15. Evaluation Proposal

Applicants must respond to the following items. The local citizen and technical advisory groups will use the evaluation proposal to evaluate your project. Applicants should contact their lead entity for additional information that may be required.

Up to eight pages may be submitted for each project evaluation proposal.

(SUBMIT INFORMATION VIA PRISM ATTACHMENT PROCESS OR ON PAPER)

I. Background

Protection is central to WRIA 6's salmon recovery strategy. This proposal's implementation strategies and actions protect nearshore habitats and processes of high value Strawberry Point watershed locations on Whidbey Island, Washington (WRIA 6 Salmon Recovery Plan, May, 2005). Those locations include key shorelines composed of feeder bluffs and sediment transport and accretion zones, eelgrass meadows, riparian cover, forage fish rearing and ESA listed specie transit areas, including loitering areas around three vital creek mouths (Restoration and Conservation Potentials in Island County, CGS, May 2004). Strawberry Point's landscape position directly across from the Skagit River delta creates valuable habitat for migrating juvenile salmonids. Island County's SRP shows that its location adjacent to both forks of the Skagit River is heavily used by six of the twenty-two independent Chinook salmon populations. As the SRP documents: Strawberry Point is within Geographic Area 1, is a juvenile Chinook utilization area, is home to sand lance and surf smelt spawning beaches, is lined by extensive eelgrass meadows identified as herring spawning habitat, and is prioritized as a very high Juvenile Salmon and Forage Fish Nearshore Habitat Protection Priority area. Strawberry Point includes a variety of shoreforms and beach environments including estuary and embayment-like environments include beach areas, mud flats, dendritic channels, an eelgrass meadow, and kelp beds. All of these biologic communities and physical habitat provide important salmonid refugia and nursery grounds within the higher energy environment of the Puget Sound. In particular, the nearshore areas provide important habitat for Endangered Species Act (ESA) listed chinook salmon and bull trout. The inner-area of Northern Puget Sound includes embayments and barrier beaches fed by the high bluffs of glacial outwash that comprise much of the Puget Sound shoreline. These bluffs provide an abundant supply of sand and gravel which is constantly eroded by waves (Fetherston et al. 2001: Reference site study and conceptual design alternatives for restoration of the Miller Creek estuary in King County). Waves also transport these sediments along the littoral zone to sustain the coastal spits and beaches. The project area includes State and County held lands as well as a variety of privately held properties, some with attached conservation easements.

The following cited resources have documented the importance of this area for salmonid species:

- The area is identified as proposed critical habitat for chinook salmon by NOAA Fisheries (NOAA 2005: *Critical Habitat Proposed for Washington's Puget Sound Population of Chinook Salmon*). In addition, U.S. Fish and Wildlife has proposed bull trout nearshore critical habitat along Whidbey Island (USFW 2005: *Proposed Bull Trout Critical Habitat – Coastal/Puget Sound Boundaries*). These areas are also Essential Fish Habitat (EFH) for a variety of juvenile stages of Pacific salmon and other marine species according to the Magnuson-Stevens Act.

- The Skagit River System Cooperative research program (*Estuarine Fisheries Sampling Plan*), which conducts long-term monitoring of juvenile chinook salmon timing and abundance and estuarine habitat selection, has shown juvenile chinook salmon use of adjacent nearshore environment (Skagit River System Cooperative 2004; Beamer et al. 2000).

- Chum salmon were the most abundant species documented in 1995 at various sampling sites located at the north end of Whidbey Island, including Skagit Bay (Beamer 2005 personal communication; Hayman et al.1996: *FY 1995 Skagit River Chinook - Restoration Research Progress Report No. 1*). In addition, Juvenile chum salmon accounted for nearly 92 percent (10,112) of all species of juvenile salmonids caught at Ala Spit and Hoypus Point, and 49 percent of the total number of juvenile chum caught in the study. Coho salmon were counted early May through June.

- Chinook salmon are commonly caught from February through September in the area. Sub-adult and adult bull trout are also common in the nearshore area and use the area for foraging (Beamer 2005 personal communication; Goetz et al. 2004: *Bull trout in the near shore*). According to Beamer (2005 personal communication), most of these juvenile chinook salmon are likely Skagit River in origin due to both the near proximity to the Skagit River delta and to the number of wild chinook salmon out migrating the Skagit River in comparison to other nearby rivers (i.e., millions of fish compared to several hundred thousand).

- Recent research has shown that wild Chinook from the Skagit River system utilize nearshore estuarine habitats more fully than hatchery chinook (Rice et. al 2005: *Puget Sound Georgia Basin: Research Conference Abstracts and Biographies March 29-31, 2005*).

- Pocket estuaries in the area have been shown to provide important habitat for juvenile salmonids. In a survey performed in April, May, and June, 2004, juvenile pink and chum salmon were found to utilize the pocket estuary area of Ala Spit, just north of Strawberry Point. Overall juvenile salmon densities were much higher inside the lagoon than in adjacent nearshore areas.

- The fish survey data provides clear evidence of salmonid utilization of the North East Whidbey Island nearshore environment. These data further support the conclusion of the *Area 6 (Whidbey & Camano Islands) Water Resource Inventory Multi-Species Salmon Recovery Plan* (WRIA 6 STAG 2005) indicating that this area is important for the recovery of listed chinook salmon and bull trout populations.

According to the June, 2005 Puget Sound Salmon Recovery Plan, "Protection is needed at the individual habitat site as well as at the ecosystem scale to ensure the processes that create habitat continue to function." This project takes the plan's philosophy and operationalizes it through on-the-ground activities. The purpose of the project is to protect healthy nearshore processes and habitats of Strawberry Point for the benefit of juvenile and adult salmon. The primary goal of this project is WRIA 6's Salmon Recovery Plan (SRP) Goal 1: A net increase in salmon habitat through inventory and protection. The project focuses on this goal's first two primary objectives—inventory and protection—thereby implementing the highest priorities of WRIA 6 in the critical geographic location of Strawberry Point on Whidbey Island.

This project also mirrors the goals, objectives and philosophy of the WRIA 6 SRP's Ten Year Implementation Plan. Goal 1 is protecting, enhancing and restoring ecosystems processes and salmon habitat. This is carried out by the Ten Year Implementation Plan's first two objectives for Goal 1: "Inventory and prioritize nearshore and fresh-water for protection and restoration activities" and "protect existing high-quality nearshore and stream habitats."

Guidance for Protection and Restoration of Nearshore Ecosystems of Puget Sound (The Puget Sound Nearshore Ecosystem Restoration Program, May, 2003) calls out protection as the first among four recommended actions. Their guidance is that "protecting portions of ecosystems with functioning

natural processes has a high chance of achieving desired goals, such as salmon recovery, because further degradation of important processes and landscape segments can be decelerated." Island County's SRP states, "If further habitat losses are to be avoided, habitat protection must be pursued with new determination given the challenges related to continued population growth." Regulatory tools of the Growth Management Act are implemented through Critical Areas Ordinances and Shoreline Masters Programs. Those regulatory tools are important and are supplemented by Island County's SRP which "focuses on voluntary opportunities to increase the levels of protection through stewardship, conservation easements and acquisitions. This strategy also focuses on encouraging voluntary enhancement."

II. Problem Statement

Protection as used in the SRP and this proposal means the act of protecting nearshore processes and habitats through stewardship or acquisition methods. Little if any protection formal protection planning has occurred along Strawberry Point. This problem is particularly acute when seen in context of the Puget Sound Salmon Recovery Plan. It states, "The Puget Sound Technical Recovery Team (PSTRT) identified protection of existing and functioning habitat as most important in their technical guidance to watersheds (PSTRT, 2002)."

From initial surveys it is known that:

(1) Little protection planning for shoreline processes or habitat has occurred on publicly held lands on Strawberry Point.

(2) Limited protection or protection planning has occurred on privately held lands in the project area

The continued lack of protection planning and actions put valuable Chinook habitat at risk. As the Puget Sound Salmon Recovery Plan (2005) states, "Protection is a more certain strategy than restoration because we know that untrammeled habitats are more likely to support species." Hence, these vital habitats and processes along the northeast shoreline of Whidbey Island have become a significant issue of concern.

This project will identify and assess the current conditions of all private and public shoreline of Strawberry Point watershed and secondly identify recommended implementation actions needed to protect the physical and biological processes that create and maintain the nearshore and its biotic communities. This will include the delivery of a conservation easement design plan to be implemented in the follow-on acquisition phase (see Phase II in Section V, Task and Time Schedule). All this will occur while maintaining a full voluntary basis for project participation.

III. Project Objective

The objective of this project is to protect nearshore processes and habitats through protection actions like increased voluntary stewardship, acquisition and other non-regulatory efforts. Only through a coordinated partnership with local agencies achieved by centralized program management can a scientifically based assessment of nearshore habitats and related protection be carried out. As project lead, Island County's overarching responsibility is to ensure consistency of scientifically based methodologies and priorities, followed by strong, partner-wide coordination and reporting of results.

The four project goals are: assemble existing data, fill needed data gaps and evaluate relevant data; create recommended implementation action plans; implement and evaluate partner action plans; and provide a conservation easement assessment for optimum, follow-on acquisition project(s).

Project objectives to achieve these goals include the following:

I) Assemble, Fill and Review Existing Data

(1) Assemble existing data into a preliminary report
(2) Assess the geomorphic changes of the Strawberry Point area
(3) Assess the status of Strawberry Point's riparian conditions
(4) Identify historic, current, and potential watershed land use issues effecting the nearshore environment of Strawberry Point

II) Create Partner Specific Implementation Strategy Plans

(5) Synthesize report information obtained in the data review assessment as well as the recommended protection actions at Strawberry Point. Voluntary, non-regulatory protection action plans will be implemented by Island County Parks, Whidbey Island Conservation District, Whidbey-Camano Land Trust, WA State Parks Deception Pass State Park staff and WSU Extension Office/Marine Resource Council.

III) Implement and Evaluate Implementation Plan Results

(6) Island County Planning Department will lead, coordinate and standardize the common protection framework and goals based on the assembled data. Technical and scientific information will identify ideal protection action candidates. These will be categorized by watershed and by partner's area of responsibility. Recommended voluntary, non-regulatory actions pertaining to protection management strategies for Strawberry Point will be presented, evaluated and selected. The plan report will include pertinent GIS figures, data tables, and photographic documentation. Partners will carry out and evaluate results of protection activities. Additionally, the project lead will produce status reporting on partner results through normal SRFB reporting channels. Further this task will include twice yearly assembly of full partner panels with other local and SRFB identified members to review and record protection planning and implementation progress.

IV) Prepare Conservation Easement Feasibility Assessment

(7) Whidbey Camano Land Trust (WCLT) will lead a feasibility study that will assess the willingness of private landowners to agree to allow access to their land for a habitat project or for selling a conservation easement. This task will be based on the results of tasks 1 – 5. Additionally, WCLT will use their normal protocols in assessing, prioritizing and performing outreach with candidate land owners. Areas that are not candidates for protection, such as developed or armored areas, will not be considered in this plan. The results of the proposed conservation easement assessment will directly lead to identification, siting, or design of habitat protection project(s) or fill a data gap identified as a priority in a lead entity strategy. Projects will focus on addressing findings that merit protection and that are advisable without adverse impact to current land owner land functions and processes.

IV. Project Approach and Methodology

Geographic setting of the project

Northern Strawberry Point comprises 6 miles of wide sand beach and creek mouths and is located in Island County on the northeast corner of Whidbey Island in Puget Sound two miles from the mouth of the Skagit River.

Individuals and methods used to identify the project and its location:

Protecting Strawberry Point habitat and processes is a very high priority for the recovery of listed chinook salmon (as well as bull trout) populations as identified in the *Water Resource Inventory Area 6 (Whidbey & Camano Islands) Multi-Species Salmon Recovery Plan* (WRIA 6 STAG 2005). In addition, the WRIA 6 Salmon Recovery Plan identifies the area as a very high protection priority for forage fish habitat and high protection priority for juvenile salmon habitat (WRIA 6 STAG 2005). Further, the area contains four critical protection areas as identified in Island County's Restoration and Conservation Potentials in Island County (CGS, 2004).

Assessment result benefit to salmonids and filling of data gaps:

Recent and ongoing efforts by Island County in collaboration with various agencies and organizations (e.g., Skagit River System Cooperative, NOAA Fisheries, Washington Department of Fish and Wildlife) to fill key ecosystem science data gaps have produced a significant amount of data and information applicable to the assessment subject of this SRFB grant application. Consequently, the proposed project approach will build upon these existing resources, rather than initiate new studies that may duplicate existing data. A significant amount of the available resources are presented in the *Water Resource Inventory Area 6 (Whidbey & Camano Islands) Multi-Species Salmon Recovery Plan* (WRIA 6 STAG 2005). The results of the proposed assessment will fill the existing data gaps thus providing necessary information to develop a protection management plan for Strawberry Point that protects the physical processes and habitats.

Assessment design and methodology:

The assessment will include both analyses of archival aerial photography and process-based field surveys of physical landforms, processes, and biotic communities. The surveys will serve both for analysis of current conditions as well as a baseline data set for monitoring the status of future conditions. Costs associated with these activities were derived based on past experience performing similar assessments. The following tasks summarize the proposed methodology for the Strawberry Point Protection Assessment project:

Task 1. Existing Information Review

The assessment will start with the collection and review of existing information pertaining to the physical processes that created and maintain Strawberry Point, as well as habitat information including the following:

- Water Resource Inventory Area 6 (Whidbey & Camano Islands) Multi-Species Salmon Recovery Plan (WRIA 6 STAG 2005).
- Assessment of Drift Cell Function (Coastal Geologic Services 2005).
- Identification and Assessment of Whidbey Basin Pocket Estuaries (Skagit River System Cooperative 2003-present).
- Island County Feeder Bluff and Accretion Shoreform Mapping Project (Island County 2003-present).

- Washington State Shore Zone Inventory GIS map layers from Washington Department of Natural Resources, Nearshore Habitat Program (WDNR 2001).
- Puget Sound Intertidal Habitat Inventory 1996 for Skagit County and Northern Whidbey Island of Washington State (WDNR 1997).
- Shoreline Management/Zoning Designation Database (Island County Planning Department 2005)
- Oblique aerial photographs from Washington Department of Ecology (Ecology 1976–1997, 1992, 2000).
- Historic maps and charts depicting Ala Spit (Historical Map & Chart Project 2005)

Task 2. Geomorphic Shoreline Change Assessment: Implications for Shoreline Area Protection

Geomorphic shoreline changes will be assessed using the results of the aerial photograph, map analyses, and ground truth GPS surveys. The purpose of this assessment is to determine historic and recent geomorphic changes to the eastern shoreline of Whidbey Island where bluff sediment feeders have been previously mapped (WDNR 2001; WRIA 6 STAG 2005).

In order to facilitate the assessment of historical changes (i.e., erosion and accretion), historical sites will be identified and mapped, including sites of mass wasting (i.e., bluffs with shallow surficial erosion and deep seated landslides), and stream and river outlets. This work will build upon *Island County Feeder Bluff and Accretion Shoreform Mapping Project* (Island County 2003-present) and other available sources. All GIS mapping will be referenced with and build upon Washington State ShoreZone Inventory (WDNR 2001) units to facilitate cross-referencing of study findings and existing information. Coastal mapping will be based on a digital elevation model (DEM) created with lidar (light detection and ranging), historical and recent rectified aerial photographs, and aerial oblique shoreline photographs available from the Washington State Department of Ecology for 1976–1977, 1992, and 2000.

Task 3. Role of Riparian Vegetarian: Implications for the Shoreline Area Protection

Riparian vegetation along the shoreline areas will be characterized in order to assess their past, current, and future role in the maintenance of this area. The plant community will be identified and mapped using existing aerial photography and a ground truth GPS survey. The riparian vegetation will be characterized as forest, shrubland, herbaceous, nonvascular, or sparse vegetation.

Task 4. Watershed Characterization: Implications for the Shoreline Area Protection

Potential watershed and land use issues include increased stormwater intensity and runoff, nearshore and freshwater sedimentation, non-point pollution from overland flow, stormwater, and failing septic systems (WRIA 6 STAG 2005). Hydrologic connection between upland area and shoreline will be characterized. Future development, zoning, fresh water contributions and implication of riparian and LID use changes will be evaluated.

Task 5. Implementation Action Plan Report Coordination, Preparation and Adoption

Island County Planning Department will lead, coordinate and standardize the common protection framework, goals and reports based on assembled data. Technical and scientific information will identify ideal protection action candidates. These will be categorized by watershed and by partner's area of responsibility. Recommended voluntary, non-regulatory actions pertaining to protection management strategies for Strawberry Point will be presented, evaluated and selected. Each partner will create a plan and the plan report will include pertinent GIS figures, data tables, and photographic documentation.

Task 6. Protection Action Plan Implementation and Evaluation

Protection action plans will be implemented by Island County Parks, Whidbey Island Conservation District, Whidbey-Camano Land Trust, WA State Parks Deception Pass State Park staff and WSU Extension Office/Marine Resource Council. Recommended voluntary, non-regulatory actions will be carried by the designated partner, in conjunction with other partners, other agencies and willing landowners and public organizations. Additionally, the project lead, Island County, will produce status reporting on partner results through normal SRFB reporting channels. Further this task will include twice yearly assembly of full partner panels with other local and SRFB identified members to review and record protection planning and implementation progress. At the conclusion of the project plan implementation evaluations will take place to determine how many outcomes were accomplished and what contributions those outcomes made to achieving protection objectives.

Task 7. Conservation Easement Feasibility Study

A feasibility study will include assessing the willingness of landowners to agree to allow access to their land for a habitat project or for selling a conservation easement. Areas that are not candidates for protection, such as developed or armored areas, will not be considered in this plan. The results of proposed conservation easement assessments must directly lead to identification, siting, or design of habitat protection or restoration projects or fill a data gap identified as a priority in a lead entity strategy. The protection design report will guide the approach and will be an aid to addressing remaining issues, such as permitting, final design and ultimately completed conservation easement(s). Projects will focus on addressing findings that merit voluntary protection and that are advisable without adverse impact to current land owner land functions and processes.

How this project will lead to salmonid habitat protection:

The results of this project will provide a clear assessment of the current and future conditions of Strawberry Point salmonid habitat with and without protection measures. By clearly assessing the local and landscape scale biophysical processes generating and maintaining Strawberry Point, and attendant salmonid habitat, science-based protection strategies will be identified.

Consequences of not conducting this project at this time:

The biological integrity of Strawberry Point is dependent upon both local and landscape scale biophysical processes. If these processes are not clearly identified and protection actions are not identified and Strawberry Point shoreline protected, then irreversible critical salmonid habitat will be lost.

How the project design and methodology will be implemented:

The proposed protection design and methodology will be implemented by technically qualified individuals in related State, County, consultant firm and local non-profit agencies, who are retained for this purpose. Island County will coordinate the project staffing, all required consultant technical efforts and will manage the grant funds.

- The project cost was estimated by Island County, in conjunction with environmental experts, based on previous experience conducting similar assessments for the protection of nearshore habitat in Puget Sound.
- To ensure that project objectives will be achieved, consideration was given to the elements required to obtain an understanding of the physical processes

that create and maintain nearshore Puget Sound habitats, based on best available science.

- The Island County Parks Department and Deception Pass State Park, principle project partners, are providing technical and community support, as they are landowners. Additionally, Whidbey Island Conservation District, Whidbey-Camano Land Trust and local WSU Extension Officer are partners on the project.
- Island County will retain a technically qualified individuals(s) upon receiving the grant funds.

V. Task and Time Schedule

The protection assessment is expected to be a 24-month process. The following time schedule is expected to be necessary to complete each of the proposed 7 protection assessment tasks, following project initiation (portions of some of the tasks may be performed concurrently):

Task 1 – Existing Information Review, Historic/Recent Aerial Photograph and Map Analysis: **4 weeks**

Task 2 – Geomorphic Shoreline Changes Assessment: **8 weeks**

Task 3 – Role of Riparian Vegetation Characterization: **12 weeks**

Task 4 – Watershed Characterization: **12 weeks**

Task 5 – Protection Assessment and Plan Recommendations Preparation: **30 weeks**

Task 6 -- Protection Plan Implementation and Evaluation: **48 weeks**

Task 7 – Conservation Easement Feasibility Assessment Project: **24 weeks**

Phase II Implementation of Conservation Easement Assessment Actions (no funds are being requested for these future tasks):

Task 1 - Application for SRFB funding to acquire conservation easements (see task 7). Partner with existing organizations like Whidbey/Camano Land Trust.
Task 2 - Gain conservation easements or acquisition(s) of adjacent private parcels (as appropriate based on feasibility assessment - phase I data)
Task 3 - Technical communications, future partner surveys and outreach with property owners
Task 4 - Internal Island County technical planning and discussions with Planning - shoreline permitting, Public Works, County Parks, Health Department and others)

VI. Constraints and Uncertainties

There are no known constraints or uncertainties that may hinder successful completion of the project. As the Puget Sound Salmon Recovery Plan (2005) states, "Protection is a more certain strategy than restoration because we know that untrammeled habitats are more likely to support species." However, potential delays could occur during field investigation while trying to obtain property access to the beach areas. To avoid potential delays, Island County is reviewing past, successfully implemented public outreach strategies which could be applied to inform property owners of the project. Past outreach activities included sending letters to owners of properties requiring field access. Letters will also illustrate relevance of the assessment for the protection of Strawberry Point as valuable habitat and community asset. Since, as the Puget Sound Salmon Recovery Plan (2005) further states, "One protection element that is often overlooked is the contribution by private citizens as land stewards. Understanding these citizens interests and concerns is a critical component of a successful protection strategy."