

Northwest Straits Action Grant Final Report to the SJC MRC

FORAGE FISH SHADE RESTORATION PILOT PROJECT

April 15, 2004

Friends of the San Juans



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SUMMARY

The Forage Fish Shade Restoration Pilot Project applied existing nearshore habitat data to the analysis of marine riparian habitat in San Juan County. Restoration and protection priorities for marine riparian habitat at forage fish beaches in San Juan County were identified, mapped, used to select pilot project sites and shared with relevant coastal management organizations and entities in San Juan County.

The Forage Fish Shade Restoration Pilot Project implemented three marine riparian enhancement projects at summer surf smelt spawning beaches. The pilot restoration projects restored native, deciduous plant species to documented spawning beaches where vegetation had been compromised by human activity. Projects will improve shade of forage fish spawning habitat, provide bank stability and enhance overall habitat function and diversity for a range of fish and wildlife species that depend on healthy nearshore environments.

Community volunteers and local youth were actively engaged in the pilot projects, and will continue to maintain and monitor planting sites. Additional funding has been secured to expand the project beyond the geographic extent and timeline of the Northwest Straits Action Grant; additional education, land use policy and restoration projects related to the restoration and protection of marine riparian habitat at priority nearshore sites are planned.

Task One: Define restoration and protection priorities for riparian restoration at forage fish beaches in San Juan County.

- Restoration and protection priorities for marine riparian habitat have been identified and mapped for San Juan County. Please see Attachment 1. *Marine Riparian Habitat Protection and Restoration Priorities for Forage Fish Habitat in San Juan County*.
- Protection and restoration priorities were applied to the selection of pilot sites for replanting, along with additional factors such as soils, adjacent vegetation and land ownership.
- Marine riparian protection and restoration priorities for forage fish habitat were shared with the following entities and organizations involved in the management of nearshore habitat in San Juan County: San Juan County planning department; the San Juan County Land Bank; the San Juan County Marine Resources Committee, the San Juan Preservation Trust; and the Salmon Recovery Funding Board.

Task Two: Implement three pilot marine riparian restoration projects at summer surf smelt spawning beaches.

- The Lopez forage fish habitat restoration pilot project occurred on San Juan County Land Bank Property. The site is located above a documented summer surf smelt spawning site and two years of pre-project egg mortality data have been collected. Community volunteers and a student intern provided assistance with implementation, maintenance and ongoing monitoring of the site. Species planted included: red alder, big-leaf maple, nutka rose, native blackberry, two species of willow, mock orange, black twinberry and thimbleberry. The site was planted once in December of 2003 and an additional planting event occurred on April 14, 2004. The project will be watered over the first summer and the following factors will be monitored: plant success (by species, size class and season of planting); shade impact to the spawning habitat (measured annually in August using a densitometer); and egg success (bulk sample collected annually in August).

- The Shaw forage fish habitat restoration pilot project occurred along Blind Bay on private property. The site is located above a documented year-round surf smelt spawning site and two years of pre-project egg mortality data have been collected. Landowners along with the parents and youth of the Shaw Island 4-H group are providing assistance with implementation, maintenance and ongoing monitoring of the site as part of their continuing participation in the SJC Forage Fish Project. Species planted included: mock orange, black twinberry, kinnickinnick, native huckleberry and thimbleberry. Moderate height and root depth shrub species were selected to reduce potential adverse impacts to the road and nearby archeological resources while still providing summer shade impact to the spawning habitat on the north facing medium bank. The site was planted on April 3, 2004. The project will be watered over the first summer and the following factors will be monitored: plant success (by species, size class and season of planting); shade impact to the spawning habitat (measured annually in August using a densitometer); and egg success (bulk sample collected annually in August).

- The Orcas Island forage fish shade restoration pilot project occurred on the west shore of Orcas Island, at YMCA Camp Orkila. The site is located above a documented summer surf smelt spawning site and one year of pre-project egg mortality data has been collected. The Orcas Island Alternative Home School Group planted the project as part of their comprehensive 6-month unit on forage fish. Species planted included: red alder, big-leaf maple, two species of willow, red flowering currant, mock orange, thimbleberry and kinnickinnick. The site was planted on March 31, 2004. The project will be watered over the first summer by adult forage fish project volunteers and the following factors will be monitored: plant success (by species, size class and season of planting); shade impact to the spawning habitat (measured annually in August using a densitometer); and egg success (bulk sample collected annually in August). A full-color, outdoor interpretive panel will be installed by the planting site (just outside of the Camp Orkila Marine Science Center) and will provide information on the importance of healthy coastal forests to marine species for the thousands of youth and adult visitors the camp hosts annually. For a draft mockup of the interpretive panel, see Attachment 2. *Healthy Coastal Forests* interpretive panel. Plants at the Camp Orkila shade restoration pilot site will be labeled with species identification tags for further education of Camp visitors.

Task Three: Document, evaluate and share all project results:

- Initial priority restoration and protection priorities for marine riparian habitat at potential and documented forage fish spawning sites San Juan County have been shared with all government and organizational entities with coastal management responsibility or interest in the county.
- Marine riparian habitat priorities are also being used in outreach and educational efforts with shoreline landowners.
- Information learned from the pilot plantings will be shared with local and regional partners in salmon and nearshore marine recovery efforts. Topics will include: site selection, species, plant size and age class, shade impact, egg mortality impact as well as the key social factors including land ownership, cultural resources, and working with private landowners and volunteers.

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Forage Fish Shade Restoration Pilot Project- Outreach Update

Lopez Project:

- Project information and invitation to participate to sent to 15 Lopez Project WET participants (adult volunteers who completed WSU Extension Service's Watershed Stewards Program and stayed together as a group to do projects).
- Project information shared with SJC Land Bank, Washington State Ferries and Washington Department of Transportation.
- 10 Project WET and community volunteers planted the site in December 2003.
- Front page coverage of the project in the Lopez Weekly, December 2003.
- 4 high school students helped plant site in spring 2004.

Shaw Project:

- Landowners fully involved in planning and implementation- family of 4.
- Project flier mailed to property owners along Blind Bay, Shaw Island- 20 landowners.
- Shaw 4-H group, 8 kids and 5 parents involved in implementation, maintenance and monitoring.
- General community volunteers on Shaw- 5 adults.
- Outreach with general Shaw community on day of planting (informal)- 15 residents.

Orkila Project:

- 10 OASIS home school students involved in project planting, plus teacher and 3 parents.
- Front page coverage of Islands Sounder of planting project.
- Outreach to Camp Orkila environmental and outdoor education staff (6 adults).
- Future outreach at Orkila site from interpretive panel and events: 1,000's.

General Meetings, Presentations:

- Marine Riparian Expert Workshop- BC. February 2003
- NW Straits/MRC Annual Meeting- Port Townsend. December 2003
- NW Straits Evaluation Committee- January 2004
- SJC MRC Meeting- April 2004.