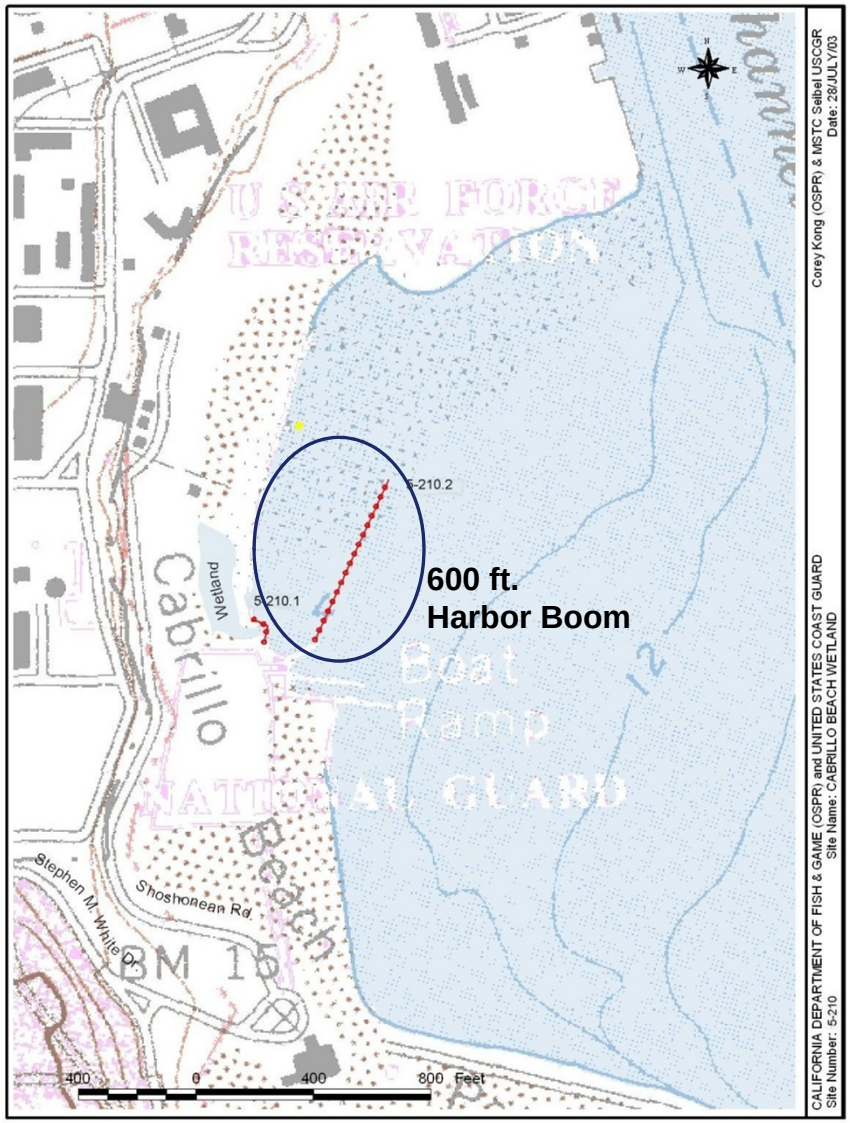
Original strategy developed in 2003 but never tested.

Field research in between the 2008 and 20011 ACPs showed that extending the boom to the riprap at the marina will provide better protection and protect the camp on the beach.

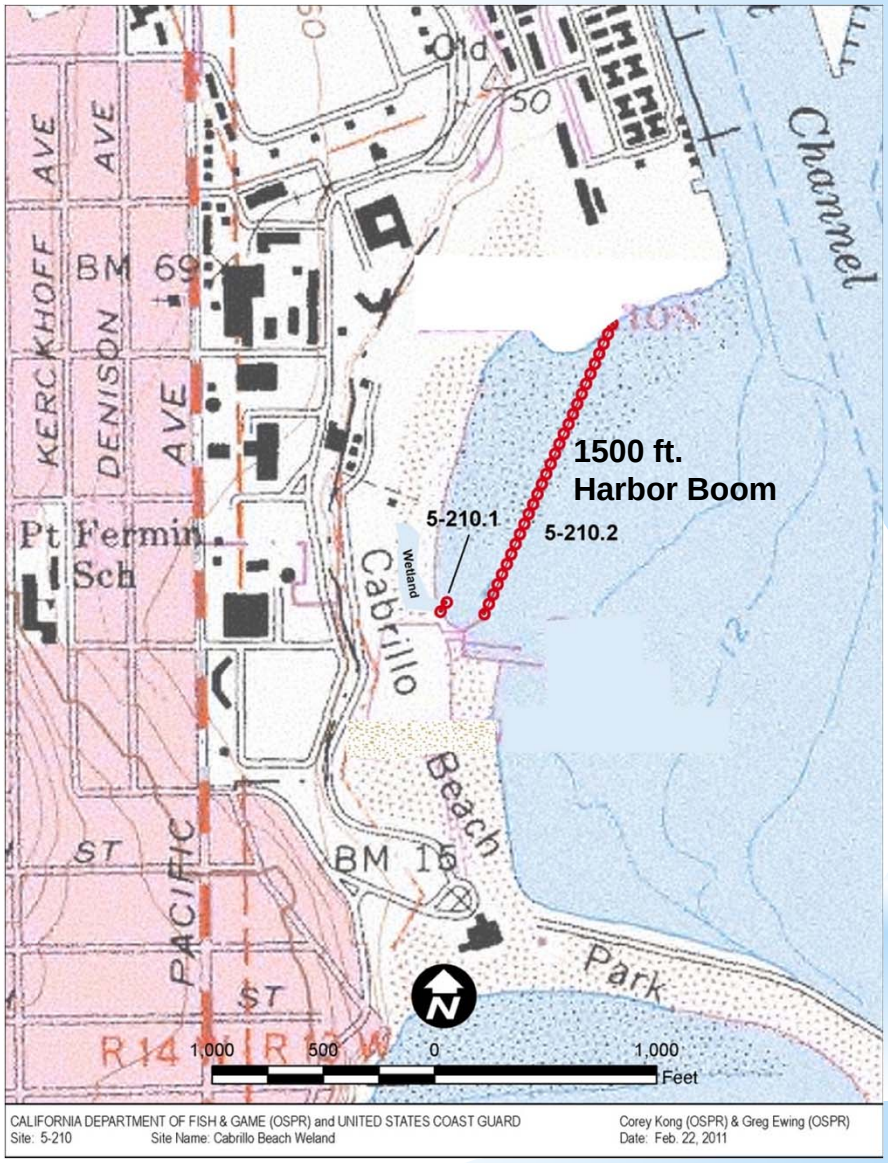
An SSSEP deployment in August 2011, showed that moving the north end of the boom slightly to the west would allow for a better collection area.

New angle of the boom is also better because it is more in the direction of the prevailing wind (S, SW) thereby eliminating the need for anchors (during prevailing wind).

5-210.2 – Cabrillo Wetlands



2008 ACP



2011 ACP

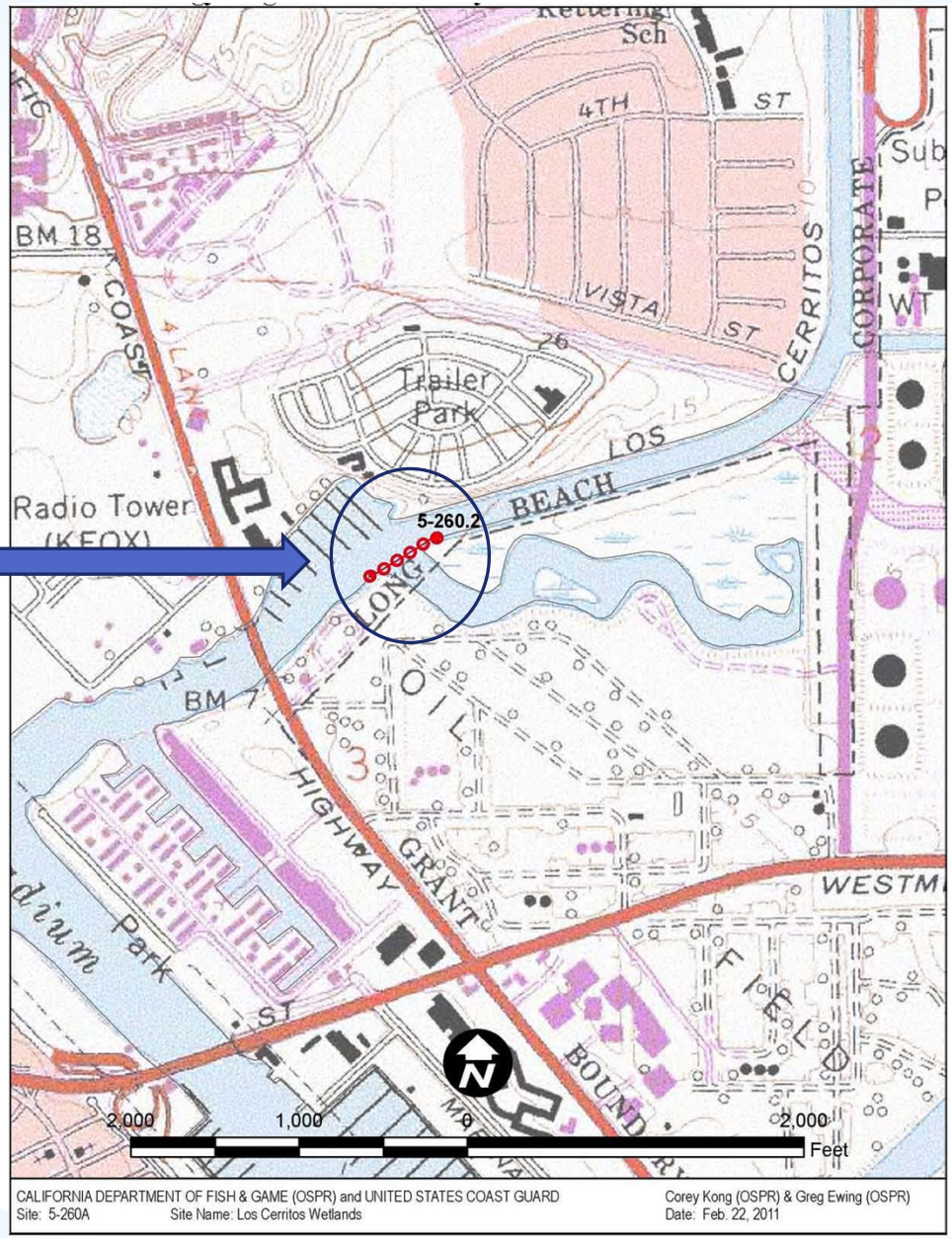
5-210.2 – Cabrillo Wetlands

The final result is…

2011 Interim Update

5-260.2 – Los Cerritos Wetland, Long Beach

New Strategy
For 2011 ACP



5-260.2 – Los Cerritos Wetland

A wetland which is immediately upstream of the Los Alamitos harbor and immediately downstream of the Los Cerritos Channel.

Field research in between the 2008 and 2011 ACPs showed that there was a need for a booming strategy closer to the wetland.

- Spills from marina
- Oil production surrounding area
- Highways
- Spills coming from the Los Cerritos Channel

5-260.2 – Los Cerritos Wetland

5-260.2 position was changed to create a collection area on an incoming tide.

5-260.3 was added so there is wetland protection on an any tide and protection from up-channel spills.

5-260.2 – Los Cerritos Wetland

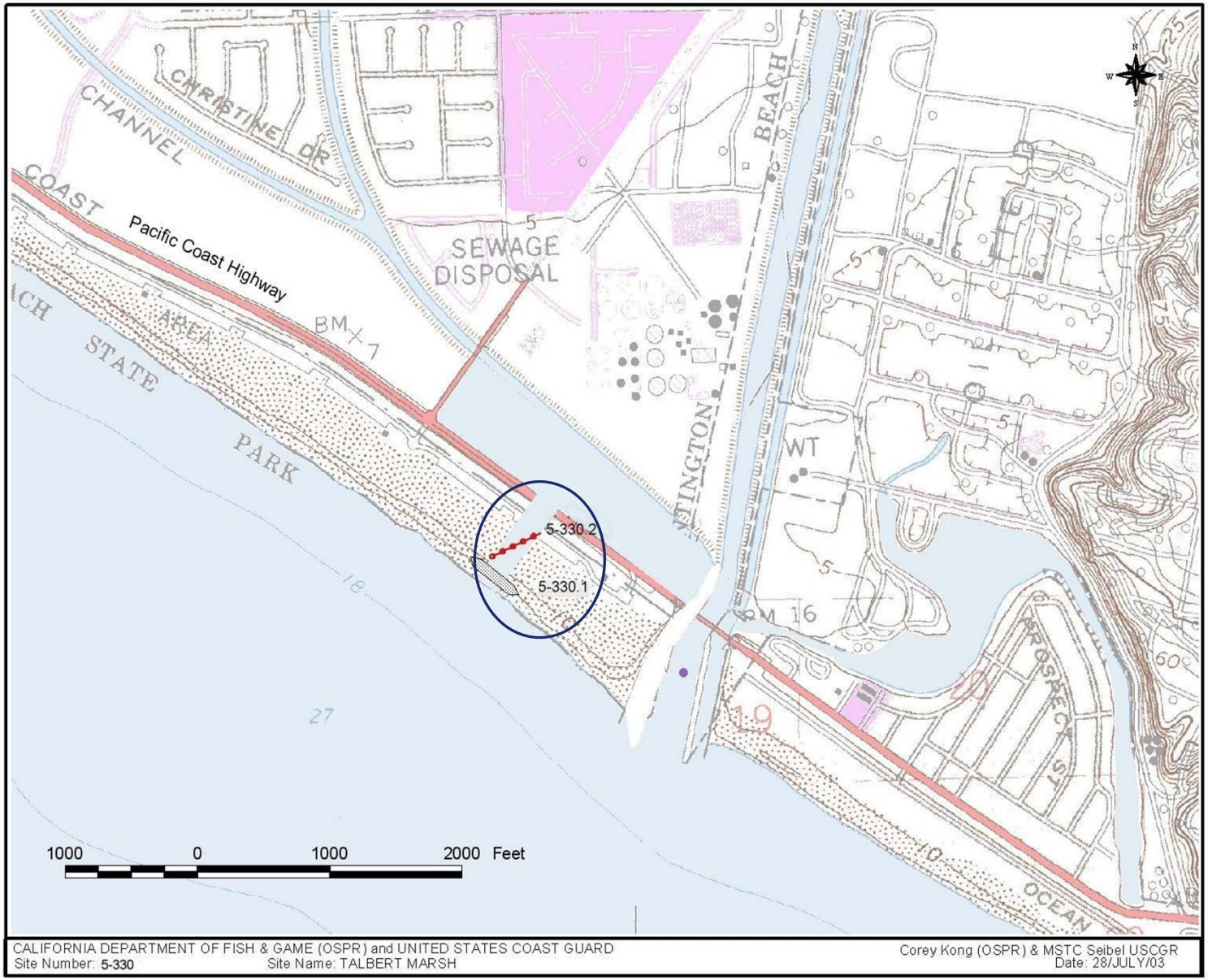
The final result is…

5-330.2 – Talbert Marsh, Huntington Beach

Entrance from the ocean to the Talbert Marsh and the other Huntington Beach marshes.

Original strategy developed in 2003 but never tested.

5-330.2 – Talbert Marsh



5-330.2 – Talbert Marsh

5-330.2 – Talbert Marsh

Boom configuration looks good here…ideal strategy?

5-330.2 – Talbert Marsh

5-330.2 – Talbert Marsh

This strategy is easy to deploy.

However, the boom was subject to a surge created by the incoming surf. It was similar to a current created by an incoming tide and it caused the boom to fail.

Sand bar on the north side of entrance was subject to less surge.

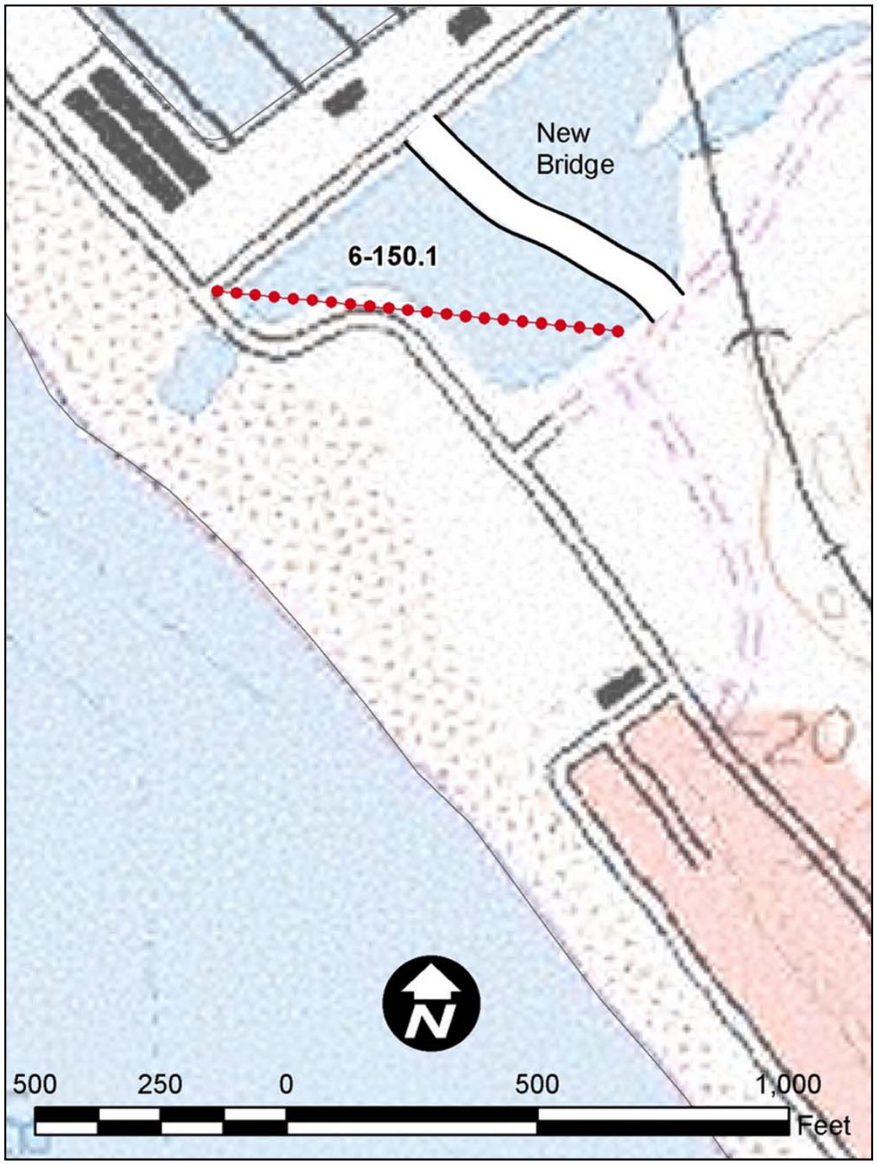
What's next?

The site will be tested again using river boom and will be deployed from the south side of the entrance to the north, taking advantage of the sandbar.

New strategies inside the wetland will be considered.

Other sites with inlets close to the surf may be subject to the same surge.

6-150.1 – San Luis Rey River, Oceanside



6-150.1 – San Luis Rey River

This strategy required 800 ft. of harbor boom.

Strategy is expected to work.

However, there was a buildup of sand in the middle of the channel.

Now the preferred strategy will be a sand berm when there is excess sand.

6-150.1 – San Luis Rey River

SSSEP What's Next

Future Deployments:

4-200.1 & 2 Morro Bay Inlet

4-747.1 –Ventura Harbor, Ventura

6-455.2 – Otay River Channel, Chula Vista

5-140.1 – Ballona Creek, Los Angeles

5-310.6 & 5-320.1 – Anaheim Bay and Bolsa Chica Combo, Huntington Beach

5-360 – Upper Newport Bay, Newport Beach

5-365 – Lower Newport Bay, Newport Beach

5-330 – Talbert Marsh Retest, Huntington Beach

A Big Thanks to the Audience and All Involved with the Program!