



PEOPLE FOR PUGET SOUND

COMMUNITY SPARTINA EDUCATION AND STEWARDSHIP PROGRAM

2012 FINAL REPORT TO THE
SKAGIT MARINE RESOURCES COMMITTEE
Skagit County Contract # C20120339

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SPARTINA SURVEYOR AMY HAMMER CHECKS OUT A NEWLY IDENTIFIED CLONE ON SKAGIT ISLAND, PHOTO R.BENBROOK

INTRODUCTION: People For Puget Sound has been supporting the Washington State Department of Agriculture's (WSDA) efforts to eradicate invasive *Spartina* grasses from the shores of Puget Sound since 2000. Since 2007, our efforts have focused on recruiting and training volunteer sea kayakers to survey priority shorelines for *Spartina anglica*, which is by far the most prevalent of the 4 species found in Puget Sound. This unique citizen science opportunity is the only region-wide volunteer program for kayakers in the country. The Skagit Marine Resources Committee has supported this groundbreaking work from the beginning, and volunteer sea kayakers have paddled almost 200 miles while surveying along Skagit County shorelines over 6 survey seasons. This report details the results of 2012 *Spartina* surveys, during which 15 volunteer kayakers surveyed over 26 miles in Skagit County, identifying approximately 69 square meters of *S. anglica*.

RECRUITMENT: Volunteer kayakers were recruited through local kayak clubs and from the general public. Training and program announcements were distributed through: Whatcom Association of Kayak Enthusiasts (WAKE), Hole In The Wall Kayak Club (HITW), Washington Kayak Club, Washington Water Trails Association, WSU Beachwatchers, Bellingham Community Boating Center, and others. Additionally, recruitment flyers were posted throughout the region at locations frequented by paddlers.

SURVEY METHODS: Experienced kayakers were invited to attend a training session held in North Puget Sound. Volunteer paddlers received formal training that included information about *Spartina*, proper survey and identification techniques, and kayak safety issues. Each volunteer was given a packet which contained all the necessary forms and guidelines to conduct surveys, including a laminated *Spartina* ID Card with detailed instructions on how to identify the plant in the wild. Surveyors were also provided with ziploc bags for storing leaf and stem samples of any potential *Spartina* specimens that needed to be verified by the project manager.

Surveys were conducted during the daylight tidal window of a +3 to a +9 tide in order to maximize *Spartina* exposure. Surveyors recorded the latitude and longitude of any *Spartina* infestations using a GPS unit and entered this data onto the inventory forms. They also recorded additional relevant information that could aid in location and removal- including estimated patch size, dominate substrate, presence of other vegetation, and other descriptive information. Water-based surveyors were encouraged to beach their craft and proceed on foot whenever possible, however, the project manager has determined with field trials that surveys can be completed successfully from the watercraft when carried out at the appropriate tidal height.



Figure 1: Careful planning of tidal conditions helped make surveys a success. Samish Bay, 8-3-12. Photo: R.Benbrook

RESULTS: Table 1 below illustrates the results of surveys in 2012. This year, 9 kayak surveys were conducted in Skagit County. A total of 26.5 miles were surveyed in Skagit County this year. Fifteen volunteers participated in these surveys, contributing a total of 85 hours, valued at \$1,838.55 at the federal rate of \$21.36 per hour. Volunteer engagement in this project remains strong, we have a dedicated base of local paddlers who conduct surveys each year. GIS maps of county-wide surveys and infestations are included in Appendix 1.

Table 1: Skagit County Survey Program Results, 2012

Date	Activity	Location	Number Volunteers	Total Volunteer Hours
5/17/2012	Spartina Paddle	Dredge Islands	2	12
7/14/2012	Spartina Paddle	Dredge Islands	0	0
7/21/12	Spartina Survey	Cypress Head and Guemes	0	0
8/3/12	Spartina Paddle	Samish Bay	6	40
8/19/12	Spartina Paddle	Skagit Delta	3	12
9/3/12	Spartina Survey	Guemes SE	0	0
9/19/12	Spartina Paddle	Hope and Skagit Islands	1	8
9/22/12	Spartina Paddle	Chuckanut - Taylor Shellfish	2	6
9/24/12	Spartina Paddle	Flounder Bay, Burrows Is	1	7
Totals:			15	85

DISCUSSION: We have come a long way towards eradication in Skagit County, due in large part to the support of the Skagit MRC. However, even after over a decade of effort to survey and control *Spartina*, we are still finding new clones scattered across the beautiful shorelines of Skagit County. This year, we continued to monitor and ongoing infestation at the Dredge Islands north of the Swinomish Channel. There are still over a hundred clones on the islands (see map in Appendix 1 for more detail) and program staff have been persistent in reminding controllers that these islands need to continue to be closely monitored to ensure this infestation does not spread to Padilla Bay or other eradicated areas nearby.

In addition, previously unknown clones were located in 2 areas in Skagit County this year: 2 small clones were found on Skagit Island and 2 larger ones in Flounder Bay in the Skyline area of Anacortes (see cover photo and Figure 2). Both of these clones were discovered due to the unique nature of sea kayak based surveys- easy access to remote locations like island beaches and also hard to reach places like inside of marinas where our shallow draft and extreme maneuverability allows us to survey all the nooks and crannies under docks and piers. Kayak surveyors continue to demonstrate the niche we can fill in the statewide eradication efforts.

The clones on Skagit Island have already been eliminated, and the location of the plants in Flounder Bay has been shared with WSDA and the Skagit Noxious Weed Coordinator to ensure that they will also be eradicated. The shorelines of Skagit County are safer today due to the efforts of People For Puget Sound staff and our dedicated volunteer kayakers.



Figure 2: A large *Spartina* clone recently discovered in Flounder Bay in Anacortes. Photo: R. Benbrook

CONCLUSIONS: The Skagit County Marine Resources Committee has been supporting People For Puget Sound's Community *Spartina* Education and Stewardship Program since 2003. During these years, program staff have trained over 310 people in Skagit County on *Spartina* identification, removal, and survey methods. Since 2007, the program has focused on survey training for kayakers, as these volunteers are especially suited to access the mudflats and outer islands that can be more difficult to survey by traditional methods. In these three years, volunteer paddlers have paddled almost 200 miles of shoreline in Skagit County, identifying approximately 380 square meters of invasive *Spartina*.

This year People For Puget Sound volunteer sea kayakers surveyed over 65 miles of shoreline in Puget Sound, including 26.5 miles in Skagit County. Program volunteers continue to demonstrate that Puget Sound's vibrant sea kayaking community has a role to play in the statewide eradication of invasive *Spartina*. In Skagit County, so close to the original infestation point in Stanwood, there continues to be problem areas where ongoing infestations of *Spartina* are growing and spreading seed. People For Puget Sound's volunteer sea kayakers, trained as citizen scientists, make a valuable contribution to monitoring and research of their local waters by documenting the continued presence of this dangerous invasive on Skagit County shorelines. This unique program would not be possible without the ongoing funding from the Skagit MRC. Thank You for this support!

APPENDIX 1: Skagit County and Infestation GIS Maps

2012 Spartina Survey: Skagit County



0 1.25 2.5 5 Miles

2012 Spartina Survey: Dredge Islands, Skagit County



2012 Spartina Survey: Skagit and Hope Islands, Skagit County



2012 Spartina Survey: Skagit County, Flounder Bay

