

PROJECT PROPOSAL – RESTORATION AND ACQUISITION PROJECTS (Excluding Fish Passage)

INSTRUCTIONS: Salmon Recovery Funding Board applicants must respond to the following items. Please respond to each question individually. Local citizen and technical advisory groups will use this information to evaluate your project. Contact your lead entity for additional information that may be required. Limit your response to eight pages.

Submit information via the PRISM attachment process. Application checklists and attachment forms may be downloaded off the SRFB Web site at <http://www.rco.wa.gov/srfb/docs.htm>.

NOTE: Acquisition, Combination, and Diversions and Screening projects have supplemental questions embedded within this worksheet. Please answer the questions below and all pertinent supplemental questions.

1) PROJECT OVERVIEW

Explain your project overall and include the following elements:

The Strawberry Plant property is located in the back reaches of Eagle Harbor (figure 1) and was once the center of a thriving strawberry industry on Bainbridge Island. The pier and the commercial-use building on the pier burned down in 1990's and were not rebuilt. The property is currently unused. It was recently acquired through a land exchange and will eventual be used as a park. Eagle Harbor has suffered significant habitat impacts, including the historic filling of two significant marsh/lagoon habitats in the outer harbor that can never be restored due to Superfund reclamation (figure 3). The Strawberry Plant property is one of the most significant opportunities to restore lost estuarine habitat in Eagle Harbor and will benefit salmon, shellfish, birds, and other wildlife. The site is located near a recently restored salmon stream and an aquatic conservancy area.

The Strawberry Plant project is currently undergoing design with funding from a previous SRFB grant. The project is on-schedule for construction in 2009. Sponsor match for this grant will be provided primarily from project partner Elliott Bay Trustee Council and the Washington State Department of Natural Resources is contributing in-kind work removing the creosote treated piling. Property value from the City of Bainbridge Island (property owner) is not accounted for in match, but is recognized as a valuable contribution to this project. This project is included in the City's Capital Facilities Plan.

Existing Conditions (figure 2)

The site contains a mature forest on the northern portion of the property, a stream and small stream mouth sub-estuary, a large asphalt area immediately adjacent to part of the stream mouth and upland of the shore, significant fill placed over tidelands, bulkheading and piles in the intertidal beach, and fringing tidal marsh. There is also significant debris (concrete, building materials, boat remains, etc) in

the creek mouth and on the tidelands. The upland property surrounding the old plant building has undergone a phase-II environmental assessment, which did not identify any contamination.

The uplands contain a mature forest of Douglas Fir, hemlock, cedar, madrone, and maple as well as some willow. This mature forest likely provides good perches for raptors and other birds. The uplands also contain a significant amount of invasive noxious weeds, including scotchbroom, ivy, blackberry, and morning glory, but these have not spread beyond reasonable control. A Great Blue Heron, an unidentified diving bird, pacific oyster, muscle, and very productive clam beds have been observed on site. Evidence of raccoon, deer, and burrowing crab have also been observed on site.

The stream that runs through the property has an urbanized watershed. Water quality conditions in this stream are unknown at this time, monitoring will provide more information in this regard. The stream north of the property (beyond Shepard Way culvert) has very limited habitat due to extensive piping and stormwater pond facilities and the culvert under Shepard Way is a fish passage barrier. The stream on the property is relatively intact with good amounts of large woody debris (downed trees and branches which are a valuable habitat component), but could use some minor habitat improvements. Salmon use of this lower stream reach is unknown but highly possible, monitoring will provide more information in this regard.

The stream mouth is restricted by fill, contains concrete debris, and has experienced scouring on the southern side due to directed stormwater flows or water utility flushing. Small stream mouths act as small estuaries (even when contained within larger estuaries) where fresh and salt water mix and sediments, if any, are deposited as deltas. This mixture of water (lower salinity than the harbor), sediment, and large woody debris provide very productive rearing habitat for young juvenile salmon emerging from the stream, nearby streams, and to juvenile salmon migrating along the shore as well as a rich area for shorebirds and terrestrial animals to forage for food.

Greater Eagle Harbor

Eagle Harbor has historically contained significant estuarine habitat complexes. In Eagle Harbor, like throughout Puget Sound, marshes were filled and dredged for industrial, residential, and commercial development. Figure 2 provides a comparison for the two largest estuarine habitat complexes in Eagle Harbor, both of which are now permanently lost to future restoration due to their Superfund status. The only significant remaining estuarine habitat in Eagle Harbor is located in the inner harbor where the Strawberry Plant is located. There are several salmon-bearing streams within Eagle Harbor, who's outmigrating juvenile salmon and salmon from other watersheds throughout Puget Sound used these marsh habitats as important rearing areas. One of these streams is Cooper Creek, in which the City restored access to nearly 1 mile of habitat (August 2004) for coho,

chum, and cutthroat. Another Eagle Harbor salmon stream is the Winslow Ravine Creek which supports coho, chum, and cutthroat. Recent beach seining research, which included one site in Eagle Harbor, documented chinook salmon from numerous watersheds throughout Puget Sound as well as pink, coho, chum, cutthroat, steelhead, surf smelt, sandlance, and hearing as well as numerous other species utilizing Eagle Harbor.

The restoration of the Strawberry Plant will return some of the important historic estuarine habitat that has been lost in Eagle Harbor, which will benefit salmon populations including fish from local streams like Cooper Creek (recently restored) and the Winslow Ravine Creek as well as ESA listed and candidate species. Additionally, Eagle Harbor water quality is degraded, water clarity is diminishing, and important habitats like eelgrass are disappearing – most likely due to the contribution of excessive nutrients from human-related activities (septic, sewer, fertilizer, boats, pets, etc). Restoring estuarine habitat at the Strawberry Plant is one of many nearshore and salmon habitat improvement projects within Eagle Harbor, all of which are part of a long-term strategic effort to improve the ecological function of the Harbor.

Restoration Components (figure 4)

Stream - The stream north of Shepard Way contains very little suitable fish habitat and is not accessible to fish due to the Shepard Way culvert. This northern portion of stream is not a high priority for fish habitat restoration, although managing the entire stream corridor and watershed to protect water quality and manage stormwater flows is a priority for maintain healthy habitat and safe recreation at the site and in Eagle Harbor. Maintaining vegetated buffers, protecting and restoring wetlands, using bioswales and other low-impact stormwater techniques at the site of development and throughout the watershed will help clean polluted runoff as well as store and release water in more natural flow patterns; thereby benefiting fish, wildlife, and people.

The stream south of Shepard Way (Figure 4, area 2) contains habitat that is suitable for fish and will be protected. Healthy riparian vegetation along this portion of the stream provides shade to help maintain cool water temperatures; recruitment of woody debris that provides habitat structure and opportunities for food (particularly insect) production; recruitment of food resources (particularly insects); and leaf litter that help support insect production. Adult and larval insects are known to be an important food for juvenile salmon in freshwater and the nearshore.

Uplands – Existing forest cover will be retained to provide wildlife and bird habitat, water quality functions, and scenery (Figure 4, area 1). Invasive noxious weeds will be controlled as part of the long-term management of the property. A significant amount of the asphalt on the site will be removed and restored to riparian and upland forest cover with appropriate view corridors retained and recreational development as determined through a park planning process (Figure

4, area 8). Recreational facilities on the site will be passive in nature and likely include playground and picnicking facilities. Some of the asphalt on the western portion of the property will likely be retained for parking and handicapped access (Figure 4, area 7). Pedestrian and bicycle connections will be made to the waterfront trail and other non-motorized facilities, which may include a pedestrian bridge over the stream. Stormwater runoff from all paved surfaces and roofs will be directed through vegetated buffers, bioswales, or rain gardens with a capability to treat the water before being released into restored marsh, the creek, or Eagle Harbor.

Shoreline – The most significant restoration on the property will be done along the shoreline, including the stream mouth subestuary and throughout the intertidal beach. Remnant piles and floats will be removed because they leach toxic contamination, smother or displace habitat, shade aquatic vegetation, and provide artificial habitat that results in a shift of species composition (Figure 4, area 5). Debris scattered throughout the stream mouth and intertidal beach will be removed to improve intertidal habitat for aquatic vegetation, clams and other benthic invertebrates, birds, and fish. Most of the debris could be removed by volunteers while items like boat remains and concrete would require heavy equipment.

The intertidal beach that was once under the Strawberry Plant is likely the historic beach and can be used as a guide for the extent of shoreline restoration. Removal of the intertidal fill and bulkheads that make up the east and west peninsulas that once extended along either side of the Strawberry Plant will restore approximately ½ acre of intertidal beach, salt or brackish marsh, and backshore habitat (Figure 4, area 4). Large woody debris (drift logs) will be added to the marsh and backshore portions of the restoration to provide habitat complexity, to naturally anchor the beach sediments and vegetation. The existing intertidal habitat is highly productive with clams and removal of this fill will restore additional clam beds as well as habitat for many other invertebrate species (worms, burrowing shrimp, crab, copepods, amphipods, etc), which in turn will support fish (flounder, salmon, sandlance, surfsmelt, etc) and birds (diving birds, wading birds, raptors, etc). The stream mouth subestuary has been artificially constricted by fill and concrete. The stream mouth will be widened by removing fill and concrete and large woody debris will be added (Figure 4, area 3). Riparian vegetation will be planted along the stream mouth and behind the backshore areas to provide additional ecological functions through a natural continuum of habitats. Appropriate view corridors and recreational facilities may be located and maintained through the riparian vegetation.

- a) List your primary project objectives, such as how this project will improve or maintain habitat conditions and habitat forming processes.
 - *Estuarine and Nearshore Marine*: Increase shallow estuarine habitat; allow fish access and use.
 - *Riparian*: Increase shade; provide a source of woody debris recruitment.

- b) State the nature, source, and extent of the problem that the project will address, including the primary causes of the problem, not just the symptoms. Explain how achieving the project objectives will help solve the problem. (Diversion and Screening projects should refer to the supplemental questions later in this worksheet for further guidance on information to include in their problem statement.)

See project description above.

- c) Describe the fish resources (species and life history stages present, unique populations), the habitat conditions, and other current and historic factors important to understanding this project. Be specific--avoid general statements.

See project description above.

- d) Discuss how this project fits within your regional recovery plan or local lead entity strategy (i.e., does the project address a priority action, occur in a priority area, or target priority fish species?).

The regional recovery chapter and local lead entity plan for the West Sound Watershed area prioritizes nearshore habitat, including estuarine and riparian habitat, restoration. These plans are multi-species and ecosystem based. The Strawberry Plant project meets all of the priorities of these plans and specifically addresses listed species.

When possible, list your sources of information by citing specific studies, reports, and other documents.

2) PROJECT DESIGN

- a) Describe the location of the project in the watershed (nearshore, estuary, main stem, tributary, off channel, etc.).

Nearshore

- b) Describe the project design and how it will be implemented. Describe the extent of the project. Describe specific restoration methods and design elements you plan to employ. If restoration will occur in phases, explain individual sequencing steps, and which of these steps is included in this application. (Acquisition-only projects need not respond to this question.)

The project is currently under design, but includes the following elements:

- Remove 95 piles (mostly creosote treated wood);
- Remove a float that grounds at low tide;
- Remove 250 feet of shoreline armoring;
- Remove 23,000 square feet (~3,400 cubic yards) of intertidal/estuarine fill and grade;
- Remove concrete, brick, and other debris spread throughout the intertidal zone;

- Remove 23,500 square feet of concrete (~870 cubic yards), amend soil, grade, and replant;
- Utilize natural seed recruitment from adjacent native marsh;
- Monitoring and maintenance (not funded by this grant).

The project will be constructed in two phases, with phase 1 being piling removal done by the Washington State Department of Natural Resources occurring from a barge in accordance with approved WDNR best management practices. Phase 2 will be the remainder of the project and will occur from the land and is expected to occur in the following general sequence:

- Remove asphalt and invasive species;
- Remove bulkheads and intertidal fill;
- Place and grade intertidal substrate;
- Utilize some of the removed intertidal fill to recontour the asphalt area;
- Grade and place soil amendment;
- Replant and install irrigation;
- Monitor and maintenance.

All of the above steps will be funded by this grant except for monitoring and maintenance, which will be funded by a separate stewardship fund established for this site.

- c) Describe the scale and size of the project, and its proximity to protected, functioning, or restored habitats. (Diversion and screening only projects [i.e., not a combination] need not respond to this question.)

The overall project will restore stream mouth, intertidal, fringe marsh, and riparian habitat. The project includes the following:

- Remove 95 piles (mostly creosote treated wood);
- Remove a float that grounds at low tide;
- Remove 250 feet of shoreline armoring;
- Remove 23,000 square feet (~3,400 cubic yards) of intertidal/estuarine fill and grade;
- Remove concrete, brick, and other debris spread throughout the intertidal zone;
- Remove 23,500 square feet of concrete (~870 cubic yards), amend soil, grade, and replant;
- Utilize natural seed recruitment from adjacent native marsh;
- Monitoring and maintenance (not funded by this grant).

The Bainbridge Island Nearshore Assessment currently rates the shoreline reach containing the Strawberry Plant as moderate/high (ecological) impact with a

score of -0.725 (on a scale from 0 to -1) and is ranked the 186th worst reach out of 201 reaches. After the proposed project achieves maturity, the same assessment methodology would rate the reach containing the Strawberry Plant as low impact with a score of -0.175 and would be ranked the 21st best reach out of 201. The Strawberry Plant site is adjacent to an Aquatic Conservancy area (regulatory designation) that protects the back portion of Eagle Harbor.

Eagle Harbor has historically contained significant estuarine habitat complexes. In Eagle Harbor, like throughout Puget Sound, marshes were filled and dredged for industrial, residential, and commercial development. Figure 2 provides a comparison for the two largest estuarine complexes in Eagle Harbor, both of which are now permanently lost to future restoration due to their Superfund reclamation status. The only significant remaining estuarine habitat in Eagle Harbor is located in the inner harbor where the Strawberry Plant is located. There are several salmon-bearing streams within Eagle Harbor, who's outmigrating juvenile salmon and salmon from other watersheds throughout Puget Sound used these marsh habitats as important rearing areas. One of these streams is Cooper Creek, in which the City restored access to nearly 1 mile of habitat (August 2004) for coho, chum, and cutthroat. Another Eagle Harbor salmon stream is the Winslow Ravine Creek which supports coho, chum, and cutthroat. Numerous other stream mouth subestuaries ring Eagle Harbor and are shown in the "Nearby Habitats" map. Recent beach seining research, which included one site in Eagle Harbor, documented chinook salmon from numerous watersheds throughout Puget Sound as well as pink, coho, chum, cutthroat, steelhead, surf smelt, sandlance, and hearing as well as numerous other species utilizing Eagle Harbor.

The restoration of the Strawberry Plant will return some of the important historic estuarine habitat that has been lost in Eagle Harbor, which will benefit salmon populations including fish from local streams like Cooper Creek (recently restored) and the Winslow Ravine Creek as well as ESA listed and candidate species. Restoring the Strawberry Plant is one of many nearshore and salmon habitat improvement projects within Eagle Harbor, all of which are part of a long-term strategic effort to improve the ecological function of the Harbor. Other projects in Eagle Harbor include:

- Waterfront Park – spawning beach restoration
- Pritchard Park West – spawning beach & riparian restoration
- Pritchard Park East – feeder bluff, spawning beach , riparian restoration
- Pritchard Park Milwaukee Dock – eelgrass restoration
- Removal of creosote treated wood
- Ongoing efforts to reduce nutrient pollution to help eelgrass restoration

d) Describe the salmonid species and life cycle stage(s) that are targeted to benefit by this project.

- Chinook – primarily juvenile
- Steelhead – primarily juvenile
- Bull trout – possibly juvenile

- Coho – juvenile & adult
 - Cutthroat – juvenile & adult
 - Chum – juvenile & adult
 - Pink – primarily juvenile
- e) Describe the long-term stewardship and maintenance obligations for the project or acquired land. For acquisition and combination projects, identify any planned use of the property, including upland areas.

Long-term stewardship will include:

- monitoring of revegetation success, invasive plants, erosion of intertidal sediments
- invasive plant control
- replacement of dead plants, as necessary

3) PROJECT DEVELOPMENT

- a) List the individuals and methods used to identify the project and its location.
- This project has been identified as an important restoration opportunity in several reports, plans, and presentations, including:
 - Bainbridge Island Nearshore Habitat Characterization and Assessment report (Williams et al; Battelle Marine Sciences Laboratory)
 - East Kitsap Habitat Limiting Factors report (Haring; WA Conservation Commission)
 - East Kitsap Salmon Recovery and Conservation Plan & 3-year list
 - Eagle Harbor/Wyckoff Superfund Site Natural Resource Trustees prioritization process
 - Scoping of this project has received support, ideas, and assistance in a variety of ways from the following:
 - Jim Brennan, WA Sea Grant
 - Doris Small, WA Department of Fish and Wildlife
 - Paul Dorn, Suquamish Tribe
 - Eagle Harbor/Wyckoff Superfund Site Natural Resource Trustees, particularly:
 - Rich Brooks, Suquamish Tribe
 - John Kern, NOAA Restoration Center
 - Project Design Consulting Team, including:
 - John Small – Anchor Environmental
 - Clay Patmont – Anchor Environmental
 - Paul Schlenger – Anchor Environmental
 - Jim Johannessen – Coastal Geologic Services
- b) Explain how the project’s cost estimates were determined.
- Cost estimates were developed by the project manager, City engineering staff and Anchor Environmental (project consultant) based on estimated quantities

derived from the conceptual plan and early design work that is currently in progress.

- c) Describe other approaches, opportunities, and design alternatives that were considered to achieve the project's objectives.
 - None. There are no other sites in Eagle Harbor that could provide this type of habitat restoration. This project substantially maximizes habitat restoration at the Strawberry Plant site.
- d) Describe the consequences of not conducting this project at this time. Consider the current level and imminence of risk to habitat in your discussion.
 - If delayed, public support may diminish and construction costs will continue to increase.
- e) Describe any concerns about the project raised from the community, recreational user groups, or adjacent land owners, and how you addressed them.
 - There is general support for restoration at the Strawberry Plant, but a few citizens have expressed concerns about converting too much of the property to habitat. The property is encumbered by significant shoreline and stream buffers that cannot be developed for recreation. These buffers comprise the habitat restoration area and therefore there is no conflict.
- f) Include a Partner Contribution Form, when required, from each partner outlining its role and contribution to the project. This form may be downloaded off the SRFB Web site. State agencies are required to have a local partner that is independently eligible to be a project sponsor. A Partner Contribution Form is also required from partners providing third-party match.
 - Elliott Bay Trustee Council (Eagle Harbor/Wyckoff Superfund Site) – will be providing funding
 - Washington State Department of Natural Resources – will be removing creosote treated piling as part of a larger creosote treated wood removal project on Bainbridge Island.
- g) List all landowner names. Include a signed Landowner Acknowledgement Form (available on the SRFB Web site) from each landowner acknowledging their property is proposed for SRFB funding consideration. If a restoration project covers a large area and encompasses numerous properties, Landowner Acknowledgement Forms are not required. For sponsors proposing work on their own property, this form is not required. For multi-site acquisition projects involving a relatively large group of landowners, include, at a minimum, signed Landowner Acknowledgement Forms for all known priority parcels.
 - City of Bainbridge Island

- h) List the names, qualifications, roles, and responsibilities for all known staff, consultants, and subcontractors who will be implementing the project. If unknown, describe the selection process.
- Peter Namtvedt Best (Planner & Shoreline Stewardship Program Coordinator) is the City's project manager and will be responsible for managing the grant, coordinating with project partners, as well as overseeing and working with the project consultant.
 - Anchor Environmental (project consultant) is currently working on the project design and will oversee construction. Anchor has teamed with Costal Geologic Services, Aspect Consulting, MAKERS Architecture + Design, and Northwest Archaeological Associates. The Anchor team was selected through a public RFQ process.
 - Construction contractors will be hired, as needed, to complete the project under the supervision of the project consultant and project manager.

4) TASKS AND SCHEDULE

List and describe the major tasks and time schedule you will use to complete the project. Describe your experience managing this type of project.

- The project will be designed and bid under the current design phase. This grant will fund the construction phase of the project, so the major tasks only include mobilization and construction. Monitoring and maintenance will be funded through a separate stewardship fund. Construction is expected to occur during late summer or fall of 2009.
- The City manages a wide variety of construction projects. We are utilizing Anchor Environmental to provide day-to-day management of construction of this project since they designed it and have extensive experience managing construction of habitat restoration projects.

5) CONSTRAINTS AND UNCERTAINTIES

Each project should include an adaptive management approach that provides for contingency planning. State any constraints, uncertainties, possible problems, delays, or unanticipated expenses that may hinder completion of the project. Explain how you will address these issues as they arise and their likely impact on the project.

Constraints, uncertainties, possible problems, delays, or unanticipated expenses might include the following:

- Archaeological Resources – we have conducted site investigations to look for archaeological resources, which should reduce the risk of finding undiscovered resources. Excavation is planned to stop above native soil to avoid uncovering archaeological resources. We will have an archaeologist on board during

construction and a response plan in place should any archaeological resources be uncovered.

- Contamination – The property has undergone a Phase-II environmental assessment and we have conducted further site investigations to look for contamination. We will have a response plan in place should any spill occur or contamination be uncovered.