



Restoration and Control of Invasive Spartina



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What is invasive *Spartina*?

Spartina is a cordgrass that grows in salt and brackish intertidal areas



Spartina foliosa (Pacific Cordgrass)
Native to the Pacific Coast

Four species have been introduced in San Francisco Bay:



Spartina densiflora
(Dense-flowered Cordgrass)



Spartina patens
(Saltmeadow Cordgrass)

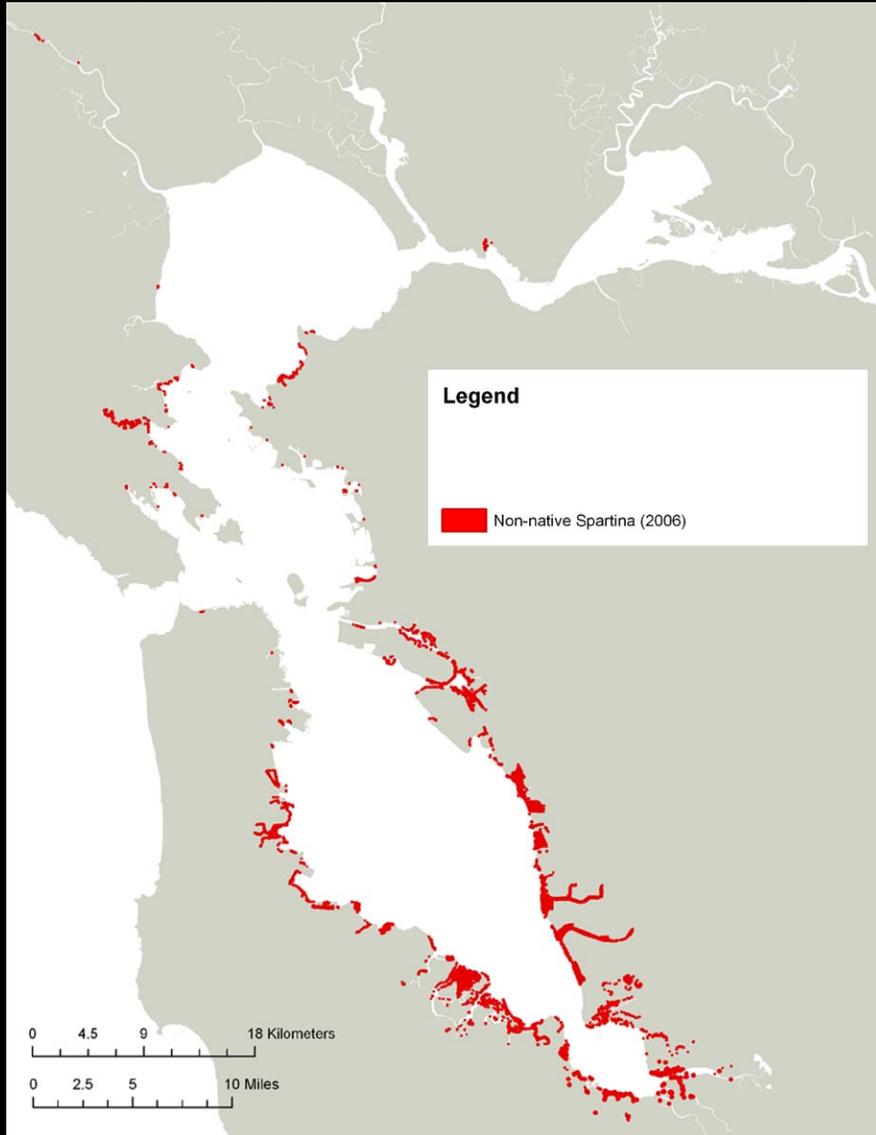


Spartina anglica
(Common Cordgrass)



Spartina alterniflora
(Atlantic Smooth Cordgrass)

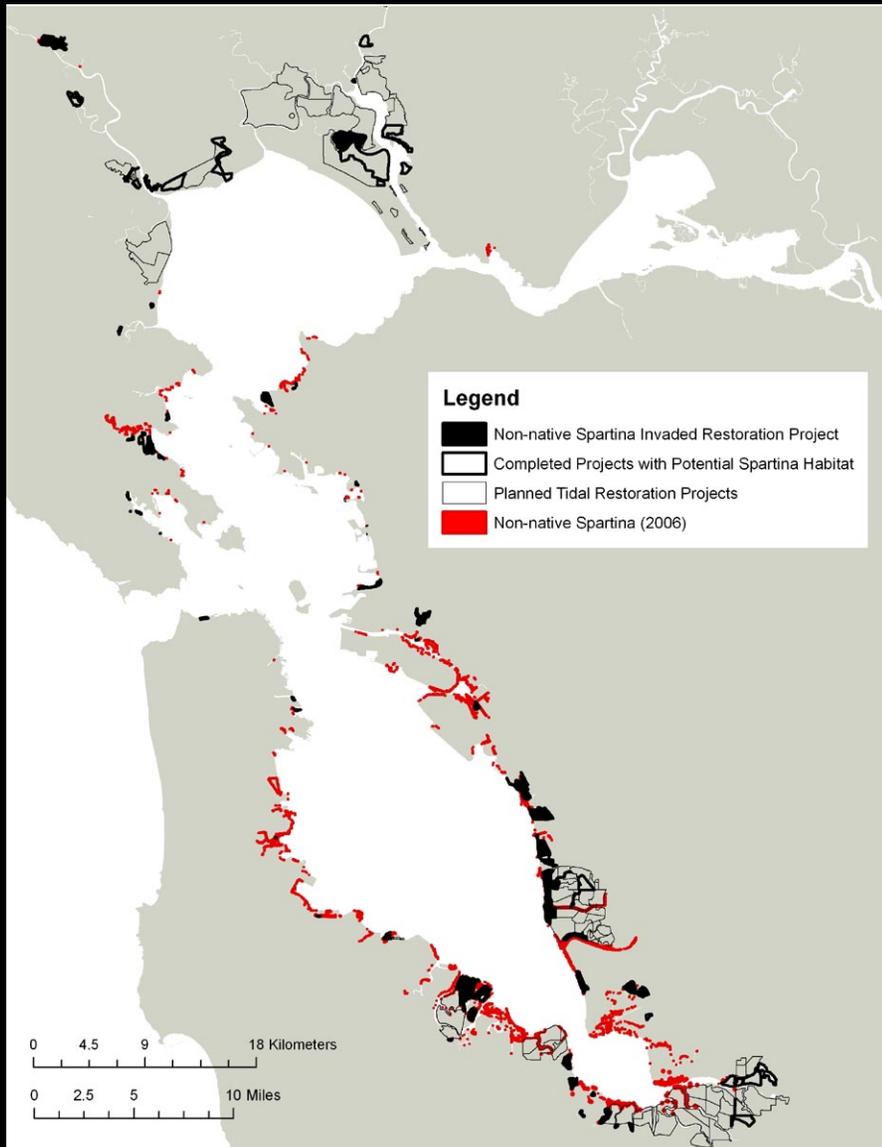
Location of Invasive *Spartina* in the San Francisco Estuary



- ~800 net acres (2005)
- Within ~20,000 acres of invaded wetlands

Spartina data from the Invasive Spartina Project

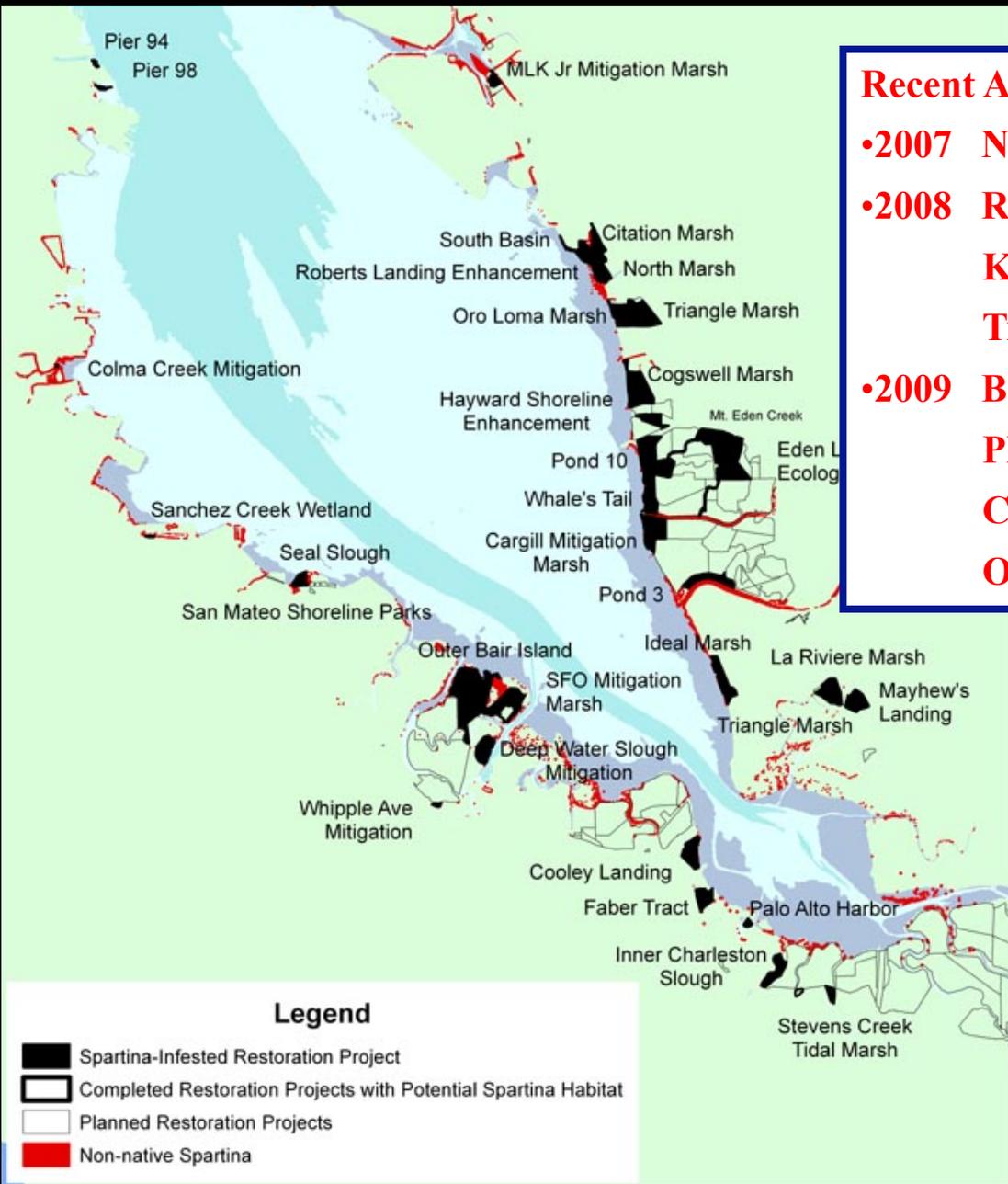
Location of Invasive *Spartina* and Tidal Restoration Projects



- 56 of 96 projects invaded by 2005
- 4,300 project acres
- 30,000 acres more planned

Spartina data from the Invasive *Spartina* Project
Restoration project data from San Francisco Bay Joint Venture, San Francisco Estuary Institute, and Wetlands and Water Resources, Inc.

Invaded Restoration Projects circa 2006



Recent Additions:

- 2007 Nordstrom/Shorebird Marsh, Marin
- 2008 Richmond Parkway Marsh, Contra Costa
KGO Towers Marsh, Alameda
Triangle Marsh, Marin
- 2009 Baumberg Marshes, Alameda
Plummer Creek Mitigation Marsh, Alameda
Color Spot Marsh, Contra Costa
Outer Bair Island, San Mateo

Watch List:

- Island Ponds
- SF-2
- Knapp Tract



Burlingame Lagoon 2006



Burlingame Lagoon 2010



2006 Airport Channel



2010 Airport Channel



Elsie Roemer Bird Sanctuary 2006



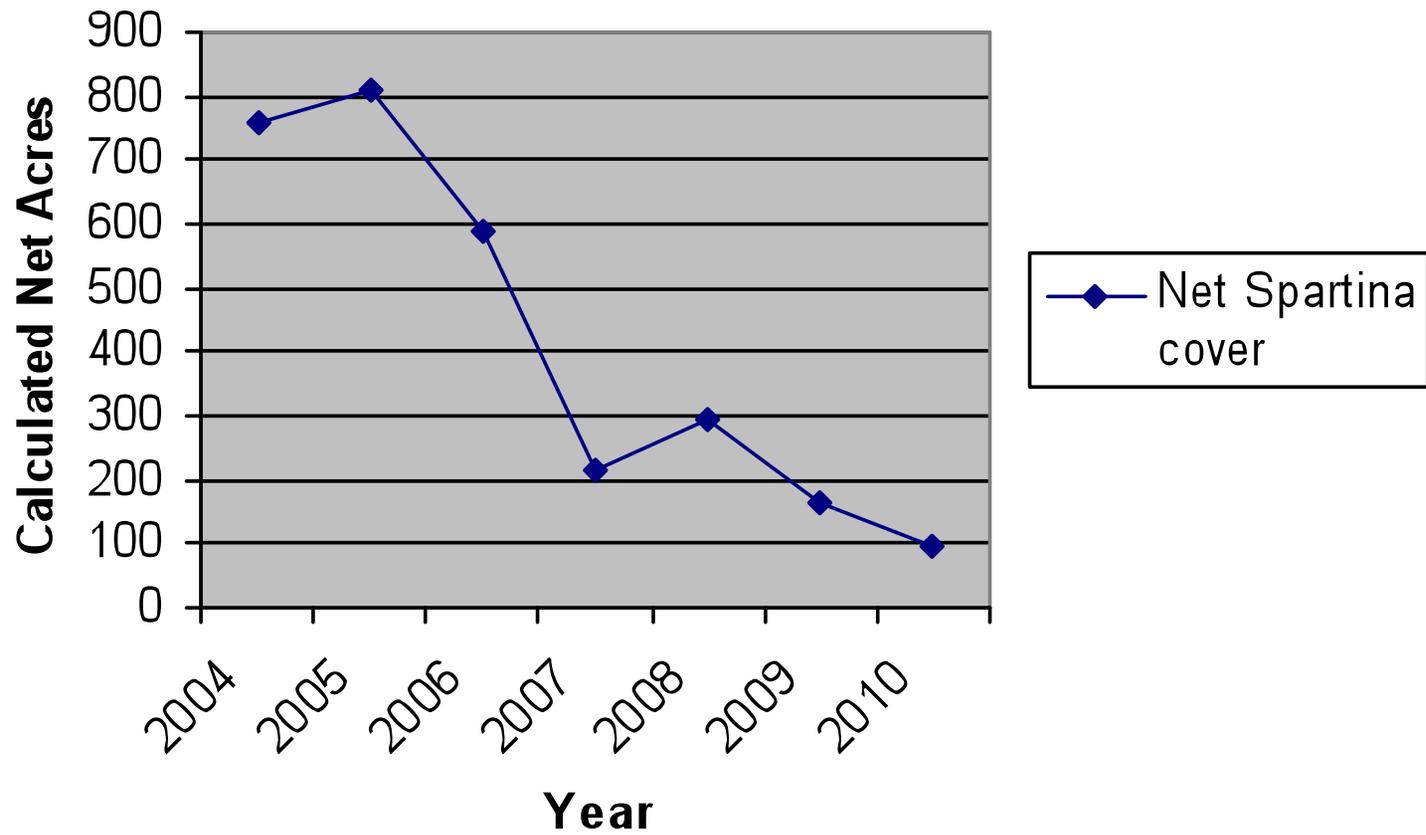
Elsie Roemer Bird Sanctuary 2007



Elsie Roemer Bird Sanctuary 2010



Progress Towards Eradication of Invasive Spartina

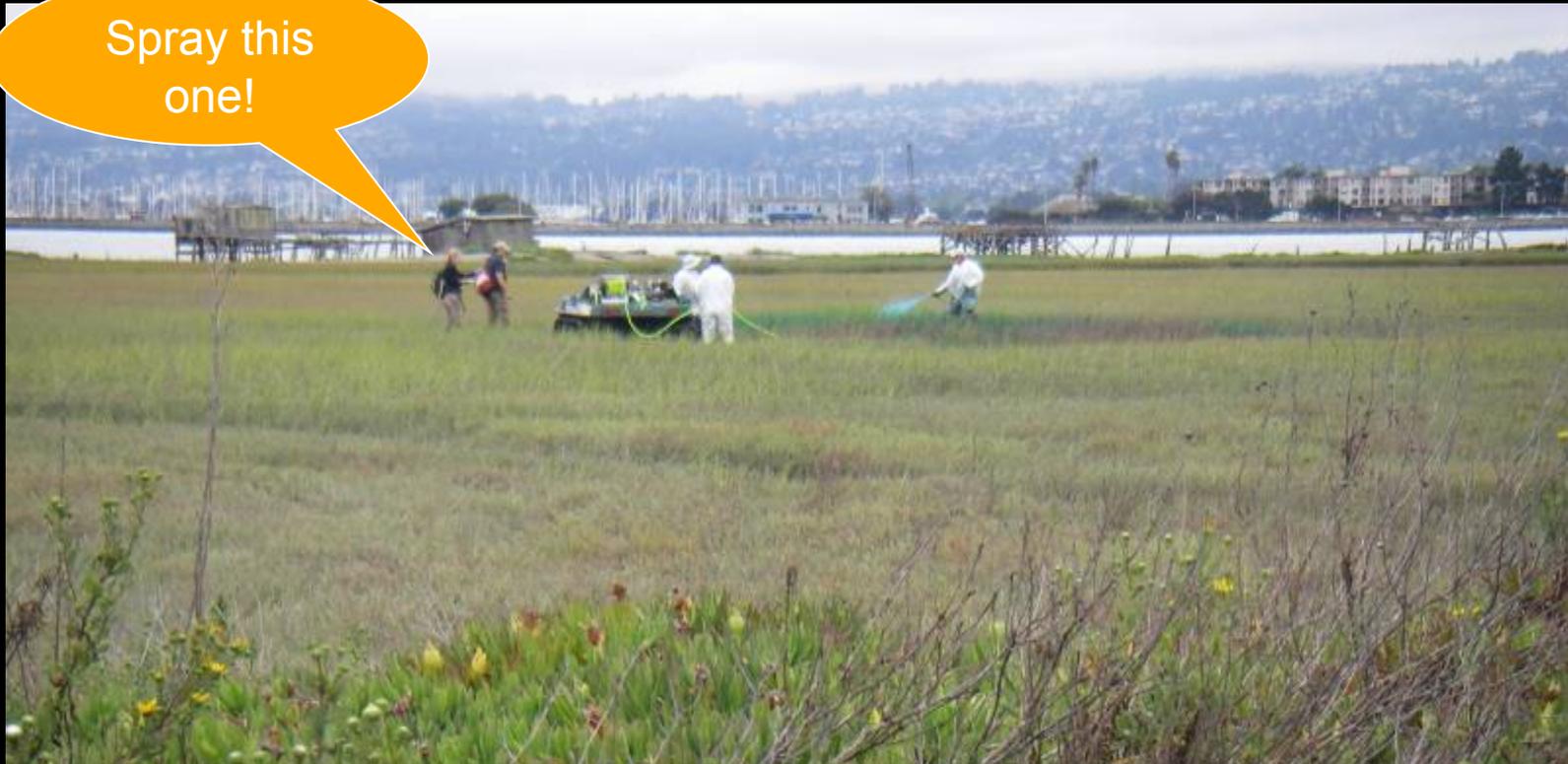




Not so easy
anymore, huh?

- Use GPS to guide treatment
- Record patch-level treatment effort

Spray this one!



A woman in a dark jacket and light pants stands on a grassy shore, looking towards a Marsh Master amphibious vehicle. The vehicle is a white boat with a metal hull and tracks, with the name "MARSH MASTER" visible on the side. Three men in white shirts and hats are on board the vehicle. The background shows a large body of water and distant mountains under a clear sky.

Where to
next,
ma'am?

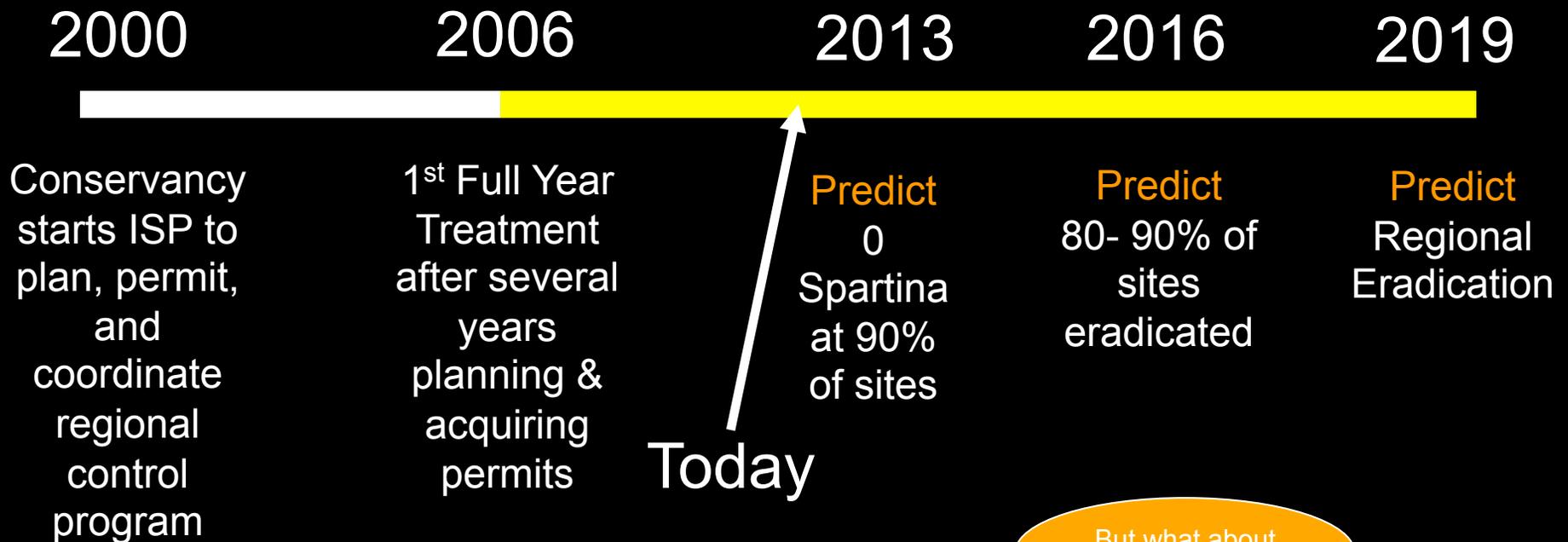
Prospectus for 2013

- ~90% (153 of 170) sites @ first yr “zero presence,” w possible eradication by 2016
- 10% (17 of 170) sites will require treatment for at least 3 more yrs, w possible eradication by 2019
- 7 of this 10% will certainly not be near zero:

Seven Problem Sites

1. Arrowhead/MLK Marsh (clapper rail)
2. Bair B2 North (2 poor treatment years)
3. Cooley Landing (hybrid & foliosa)
4. Calaveras Point Marsh (recent detection)
5. Creekside Park Marsh (*densiflora* meadows)
6. Southampton Marsh (*patens* & Soft Bird's Beak)

Spartina Eradication Timeline



But what about the hybrid??

Invasive Spartina Forum:

Hybrid Spartina in the San Francisco Estuary

March 10-11, 2011

Preservation Park, Oakland

www.Spartina.org/Hybrid_Forum.htm

Thank You!

