## Spartina Eradication Plan West Coast Governors' Agreement on Ocean Health

Mark Sytsma Co-chair, Spartina Action Plan Immediate Past-chair, Oregon Invasive Species Council Oregon ANS Plan Coordinator

Four species of non-native cordgrasses (genus *Spartina*) are found along the West Coast of the United States and Canada. Where established, these invaders convert estuarine mudflats and salt-marsh ecosystems into uniform expanses of dense cordgrass, otherwise known as *Spartina*. Without diligent control, *Spartina* is known to alter the hydrology of estuaries by modification of tidal creeks and navigational channels, dominate newly restored tidal marshes, displace thousands of acres of existing shorebird habitat, and drastically reduce biodiversity. Drift card studies have shown that *Spartina* can rapidly spread through throughout the West Coast of the US and Canada through dispersal on large-scale currents. Even if *Spartina* is successfully eradicated in one state, that area continues to be vulnerable to reintroduction from *Spartina* infestations in other states along the West Coast.

Through the West Coast Governors' Agreement on Ocean Health, the Governors of Washington, California, and Oregon have committed themselves to work cooperatively to eradicate non-native *Spartina* by 2018 (Action 2.4 of the Action Plan). An Action Coordination Team (ACT), or workgroup, has been formed with representatives from the three states, federal government, tribal governments, non-governmental organizations, and the Province of British Columbia. The workplan represents the strategies developed by the ACT to eradicate non-native Spartina along the West Coast by 2018. The development and implementation of the workplan will provide lessons that can be used in other West Coast-wide efforts to eradicate non-native species.

Nearly complete eradication of *Spartina* in San Francisco Bay, California, most sites in Oregon, and Grays Harbor and Willapa Bay, Washington demonstrate that it is possible to achieve eradication with adequate funding, political will and coordinated efforts. In fact, managers believe that *Spartina* can be eradicated from San Francisco and Willapa Bay by the year 2012 with continued public support and funding. However, there are infestations that are not currently being adequately addressed in Humboldt Bay, California; the Siuslaw Estuary, Oregon; and various locations in British Columbia, Canada. Lack of effective management of these known, core, infestations threaten the nearly successful eradication efforts in San Francisco Bay and Willapa Bay. Furthermore, lack of rigorous early detection that permits inexpensive and quick eradication of satellite populations may allow for continued expansion of *Spartina* on the West Coast.

The workplan supports ongoing eradication efforts in San Francisco and Willapa Bays and focuses eradication efforts in Humboldt Bay, the Siuslaw Estuary, and in British Columbia. A successful coast-wide eradication by 2018, however, requires a concerted effort on a number of fronts. To accomplish this ambitious goal, the workplan is divided into six workplan elements: prevention, early detection, rapid response, eradication, restoration, and communication/public outreach. All of these elements are necessary for the successful eradication of *Spartina* on the West Coast.

The nearly successful eradication efforts in San Francisco Bay and Willapa Bay have each required \$12 million since the year 2000. These eradication efforts were initiated following extensive colonization of the bays, and indicate the amount of funds needed to eradicate large, established populations that could occur in other areas of the West Coast if effective early detection surveys and rapid response are not implemented in a timely manner. Therefore, in addition to supporting eradication of known infestations, the *Spartina* ACT workplan focuses on early detection of new infestations in order to most

cost-effectively eradicate Spartina coast-wide.

Implementation of the workplan will require continued funding of ongoing eradication efforts and additional funds from the states, the federal government, the Province of British Columbia, the federal government of Canada, and cooperation with non-governmental and tribal government partners. The ACT estimates that new funding required for the next three years (2009-2011) will be approximately \$4.8 million, with the largest expense being eradication. The total new funding required to accomplish the entire goal of West Coast-wide eradication is \$16.8 million dollars over the next 10 years. The ACT will pursue this funding through a variety of sources, including state, federal, and non-governmental organizations.