Skagit County Marine Resources Committee

2006 Action Grant- *Spartina* Survey and Removal Final Report

May 23,2007

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

This report was funded in part through a cooperative agreement with the National Oceanic and Atmospheric Administration.

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

PEOPLE FOR PUGET SOUND
pugetsound.org

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Project Narrative

Spartina anglica, an invasive, salt-tolerant weed, continues to threaten the natural shoreline ecosystems of Washington. 2006 represents the tenth 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 sixth year in a row to promote public education and encourage alternatives to herbicide control on tribal property in Skagit County.

The 8th Annual Skagit Dig Days community dig, held on June 10th 2006, was co-sponsored by Skagit County Marine Resources Committee, People For Puget Sound, the Swinomish Tribal Community, and the Skagit Fisheries Enhancement Group.

The event was held on Turner's Bay in the northern most tip of Similk Bay on the private property of Nancy and Harriett Mack. The Swinomish Tribe own and manage the tidelands adjacent to the private property. This site was chosen based on multiple site visits with the Swinomish Tribal Planning Department, and discussions with the property owners. Kyle Murphy at Washington Department of Agriculture, lead entity for the North Sound *Spartina* Task Force, approved the site prior to the event and gave verbal permitting to People For Puget Sound and the Swinomish Tribal Planning Department to remove and dispose of noxious weeds from the site. Permission to use the site was acquired through the Swinomish Tribal Community and the property owners.

The event partners recruited 35 volunteers, which resulted in 175 volunteers hours logged (sign-in sheets provided with progress report). An estimated three cubic yards of *Spartina* above and below ground mass were removed during the four-hour event. This roughly equates to just over $1/10^{th}$ of an acre of mature *Spartina* cleared from the site. The majority of the grass consisted of small outlier clones and fringe areas missed by the larger mechanical control devices used at the site prior to the event. Digging has been shown to be an effective control technique at a site of large infestation, such as Turner's Bay, when used in this manner. Education of the volunteers was also a great success this year. The volunteers were trained in *Spartina* identification and provided with *Spartina* identification cards, handbooks, and contact information to report any future sightings.

Press stories ran in three local newspapers prior to the event to assist in recruiting volunteers and spreading the word about *Spartina* in Skagit County. La Conner's Channel Town Press ran an event column, The Anacortes American ran a story, and the Skagit Valley Herald conducted a full interview and photo shoot onsite prior to the event (news stories provided with progress report).

Media alerts were sent to The Skagit Valley Herald, Anacortes American, Skagit Argus, Channel Town Press, Clamdigger, Swinomish Kee-yooks, Shelter Bay newsletter, the Skagit Valley College, Skagit Valley Co-op, Bellingham Herald, Stanwood-Camano News, Organic Press, Whatcom Watch, Cascadia Weekly, Skagit Watershed Council e-mail list, and the DOVIA e-mail list. Event flyers and a full-color poster were posted throughout Whatcom and Skagit counties, focusing on La Conner, Anacortes, and Mount Vernon (flyer and poster provided with progress report).

Spartina *surveys:* The survey protocol and inventory was designed in partnership with WDNR and the Skagit/Snohomish WSU Beach Watcher coordinator. It was based on the protocol developed by WDNR for creosote surveys, with additional information pertinent to *Spartina* derived from protocols that were developed and used in the mid 1990's by the Adopt-a-Beach Foundation in partnership with the Washington Water Trails Association who conducted kayak-based *Spartina* surveys.

Volunteers conducted surveys during the day during tidal windows appropriate for surveying for both creosote and *Spartina*. The lat/long of *Spartina* sightings are recorded in the field using Garmin GPSmap 60Csx GPS units and hand entered onto hardcopy inventory forms. Additional information on the infestations were also recorded to aid in locating and assess prioritization for removal, such as estimated patch size, dominate substrate, presence of other vegetation, and other descriptive information (see attached inventory form). Water-based surveyors were encouraged to beach their craft and proceed on foot whenever possible, however, the project manager determined with field trials that surveys could be completed successfully from the watercraft when carried out at the appropriate tidal height. In situations where exiting the craft on the beach was not possible (due to inaccessibility, poor footing, or private property) the survey was conducted in such as way that each of the target items were surveyed for individually, for example surveying for *Spartina* on the trip out and for creosote on the trip back, again with special attention paid to timing with the tide. WDNR staff compiled all GPS and hardcopy data for post-processing.

Volunteer surveyors received formal training from the project manager and partner staff on techniques for proper surveying and identification. The Skagit County

Creosote/*Spartina* survey trainings were held on May 13th and August 5th (kayak-based training). These trainings consisted of at least two hours in the classroom to discuss both creosote and *Spartina* surveys and one hour in the field for practice and QA/QC with staff (see attached training agenda). Volunteers also received inventory packets containing a GPS unit, inventory forms on write-in-the-rain paper, pencils, measuring tape, Ziploc bags (for taking samples), trash bags, and a survey cheat sheet to refer to in the field. For the purpose of proper identification, surveyors were given Ziploc bags for taking stem and leaf samples of any unknown or questionable plants to be verified by the project manager. Many of the volunteer surveyors are also in the Beach Watcher program and have received several hours of training on nearshore topics and survey/inventory procedures. Volunteers were strongly encouraged to conduct their surveys with a partner resulting in many others being educated on invasive *Spartina*, identification, and surveying techniques.

. The project manager assisted WDNR staff with downloading GPS data and performing QA/QC. WDNR staff created maps by county displaying survey area covered and location of *Spartina* infestations found (see attached Skagit County map). Skagit County surveyors reported *Spartina* infestations over approximately eight miles of shoreline, however surveyors did not estimate patch size for area calculations. It is unclear if the lack of *Spartina* infestations recorded during these surveys is due to the actual absence of *Spartina* in these areas, or due to surveyor error (such as overlooking *Spartina* in lieu of creosote logs). Survey results are as follows:

County	Partners	Priority Area	Miles surveyed	Spartina found (m^2)	Num. of Volunteers	Num. of Vol hours
Skagit	--WDNR --Skagit WSU Beach Watchers --Skagit MRC	--Cypress Island --Bowman Bay --Burrows Island --Allen Island --Deception Pass --Similk Bay --Skagit Bay	118.74	N/A	19	163.5

Follow up and Recommendations

The People For Puget Sound project coordinator has worked closely with the Swinomish Tribal Planning Department, who in turn work with the Skagit County Noxious Weeds Control Board and Washington Department of Fish and Wildlife to build recommendations for site maintenance. The 9th Annual Skagit *Spartina* Dig Day is scheduled for June 16th 2007 and will again held at Turner's Bay. The project coordinator plans to continue working with the Skagit County Marine Resources Committee, Skagit/Snohomish County Beach Watchers and the WA Department of Natural Resources to conduct joint *Spartina*-creosote surveys on priority Skagit County shoreline during the summer of 2007.

Attachments:

1. sample *Spartina* inventory form
2. Creosote/*Spartina* survey training agenda
3. Skagit County survey results map

Spartina Survey Inventory Form

Date_____ Ecology Photo Number_____

Entered in Spreadsheet _____
Date_____ Initials_____

Site Location: City _____ County _____ Embayment _____ Beach _____

Name_____ Phone_____ Email_____

patch #	Digital Photo #	GPS Location (in Decimal degrees)		Estimated patch size (meters) SEE KEY	Dominant substrate type SEE KEY BELOW	Other dominant vegetation present	Other Descriptive Information (location on beach- appox. tidal height) accessible for removal, mixed in with other vegetation, flowering or seed heads present, sample taken for verification...)
		LAT:					
		LONG:					
		LAT:					
		LONG:					
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Site Notes: (include road access or boat access only; critters seen; property ownership; other...

KEY FOR PATCH SIZE: seedling; 0-0.5m, 0.5m-1m, 1m-3m, over 3m, meadow

KEY FOR BEACH SUBSTRATE: mudflat, marsh, cobble beach, sand beach, hardpan, mixed substrate (identify mix)

Note: if a sample is collected for verifycation, place sample in ziploc bag and clearly mark site location, patch id# the sample was taken from, and your name and contact information. Take care not to spread seed or root material into marine environment. DO NOT attempt control work yourself-