

**Skagit County Marine Resources Committee
2005 Action Grant- *Spartina* Survey and Removal
Year One Final Project Report**

February 1st, 2006



Prepared for the Skagit Marine Resources Committee by
People For Puget Sound



**Skagit County Marine Resources Committee
2005 Action Grant- *Spartina* Survey and Removal
Year One Final Project Report
February 1st, 2006**

**Contractor: People For Puget Sound
Project Coordinator: Keeley O'Connell
Report Author: Keeley O'Connell**

Project Narrative

Spartina anglica, an invasive, salt-tolerant weed, continues to threaten the natural shoreline ecosystems of Washington. 2005 represented the ninth year of coordinated treatment efforts by several state agencies and organizations in Puget Sound. Washington State continues to use a large-scale integrated pest management (IPM) approach to combat *Spartina* in the North Puget Sound area. This means utilizing several control methods (manual, mechanical and herbicide) in order to maximize the area of the infestation being treated and the effectiveness of treatment. Accomplishing this goal will involve cooperative working between several organizations with interests in maintaining the integrity of Puget Sound's estuaries.

People For Puget Sound continues its involvement in the control effort by dedicating its resources to outreach and education of the public through beach surveys and community dig events. This work is only possible through partnerships with local groups, such as the Skagit County Marine Resources Committee, dedicated to protecting the marine environment.

Progress and Results

Dig Event: The funding provided to People For Puget Sound by the Skagit County Marine Resources Committee resulted in another successful large-scale community dig event. We partnered with the Swinomish Tribal Community for the fifth year in a row to promote public education and encourage alternatives to herbicide control on tribal property in Skagit County.

The 7th Annual Skagit Dig Days community dig, held on July 23rd 2005, was co-sponsored by Skagit County Marine Resources Committee, People For Puget Sound, the Swinomish Tribal Community, and the Skagit County Noxious Weed Board.

The event was held at a site called Kwanesum on the Swinomish Channel. This site was chosen based on several surveys with the Swinomish Tribal Planning Department and Skagit County Noxious Weeds Control Board, and was approved by Kyle Murphy at Washington Department of Agriculture, lead entity for the North Sound *Spartina* Task Force. Permission was acquired through the Swinomish Tribal Community. A *Spartina* removal and disposal permit was acquired from Kyle Murphy, WSDA (this was a verbal permit and did not require documentation).

Prior to the dig event, People For Puget Sound, Swinomish Tribal Community, and Skagit Noxious Weed Board staff conducted three survey and marking trips at Kwanesum to flag *Spartina*. Over 300 individual plants were flagged during those trips.

Partners recruited 33 volunteers, who spent up to five hours working (sign-in sheets were included with progress report). The good volunteer turnout and effort resulted in the removal of approximately 95% of the flagged *Spartina* at the site. However, two post-dig surveys revealed additional plants that were not flagged, resulting in total of approximately 90% removal at the site. An estimate of the total acreage of *Spartina* at the site prior to the dig event is not available due to the loss of GPS data from the site.

Media alerts prior to the event were sent to The Skagit Valley Herald, Skagit Argus, Channel Town Press, Swinomish Kee-yooks, Shelter Bay newsletter, the Skagit Valley College, Skagit Valley Co-op, Skagit Watershed Council e-mail list, and the DOVIA e-mail list. We also recruited volunteers to post flyers and posters in Whatcom and Skagit counties, focusing on LaConner, Anacortes, and Mount Vernon (event flyer attached). In addition, a paid advertisement for volunteer recruitment was run in the Skagit Valley Herald on July 17th prior to the dig event (advertisement attached).

Surveying and Removal: People For Puget Sound conducted surveys in late April to early May with Susan Moreno of the Swinomish Tribe Planning Department and Bill Rogers of the Skagit County Noxious Weeds Control Board following recommendations from the 2004 Action Grant *Spartina* Survey and Removal Final Report to the Skagit County Marine Resources Committee.

McGlinn Island causeway (see attached map) was surveyed for quality control follow-up from the 2003 Skagit Dig Day and follow up digs made by the Swinomish Tribe in 2004. Several *Spartina* seedlings and a small number of larger plants were found, indicating seed set from another site. Approximately 20 *Spartina* plants were flagged and several seedlings pulled. We determined that the McGlinn site was not appropriate for another large dig event, as there was not enough *Spartina* to host 30+ volunteers for several hours. Sue Moreno determined that the Swinomish crew could again remove the remaining plants during the 2005 control season. Eric Dennis with Swinomish reported the tribal crew manually removed all *Spartina* plants from this site.

We also surveyed south of McGlinn Island causeway (see attached map) to the southeast opening of the Swinomish channel into Skagit Bay. About a dozen seedlings were pulled, and approximately 15 larger plants flagged. Sue Moreno determined that the tribal crew could treat this area manually during the control season. Eric Dennis reported that the tribal crew manually removed all *Spartina* plants from this site.

We surveyed Lone Tree site (see attached map) at Thousand Trails Resort on the west side of the Swinomish Reservation. This site is roughly one and one half acre of native low salinity marsh and a sand spit. The majority of the *Spartina* found at this site was seedlings and small, individual plants. Three larger clones (0.5 to one square meter) were found. We flagged individual plants and clones for future removal by the Swinomish Tribe or the Skagit County Noxious Weed Board.

We again surveyed the Kwanesum site (see attached map) on the west side of the Swinomish channel. This site is approximately two acres with mixed habitat types including mudflat, sand, and a native low salinity marsh. In the past, *Spartina* had

completely consumed the native marsh and much of the mudflat area, leaving little diversity in flora. Through the efforts of the Swinomish Tribe and the Skagit County Noxious Weed Board, the infestation had been reduced to a manageable size, and a good site for a community dig event in 2005. Over the course of three follow-up surveys and marking trips, at least 300 plants ranging from seedlings to 1.5-meter diameter clones were flagged.

We also surveyed approximately two miles of shoreline north from the Kwanesum site along the west side of the Swinomish Channel. Very little to no *Spartina* was found in the riprap hardening along the channel itself. However, *Spartina* infestations of five to ten solid square meters were found in two small inlets. The Swinomish Planning Department is aware of these infestations, and has been treating them manually for several years. Sue Moreno reported that the Tribal crew would again treat these sites in 2005. Eric Dennis reported that the tribal crew manually removed all *Spartina* plants at this site.

Follow up and Recommendations

The People For Puget Sound project coordinator has worked closely with the Swinomish Tribe and the Skagit County Noxious Weeds Control Board to build recommendations for site maintenance and surveys in 2005. *Spartina* control efforts over the past nine years have reduced the overall infestation in Skagit County from over 100 solid acres to less than 10 solid acres. A few remaining infestations in Turner's Bay, Kwanesum and west Casino lagoon are all potential sites for dig days next year (see attached map).

The Casino lagoon and Kwanesum have been treated manually and with herbicide for the past two+ years. Turner's Bay is a historical shellfish site for the Swinomish, and the Tribe has determined that the use of herbicide would impact the effort to restore traditional shellfish areas on the reservation. Turner's Bay is also one of only three sites in the Puget Sound being treated with the bio-control agent, *Prokelisia marginata*. The tribe is committed to manually and mechanically eradicating *Spartina* from this site, and is therefore the best site to host a dig event in 2006. Scott Andrews and Eric Dennis from the Swinomish Planning Department are currently working with local residents on Turner's Bay to gauge interest in hosting a large, public event alongside the Tribe, People For Puget Sound and the Skagit MRC.

It is a priority of People For Puget Sound's *Spartina* program to assist in the phase out of potentially harmful chemicals used in the treatment of the invasive grass. It is highly recommended that sites receiving herbicide are surveyed each year and a concise assessment for the continued need of chemical control be made. The combined efforts of the Skagit County Marine Resources Committee, People For Puget Sound, the Swinomish Tribe, and other partners continue to educate and involve the public in *Spartina* awareness and nearshore stewardship.

Attachments:

1. 7th Annual Skagit Dig Days flyer
2. Skagit Valley Herald advertisement
3. Skagit County *Spartina* site map