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## WRIA 6 (Island) 2012 3-Year Implementation Work Plan Narrative

This document reviews the WRIA 6 salmon recovery program's efforts over the past year, considers the current implementation status and strategies of our Salmon Recovery Plan, and outlines planned actions, needs, and priorities of the watershed over the next 3 years (2012-2014). Island County lead entity staff developed this update with considerable input from local partners and review by the WRIA 6 Salmon Technical Advisory Group (TAG). This document and associated project matrix are intended to be used as a planning and tracking tool for local and regional partners involved in salmon recovery.

This version of the implementation work plan (IWP) includes many of the projects submitted in the 2011 version of the work plan as well as additional projects that have been started, or identified as important to local salmon recovery partners over the past year. Top tier projects are those that address priority actions, priority geographic areas, work to protect priority ecosystem processes, and priority habitats as identified in the WRIA 6 Multi-Species Salmon Recovery Plan (SRP). It should be noted that the work plan spreadsheet has inclusively listed projects sponsors are interested in and that many of the projects are unlikely to be accomplished without significant increases in funding resources and/or additional landowner/community support.

In this update, WRIA 6 has considered regional guidance intended to: 1) facilitate communication between the local watershed groups and regional representatives (both Puget Sound Partnership [PSP] and Recovery Implementation Technical Team [RITT]) regarding work, status, and needs of salmon recovery at the local and regional levels; 2) help develop a region wide understanding of the work, status, and needs of salmon recovery over the next three years; 3) identify priority projects for funding; and 4) document changes in implementation of the local recovery plan.

This narrative also attempts to discuss how key regional issues are being addressed at the local scale, issues facing local implementation, and near term priorities for the Island County Salmon Recovery Program.

### **GOALS AND OBJECTIVES**

Learning more about salmon use of WRIA 6 habitats, setting measurable goals, establishing a robust protection strategy, and working with the community to find solutions that work for fish and people are the underlying primary goals of the WRIA 6 Multi-Species Salmon Recovery Plan. In the below section, each of the 4 SRP goals are briefly discussed in regards to status of implementation, and program priorities and challenges anticipated over the next three years.

**Goal 1** – Over the long-term, achieve a net increase in salmon habitat through protection, enhancement, and restoration of naturally functioning ecosystems that support self-sustaining salmon populations and the species that depend on salmon.

#### **Objectives**

1. Inventory and prioritize nearshore and fresh-water habitats.
2. Protect existing high-quality nearshore and stream habitats.
3. Restore critical rearing habitats for forage fish and salmon.

Progress towards this goal is characterized by work completed in the WRIA including habitat assessments, acquisitions of priority sites, and planning and implementation of restoration actions. Specific examples of completed and planned actions regarding these objectives are discussed below in "2012 Matrix Discussion" (including the following sections: "Habitat Restoration", "Habitat – Acquisition for Future Restoration", "Habitat – Acquisition For Protection",

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“Non – Capital Habitat Protection”). Actions listed within this Goal should be updated and prioritized when new knowledge becomes available.

Over the past decade research has been conducted on juvenile salmon use of the nearshore and different habitats. Recent research including the stock origins of juvenile Chinook found in WRIA 6 using DNA and juvenile Chinook use of small non-natal coastal streams continues to provide important insights about priority salmon habitat in WRIA 6. This information needs to be compiled, synthesized, and disseminated to help better identify priority actions, data gaps, and habitats.

**Nearshore Protection Prioritization.** In 2011, a summary report was completed to help identify priority WRIA 6 nearshore reaches for protection activities. A primary goal of this report was to provide guidance regarding appropriate actions related to protection including formal protection activities (acquisition) and as well as targeted outreach/education about nearshore processes, habitats, and species utilization. This product is intended to be a living guidance document and updated as new knowledge becomes available.

**Shoreline Master Program (SMP).** SMP's play critical regulatory roles protecting existing habitat and helping manage development along our shorelines. Protection of intact habitat will continue to be a priority action given the challenges related to continued population growth in the county and demand for shoreline access. Several representatives from the salmon recovery program and lead entity staff participate as advisors on the county's SMP committee. A significant task of the salmon recovery program, the County, and others will be to work together to ensure that important salmon habitat is acknowledged and protected in the updated SMP. Island County is on schedule to update its SMP by late 2012. The cities of Oak Harbor and Langley are also in process of updating their SMPs.

**Goal 2** – Develop an understanding of habitat functions and the distribution of forage fish species, salmonids, and marine mammals in WRIA 6.

**Objectives**

1. Fill key ecosystem science data gaps.
2. Assess and regularly update aquatic habitat attributes.
3. Quantify and evaluate impacts of predation by marine mammals and other wildlife on salmonid and forage fish populations.

Progress has been made in our understanding of the role of the nearshore ecosystem at both the local and regional scale since adoption of our SRP. More research and monitoring are needed to both assess both the current status of salmon and the results of restoration and recovery activities. Examples of completed and planned actions regarding these objectives are discussed below in “2012 matrix discussion” (including the following sections: “Project Monitoring”, “Stock Monitoring”).

Over the past ten years several research projects have been conducted in and adjacent to WRIA 6 and have substantially increased our understanding of juvenile salmon use of nearshore habitat. This information helps describe how, when, and where juvenile salmon utilize the freshwater and nearshore habitat in WRIA 6. Recently completed examples include information collected on stock origins of juvenile Chinook found in WRIA 6 using DNA, and juvenile Chinook use of small non-natal coastal streams. These examples provide important insights about priority salmon habitat in WRIA 6. However, data gaps still exist and the existing research and data needs to be compiled, the linkages between the different research efforts need to be made, and an updated list of data gaps identified.

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Information about local aquatic habitat attributes is continually being collected and updated by different organizations and agencies. An important challenge is finding a system to host these updates/changes and conducting the necessary QA/QC to ensure the final projects are of sufficient quality and able to be used appropriately.

**Goal 3** – Engage an informed community in identifying, protecting, enhancing, and restoring salmon-supporting ecosystem processes and habitats.

**Objectives**

1. Educate the community about juvenile and adult salmon distribution, ecosystem processes, and challenges through information, education, and communication activities.
2. Develop and implement a comprehensive communication strategy for internal and external communication.
3. Increase community participation in, and commitment to, salmon recovery activities.

It will be important for the program to continue to work with partners to find ways to effectively engage the community and disseminate information in order to make gains in public support needed to take actions necessary to implement salmon recovery. Examples of completed and planned actions regarding these objectives are discussed below in “2012 matrix discussion” (including the following sections: “Education/Outreach”, “Project Monitoring”).

In addition to a number of actions planned to support this goal, the salmon recovery program has been provided funding support to develop a communication strategy to help in implementing and integrating education/outreach efforts related to the SRP. Progress continues towards completion of the strategy which is expected to support project sponsors and the efforts of program partners involved in outreach efforts.

**Goal 4** – Cultivate a supportive environment for salmon recovery by supporting policies that protect salmon habitats; advocating for adequate program staffing; encouraging cross-sector and public-private partnerships; pursuing adequate, reliable funding; and implementing effective project and program evaluations.

**Objectives**

1. Establish salmon recovery program policies that will cultivate public support for salmon recovery and adequate program staffing.
2. Obtain adequate reliable funding through a variety of public and private sources and use these resources cost-effectively.
3. Develop and implement a salmon recovery adaptive management plan.

The recovery program will need to address the necessity of integrating ongoing watershed efforts by partners, and integrate the work and efforts of groups such as the TAG, WRAC, and MRC. Examples of completed and planned actions regarding these objectives are discussed below in “2012 matrix discussion” (including the following sections: “Watershed Plan Implementation & Coordination”).

Securing funding for organizational capacity for local salmon recovery partners continues to be a critical need identified in this matrix. The “Watershed Plan Implementation & Coordination” section of the matrix addresses the need for funding for groups that have minimal staff capacity to participate in WRIA 6 salmon recovery activities, and groups that have historically chosen to have limited participation in the WRIA 6 process due to funding limitations. These groups provide

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critical scientific, technical, or policy support necessary for plan implementation. Identifying and securing basic capacity funding is a critical step if local salmon recovery activities are going to deliver protection and restoration results in this timeframe. This limitation of organizations will continue to impact the ability to fully implement the SRP.

**Monitoring and Adaptive Management**

Development of monitoring and adaptive management plans continues to be high priorities for our Salmon Recovery Program. The program intends to work towards development of realistic, useful and applicable monitoring and adaptive management plans. This process will also need to address the question of who and how the monitoring and adaptive management plans will be overseen within the watershed.

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**Below are discussions regarding specific questions that have been asked in the 2012 Three-Year Work Plan/Program Guidance.**

*Consistency Question*

- 1. What are the actions and/or suites of actions needed for the next three years to implement your salmon recovery chapter as part of the regional recovery effort? (A template spreadsheet with general categories is provided to identify which actions and/or suites of actions are needed. Please note that you can use the HWS to produce a list of habitat actions)*

See the attached matrix and priorities described within the previous review of WRIA 6 goals. Descriptions of each of the project categories are included in this narrative. Funding and staffing capacity will likely hinder the implementation of all these actions within the next three years.

*Pace/Status Question*

- 2. What is the status of actions underway per your recovery plan chapter? Is this on pace with the goals of your recovery plan?*

As stated in previous versions of this document and acknowledged in regional feedback provided to the watershed last year, although there has been progress made towards many of the objectives and actions of our SRP, it is difficult to evaluate the pace of implementation as our SRP does not include quantified habitat goals. Although we feel that the general guidance provided in the SRP provides the opportunistic actions to be initiated which might be challenging in a more rigid plan, this lack of specific quantifiable actions creates some uncertainty as to the effectiveness of actions meant to support the Goals. However, specific actions and timelines are described in the SRP and implementation of many of these actions is behind schedule.

- 3. What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals? Progress can be tracked in terms of 'not started, little progress, some progress, or complete' or in more detail if you choose.*

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Habitat restoration: Some progress. Generally, restoration activities have been difficult to implement, partly due to challenges of securing support of landowners/community. See “Matrix Discussion” below.

Habitat protection: Some progress. Protection is a high priority action in the SRP and partners have been fairly successful in acquiring priority sites for protection and future restoration opportunities. See “Matrix Discussion” below.

Harvest and Hatchery Management: No notable progress made.

***Sequence/Timing***

- 4. What are the top implementation priorities in your recovery plan in terms of specific actions or theme/suites of actions? How are these top priorities being sequenced in the next three years? What do you need to be successful in implementing these priorities?***

Priorities of the SRP have been discussed above and are listed in the “**Key to Priority Tier Abbreviations**” below (priorities are listed in column three of the IWP matrix). This 3-year work plan is an inclusive list of projects which addresses all goals of our recovery plan. This approach to implementing the plan allows for flexibility as opportunities become available, and local prioritization of projects can be evaluated based on local priorities.

Hurdles to implementation include landowner willingness, funding, and staff capacity (related to funding). Funding is likely to continue to be problematic given the current economic situation. Seeking of new partners and looking for opportunities to better integrate efforts may help in offsetting some of these problems.

***Next Big Challenge***

- 5. Do these top priorities reflect a change in any way from the previous three-year work program? Have there been any significant changes in the strategy or approach for salmon recovery in your watershed? If so, how & why?***

No, our priorities have not changed since the previous IWP update. However, generally it has been recognized that increased consideration will need be made to improve effective communication with the stakeholders and the community during project development.

- 6. What is the status or trends of habitat and salmon populations in your watershed?***

We are not aware of data that provides any comprehensive evaluation of salmon population and/or habitat trends within the watershed.

- 7. Are there new challenges associated with implementing salmon recovery actions that need additional support? If so, what are they?***

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The needs and challenges facing the watershed are generally discussed above and are not new (including drafting monitoring and adaptive management plans which will be a priority over the next year).

Like others jurisdictions and agencies, Island County and our partners have felt the economic downturn. The County itself is facing budget shortfalls which has reduced staff's capacity to address key regulation updates (FWHCA), provide technical support to landowners, and will be generally challenged to initiate projects to support salmon recovery. Current economic conditions may also continue to hamper the ability of watershed partners to participate in recovery efforts.

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## **2012-2014 Matrix Discussion**

The following section discusses each of the categories listed in the matrix. This describes how each category of projects support SRP goals, fit within the local strategy, and briefly describes some of the significant results accomplished.

### **Key to Priority Tier Abbreviations (priorities are listed in column three of the IWP matrix)**

A = Action Priorities

1 = Marine Fish Distribution, Protection, Capacity Funding, Targeted Shoreline Education

2 = Restoration, Habitat Assessments, General Education

GA = Geographic Area

1 = Skagit Bay, Port Susan

2 = Saratoga Passage, SW Whidbey, NW Whidbey

3 = Central-West Whidbey

H = Habitat Priorities

1 = Mudflats, marshes, pocket estuaries

2 = Sand/gravel beaches, sandflats, instream/riparian

3 = cobble beaches, rocky shore, uplands

P = Process Priorities

1 = Shoreline Sediment Transport, Tidal Exchange, Hydrology

2 = Nutrient Cycles, Food Web, Animal/Plant Communities

3 = Upland / Coastal Stream Processes

## **Capital Projects-Habitat**

The WRIA 6 habitat goal states: "Over the long term, achieve a net increase in salmon habitat through protection, enhancement, and restoration of naturally-functioning ecosystems that support self-sustaining salmon populations and the species that depend on salmon". If further habitat losses are to be avoided, a continued commitment to long-term protection must be encouraged. In addition, where we have significant scientific knowledge and local commitment to restoration of key nearshore environments, we should pursue these projects.

### **Habitat Restoration**

**Purpose:** Enhance and restore habitat functions which support Chinook, other salmonids, and forage fish where there is supporting scientific knowledge and local commitments. Enhance WRIA 6 marine food webs for all salmon that migrate through WRIA 6 marine waters at all life

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stages. Habitat Restoration advances Goal #1 of the Island County Salmon Recovery Plan.

**Strategy:** Pursue restoration projects as identified through ongoing feasibility assessments and continue ongoing habitat projects. Act where there are willing landowners, scientific justification, and efficient use of funds. Pursue actions that coincide with ongoing regional efforts, such as derelict nets removal, creosote debris removal in key nearshore habitats, and Spartina control.

**Magnitude/Sequence:** The actions in this section are initial steps towards a net increase in Chinook, other salmonids, and forage fish habitats in Island County. These projects are important opportunities to demonstrate how recovery actions can recognize and incorporate community concerns into projects that provide significant benefits to salmon.

### **WRIA 6 Results:**

- Ala Spit - 850 linear feet of Riprap (shoreline hardening) was removed from the neck of Ala Spit to restore natural sediment processes critical to maintain nearshore and pocket estuary functions.
- Removal of creosote debris from nearshore completed in Port Susan, Crocket Lake, and Double Bluff shorelines (future program funding not well supported).
- Spartina control has been completed in all identified meadows removing over 300 acres within WRIA 6. Monitoring and maintenance treatments will continue.
- Crescent Harbor tidal connection to 200 acres of marsh at completed in 2009.
- Significant progress has been made towards the removal of Derelict Fishing Net removal, with 357 legacy nets now having been removed from WRIA 6 waters and an estimated 32 nets remaining.

### **Progress over past year (2011-2012):**

- SRFB funding has been secured to restore approximately 1100 linear feet of shoreline in Cornet Bay.
- Permitting and design continues for restoration of Livingston Bay, Dugualla Heights pocket estuaries.
- Funding allocated to remove final derelict nets from WRIA 6 waters.
- Surveys located and led to removal of approximately 4 acres of Spartina.

**Funding:** Total estimated project costs are approximately \$2,348,000 over the next 3-year period; approximately \$1,783,000 has been secured.

**Changes to Matrix 2011 and 2012:** Design work and permitting is ongoing with restoration funding already secured at Cornet Bay, Ala Spit, and Livingston Bay.

### **Habitat - Acquisition for Future Restoration**

**Purpose:** Provide permanent protection for nearshore habitats in areas where there is opportunity for significant restoration, supporting advancement of SRP goal #1.

**Strategy:** Acquire and/or gain conservation easements where there are opportunities to increase the amount and/or quality of nearshore habitat, accessibility to fish, and opportunities to restore high priority habitats such as pocket estuaries and marshes.

**Magnitude/Sequence:** Opportunities to purchase, or gain conservation easements on high priority nearshore habitat with restoration potential, should be pursued where there is landowner willingness.

**Results:** Past acquisitions that provide restoration opportunities include Ala Spit, Deer Lagoon, Swan Lake, Dugualla Heights Lagoon, Iverson, Skagit Bay nearshore, and Livingston Bay pocket estuary.

**Results over past year (2011-2012):** None known

**Funding:** Total estimated project costs are approximately \$1.1million over the next 3-year period; approximately \$0 million has already been secured.

### **Changes to Matrix Between 2011 and 2012:**

- Acquisition for future restoration opportunity added for Livingston Bay opportunities.

### **Habitat – Acquisition for Protection**

**Purpose:** Provide permanent protection for high quality nearshore habitats, nearshore processes, and ecosystems functions. These actions advance Goal #1 of the SRP.

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**Strategy:** Acquire and/or gain conservation easements on high quality nearshore habitats focusing on top priority habitats. Nearshore habitat will likely to continue to see development pressure at desirable shoreline property and efforts should focus on likely risks.

**Magnitude/Sequence:** Opportunities to purchase, or gain conservation easements on high quality nearshore habitat should be identified, and the watershed must continue to refine priorities based on new knowledge.

**Results:**

- Several acquisitions in Port Susan/Livingston Bay resulting in over 7,000 contiguous areas of protected nearshore habitat including pocket estuary, marsh habitat, and upland nearshore.
- The Henry Hollow site was acquired on west Camano to protect natural shoreline and a freshwater stream.

**Results over past year:** None known. In early 2012, the National Coastal Estuarine Wetland program provided awards to support acquisition of several high priority nearshore sites.

**Funding:** Total estimated project costs are approximately \$13,885,000 over the next 3-year period; most projects are conceptual and dependent on opportunities which have not been clearly identified.

**Changes to matrix between 2011 and 2012:** No significant changes

**Non-Capital Projects**

**Harvest Management Support**

**Purpose:** Assess harvest practices to inform improved management of fisheries. Harvest Management Support advances Goal #2 of the Island County Salmon Recovery Plan.

**Strategy:** Not clearly defined for WRIA. **Magnitude/Sequence:** Not clearly defined for WRIA.

**Results:** none known

**Results over past year:** none

**Funding:** none known

**Changes to Matrix between 2011 and 2012:** none

**Future Habitat Project Development:**

**Purpose:** These projects are intended to help assess future habitat restoration needs and opportunities. These projects will support advancement of Goals #2 and #3 of the SRP.

**Strategy:** Many of the top priority nearshore restoration projects in WRIA 6 are seemingly constrained by adjacent development and/or existing uses. Securing landowner support for restoration projects require a detailed, site specific feasibility study. Studies are necessary to identify and alleviate community concerns, address infrastructure constraints, and evaluate design alternatives.

**Magnitude/Sequence:** This category is critical in advancing priority projects through gaining community support and evaluating alternatives at priority sites. Secure landowner support, establish outreach to neighboring landowners, and evaluate project alternatives at potential project sites. Develop initial project designs for sites where landowner willingness is established and site evaluation shows significant benefit for salmon.

**Results:**

- Assessment for restoration at Ala Spit was completed (and used to secure restoration funding).
- An initial study was completed at Iverson Spit/Lagoon which outlines recommendations for future feasibility work.
- The "Skagit Basin Nearshore Assessment" was completed by SRSC which reviewed habitat and nearshore processes of 10 Skagit Bay pocket estuaries.
- Feasibility assessments regarding restoration of two pocket estuaries at "Possession Beach" and "Lowell Point", indicating that restoration is promising at the Lowell Point site.
- Initial modeling to review tidal reconnection opportunities at Deer Lagoon was completed.
- Initial review of historic connectivity and current hydrological conditions at Swan Lake.

**Results over previous year (2011-12):**

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- PSNERP initiated work to develop 10% design at Dugualla Bay and Livingston Bay sites.
- Design work to support restoration at Cornet Bay completed.
- Initial design completed at Dugualla Heights site.

**Funding:** Total estimated project costs are approximately \$1,135,000 over the next 3-year period; it is unclear on the funding already been secured.

**Changes to matrix between 2011 and 2012:** No significant changes

### Habitat Protection

**Purpose:** Support capital protection of habitat with regulatory and implementation of voluntary protection strategies, monitoring of habitat quality indicators, and habitat management planning. Advances Goal #1, #3, and #4 of the Island County Salmon Recovery Plan.

**Strategies:** When possible, incorporate salmon recovery information in updates of local code. Ensure that local, state, and federal agencies manage resources on public lands in a manner that supports salmon recovery. Evaluation of nearshore protection needs, and outreach to landowners to provide technical assistance and stewardship. . Establish methods for nearshore protection evaluation. Preparation for early assessment of oil spill response needs. Establish assurances that management action on publicly owned nearshore properties protects known Chinook, sand lance, and herring habitats.

**Results:**

- Strawberry Point Nearshore Protection Project completed which integrated protection planning, landowner outreach and technical assistance in a geographic priority area.

**Results over previous year:**

- Updates to SMP continue in Island County, city of Oak Harbor and Langley. Organizations within the Lead Entity are participating in the process and active in the SMP advisory committee.
- Creation and planning related to Port Susan Marine Stewardship Area continues.
- Funding was directed towards Penn Cove and Admiralty Inlet water quality improvement projects.

**Funding:** Total estimated project costs are approximately \$1,780,000 over the next 3-year period; funding has been secured to complete updates to SMP and support Port Susan MSA planning.

**Changes to matrix between 2011 and 2012:**

- Port Susan MSA project added to help track this ongoing work directed to improve stewardship of Port Susan across WRIA boundaries.

### Watershed Plan Implementation and Coordination

**Purpose:** Coordinate and implement salmon recovery activities in WRIA 6. Secure basic level funding for local/regional organizations, allowing staff participation in WRIA 6 salmon recovery work. The organizations that are requesting capacity funding are keys to implementing high priority activities, but have limited capacity to participate in protection, restoration, and science planning processes and project review. Advances Goal #4 of SRP.

**Strategy:** Secure funds for other organizations that have expertise/interest in in salmon recovery (protection, restoration, and/or nearshore science). Secure funding for development and future implementation of adaptive management program for the WRIA 6 salmon recovery plan.

**Magnitude/Sequence:** The groups that are requesting funding at this time are actively participating to some extent in salmon recovery activities, but limited funding impacts capacity to participate in and implement activities within WRIA 6. Given the small size and limited funding mechanisms in WRIA 6, capacity funding will continue to be a hurdle to fully implement SRP activities. Initial development of an adaptive management framework and further project prioritization are both high priorities in the watershed.

**Results:** Increased efforts around targeted salmon and nearshore focused stewardship outreach, landowner technical assistance, project review, data synthesis and distribution, ID of key research needs, protection strategy, and initial review of adaptive management planning.

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Continuation of local coordination of the following: Salmon Recovery Funding Board process; the Community Salmon Fund process; coordination between local salmon recovery partners, Puget Sound regional staff, and the lead entity staff.

**Results over previous year:** Efforts by many partners to engage in implementing the SRP and participating in salmon recovery projects and programs will be limited by funding restraints.

**Funding:** Total estimated project costs are approximately \$1,426,500 over the next 3-year period; it is unclear what funding has been secured/dedicated.

**Changes to matrix between 2011 and 2012:** None

### **Outreach and Education**

**Purpose:** Meaningful advances towards protection and restoration will be possible with broad public support and community engagement. Provide outreach to residents and visitors throughout WRIA 6 about the importance of nearshore habitats for salmon and forage fish populations. Work with citizens to advance opportunities to protect and restore habitats where opportunities arise. Engage the community in participating in recovery actions and dialogue. Advances goal #3 of the SRP

**Strategy:** Develop an increased understanding of the community's and individual landowners' willingness to support actions related to salmon recovery. Implement targeted outreach strategies using existing programs, and when necessary, new materials and programs. Actions will be needed to increase community awareness of local salmon recovery issues, specifically the habitat needs of listed species and forage fish; and links between upland and nearshore habitats.

**Magnitude/Sequence:** This activity is meant to expand local knowledge about the community and make use of this to target current programs and develop complimentary programs. Outreach to local schools, and other community venues provide vital support for local salmon recovery efforts.

#### **Results:**

- Community assessment of landowner attitude and knowledge completed by Island County, which also discussed integration opportunities related to watershed partners involved in salmon recovery activities.
- The Island MRC has installed educational signage at public shorelines to highlight the importance of marine and nearshore for salmon, forage fish and other species.
- Volunteers from the public have been collecting fish data at nearshore sites discussed in the monitoring section.
- Several programs have been implemented to help educate schools and other youth programs on watershed issues and salmon use in WRIA 6.
- Finfest public event to educate the public on the relationship between Orcas and salmon.

#### **Results over previous year:**

- Ongoing work to develop Communication Strategy to support implementation of the SRP.
- School targeted outreach continued including Whidbey Watershed Steward program at 'outdoor classroom'.

**Funding:** Total estimated project costs are approximately \$344,000 over the next 3-year period; secured funding is unclear

**Changes to matrix between 2011 and 2012:** no significant changes

### **In-Stream Flow Protection**

**Purpose:** Maintain freshwater resource quantities sufficient to support salmon recovery and other beneficial uses. Advances Goal #1 and #2 of the SRP.

**Strategy:** Assessment of coastal watershed freshwater resources to inform future project development. Results will lead to increased habitat data about freshwater connectivity.

**Results:** None reported.

**Results over previous year:** Some work related to this category addressed in small stream investigation.

**Magnitude/Sequence:** This category remains a data gap for WRIA 6 related to habitat structure and function.

**Funding:** No funding needs identified

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**Changes to matrix between 2011 and 2012:** The single project listed in previous years was removed because work is being addressed as part small stream study.

**Habitat Project Monitoring**

**Purpose:** Initiate monitoring activities to evaluate salmon recovery projects in WRIA 6.

Advances Goal #2 of the SRP.

**Strategy:** Establish robust monitoring program to help in evaluating projects and strategy, and support adaptive management. Ensure pre and post - monitoring as appropriate

**Magnitude/Sequence:** These activities are the initial steps towards a robust project monitoring program. New and additional activities will be identified and funding sought as needs and opportunities are identified. Monitoring considerations must be evaluated in advance of any restoration activities to ensure appropriate monitoring activities occur.

**Results:**

- Preconstruction monitoring of habitat and fish use completed at Ala Spit.

**Results over previous year:**

- Eelgrass monitoring occurring at 24 sites within the county to map eelgrass coverage.
- Preconstruction monitoring activities at Cornet Bay and Dugualla Heights restoration sites are ongoing.
- Post construction monitoring plan developed for Ala Spit.
- Post construction monitoring ongoing at Crescent Harbor.

**Funding:** Total estimated project costs are \$271,000 over the next 3-year period; minimal funds have been secured.

**Changes to matrix between 2011 and 2012:**

**Stock Monitoring Support**

These activities should be a part of a regional monitoring program to improve understanding of specie and stock use in WRIA 6 waters.

**Purpose:** Initial quantification of the relationships between nearshore habitat functions and Chinook life histories. Advances Goal #2 of the SRP

**Strategy:** Pursue fisheries science collaboratively at sub-region scale. Continue marine fish distribution surveys, identify stock origins, and initiate an evaluation of marine trophic interactions as an initial step in H-integration.

**Magnitude/Sequence:** Local activities should be linked to actions throughout each sub-region to provide the best results. These activities are necessary steps towards quantifiable recovery goals.

**Results:**

- IMW research continues in the Skagit Bay collecting data related to out-migrating fish and use of WRIA 6 nearshore.
- The West Whidbey Nearshore Juvenile Fish Use Assessment was completed in 2008
- Many other data sets have been collected in recent decades to help in understanding WRIA 6 nearshore salmonid use.
- Forage fish surveys were completed for Camano and Whidbey islands.
- Port Susan nearshore salmonid distribution and habitat analysis completed (2009)

**Results over previous year:**

- Completion of "WRIA 6 Juvenile Salmon Origins" project completed providing genetic data indicating what Chinook stocks are found using WRIA 6 nearshore.

**Funding:** Total estimated project costs are approximately \$660,000 over the 3-year period; approximately \$600,000 is believed to be fairly secured

**Changes to matrix between 2011 and 2012:** No new projects added to this section.

**Research**

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**Purpose:** Increase specificity in identifying projects and habitat priorities; increase knowledge about species that support salmon in the nearshore and freshwater environments. Advances Goal #2 of SRP.

**Strategy:** Local understanding of the ways in which nearshore habitats provide functions for salmon is continuing to evolve. This section identifies two types of research: 1) hydrologic modeling for the Whidbey Basin and for Admiralty Inlet, which are considered to be key steps towards increasing our understanding of benefits to fish and the dynamics at individual sites; and 2) specific assessments on habitat components – forage fish and eelgrass.

**Magnitude/Sequence:** Completing these projects are critical steps to increasing our ability to best prioritize habitat projects. Projects should be pursued when there is opportunity to address identified needs in information.

**Results:** Total estimated project costs are approximately \$440,000 over the 3-year period; all funds are believed to be secured

- Initial hydrodynamic modeling has been completed for the Puget Sound.
- Work has been completed regarding monitoring eelgrass, shoreforms, shoreline armoring, and forage fish.

**Results over previous year:**

- Initial investigation completed looking at non-natal salmonid use of small coastal streams in the Whidbey Basin (report in 2012). 15 of 16 streams found non-natal salmon.

**Funding:**

**Changes to matrix between 2011 and 2012:**

- Added project intended improve understanding of fish use in small WRIA 6 coastal streams and develop predictive modeling tool to assist in identifying potential habitat.
- Funding acquired to support bulkhead study examining to improve understanding and help quantifiably predict impacts of shoreline armoring to nearshore ecology. Regional (Puget Sound) study applicable to WRIA 6.

### **Priority Projects and Programs Benefiting Non-Listed Species**

**Purpose:** Protect and restore upland hydrology, water quality, and riparian habitats with value for multiple salmonid species, focusing on projects in salmonid bearing streams and opportunities with outreach components. This broad section of the work plan advances all goals of the Island County Salmon Recovery Plan. Projects focusing on the lower sections of stream systems may become a higher given ongoing studies looking at the use of these areas for Chinook rearing.

**Strategy:** The actions listed in this section target upland hydrology and water quality; and instream fish passage and riparian projects. These projects represent some of the key activities for both listed and non-listed species being pursued by local salmon recovery partners.

**Magnitude/Sequence:** There are many ongoing activities related to activities within this section which benefit water quality, stream habitats, and indirectly the nearshore.

**Results:**

- Culverts in the Maxwellton, Glendale, and Kristoferson creeks have been retrofitted to improve fish passage.
- Riparian restoration has been completed along sections of the Maxwellton, Kristoferson, and Glendale streams.
- Stream Typing completed in Kristoferson, Chapman, and Maxwellton basins.
- Water quality monitoring completed for fifth year of program.

**Results over previous year:** Smolt and spawner surveys continued in the Maxwellton stream system.

**Funding:** Total estimated project costs are approximately \$2,506,000 over the 3-year period; it is unclear what funding has been secured

**Changes to matrix between 2011 and 2012:** None

Key to Priority Tier Abbreviations

A = Action Priorities

- 1 = Marine Fish Distribution, Protection, Capacity Funding, Targeted Shoreline Education
- 2 = Restoration, Habitat Assessments, General Education

GA = Geographic Area

- 1 = Skagit Bay, Port Susan
- 2 = Saratoga Passage, SW Whidbey, NW Whidbey
- 3 = Central-West Whidbey

H = Habitat Priorities

- 1 = Mudflats, marshes, pocket estuaries
- 2 = Sand/gravel beaches, sandflats, instream/riparian
- 3 = cobble beaches, rocky shore, uplands

P = Process Priorities

- 1 = Shoreline Sediment Transport, Tidal Exchange, Hydrology
- 2 = Nutrient Cycles, Food Web, Animal/Plant Communities
- 3 = Upland / Coastal Stream Processes

**Island Watershed (WRIA 6) 2012-14 Three-Year Implementation Work Plan**

Project Information and How it Relates to the Recovery Plan							Project Planning				Project Cost and Sponsor									
Project Name	Project Description	Priority tier of project	Limiting Factors	Habitat Type	Activity Type	Project Performance	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status	2012 activity to be funded - scope	2012 Estimated cost	2013 activity to be funded - scope	2013 estimated cost	2014 activity to be funded - scope	2014 estimated cost	Likely End Date	Likely Sponsor	Total Cost of first three years	Local share or other funding	Source of funds
<i>Projects focused on restoration, acquisition for eventual restoration, and/or acquisition for protection.</i>																				
<b>Capital Projects - Listed Species</b>																				
<b>Habitat Restoration</b>																				
Ala Spit Enhancement & Protection	Restoration of sediment down drift processes to maintain spit habitats and associated pocket estuary (based on recommendations from completed assessment)	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	remove 850 feet of riprap; action will restore natural sediment drift process with purpose to restore maintain and pocket estuary	Chinook	bull trout, chum, pink, forage fish	1st phase of restoration completed (removal of riprap from spit neck; ongoing monitoring; final design and permitting completed	Post construction monitoring (see below)	\$20,000	2nd phase restoration jetty assessment (removal of 275 feet of bulkhead; beach nourishment); monitoring (see below)	\$220,000	Post construction monitoring	\$10,000	2015	Island County	\$250,000	\$35,000	SRFB; local; Island County; WSU beachwatchers
Derelict Net Removal	identification and removal of derelict fishing nets in Island County marine waters	A = 2 GA = all H = 2,3 P = 2	Loss of Habitat	nearshore rocky coast		Survey and remove remaining known derelict nets	Chinook	salmon, rockfish, marine mammals, birds, others	Ongoing - approximately 22 nets remain; permitting complete	remove 22 nets	\$65,000					NW Straits 2012 Foundation	\$65,000	\$146,000	Mostly funded with NOAA/Recovery Act funding through end of 2010; SRFB	
Spartina Removal Projects	identification and removal of Spartina anglica throughout Island County as part of monitoring	A = 2 GA = all H = 1,2 P = 1,2	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Monitor and remove spartina where located	Chinook		large proportion of sites have been treated; ongoing monitoring & and treatment of identified sites planned	monitoring & removal	\$50,000	monitoring & removal	\$50,000	monitoring & removal	\$50,000	ongoing	IC Weed Control, WDFW	\$150,000	\$60,000	WDFW; Marine Conservation Fund
Livingston Bay Pocket Estuary Restoration	restoration of tidal connectivity by removing section of dike	A = 1 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Restoration of 10 acre pocket estuary through removal of dike, fill and tidal reconnection	Chinook	Chum, Bull trout; forage fish	Acquisition complete; 30% complete; permitting ongoing	final design & permitting, construction	\$315,000	monitoring		monitoring		The Nature Conservancy 2012	\$315,000	\$65,000	SRFB/PSAR; local; others sought	
Cornet Bay Enhancement/Restoration	enhancement of eelgrass, marshland and forage fish habitat at Deception Pass State Park	A = 2 GA = 1 H = 2 P = 2	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore	2000 linear ft and 7 acres of wetland	Chinook	Chum, Bull trout; pink forage fish	Restoration design completed for several reaches where restoration funded; permitting ongoing	Release of RFP for 2000 linear foot restoration	\$248,000	Planting, monitoring and wetland planning efforts	\$50,000	Monitoring, evaluating and reporting of 2012 work and plannign of Phase 2 restoration work	\$100,000	2016	Current sponsors are WA SRFB, US FWS, City of Oak Harbor and Island MRC	\$398,000	Complex mix of private and public funding (see source documents for details)	See source documents
Crescent Harbor Marsh Restoration	Restore tidal connectivity and improve of internal hydrologic connectivity	A = 2 GA = 2 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	restore connection to approximately 200 acres of salt marsh habitat	Chinook	Chum, Bull trout	connectivity completed for most of site; monitoring ongoing; restoration antipated to continue upon relocation of sewage treatment plant	Ongoing adaptive management	\$50,000 ;	Adaptive Management	\$50,000	Sewage treatment plant removal assesment	\$90,000	2019	Skagit River System Coop, Navy; City of Oak Harbor	\$190,000 ?		SRFB, ESRP, SRSC, Navy.
Creosote Log & Piling Removal	removal of creosote debris and derelict creosote pilings from Island County nearshore, particularly in forage fish spawning areas	A = 2 GA = all H = all P = 2	Water Quality	nearshore beaches	Estuary or Nearshore	Survey and remove creosote debris; remove 90% of creosote debris from identified areas	Chinook		Planned - dependent on funding	removal of creosote debris and pilings	\$20,000	removal of creosote debris and pilings	\$20,000	removal of creosote debris and pilings	\$20,000	unknown	WA DNR, local volunteers, MRC	\$60,000	\$0	Program not funded - WA DNR
Dugualla Heights Restoration	Restore tidal connectivity to historic pocket estuary, and enhance salt marsh and upland habitats	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Restore tidal connection to historic pocket estuary of 12 acres intertidal and 13 acres of high marsh and marine riparian area	Chinook	chum, bull trout	Feasibility complete; Permitting and final design ongoing	permitting and final design, and completion of funding identification	\$70,000	construction	\$790,000	revegetation and monitoring	\$60,000	2014	WICD, WCLT	\$920,000	\$140,000	SRFB, USFWS, NRCS, others
																		\$2,348,000	\$446,000	

Habitat Acquisition for restoration										top priority nearshore acquisitions (conservation easements)		Whidbey Camano 2016 Land Trust				SRFB, USFWS, ESRP			
Livingston Bay High Priority Habitat for Restoration	acquisitions and conservation easements that provide future restoration opportunities of nearshore processes and functions	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$1,100,000									
Habitat Acquisition for protection										top priority nearshore acquisitions (3 conser. Easements) <th colspan="2">top priority nearshore acquisitions (3 conser. Easements) <th colspan="2">Whidbey Camano 2015 Land Trust <th colspan="2">\$1,300,000 <th colspan="2">\$200,000 Unknown</th> </th></th></th>		top priority nearshore acquisitions (3 conser. Easements) <th colspan="2">Whidbey Camano 2015 Land Trust <th colspan="2">\$1,300,000 <th colspan="2">\$200,000 Unknown</th> </th></th>		Whidbey Camano 2015 Land Trust <th colspan="2">\$1,300,000 <th colspan="2">\$200,000 Unknown</th> </th>		\$1,300,000 <th colspan="2">\$200,000 Unknown</th>		\$200,000 Unknown	
South Camano High Priority Habitat Protection	acquisitions and conservation easements that protect intact priority nearshore processes and functions	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	seven conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$550,000		\$750,000							
Strawberry Point High Priority Habitat Protection	acquisitions and conservation easements that protect intact priority nearshore processes and functions	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	four conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$600,000		\$725,000							
Cultus Bay High Priority Habitat Protection	acquisitions and conservation easements that protect intact top priority nearshore processes and functions	A = 1 GA = 2 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	three conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$150,000		\$1,200,000							
Kristoferson Creek High Priority Habitat Protection	acquisitions and conservation easements that protect intact top priority watershed processes and functions	A = 1 GA = 1 H = 2 P = all	Loss of Habitat	riparian	Land Protected, Acquired, or Leased	six conservation easements protecting watershed habitat and processes	Chinook	Conceptual		\$220,000		\$600,000							
Holmes Harbor High Priority Habitat Protection	acquisitions and conservation easements that protect intact top priority nearshore processes and functions	A = 1 GA = 2 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	three conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$75,000		\$65,000							
Useless Bay High Priority Habitat Protection	acquisitions and conservation easements that protect intact priority nearshore processes and functions	A = 1 GA = 2 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	three conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$50,000		\$1,700,000							
Livingston Bay High Priority Habitat Protection	acquisitions and conservation easements that protect intact top priority nearshore processes and functions	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	conservation easements protecting nearshore habitat and processes	Chinook	Conceptual		\$600,000									
Barnum Point / Triangle Cove Protection	acquisition to protect high quality nearshore, shoreline, and marine riparian habitat	A = 1 GA = 1 H = 1 P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	one to three fee simple acquisitions protecting nearshore, shoreline, and marine riparian habitat and processes	Chinook	Conceptual; partial funding identified	top priority nearshore acquisition (phase one of three)	\$1,500,000		\$1,500,000							
Crockett Lake High Priority Habitat Protection	acquisitions that protect intact top priority nearshore processes and functions	A = 1 GA = 2 & 3 H = all P = all	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	conservation easements protecting nearshore habitat and processes	Chinook	Conceptual; partial funding identified	top priority nearshore acquisitions	\$2,500,000									
Swede Hill/Indian Point High Priority Nearshore Habitat Protection	acquisitions and conservation easements that protect intact top priority nearshore processes and functions	A = 1 GA = 2 H = all P = 1 & 3	Loss of Habitat	nearshore embayments	Land Protected, Acquired, or Leased	conservation easements protecting nearshore habitat and processes	Chinook	Conceptual; partial funding identified	top priority nearshore acquisitions	\$1,100,000									
												\$13,885,000		\$2,305,000					
Hatchery	Projects focused on hatchery program facilities and maintenance to rear fish, maintain fish health and diversity, and minimize domestication in fish of naturally spawning broodstocks.																		

Other														NONE						
<b>Total Capital Need:</b>																\$16,233,000		\$2,751,000		
<b>Non-Capital Programs - Listed Species</b>																				
Harvest Management Support														Activities related to management of Chinook as they transit various management jurisdictions, and the design and implementation of harvest management actions intended to maintain and restore the diversity and productivity of Chinook populations.						
Future Habitat Project Development														Projects designed to assess future needs for habitat restoration projects.						
West Deer Lagoon Feasibility Assessment and Neighborhood Outreach	feasibility assessment of enhancing tidal connectivity and fish passage, and outreach activities	A = 2 GA = 2 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Prepare feasibility study and initial design, and conduct public outreach	Chinook	Chum	Feasibility study and outreach ongoing; conceptual, initial restoration assessment completed; Acquisition for protection completed; stewardship plan completed	Completion of alternative analysis and outreach	\$30,000	Geotechnical analysis of dikes	\$75,000		Wild Fish 2011 Conservancy	\$105,000	\$0	SRFB/PSAR, WFC		
Iverson Marsh Restoration Feasibility and Outreach	feasibility assessment, modeling, and design of marsh restoration	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	complete feasibility study and design	Chinook	Chum; Bull Trout	Conceptual; initial historic condition and project scoping completed; ongoing hydrological monitoring	assessment and 30% design of preferred restoration alternative; outreach				feasibility study, design	\$160,000	2012	Island County, Stillaguamish Tribe, Wild Fish Conservancy	\$160,000	\$0	SRFB; unknown
Swantown Lake Feasibility Assessment and Neighborhood Outreach	feasibility assessment of enhancing tidal connectivity and fish passage	A = 2 GA = 3 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Complete feasibility study and conduct public outreach	Chinook	Chum	Conceptual; culvert upgraded and access improved	assessment of accessibility and feasibility	\$160,000	Completion of study and final alternative analysis	\$50,000		Swan Lake Watershed Preservation Group; Skagit Fisheries Enhancement Group	2013	\$210,000	\$25,000	SRFB; County; local	
County Club Lagoon	feasibility assessment of enhancing fish passage	A = 2 GA = 1 H = 1 P = 1	Reduced habitat function, access limited	nearshore embayments	Estuary or Nearshore	Study to improve feasibility of improving fish passage	Chinook	Chum	Conceptual	feasibility study				Tulalip; Island 2013 County	\$50,000		\$0	unknown		
Crocket Lake Camano Island State Park Pocket Estuary Restoration Assessment	feasibility assessment of enhancing tidal connectivity and fish passage improvement or internal hydrologic connectivity and restoration of tidal connectivity	A = 2 GA = 3 H = 1 P = 1 A = 2 GA = 2 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Feasibility study to determine restoration potential	Chinook	Chum	Conceptual			feasibility study	\$95,000	Design	\$75,000	2014	Wild Fish Conservancy, SRSC; Seattle Lights	\$170,000	\$0	SRFB, ESRP
Duqualla Bay	feasibility assessment of enhancing tidal connectivity and fish passage	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	restore 4.4 acres of salt marsh habitat	Chinook	bull trout, chum, forage fish	Feasibility assessment completed in 2010	Outreach				Outreach, 30% design	\$140,000	2016	Skagit River System Coop, WA State Parks	\$140,000 ?		unknown
						Feasibility study to determine restoration potential	Chinook	Chum	Conceptual; 10% design completed by PSNERP			feasibility study	\$175,000	Design	\$125,000	2014	Navy, SRSC, others	\$300,000	\$25,000	SRFB, ESRP, PSNERP, NAVY
Habitat Protection														Projects designed to assess, monitor, or participate in planning activities related to habitat protection. This includes monitoring.						

Penn Cove and Admiralty Inlet Nearshore Water Quality Restoration	integrated protection planning, technical assistance and nearshore water quality remediation implementation	A = 1 GA = 2 H = all P = 2	Degraded habitat; landowner permission	nearshore beaches	Estuary or Nearshore	91 acre subbasin water quality improvement	Chinook	bi-valves	Implemented	Seal design document, complete permitting protection and restoration plan, landowner outreach and technical assistance	\$200,000	Construction and beginning of monitoring feasibility assessment, landowner outreach and fundraising for acquisitions	\$460,000	Monitoring, evaluating and reporting	\$100,000	\$2,014	SeaGrant, WA DOE, Russell Family Foundation, Town of Coupeville	\$760,000	\$127,000	IC MRC, IC Health Department, Town of Coupeville and US Parks (easement)
North Camano Nearshore Protection Project (Utsalady Bay focus area)	integrated restoration and protection planning, landowner outreach, & technical assistance	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore beaches	Estuary or Nearshore	perform landowner outreach, and assessment of priority habitats, sites, and properties	Chinook	Forage fish, Coho, chum	Data collection, WDFW policy research	synthesis	\$75,000	Restoration feasibility assessment	\$75,000	Restoration feasibility assessment	\$85,000		MRC; Island County	\$235,000	\$10,000	MRC, NOAA, NWSC
Synthesis of Geographic Area 1 Nearshore Protection Projects	evaluation of lessons learned through initial integrated protection projects	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore beaches	Estuary or Nearshore		Chinook		Conceptual	synthesis	\$25,000	synthesis	\$25,000	synthesis	\$25,000		MRC; Island County	\$75,000	\$0	unknown
Island County SMP Update	Update of Shoreline Management Program	A = 1 GA = all H = all P = all	Reduced Habitat Capacity	nearshore	Estuary or Nearshore	Review and update SMP incorporating BAS and restoration plan	Chinook	Forage fish, Coho, chum	Ongoing	Complete draft ordinance	\$200,000	Adopt updated SMP ordinance	\$200,000				2013 Island County	\$400,000 ?		DOE; Island County
Island County CAO (FWHCA)	Update of Critical Area Regulations; Fish and Wildlife Habitat Conservation Areas	A = 1 GA = all H = all	Reduced Habitat Capacity	nearshore, stream and riparian	Estuary or Nearshore;	Review and update CAO incorporating BAS	Chinook	Forage fish, Coho, chum	Complete; FWPCA section not begun			Review and update FWPCA	\$175,000				2013 Island County	\$175,000 ?		Island County; ?
Island County Owned Nearshore Protection Project	Review & update management plans for county owned lands in and adjacent nearshore	A = 1 GA = all H = all P = all	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore		Chinook	Forage fish, Coho, chum	Conceptual					ID of properties, draft management plan review/evaluation of state ownership & discussion w/ agencies	\$35,000		MRC; Island County	\$35,000	\$105,000	unknown
WRIA 6 State Owned Nearshore Protection Project	Review & evaluate management plans for state owned lands in and adjacent to the nearshore	A = 1 GA = all H = all P = all	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore		Chinook	Forage fish, Coho, chum	Conceptual					review/evaluation of state ownership & discussion w/ agencies	\$50,000		MRC; Island County	\$50,000	\$0	unknown
WRIA 6 Federally Owned Nearshore Protection Project	Review & evaluate management plans for federally owned lands in and adjacent to the nearshore	A = 1 GA = all H = all P = all	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore		Chinook	Forage fish, Coho, chum	Conceptual					review/evaluation of state ownership & discussion w/ agency	\$50,000		MRC; Island County	\$50,000	\$0	unknown
Port Susan Marine Stewardship Area	Planning & creation of MSA to promote stewardship and protection of the the marine and nearshore of Port Susan	A = 1 GA = 1 H = all P = all	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore	Development of MSA plan in both Island and Snohomish Counties	Chinook	Forage fish, salmonids, others	Ongoing	MSA planning and coordination	\$30,000	MSA planning and coordination	\$30,000				2013 MRC; Tulalip	\$60,000		
															\$1,780,000	\$242,000				
<b>Watershed Plan Implementation &amp; Coordination</b>																				
Projects designed to increase the capacity of watersheds to implement the recovery plan.																				
WRIA 6 Salmon Lead Entity Coordinator	Lead Entity tasks, Recovery Chapter coordination	A=1	Human Resources	All	All		Chinook	Salmonids, forage fish	Ongoing	LE operational grant tasks, etc.	\$65,000	LE operational grant tasks, etc.	\$65,000	LE operational grant tasks, etc.	\$65,000	ongoing	Island County	\$195,000	\$195,000	funded: Lead Entity operational grant; PSAR capacity funds; NEP funds; Island County
Marine Resources Committee Coordination & Staff	MRC coordination	A=1	Human Resources	All	Estuary or Nearshore				Ongoing	MRC coordination	\$40,000	MRC coordination	\$40,000	MRC coordination	\$40,000	ongoing	Island MRC; WSU Extension	\$120,000	\$116,000	funded: NW Straits Commission
WCLT - Protection Capacity Funding	Landowner outreach and fundraising for acquisitions	A=1	Human Resources	All	Estuary or Nearshore		Chinook		Ongoing	landowner outreach and fundraising for acquisitions; LE participation	\$35,000	landowner outreach and fundraising for acquisitions; LE participation	\$35,000	landowner outreach and fundraising for acquisitions; LE participation	\$35,000	ongoing	Whidbey Camano Land Trust	\$105,000	\$0	WCLT
Conservation Dist. - Protection Capacity Funding	Stewardship outreach, landowner technical assistance, and LE participation	A=1	Human Resources	All	LID, Upland Agriculture, and other				Ongoing	stewardship outreach, landowner technical assistance, and LE participation	\$50,000	stewardship outreach, landowner technical assistance, and LE participation	\$50,000	stewardship outreach, landowner technical assistance, and LE participation	\$50,000	ongoing	Whidbey and Snohomish Conservation Districts	\$150,000	\$0	Mostly funded (Conservation Districts)
SRSC - Protection Capacity Funding	project review, stewardship outreach, & LE participation	A=1	Human Resources	All	Estuary or Nearshore		Chinook		Ongoing; partially funded	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	ongoing	Skagit River System Cooperative	\$105,000	\$0	unknown

Stillaguamish - Protection Capacity Funding	project review, stewardship outreach, & LE participation	A=1	Human Resources	All	Estuary or Nearshore	Chinook	Ongoing; partially funded	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	ongoing	Stillaguamish Tribe	\$105,000	\$0	unknown	
Tulalip - Protection Capacity Funding	project review, stewardship outreach, & LE participation	A=1	Human Resources	All	Estuary or Nearshore	Chinook	Ongoing; partially funded	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	project review, stewardship outreach, and LE participation	\$35,000	ongoing	Tulalip Tribes	\$105,000	\$0	unknown	
MRC - Restoration Capacity Funding	Project identification, scoping & fundraising	A=2	Human Resources	All	Estuary or Nearshore	Chinook		project id and fundraising; LE participation	\$15,000	project id and fundraising; LE participation	\$15,000	project id and fundraising; LE participation	\$15,000	ongoing	Marine Resources Committee	\$45,000	\$0	unknown	
SRSC - Restoration Capacity Funding	project identification, scoping, & fundraising; landowner technical assistance	A=2	Human Resources	All	Estuary or Nearshore	Chinook		project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	ongoing	Skagit River System Cooperative	\$60,000	\$0	unknown	
Stillaguamish - Restoration Capacity Funding	project identification, scoping, & fundraising; landowner technical assistance	A=2	Human Resources	All	Estuary or Nearshore	Chinook		project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	ongoing	Stillaguamish Tribe	\$60,000	\$0	unknown	
Whidbey Watersheds Stewards - Restoration Capacity Funding	project identification, scoping, & fundraising; landowner technical assistance	A=2	Human Resources	All	Instream	Coho	Cutthroat	project id, scoping, & fundraising, landowner technical assistance	\$15,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	ongoing	Whidbey Watershed Stewards	\$55,000 ?		WWS Local contributions	
Tulalip -Restoration & research Capacity Funding	project identification, scoping, & fundraising; landowner technical assistance	A=2	Human Resources	All	Estuary or Nearshore	Chinook		project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	project id, scoping, & fundraising, landowner technical assistance	\$20,000	ongoing	Tulalip Tribes	\$60,000	\$0	unknown	
SRSC - Nearshore Science Capacity Funding	project scoping & fundraising, data synthesis, presentations	A=1	Human Resources	All	Estuary or Nearshore	Chinook		project scoping & fundraising, data synthesis, presentations	\$37,500	project scoping & fundraising, data synthesis, presentations	\$37,500	project scoping & fundraising, data synthesis, presentations	\$37,500	ongoing	Skagit River System Cooperative	\$112,500	\$0	unknown	
Wild Fish Conservancy - Nearshore Science Capacity Funding	project scoping & fundraising, data synthesis, presentations	A=1	Human Resources	All	Estuary or Nearshore	Chinook		project scoping & fundraising, data synthesis, presentations	\$15,000	project scoping & fundraising, data synthesis, presentations	\$15,000	project scoping & fundraising, data synthesis, presentations	\$15,000	ongoing	Wild Fish Conservancy IC Marine Resources Committee	\$45,000	\$0	unknown	
Shore Stewards Coordination	newsletters, events, technical assistance, etc.	A=1	Human Resources	All	Estuary or Nearshore		Ongoing	program coordination	\$28,000	program coordination	\$28,000	program coordination	\$28,000	ongoing		\$84,000	\$0	IC MRC	
WRIA 6 Monitoring & Adaptive Management Planning and Implementation	programmatic evaluation of projects/programs and ecosystem functions	A=1	Human Resources	All	All	Chinook	other salmonids, forage fish	Early development locally	Development of draft WRIA 6 draft monitoring and Adaptive Management Plan; regional engagement	\$20,000	Finalize local plans; regional template; implement	implement monitoring and adaptive management	ongoing	WRIA 6 TAG; Island County Lead Entity Staff	\$20,000 ?			WRIA 6 - NEP; other unknown	
<b>\$1,426,500</b>																	<b>\$311,000</b>		
Projects designed to increase outreach and education related to watershed health and salmon recovery.																			
Outreach & Education																			
Marine Stewardship Area Signage	educational signs at parks highlighting importance of marine and nearshore for salmon, forage fish and other species	A = 2 GA = all H = all P = all	Community Engagement	All	Estuary or Nearshore			Project data archiving	Project data archiving	Install at least 2 new signs	\$10,000	Install at least 2 new signs	\$10,000	ongoing	MRC & partners	\$22,000	\$20,000	NWSC (NOAA) via MRC	
Community Knowledge Assessment	evaluation of citizen knowledge about salmon recovery issues and willingness to participate in recovery projects	A = 1 GA = all H = all P = all	Community Engagement	All	All			Conceptual; initial report finalized 2009		follow-up assessment	\$15,000			Island County; 2013 Island County MRC	\$15,000	\$15,000	unknown		

Shore Stewards Shoreline Landowner Workshops	outreach in shoreline communities focusing on nearshore functions for salmon, and opportunities for protection and enhancement	A = 1 GA = all H = all P = all	Community Engagement	nearshore	Estuary or Nearshore	2-3 workshops/year	Chinook	Conceptual	2 workshops	\$4,000	2 workshops	\$4,000	2 workshops	\$4,000	ongoing	Island County; Shore Steward Program; Whidbey Watershed Stewards	\$12,000	\$6,000	local	
Deception Pass SP Salmon Outreach Campaign	develop educational materials and outreach events targeting park visitors	A = 1 GA = 1 H = all P = all	Community Engagement	All	All		Chinook	Conceptual	design, develop outreach materials	\$40,000	design, develop outreach materials	\$40,000	materials, activities	\$40,000	2014	State Parks; MRC	\$120,000	\$0	unknown	
Site Specific Seining Results	Annual updates summarizing results of Beach Watchers juvenile salmon seining efforts	A = 1 GA = 2 H = 1 P = all	Community Engagement	nearshore	Estuary or Nearshore	Strategic seining to support education and outreach	Chinook	Seasonal monitoring, data collection, analysis and report writing	Seasonal monitoring, data collection, analysis and report writing	\$2,000	Seasonal monitoring, data collection, analysis and report writing	\$2,000	Seasonal monitoring, data collection, analysis and report writing	\$3,000	ongoing	Island MRC, Beach Watchers	\$7,000	\$2,500	US EPA, Island County	
Watershed Stewardship Program	Educate shoreline residents on best practices	A = 2 GA = all H = all P = all	Community Engagement	All	All	Shoreline of Island County (up to 1000 landowners)	all	all	Low-level member data collection, newsletters	\$9,000	Moderate level member data collection, newsletters	\$20,000	Moderate level member data collection, newsletters	\$20,000	ongoing	Island MRC	\$49,000	n/a	US EPA, Island County, WSU	
Booklet: Salmon Swim Amongst Us	telling the story of salmon passing through Island County	A = 2 GA = all H = all P = all	Community Engagement	All	Estuary or Nearshore	Distribute strategically Maxwelton Classroom; serves 1600 students/yr; service-learning with middle school, high school, Scouts, and Community College students	Chinook	Design completed; printed 2011	Print	\$4,000				ongoing	Orca Network	\$4,000	\$0	unknown		
K-12 School Programs	education about watershed and nearshore functions for salmon	A = 2 GA = all H = all P = all	Community Engagement	All	All		Chinook, forage fish	other salmon	Underway by sponsor	presentations	\$15,000	presentations, service learning	\$15,000	presentations, service learning	\$15,000	ongoing	Whidbey Watershed Stewards, Fisheries Enhancement Groups, WSU Extension	\$45,000	\$15,000	partially funded by CSF
Sportfishing Outreach	outreach campaign to sportfish community at boat ramps &	A = 1 GA = all H = all P = 2	Community Engagement	All	Estuary or Nearshore	Presentations at sportfishing events establish contact with willing landowners for restoration projects, improve public awareness, reduced non-point pollution			Conceptual	outreach	\$5,000	outreach	\$5,000	outreach	\$5,000	ongoing	Island County; Lead Entity staff	\$15,000	\$15,000	unknown
Glendale Watershed Education Program	education and outreach related to Glendale Watershed	A = 2 GA = 2 H = 2 P = 3	Community Engagement	instream	Instream	Annual event aimed at awareness of community regarding salmon use and importance in ecosystem	Chum	Chinook	contacts made, and watershed education program completed 2010	outreach, education program	\$15,000	presentations	\$5,000	presentations	\$5,000	ongoing	Whidbey Watershed Stewards	\$25,000	\$5,000	Island County
Salmon awareness event	Annual community event to raise awareness of salmon use in Island County	A = 2 GA = all H = all P = all	Community Engagement	All	All	Document outlining strategic actions necessary to effectively make outreach to the community and build public support for actions necessary to recover salmon	Chinook		Conceptual	event	\$5,000	event	\$5,000	event	\$5,000	ongoing	Whidbey Watershed Stewards; Orca Network	\$15,000	\$30,000	unknown
Communication Strategy	Develop strategic plan to help in implementing communication activities in the watershed related to salmon recovery and improve knowledge and support for salmon recovery	A = 2 GA = all H = all P = all	Community Engagement	All	All		Chinook	forage fish; other salmonids	Ongoing; plan development funded	Finalize strategy, lessons learned, and project development guidance	\$15,000	implement and coordinate plan		implement and coordinate plan	ongoing	Island County; Whidbey Watershed Stewards, TAG	\$15,000		PSAR capacity; local	
<b>\$344,000</b>																	<b>\$108,500</b>			
Instream Flow Protection	Projects designed to protect instream flows.																			
NONE																				
<b>\$0</b>																	<b>#REF!</b>			
Project Monitoring	Projects designed to monitor habitat projects. Includes adaptive management monitoring and post-construction monitoring.																			
Cornet Bay - Forage Fish Monitoring	pre and post restoration monitoring of habitat and fish use	A = 2 GA = 1 H = 2 P = 2		nearshore		1600 feet of shoreline monitoring for forage fish spawning	forage fish	salmonids	active pre-restoration monitoring	pre-restoration monitoring	\$5,000	Post-construction monitoring	\$5,000	Post-construction monitoring	\$5,000	2014	MRC, WDFW	\$15,000		WSU Beach Watchers

Coronet Bay - Salmonid Fish Use Monitoring	pre and post restoration monitoring of habitat and fish use	A = 2 GA = 1 H = 2 P = 2		nearshore		10 sites monitored at site	Chinook	chum, pink	active monitoring	pre-restoration monitoring	\$3,000	post-restoration monitoring	\$3,000	Post-construction monitoring	\$3,000	2014 NOAA	MRC, WSU Beachwatchers,	\$9,000	WSU, MRC	
WRIA 6 Eelgrass Mapping and Monitoring	Countywide survey of eelgrass	A = 2 GA = 1 H = 2 P = 2	Loss of Habitat	nearshore	Estuary or Nearshore	24 DNR segments per year	Chinook	Forage Fish	Seasonal monitoring, data collection, analysis and report writing	Seasonal monitoring, data collection, analysis and report writing	\$2,000	Seasonal monitoring, data collection, analysis and report writing	\$2,000	Seasonal monitoring, data collection, analysis and report writing	\$3,000	2016 ongoing		\$7,000	\$21,000	US EPA, Island County
Post-construction Monitoring Crescent Marsh Restoration	post construction monitoring of habitat and fish use	A = 2 GA = 2 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Monitor habitat and fish use in 200 acre restored salt marsh monitor habitat and fish use at approximately 15 acre pocket estuary restoration site and	Chinook		Construction Completed. Habitat and Fish monitoring in progress	habitat and fish surveys	\$35,000	habitat and fish surveys	\$35,000	habitat and fish surveys	\$35,000	2014	Navy, University of Washington; Skagit River System Coop; Beachwatchers	\$105,000	\$0	Partially Funded; Navy
Dugualla Heights Lagoon Monitoring	pre and post restoration monitoring	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	restoration site and	Chinook	chum, bull trout	Pre-restoration seining ongoing; restoration design funded	pre-construction monitoring (habitat & fish)	\$25,000	post-construction monitoring (habitat & fish)	\$25,000	post-construction monitoring (habitat & fish)	\$25,000	2015	WCLT; SRSC; Skagit Fisheries Enhancement Group; WSU	\$75,000	???	
Ala Spit post construction monitoring	post construction monitoring of habitat and fish use	A = 2 GA = 1 H = 1 P = 1	Loss of Habitat	nearshore embayments	Estuary or Nearshore	Post construction/restoration at spit	Chinook	Bull trout; Forage fish; Chum	Monitoring plan completed; Restoration permitting and final design completed; 1st phase construction completed	post-construction monitoring (habitat & fish)	\$20,000	post-construction monitoring (habitat & fish)	\$20,000	post-construction monitoring (habitat & fish)	\$20,000	2015	Island County	\$60,000	\$21,000	WSU beachwatchers, Local, ?
<b>\$271,000</b>																			<b>\$21,000</b>	
<b>Stock Monitoring Support</b>		<b>Projects designed to monitor stocks.</b>																		
WRIA 6 Juvenile Salmon Origins	genetic identification of distribution of stocks using WRIA 6 nearshore	A = 1 GA = all H = all P = all	NA	nearshore	Estuary or Nearshore	10 year study monitoring Chinook in Skagit Bay. Study area includes area from Western edge of Deception Pass to Ponell Pt and across to Utsalady.	Chinook		Data has been collected and is being synthesized; final report to be completed and outreach	completion of synthesis of all WRIA habitat and fish data; results outreach	\$10,000					2011	Skagit River System Cooperative	\$10,000	\$140,000	funded: SRFB, SRSC, partners
Skagit Bay Nearshore/Marine Salmonid Distribution	Intensively Monitored Watershed - assessment of distribution of out-migrating fish living in skagit estuary and nearshore areas of Skagit Bay, including WRIA 6 nearshore.	A = 1 GA = 1 H = all P = all	NA	nearshore	Estuary or Nearshore		Chinook		On-going	monitoring; data synthesis	\$200,001	monitoring; data synthesis	\$200,000	monitoring; data synthesis	\$200,000	2015	NOAA, WDFW ??	\$600,001	\$200,000	Funded: NOAA, IMW SRFB, Tribes. Pacific Salmon Treaty Research
Port Susan and Saratoga Passage Neashore/Marine Salmonid Distribution	assessment of distribution of out-migrating fish	A = 1 GA = 1,2 H = all P = all	NA	nearshore	Estuary or Nearshore		Chinook		Final Report Completed; outreach of result needed	completion of synthesis of all WRIA habitat and fish data; results outreach (related to origins study)	\$5,000					ongoing	Tribes, NOAA, WSU Extension	\$5,000	\$150,000	partially funded: Tribes, NOAA, volunteers, SRFB, MCF
Admiralty Inlet Nearshore/Marine Juvenile Salmonid Distribution	assessment of distribution of out-migrating fish	A = 1 GA = 2,3 H = all P = all	NA	nearshore	Estuary or Nearshore		Chinook	Chum	Final Report Completed; outreach of result needed	completion of synthesis of all WRIA habitat and fish data; results outreach (related to origins study)	\$5,000					ongoing	Tribes, NOAA, Wild Fish Conservancy	\$5,000	\$0	unknown
Whidbey Basin Trophic Interactions Scoping	evaluation of predator/prey assessments done to date; development of future scope of work	A = 2 GA = 1,2	NA	nearshore	Estuary or Nearshore		Chinook		Conceptual	evaluation of work to date; scoping	\$20,000					2014	Tribes, WDWF, NOAA	\$20,000	\$0	unknown
Admiralty Inlet Trophic Interactions Scoping	evaluation of predator/prey assessments done to date; development of future scope of work	A = 2 GA = 2,3	NA	nearshore	Estuary or Nearshore		Chinook		Conceptual	evaluation of work to date; scoping	\$20,000					2010	Tribes, WDWF, NOAA	\$20,000	\$0	unknown
<b>\$660,001</b>																			<b>\$350,000</b>	
<b>Research</b>																				

Small stream fish use in Island County and predictive modeling	Develop and test GIS based model to identify small coastal streams likely to have rearing juvenile salmon, conduct watershed analysis on WRIA 6 streams and, support inclusion of study/project results into SMP, CAO, and SRP.	A = 1 GA = all H = 2 P = 3	Limited habitat access	Instream	instream	100% survey of WRIA 6 shoreline for small stream mouths, electrofish and habitat surveys for 40+ streams.	Chinook	Coho, Cutthroat	Funded and initial field investigation begun	Stream habitat surveys, journal article publication, outreach, reference stream sampling	\$92,461	fish sampling in streams, watershed analysis, provide findings for use in CAO, SMP & SRP updates	\$92,462	2014 Tulalip, SRSC	\$184,923	\$65,640	funded DOE, DEP grant	
Small stream non-natal fish use	Initial survey of small streams in WRIA's 4,5,6, & 7, and collection of fish presence and stream surveys.	A = 2 GA = 1, 2 H = 2 P = 3	Habitat access	Instream	Instream	Survey of 18 streams and collection of basic stream habitat information	Chinook	Coho, Cutthroat	Data collection completed; findings presented at 2011 Salish Sea Conf, manuscript is being drafted for publication	Draft manuscript to be completed and submitted to scientific journal	\$15,000	Findings published in scientific journal	\$15,000	2013 Tulalip, SRSC	\$30,000		EPA/NWIFC	
Puget Sound Shoreline Armoring Impacts to Nearshore Ecology and Shoreform	Improve understanding and ability to quantify impacts of shoreline armoring to nearshore ecology	A = 2 GA = all H = all P = 1	Reduced Habitat Capacity	shoreline	Nearshore	Study will collect data from several different Puget Sound locations over several years to help understand impacts of armoring on	Chinook	salmonids, forage fish, other nearshore species	Funded; data collection and	sampling;	\$50,000	sampling;	\$75,000	2015 SRSC,	\$125,000		SeaGrant; WDFW	
															\$339,923	\$0		
Other																		
<b>Total Non-Capital Need:</b>															\$5,616,501	#REF!		
<b>Priority Projects and Programs Benefiting Non-Listed Species</b>																		
Island County Freshwater Water Quality Monitoring	baseline monitoring of streams and lakes; source id monitoring of streams with impairments	A = 2 GA = all H = 2 P = 3	Water Quality	instream	Water Quality Improvement	Continued monitoring			ongoing monitoring - in 5th year of baseline study	baseline and source identification water quality monitoring	\$250,000	baseline and source identification water quality monitoring	\$250,000	ongoing	Island County	\$500,000	\$750,000	funded: county, WA Ecology
Maxwelton Smolt Counts	May survey of juvenile Coho in Maxwelton/Quade Creek system	A = 2 GA = 2 H = 2 P = 3	NA	instream	Instream	Ongoing survey	Coho	Cutthroat	Ongoing; annual outmigration survey of Coho in Maxwelton/Quade Creek	monitoring	\$3,000	monitoring	\$5,000	monitoring	Whidbey Watershed Stewards	\$13,000	\$6,000	WWS Local contributions, MRC
Follow-up Monitoring Maxwelton Creek Tidegate	Coho spawner surveys	A = 2 GA = 2 H = 2 P = 3	Loss of Habitat	instream	Instream	Report prepared; monitoring fish use/returns	Coho	Cutthroat	ongoing; completed for 2007-12	spawner surveys, gate spawner surveys	\$1,000	spawner surveys, gate survey	\$1,000	spawner surveys, gate survey	Whidbey Watershed Stewards; Wild Fish Conservancy	\$1,000	\$3,000	WWS local contributions, MRC
Quade Creek Enhancement	culvert replacement and riparian planting	A = 2 GA = 2 H = 2 P = 3	Riparian Areas and LWD	riparian	Riparian	Replace culvert	Coho	Cutthroat	Completed; now in maintenance phase	riparian maintenance	\$10,000	riparian maintenance	\$10,000	riparian maintenance	Whidbey Watershed Stewards	\$30,000	\$10,000	Community Salmon Fund, Whidbey Watershed Stewards
Kristoferson Farm Riparian Restoration	riparian planting along Kristoferson Creek on Kristoferson Farm	A = 2 GA = 1 H = 2 P = 2	Riparian Areas and LWD	riparian	Riparian	restore vegetative stream buffer			Completed planting; now in maintenance phase	maintenance	\$4,000	maintenance	4000	maintenance	Landowner	\$4,000	\$12,000	\$8,000 funded: ???
Island County Water Typing	Field survey of stream habitat to ground truth DNR fish distribution	A = 2 GA = all H = 2 P = 2	Altered Stream Morphology/Stream Flow Patterns	riparian	Riparian	determine water type classification in watersheds in Island County			conceptual	project development	\$5,000	surveys/implementation	\$90,000	Wild Fish Conservancy; Island County	\$95,000	\$0	unknown; SRFB	
Drainage mapping and verification	evaluation of existing hydrography data layers; field verification	A = 2 GA = all H = 2 P = 2	Altered Stream Morphology/Stream Flow Patterns	riparian	Riparian				ongoing	field verification of stream outlets design & permitting of Wildes Rd. culvert replacement	\$20,000	field verification	\$20,000	2013 Tulalip Tribes	\$40,000	\$0	NWIFC	
Maxwelton Watershed Fish Passage Culverts	replacement of fish passage barriers identified in 2005 creek inventory	A = 2 GA = 2 H = 2 P = 3	Loss of Habitat	instream	Instream	Remove fish passage barrier, providing passage to upper 2 miles of stream habitat	Coho	Cutthroat	conceptual; landowner willing	restoration	\$45,000	Final design, construction	\$250,000	2015 Stewards	\$295,000	\$85,000	unknown	
Maxwelton Watershed Fish Passage Culverts (Daisy Ln, Coyote Ln)	habitat restoration	A = 2 GA = 2 H = 2 P = 3	Loss of Habitat	instream	Instream	restore riparian habitat, enhance rearing habitat for coho	Coho	Cutthroat	completed; ongoing adaptive management needed	adaptively manage	\$4,000	adaptively manage	\$4,000	Whidbey Watershed Stewards	\$8,000	\$4,000	unknown	

Upper Kristoferson Creek Enhancement	4 tributary culvert replacements and riparian planting	A = 2 GA = 1 H = 2 P = 2	Loss of Habitat	instream	Instream	replacement of culverts in fish bearing stream			conceptual/planned		culvert replacement & riparian planting	\$40,000		2012	Landowner	\$40,000	\$0	FFFAA		
Kristoferson Creek Enhancement-Barnum Rd	culvert replacement and riparian planting	A = 2 GA = 1 H = 2 P = 2	Reduced Habitat Capacity	instream	Instream	Replace partially blocking culvert address restoration of lower 1 mile of stream caused during flood event			Design partially completed; funding sought early engineering design work completed; conceptual		design and permitting	\$25,000	construction	\$85,000	2013	Island County	\$110,000	\$17,000	unknown	
Lower Glendale Creek Restoration	instream habitat restoration to be determined	A = 2 GA = 2 H = 2 P = 3	Reduced Habitat Capacity	instream	Instream		Coho; Chum	Cutthroat	completed; conceptual		Design/Permitting; construction	\$400,000	construction; Monitoring	\$200,000	2011	Island County Public Works; Tulalip	\$600,000 ?		unknown; SRFB	
Penn Cove Watershed Contamination Remediation Project	Subsurface wetland installation	A = 2 GA = 2 H = 2 P = 2	Water Quality	nearshore	Improvement	Penn Cove sub-basin I, adjacent to Coupeville waste water treatment plant	ESA listed Chinook Salmon	shellfish beds	Completing final design, beginning permitting	Seal design document, complete permitting	Construction and beginning of monitoring	\$200,000	\$460,000	Monitoring, evaluating and reporting	\$100,000	2014	SeaGrant, WA DOE, Russell Family Foundation, Town of Coupeville	\$760,000	\$173,000	SeaGrant, WA DOE, Russell Family Foundation, Town of Coupeville
Camano Country Club Creek	Riparian planting/restoration; Instream restoration	A = 2 GA = 1 H = 2 P = 3	Reduced Habitat Capacity	instream; riparian	instream; riparian	Improve fish passage and restore native riparian vegetation improve fish passage and maintenance requirements of existing culvert	cutthroat	chinook	conceptual		Instream and riparian restoration	\$25,000			2012	Tulalip; SCD	\$25,000		unknown	
Unnamed Creek (Zook or Orr Crk) culvert replacement	culvert upgrade to improve fish passage, and riparian planting	A = 2 GA = 2 H = 2 P = 3	Reduced Habitat Capacity	instream	Instream		Coho; cutthroat	chinook	conceptual		design and permitting; construction	\$100,000			Tulalip; Island 2010 County	\$100,000		unknown		
<b>Total Non-Listed Species Need:</b>																		\$2,506,000	\$1,059,000	



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Habitat

Acquisition for restoration

x	<p>protection of high priority nearshore on NE Whidbey in Skagit Bay; provide potential for nearshore restoration</p> <p><b>***COMPLETE D - 2009***</b></p> <p>Skagit Bay Nearshore Protection</p>	<p>A = 1 GA = 1 H = 1 P = 1</p>	<p>Reduced Habitat Capacity</p>	<p>nearshore embayments</p>	<p>Land Protected, Acquired, or Leased</p>	<p>Acquire high priority nearshore for protection and future restoration; potential of up to approx. 30 acres of nearshore</p>	<p>Chinook</p>	<p>Acquisition completed</p>	<p>Whidbey Camano Land Trust 2009</p>	<p>\$0</p>	<p>funded: SRFB/PSAR, local</p>
x	<p>protection for future restoration of high priority nearshore in N Port Susan</p> <p><b>***COMPLETE D - 2009***</b></p> <p>Livingston Bay Nearshore Acquisitions &amp; Restoration</p>	<p>A = 1 GA = 1 H = 1 P = 1</p>	<p>Loss of Habitat</p>	<p>nearshore and embayments</p>	<p>Land Protected, Acquired, or Leased</p>	<p>containing 10 acre pocket estuary for restoration</p>	<p>Chinook</p>	<p>Acquisition completed</p>	<p>The Nature Conservancy 2009</p>	<p>\$0</p>	<p>partially funded: SRFB, USFWS</p>

Future Habitat Project Development		Projects designed to assess future needs for habitat restoration projects.											
x	<p>***COMPLETE D - 2009*** Skagit Basin Nearshore Assessment</p>	<p>habitat and process assessment of 10 WRIA 6 Skagit Bay pocket estuaries</p> <p>A = 2 GA = 1 H = 1 P = 1</p>	Loss of Habitat	embayments	nearshore	Estuary	Bay Pocket Estuaries	Chinook	Data collection completed; Report completed	2009	Skagit River System Cooperative	\$0	funded: SRFB, SRSC
x	<p>***COMPLETE D - 2010*** Possession Beach Feasibility</p>	<p>feasibility assessment of pocket estuary restoration options</p> <p>A = 2 GA = 2 H = 1 P = 1</p>	Loss of Habitat	embayments	nearshore	Estuary	Nearshore potential	Chinook	Completed 2009: Feasibility study	2010	Skagit River System Cooperative; S. Whidbey Port	\$0	\$40,000 funded: Swinomish & Lummi
x	<p>***COMPLETE D - 2010*** Lowell Point Feasibility - Camano St. Pk</p>	<p>feasibility assessment of pocket estuary</p> <p>A = 2 GA = 2 H = 1 P = 1</p>	Loss of Habitat	embayments	nearshore	Estuary	Nearshore to	Chinook	Feasibility study completed	2010	Skagit River System Cooperative; State	\$0	\$40,000 funded: Swinomish & Lummi

		Projects designed to assess, monitor, or participate in planning activities related to habitat protection. This includes monitoring.																		
x	Habitat Protection Project	integrated protection planning, landowner outreach, & technical assistance	A = 1 GA = 1 H = all P = all	Loss of Habitat	nearshore beaches	Estuary or Nearshore	education/outreach, protection planning, and technical assistance in priority nearshore area	Chinook	Completed March 2010	Island County ; Whidbey Conservation District	2009	\$0	\$5,000	funded: SRFB						

???	Puget Sound Hydrodynamic Model	calibration of salinity and current model	A = 1 GA = all H = all P = all	NA	nearshore	Estuary or Nearshore		Chinook		PNNL Battelle, 2009 Tribes		\$0 ?		partially funded: tribes, NW Straits Commission, ?						
????	Camano Forage Fish Study 2007-08	intensive monitoring of 50 beach sites (Sept 07- Sept 08)	A = 1 GA = 1,2 H = 2 P = all	Reduced Habitat Capacity	nearshore beaches	Estuary or Nearshore		Chinook		2008 WDFW		\$0 ?		funded: WDFW						



Whidbey Forage Fish Study 2008-2011

monitoring of beach sites

A = 1  
GA = all  
H = 2  
P = all

Reduced Habitat Capacity nearshore beaches

Estuary or Nearshore

Chinook

USGS - 2011 CHIPS

\$0 ?

funded: USGS