

2011 Three Year Work Program Update Narrative to South Sound Watersheds Three-Year Project List

Introduction

For the purposes of recovery and sustainability planning “South Sound” is defined as that area of Puget Sound south of the Tacoma Narrows that includes the marine, near-shore, estuaries, and freshwater environments. This area includes: all of WRIA’s 11, 13, and 14, and portions of WRIA’s 10/12 and 15; portions of Kitsap, Mason, Pierce and Thurston Counties as well as numerous cities and municipalities. The South Sound also includes portions of the usual and accustomed areas for the Nisqually, Puyallup, and Squaxin Island Tribes.

The South Sound Salmon Recovery Group (SSSRG) is a local planning group consisting of members from Kitsap, Mason, Pierce and Thurston Counties, the Nisqually, Puyallup and Squaxin Island Tribes, WRIA’s 10/12, 11, 13, 14, and 15, the South Puget Sound Salmon Enhancement Group, and the Washington Department of Fish and Wildlife. The goal of this group is to coordinate protection and restoration efforts in South Sound concerning salmon populations.

The South Sound Salmon Technical Team consists of representatives from Pierce and Thurston Counties, the Nisqually and Squaxin Island tribes, the Washington Department of Fish and Wildlife, and the South Sound Salmon Enhancement Group. This group provides input at a technical level for South Sound salmonid issues and coordinates with the technical teams of the various WRIA’s and State and Federal agencies.

The SSSRG plans to coordinate with the proposed South Sound Local Integrating Organization (LIO), which is currently being developed by South Sound counties, tribes and other local entities. The proposed organization will be responsible for prioritizing and implementing local Action Agenda strategies for the South Sound Action Area, including salmon recovery actions. The SSSRG will work with the LIO on the implementation and update of the South Sound Salmon Recovery Chapter and to implement recommendations from the Puget Sound Partnership Action Agenda. The South Sound region made substantial progress in 2010 by creating and organizing the LIO. The SSSRG will provide technical support for salmon recovery for this new organization (additional detail is provided in question two below).

The goal of the SSSRG and technical team is to use an ecosystem-based, multi-species approach to restore all salmonid species in the South Sound to a sustainable, harvestable level by ensuring that there are properly functioning near-shore and freshwater habitats that serve their spawning, rearing, refuge, feeding, physiological transition, and migratory needs.

The South Sound Chinook and Bull Trout Recovery plan addresses near-shore habitat south of the Tacoma Narrows. The SSSRG continues to refine the document by adding additional levels of detail and producing new tools to select and prioritize nearshore projects. The South Sound Recovery Plan identified and addressed the following human- induced stressors that are contributing to the status of the salmon in the nearshore and the hypothesized effect on the Viable Salmonid Population:

- Shoreline Armoring
- Overwater Structures and Ramps
- Stormwater and wastewater
- Riparian Loss
- Wetland and Estuarine Modification
- Boat Traffic
- Invasive Species
- Shellfish Aquaculture

Three-Year Work Program Questions

Consistency

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?**

The SSSRG considers that the recovery and sustainability of all salmonid species is a high priority. In an effort to prioritize projects, the SSSRG has hypothesized that actions in the WRIA 11 freshwater as well as the marine nearshore of all of the WRIA's will have the greatest benefit to recover and sustain Chinook populations while benefiting other salmonid species as well.

The submitted 3 year list for South Sound represents the highest priority projects for the respective WRIA's as identified by modeling, strategies, and limiting factors assessments.

Watershed Specific Actions/Suites of Actions Needed

WRIA 13 and 14:

Within the Lead Entities in WRIA's 13 and 14, the technical advisory groups (TAG) have utilized the 2007-09 5% capacity funds over the last year to develop a GIS-based project selection tool to continue the work of prioritizing the nearshore areas. Both Lead Entities have historically rated the entire nearshore as a high priority for listed and unlisted stocks primarily due to a lack of information available on fish use of the nearshore. Now, with the completion of several assessments and new data from studies becoming available information has been compiled into an interactive tool developed collaboratively and housed within the GIS capabilities of the Squaxin

Island Tribe. In an initially attempt at prioritization the WRIA's have rated the top scoring 20% of nearshore units as priority for restoration as designated in a limiting model and the top 20% for conservation designated by a beneficial model. The intent of this exercise is to use a set of parameters to identify contiguous habitat units at the Shorezone level that posses multiple habitat types hypothesized to be beneficial to juvenile salmon and forage fish.

In the next step the TAG's for both WRIA's used the tool and other nearshore assessments and studies along with the expertise of local experts to further identify and filter nearshore areas for focused efforts. This second step represents a vast amount of knowledge and information, truly an extensive update directly to the WRIA 13 and 14 portions of the Chinook Recovery Chapter for South Sound. Contained within these areas prioritized as "high" for conservation or restoration were some units that were highly parcelized and that would present a formable challenge towards the goal of conservation and restoration. A third filter was applied to identify areas that, for example, are rated as high priority for conservation or restoration *and* contain large multi-acre parcels in single or dual ownership. In this way, we can focus the efforts of project sponsors to develop highly beneficial, strategic projects that have likelihood for success. These projects are the new additions or slight modifications presented within the WRIA 13 and 14 3-year-work-programs.

The TAG's continue this nearshore discussion, and in the next year, will have an even more focused strategy for restoring and conserving the nearshore of WRIA's 13 and 14, that focuses on what specific actions are necessary for recovery. Currently, the discussion focuses on restoring and protecting pocket estuaries and steam estuaries; and conserving high priority sediment sources. This is still preliminary, needing more discussion and consensus from the entire Lead Entity committees.

Protecting the nearshore areas of WRIA's 13 and 14 remains economically viable, particularly in WRIA 14, where much of the nearshore is intact or requires little restoration for full function. Incorporating the new information contained within the tool and using the expertise of the TAG, and then investing in the capacity of existing project sponsors to develop relationships on the ground that lead directly to projects have been and will continue to be a worthy use of capacity funds. This tremendous advancement in the prioritizing efforts within the two Lead Entities could not have happened without outside investment, in this case, the PSAR funds.

Some of the projects included within the matrix are freshwater activities. Each Lead Entity has chosen several watersheds to concentrate efforts within, in an approach that begins at the headwaters and continues down to the estuaries. We understand the health of the entire watershed affects the health of the estuary, the inlet and the Sound. It is this reason why we have chosen to include these larger areas that support both listed and unlisted species.

Even with the extensive protection and restoration work occurring in WRIA's 13 and 14, our efforts are not enough to counteract the effects of development. However, we have been extremely successful leveraging our modest allocation to perform estuary restorations and conservations. In the absence of additional funding streams, we have begun working with the local jurisdictions as they develop updates to the existing Shoreline Master Program, in an effort to provide a regulatory backstop for habitat degradation. The Lead Entity in WRIA 13 is working with Thurston County to provide landowners incentives against conventional shoreline armoring and will partner with the County and the South Puget Sound Salmon Enhancement Group in an EPA grant that will provide cost-share for landowners willing to remove existing structures and replace them with bioengineered alternatives. The Lead Entity is working to impel landowners make the right biological choice that also benefits their property, their lifestyle and the health of Puget Sound.

There are efforts that are addressing water quality, stormwater, and other stressors identified in the chapter, but are not included in the 3-year action list. For example, the City of Shelton is building a de-nitrification plant to reduce nitrogen output from their sewage treatment facility. The reduction in nitrogen is designed to help alleviate the low dissolved oxygen problem described in the recovery chapter. The Squaxin Island Tribe has completed a 100% water reuse facility for the reservation that addresses water quality and conservation concerns. As a South Sound strategy is developed it is the intention of the WRIA's and the SSRG to identify which of these efforts are addressing salmon recovery needs, and then identify gaps in implementation.

WRIA 11:

Protection and restoration of the estuary is still the highest priority for Nisqually Salmon recovery. Even with the ***Nisqually Refuge Estuary Restoration*** of over 760 acres and the Nisqually Tribe's ***Red Salmon Slough (RSS)*** restoration work, restoration of the rest of the historical estuary is still ranked above any restoration areas by the model. Both those projects are still in progress and the ***Estuary Restoration Monitoring*** of the projects is critical to our ability to evaluate the effectiveness of this work. One monitoring result, so far, has shown the low connectivity of the entire Red Salmon Slough area to the Nisqually Reach and river due to some remnant dikes. The ***RSS Phase 3 Project*** will remove those remnant dikes and increase the water, sediment and biota exchange between those areas. The areas that are left that included historical estuary but now are converted are mostly in the historical forested salt/freshwater transitional areas on the upstream side of Interstate 5. Restoring those historical areas would be a major undertaking that could involve reclaiming developed areas and removing or opening up the Interstate 5 fill which acts as a large cross valley dike. The impacts, benefits and feasibility of such a project would be investigated through the ***I-5 Fill removal feasibility analysis*** which is proposed within the next 3 years.

Protection of the estuary is now more important than ever, since several hundred acres are now accessible to juvenile salmonids. Fortunately most of the areas are in protected ownership, i.e. Nisqually Wildlife Refuge and Nisqually Indian Tribe's Braget Marsh. Some smaller areas are not, and the ***Lower Nisqually Mainstem/McAllister ck. Acquisition project*** is focused on securing those last remaining intact areas in the estuary and lower Nisqually mainstem, but also securing degraded areas to make them available for restoration.

2010 Estuary Protection and Restoration Projects:

Nisqually Refuge Estuary Restoration 760 acre	-in progress, near completion
Red Salmon Slough Restoration Phase 3	-planned for 2010
I-5 Fill removal feasibility analysis	-conceptual
Estuary Restoration Monitoring	-in progress
Lower Nisqually Mainstem/McAllister Ck. Acquisition	-conceptual

Restoration of Puget Sound Shorelines

Projects that are located within South Puget Sound i.e. downstream of Tacoma Narrows and east of Johnson Point are identified in the Nisqually 3-year workplan, even though the location of the projects falls in adjacent watersheds' 3-year workplan, because the projects are significant to migrating Nisqually salmon. The EDT analysis identified South Sound, Central Sound, and the Nisqually and Commencement Bays as high priority areas for restoration. Due to extensive development activities over the last century on many of the Puget Sound shorelines, many key nearshore processes have been significantly degraded or lost. Impairments to habitat forming processes on the shoreline include: reduced sediment input and transport, loss of riparian fringe habitat, reduced estuarine area and connectivity, filling over of upper intertidal beaches and degradation of water quality due to introduction of contaminants. There are several discrete areas along these shorelines where such habitat and process impairments might be addressed through restoration or enhancement. Conversely, there a few discrete areas, where habitat features still exist to support salmonids; these areas should be protected.

The ***Nisqually to Pt. Defiance Nearshore Assessment Project*** identifies those restoration and protection projects is such as the ***Ketron Island Protection Project*** which would protect some of the last intact shoreline between the Nisqually and Point Defiance. Most projects in the plan address one or more of the lost nearshore processes. The ***Beachcrest Pocket Estuary Restoration, Titlow Estuary Restoration, and the Sequelitchew Estuarine Restoration Design*** address lost small estuaries along the shorelines. The ***Chambers Bay Estuarine and Riparian Enhancement*** project addresses both, the estuarine and riparian processes within Chambers Bay. Sediment transport and beach habitat are addressed in the: ***Chambers Beach Reconstruction and Riparian Enhancement, East Nisqually Reach Beach Nourishment Pilot, Filucy Bay Bulkhead Removal, VonGeldern Cove Bulkhead Removal, and***

Penrose Point Bulkhead Removal Projects. The ***Nisqually to Pt. Defiance Nearshore Restoration Project*** is a placeholder for a substantial project to address the effects of the railroad on the shoreline.

2010 Nisqually priority nearshore restoration projects:

WRIA 13:

Beachcrest Pocket Estuary Restoration -in progress

WRIA 12:

Nisqually to Pt. Defiance Nearshore Assessment Project - completed

Nisqually to Pt. Defiance Nearshore Restoration Project -feasibility completed

Sequalitchew Estuarine Restoration Design -feasibility completed

Chambers Bay Estuarine and Riparian Enhancement -feasibility completed

Chambers Beach Reconstruction and Riparian Enh. -feasibility completed

East Nisqually Reach Beach Nourishment Pilot -feasibility completed

Titlow Estuary Restoration -design in progress

WRIA 15:

Ketron Island Protection Project -conceptual

Filucy Bay Bulkhead Removal -feasibility in progress

VonGeldern Cove Bulkhead Removal -feasibility in progress

Penrose Point Bulkhead Removal -feasibility in progress

WRIA 10/12:

The WRIA 10/12 Lead Entity has identified high priority actions to recovery Chinook in the Puyallup-White and Chambers-Clover Creek watersheds. Although most of the priority actions are located in the Puyallup and White Rivers and their tributaries outside of the South Sound area, restoration of marine shoreline habitats in WRIA 10 and 12 will be of great benefit for multiple stocks of Chinook salmon, including White River Spring Chinook, Puyallup Fall Chinook, and Nisqually Fall Chinook.

WRIA 15:

The primary hypothesis that forms the basis for the suites of actions proposed in this update for the West Sound Watersheds Lead Entity is that the **nearshore habitat is the highest priority for investment**. Most of the projects and programs proposed in the next three years are targeted at protecting or restoring quality nearshore habitat. Additionally we intend to extend our documentation of existing freshwater ecosystems through the water typing in selected South Sound streams.

The lead entity also plans to engage the Washington Dept. of Fish and Wildlife's Minter Creek Hatchery program staff in the planning and execution of habitat protection and restoration activities.

South Sound-Wide Actions/Suites of Actions Needed

H-Integration: There has been no new progress toward H-Integration for Chinook in the South Puget Sound marine waters. There has been progress in freshwater areas such as the Nisqually River. H-Integration typically addresses genetic impacts of harvest and hatcheries, e.g., changes to the ratio of hatchery-origin and natural-origin salmon on the spawning grounds. In marine waters H-Integration needs to focus on ecological interactions such as competition, predation, and life history characteristics. Unfortunately, the planning and modeling tools for H-Integration in marine waters are not available or are not well developed.

There has been progress in H-Integration in marine waters for individual species and runs as managed by the co-managers. The Washington Department of Fish and Wildlife requires that the cutthroat trout fishery in South Sound be catch and release only. This has resulted in South Sound becoming a destination fishery for cutthroat trout. The Squaxin Island Tribe has altered its harvest management to focus tribal harvest on hatchery coho by not allowing fishing in any fresh water and closing the inlets to harvest during the coho management season. This has resulted in a Tribal harvest for coho that has a running five year average of 94% for marked fish. Additionally the Arcadia Point shoreline outside of Totten Inlet has been closed to all fishing by the Tribe to protect runs of chum in Kennedy Creek. While we have noted successes for individual “H’s” there currently is no coordinated effort for all “H” planning outside of the work by the co-managers.

Adaptive Management: We have not developed an Adaptive Management Plan for the marine waters of South Sound. However, a draft adaptive management plan for the Nisqually River system has recently been completed. Preliminary discussions on the development of a South Sound Adaptive Management Plan have been had by members of the technical group and it was decided to begin this process once the Nisqually River plan has been produced. We plan to coordinate with the RITT-led AMM process when it is scheduled.

Sequencing/Strategy:

We have not developed an accepted strategy for sequencing projects among the WRIA’s. We have five different Lead Entity strategies that identify goals, actions, and suites of actions to implement the salmon recovery chapter. However, there is no overarching, integrated strategy for addressing the stressors identified in the recovery chapter. In WRIA 13 and 14 a first attempt at this is the newly developed nearshore project selection tool, which is designed to provide information on areas where projects are hypothesized to have the greatest benefit as well as provide a geographic context for project selection that should aid in sequencing. It is our intention in the future as we develop our organizational structure to create a comprehensive strategic approach to South Sound nearshore habitat protection and restoration.

Regulatory updates are underway in the South Sound, including Critical Areas Ordinance updates in Thurston County, and Shoreline Master Program updates in Thurston, Pierce, Kitsap, and Mason Counties, and the Cities of Lacey, Olympia, Tacoma, Shelton, and others. Each of the South Sound Lead Entities has participants who track the SMP and CAO updates and advocate for salmon recovery consideration.

Outreach regarding salmon and ecosystem recovery is an important and ongoing need. Currently, there are multiple outreach efforts South Sound-wide, such as the South Sound Science Symposium, EcoNet, Lead Entities, and other outreach efforts.

Pace/Status

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

Actions as identified in the recovery plan and the three year list are being implemented. Due to funding constraints we are not on goal to meeting the sequencing implied by the three year list nor are we on goal to meet the pace identified in the recovery plan. We have not developed South Sound-wide goals for recovery, but each watershed has set goals for their portion of the South Sound.

Watershed Specific Actions/Suites of Actions Accomplished

WRIA 13 and 14:

- ① WRIA 13 and 14 have worked towards prioritizing the nearshore areas to focus efforts
- ① Working intensely in all of Eld Inlet to develop landowner relationships that lead to projects
- ① Working with landowners in the nearshore and within the freshwater focus areas to develop relationships that lead to projects proposed, funded and implemented.

WRIA 13:

- ① Completed work to remove creosote pilings and a large dock and bulkhead at the DNR marine research and storage area on Budd Inlet;
- ① Continuing to restore Woodard Bay Natural Area Preserve; removing creosote pilings;
- ① Beachcrest estuary and fish passage project was completed, restoring 1.5 acres of estuary habitat to use for rearing;
- ① Removed derelict home structures followed by estuary impoundments at Allison Springs in Eld Inlet
- ① Landowner outreach in McLane creek, an extremely productive system that has had landowner difficulties. This outreach has led to a project proposal within a key reach of the system;

- ⌚ Designs for the Deschutes river LWD placement in the middle reach are moving forward;
- ⌚ A purchase and sale agreement has been created for the ILF land on the Deschutes River Wetland Enhancement Project on the lower Deschutes, purchasing and subsequently restoring 185 acres of prime habitat in a crucial reach;
- ⌚ Extensive landowner outreach on Spurgeon Creek, one of two cold water refuges on the Deschutes, has led to a proposal for a conservation easement on the system;
- ⌚ Additionally, good relations with landowners on the Deschutes have provided the opportunity to expand the Stewart Conservation area property;
- ⌚ After working with the Port of Olympia for nearly a decade, the Port is now ready to propose the Mission creek estuary restoration project for funding. Project will restore passage and approximately 1 acre of estuary habitat to Budd Inlet;
- ⌚ Completed work with St. Martins on Woodland Creek in Henderson Inlet to remove debris from the stream channel, re-vegetate the site and restore passage;
- ⌚ DNR has completed the alternative analysis of Woodard Bay NAP;
- ⌚ Working with Thurston County of their SMP update. Providing examples of bioengineered alternatives and helping provide TC Commissioners the necessary information to support technical recommendations;
- ⌚ ACOE 10% design on Deschutes Estuary restoration proposal;
- ⌚ ACOE 10% design on Mission Creek restoration proposal;

WRIA 14:

- ⌚ Working intensely in the Goldsborough watershed and with the BNSF railroad to develop projects and landowner relations in that area;
- ⌚ Removed derelict over water pier and creosote pilings in addition to a bulkhead on Squaxin Island;
- ⌚ Continuing to work with sponsors to secure funding for the Johns Creek Estuary acquisition and restoration;
- ⌚ Working with sponsors and landowners to secure the final remaining large intact functioning parcels in the Oakland Bay watershed. Currently proposed purchase of a 36-acre parcel at Sunset Bluffs;
- ⌚ Working with Green Diamond and Simpson to restore the mouth of Goldsborough creek estuary;
- ⌚ Landowner discussions on the Fudge Point Conservation and Restoration;
- ⌚ Conservation nearly complete on the 133 acres at Twin Rivers – restoration of native vegetation begins in May;
- ⌚ Extensive landowner negotiations that could lead to purchase by the fall of the Oakland Bay Habitat Protection project;
- ⌚ Acquired 80 acres at the Totten Inlet Pocket Estuary project (project of regional significance);
- ⌚ Continue to look for matching funds on Eagle Point Shoreline Acquisition;

- ⌚ Acquire several parcels (70 acres total) within the Goldsborough creek watershed;
- ⌚ Acquired 112 acres through the Harstene Island Acquisition (project of regional significance);
- ⌚ Continue to work with willing landowner on the East Hammersley Inlet Project;
- ⌚ Working extensively in the Goldsborough creek basin to restore fish passage and enhance habitat through restoration projects and to protect pristine habitat through acquisitions that connect to previous acquisitions, thereby connecting critical habitat corridors;
- ⌚ ACOE 10% design on Johns Creek restoration proposal
- ⌚ Continue to work with willing landowners on the Johns creek headwaters conservation initiative;
- ⌚ Working with landowners in the Cranberry creek basin to place much needed wood in priority areas within the watershed;
- ⌚ Continued progress with the water type assessment;

WRIA 11:

Restoration of 762 acres in the Nisqually Estuary by the Nisqually Wildlife Refuge is a significant accomplishment that was substantially completed in 2009.

WRIA 10/12:

In the WRIA 10/12 Lead Entity, the Nisqually to Pt. Defiance Nearshore Habitat Assessment is nearly complete. The assessment has identified numerous potential restoration and protection projects along the WRIA 12 shoreline. Seven nearshore habitat restoration projects are currently included on the WRIA 10/12 three-year list. The projects include:

- ⌚ Titlow Estuary Restoration,
- ⌚ Chambers Bay Estuarine and Riparian Enhancement,
- ⌚ Chambers Beach Reconstruction and Riparian Enhancement,
- ⌚ Sequalitchew Estuary Reconnection,
- ⌚ Sequalitchew Creek Beach and Riparian Restoration
- ⌚ Narrows and Sequalitchew-Steilacoom Feeder Bluff Reconnection
- ⌚ Pocket Beach Enhancement/ Nourishment Pilot: Sequalitchew to Solo Point

Through the Army Corps of Engineers PSNERP process, Chambers Bay and Sequalitchew Creek Estuary projects were designed to the 10% level.

WRIA 15:

The West Sound Watersheds Lead Entity was able to fully fund the SRFB request for acquisition of Devils Head at the southern point of the Key Peninsula, thanks to additional funding allocated from 3 of the 4 other South Sound lead entities. This pristine nearshore has been on the priority list for protection for many years, and will be acquired by Pierce County Parks and Recreation Services (original grant was

proposed by the Cascade Land Conservancy). The cooperation and good will fostered by this sharing of financial resources for the greater South Sound is exemplary.

South Sound-wide Actions/Suites of Actions Accomplished

Project Prioritization and Sequencing: The RITT has identified the need for better refinement of the South Sound project prioritization and sequencing efforts. The South Sound Salmon Recovery Group has continued to use and refine two draft tools to assist in this regard.

1. **Projects of Regional Significance** – In 2009 we funded three Projects of Regional Significance: two in WRIA 14 and one in WRIA 15. The WRIA 14 projects were funded entirely by the WRIA 14 Lead Entity, and the WRIA 15 project (Devils Head Acquisition) received pooled funding from the other four Lead Entities. We use the project evaluation tool we developed in 2008 to distinguish Projects of Regional Significance and Projects of Local Significance. Projects are evaluated based on the degree of habitat stressor removed, the number of different habitat types that will be restored, and project readiness. Projects of Regional Significance are those that completely remove stressors impacting multiple habitat types, and are well developed and nearly ready for construction. Information is displayed in a matrix format that places projects in bins that can be used for prioritization.
2. **WRIA 13 and 14 nearshore project selection tool** – We continued to refine this GIS based model that illustrates high priority areas for restoration and conservation. In essence this is a refinement of the mapping exercise that was conducted for the Chinook and bull trout recovery document. A suite of beneficial habitat types are identified, mapped, and rated. These habitat types include: salt marsh, sub-tidal vegetation, eelgrass, forage fish spawning, pocket estuaries, and proximity to salmon bearing systems. Additionally, stressors have been mapped and rated including: armoring, docks, piers, and riparian loss. We continue to refine this tool and are now working with the TAG to identify prioritized habitats with low numbers of parcels and to determine and rate the health of contributing catchments as a predictor of restoration or conservation of habitat function.

Habitat Work Schedule: The South Sound partners have committed to using the Habitat Work Schedule on-line database. Currently, all proposed and ongoing habitat projects are being entered into the database. We are also committed to working with the Recreation and Conservation Office to modify the HWS so it will produce the three-year project list for the entire South Sound more easily. There was significant effort in 2010 among all the watersheds to update and maintain the HWS database.

Improved Coordination: There are overall programmatic or organizational needs to advance the coordinated South Sound salmon recovery effort. We are working together to identify a new organizational structure for South Sound salmon recovery implementation. We have well developed organizational structures for each of our Lead Entities, but we need to develop a structure for agreeing on a South Sound-wide strategy, and for coordinating salmon recovery efforts throughout the South Sound.

The South Sound region has made great progress over the past year in improving regional coordination on numerous natural resource issues. During 2010-11 three counties and four tribes in the South Sound action area have been working cooperatively to create a Local Implementation Organization, which has been named the Alliance for a Healthy South Sound (AHSS). The focus of AHSS will be on a broad array of resources issues within South Sound, including salmon recovery, water quality, stormwater, etc. The current vision is the SSSRG will be a technical working group that provides salmon recovery support for AHSS.

Shoreline Master Program (SMP) Updates: All counties and cities in the South Sound are in the process of updating their SMPs. The Shoreline Management Act specifically requires SMPs to include protection for salmonids and salmon habitat. This provides an important opportunity for strengthening shoreline protection regulations by working with the local jurisdictions.

South Sound Science Symposium: The third South Sound Science Symposium was held on October 27, 2010. The purpose of the Symposium is to connect the region's scientists on ecosystem issues and questions; to explore the threats and indicators unique to South Puget Sound; and to help educate the public and policy makers on important ecosystem issues. There were two presentations specifically on salmonids. David Beauchamp of University of Washington spoke on food web dynamics and implications for Chinook salmon. Larry Phillips of WDFW spoke about the seasonal movement of sea-run coastal cutthroat trout. The next South Sound Science Symposium is tentatively scheduled for spring 2012.

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.**

Habitat Restoration:

Some progress – A major restoration project, the Nisqually Estuary Restoration was completed in 2009. This project when matured will increase the amount of salt marsh habitat in the South Sound by 50%. In addition, other nearshore restoration

projects have been funded or completed (see above for details). We are continuing to use prioritization tools and assessments to identify high priority projects.

Feasibility and design work has been initiated on some of the projects listed above. This work has been completed at various levels and through several different funding sources: the Salmon Recovery Funding Board, the Estuary and Salmon Restoration Program, and the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP).

The Army Corps of Engineers through PSNERP chose several South Sound projects as candidate restoration sites:

- ⌚ Chambers Bay
- ⌚ Sequelitchew Creek Estuary
- ⌚ Oakland Bay
- ⌚ Lower Budd Inlet
 - Deschutes River
 - Garfield Creek Delta
 - Indian/Moxlie Delta
 - Mission Creek Estuary
 - Marine Lab Embayment

Of these the following were designed high priority and chosen to be designed to 10%:

Chambers Bay Estuarine and Riparian Enhancement: Project goals evaluated for feasibility included restoration of this coastal inlet through removal of barriers: to tidal and freshwater flow, sediment erosion and accretion, channel formation, and input of nutrients. Two alternatives have been developed and evaluated by this report: a full restoration alternative and a partial restoration alternative (PSNERP 2011, #1801). The partial restoration alternative addresses removal of the dam and associated armor and fill, and daylighting of Garrison Springs through the former mill site, while the full restoration alternative addresses removal of the dam and associated fill and armor, removal of fill and armor at the mill site, daylighting of Garrison Springs and No Name Creek in the mill site, relocation of Chambers Creek Road and bridge, removal of the marina fill and armor and overwater boat slips, and replacement of the lift bridge and fill berms with a full spanning trestle at the mouth of the Bay.

Sequelitchew Creek Estuary Reconnection: evaluation for feasibility included restoration of this coastal inlet Titlow Estuary Restoration Pocket Beach Enhancement/Nourishment Project: Sequelitchew to Solo Point.

Oakland Bay: evaluation for feasibility included the removal of several intertidal and supratidal dikes and planting native vegetation at the mouth of Johns Creek.

Lower Budd Inlet:

Deschutes Estuary: the action would include the dredging of Capitol Lake and removal of the dam at 5th avenue. This would result in the restoration of 346 acres of Puget Sound estuary.

Mission Creek Estuary: this project would remove a road embankment to restore tidal hydrology opening 1 acre of estuary.

Marine Lab Embayment: the design evaluates the restoration of a barrier and bluff backed beach. It is also proposed to remove fill and restore a barrier lagoon.

Habitat Protection:

Some progress – Individual Lead Entities are continuing to make progress in funding nearshore protection projects that are of local significance. Several identification and prioritization tools and assessments have been completed that will allow for the selection of high priority projects. We are losing habitat functions through shoreline development. Until stronger shoreline regulations are in place, we will continue to lose ecosystem function.

Harvest and Hatchery Management:

Some progress – In the Nisqually watershed a specific stock management strategy with actions has been developed. These activities are described in detail in the Nisqually three-year list update.

Coho hatchery releases from the co-managed South Sound netpen complex are timed with the intention of minimizing co-occurrence with naturally produced coho from local streams. Over a four year period a subset of netpen and wild coho were implanted with sonic transmitters allowing researchers to establish an average residency time in the marine waters of South Sound before out-migration. Smolt trap and hatchery personnel stay in contact with the goal of releasing netpen coho after the peak out-migration and presumed residency of the natural stocks.

Sequence/Timing

- 1. 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?**

We have identified numerous restoration and protection projects, including several large projects that we identified as Projects of Regional Significance. We are continuing to use nearshore assessments, freshwater VSP based models, lead entity strategies, and limiting factor assessments to assist us in identifying and developing capital projects. There is only a fraction of the funding needed to implement the projects indentified in the three-year project list.

In addition, we have identified non-capital or programmatic actions that will move the South Sound region toward recovery. These programmatic actions include:

- ⌚ Developing a Formalized Structure – currently the South Sound Salmon Recovery Group is an informal participatory group. Formalizing a structure that allows us to pool resources easier and prioritize regional goals would facilitate implementation of a South Sound-wide Recovery Strategy. It is anticipated that the formalization of the SSSRG is likely to be an action item for the newly formed AHSS LIO.
- ⌚ South Sound-wide Recovery Strategy – each Lead Entity has developed a strategy for recovery in their individual watersheds. However, there is no coordinated South Sound-wide Recovery Strategy. To develop such a strategy requires a more formalized organizational structure than we have been working under in the past. Prioritizing the creation of this document is a stated goal of the SSSRG.
- ⌚ South Sound- wide Adaptive Management Plan- each Lead Entity has its own adaptive management process. These are currently uncoordinated. It is the intent of the SSSRG to use the as yet uncompleted strategy to produce an adaptive management plan.

Next Big Challenge

2. **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 and why?**

There has been no change in how South Sound lead entities have approached salmon recovery and sustainability in the last year. An anticipated change for 2011 will be the interactions with the newly formed South Sound AHSS group. We anticipate that this group will be the driving mechanism for South Sound wide discussions on policy and scientific goals over the coming years.

Watershed Specific Priorities

WRIA 13 and 14:

The 3-year-work-program matrix has not changed substantively from 2010. This year, current status was updated and no new projects were added as a result of a very robust and extensive update in 2010. In 2010, nearshore priorities were identified and then the LE has worked with the TAG to develop relationships and proposals to bring those priorities to fruition.

WRIA 11:

The top priorities continue to be the protection and maintenance of the restoration of the Nisqually Estuary. In addition supporting the adjacent WRIA's in protection and restoration of key nearshore habitat is a high priority.

WRIA 10/12:

The WRIA 10/12 Lead Entity has not changed its top priority actions from the previous three-year work program. Nearshore habitat restoration along the WRIA 12 shoreline continues to be a high priority.

WRIA 15:

There have been no changes in the top priorities for the West Sound Watersheds Lead Entity. We are concerned over the lack of actions to protect wild Puget Sound steelhead in our streams and look forward to inclusion of the freshwater resources that support them in our future 3 Year Updates.

South Sound-Wide Priorities

One of our priorities is to work cooperatively at a regional level to recover salmon. That priority has not changed. We remain committed to a collaborative salmon resource regional management approach. In addition, we remain committed to pooling resources to fund large projects that will provide direct benefit to multiple salmon stocks from multiple watersheds.

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

Chinook, coho, steelhead, pink, chum, cutthroat, and bull trout occur within the South Puget Sound. Chinook, steelhead, and bull trout are ESA listed as Threatened. Coho are proposed for ESA listing. Chinook and coho stocks in the South Sound are heavily influenced by past and ongoing hatchery management. Chum, pink, steelhead, cutthroat, and bull trout populations display primarily wild genetics.

The increase of 900 total acres of Nisqually estuary habitat in the last six years is a significant improvement in available habitat in the South Sound. The EDT model predicts that there will be a doubling of the number of naturally produced Chinook salmon in the Nisqually watershed as a result of that work alone.

In general, we do not have a well developed monitoring program to assess habitat status and trends on South Sound marine shorelines. We know that restoration and protection projects occur, and that riparian removal, shoreline armoring and overwater structures continue to be constructed. Our most significantly impacted shoreline is from Nisqually to Pt. Defiance which is armored for protection of the BNSF rail line. There is no systematic approach to documenting net change in habitat status across the South Sound. There are several habitat assessments ongoing (e.g. Nisqually to Pt. Defiance assessment) that are evaluating habitat status along specific reaches.

Several long term trapping efforts occur throughout South Sound. Adult traps are maintained on Chambers, Cranberry and Minter Creeks as well as the Deschutes River. Downstream migrant rotary screw trapping is conducted on the Deschutes and Nisqually Rivers and Goldsborough Creek. Panel weir traps targeting out-migrant coho are employed on Skookum, Mill, Johns, Cranberry and Sherwood Creeks. In the case of the Deschutes these traps have been in place for over thirty years and in most other systems for over ten years. Results show variation in year to year production that is relatively constant except for Goldsborough Creek which is experiencing a steady climb in average coho and chum numbers after the removal of a dam in 2001. The Nisqually Tribe will be installing a weir in the mainstem Nisqually (summer 2011) for enumeration of fish passed, and exclusion of hatchery origin fish from the area above the weir (mainstem Nisqually River mile 12). Data from the weir will improve future adult Chinook salmon escapement estimates and will provide better status and trends information in future.

Population trends are also monitored by the co-managers utilizing foot surveys to document spawning Chinook, chum, coho, steelhead and cutthroat. Representative reaches within documented spawning areas are designated and then either walked or rafted to note spawning fish and recently constructed redds. These surveys generally occur on a weekly or bi-weekly interval. In the case of coho in the Deep South Sound tributaries all reaches of all streams are walked.

In the Nisqually there is a comprehensive effort to evaluate the status and trends of Chinook salmon in the watershed and in the South Sound. This is being done with a combination of adult spawner surveys, in-river fishery monitoring, an in-river smolt trap, juvenile seining and fyke trapping in the Nisqually estuary and nearby South Sound nearshore environments. As part of this effort otoliths from the juvenile and adult Chinook salmon are being collected which can tell the story of how the salmon are using and responding to the available habitat and which salmon life histories are surviving to return as adults.

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

We need a reliable, predictable, clear funding process for better planning and prioritization of high quality projects. The funding sources we have used to plan and prioritize projects at a regional scale have primarily been through PSNERP and NEP grants. However, these sources need to coordinate more with the South Sound Salmon Recovery Group effort. For example, PSNERP and NEP grants had a very short timeline, which makes it difficult to prepare and coordinate priority projects.

More limited state and local government funding has made it difficult to support capacity needs in the watersheds. For example, 2011-2013 PSAR capacity funding has been substantially reduced which will make coordination among lead entities

more difficult to support. Maintaining and updating the Habitat Work Schedule represents a capacity need in all of the South Sound watersheds. Furthermore, funding limitations reduce the ability for identifying local matching funds for grant projects.

Steelhead recovery does not mesh well with Chinook recovery planning in the South Sound Action Area. Steelhead are more widely distributed within the South Sound watersheds than are Chinook. This fact means there will be more work than anticipated to coordinate the two recovery efforts. At present funding levels there are no resources available to support this update.

Newly added projects (YELLOW)
 Active projects (funded) (GREEN)
 Completed projects (BLUE)
 New information/updates to existing projects (Orange)

Project Type <small>ss indicates south sound</small>	Project Name	Project Description (brief description)	Limiting Factors	Habitat Type	Activity Type	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated Cost	2013 Activity to be funded	2013 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
Capital																				
Habitat Restoration																				
ss	Penrose Point Bulkhead Removal	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore and beach processes	1500 feet shoreline	Chinook	chum, coho, steelhead, cutthroat, forage fish	design nearing completion	finish design	\$90,000	construction	\$386,000	close out	\$0	2012	SPSSEG	\$476,000	\$57,900	WA State Parks, SRFB, PSAR,USFWS
ss	Whiteman Cove Estuary Restoration	restore tidal function	nearshore alteration	nearshore	restore nearshore, sub-estuary function	30 acres sub-estuary habitat	Chinook	steelhead, coho, cutthroat, chum, forage fish	conceptual	meet with landowners		propose project		design	\$50,000	2013	SPSSEG	\$500,000	\$50,000	SRFB, PSAR, ESRP
ss	Maple Hollow Shoreline Restoration	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore function	2 acres,1450 ft. shoreline	Chinook	chum, coho, steelhead, cutthroat, forage fish	permitting completed	construction	\$50,000					2012	Key Pen Parks	\$600,000	local match	PSAR,ALEA
ss	Filucy Bay bulkhead removals	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore, sub-estuary function	5000 ft shoreline	Chinook	chum, coho, steelhead, cutthroat	Conceptual	Design	\$30,000	Construction	380,000			2013	South Puget Sound SEG	\$380,000	ESRP	SRFB, PSAR
ss	Von Geldern Cove bulkhead removals	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore, sub-estuary function	1500 ft of shoreline	Chinook	chum, coho, steelhead, cutthroat	Conceptual	Design	\$30,000	Construction	400,000			2014	South Puget Sound SEG	\$430,000	ESRP	SRFB, PSAR
ss	East Oro Bay dam removal	restore nearshore processes	altered nearshore habitat	nearshore	restore nearshore, salt marsh function		Chinook	chum, coho, steelhead, cutthroat	conceptual	scoping	\$5,000	design	40,000	construction	\$150,000	2014	South Puget Sound SEG	\$195,000	ESRP	SRFB, PSAR
ss	Carr Inlet (3) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Anderson Island (5) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	McNeil Island bulkhead removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Case Inlet (5) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB

ss	McNeil Island tidegate removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual								2012	SPSSEG	\$200,000		SRFB
ss	Oro Bay (3) bulkhead removals Drayton	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual								2012	SPSSEG	\$200,000		SRFB
ss	Passage (2) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual								2012	SPSSEG	\$200,000		SRFB
ss	Filucy Bay Enhancement	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual								2012	SPSSEG	\$200,000		SRFB
ss	Filucy Bay Dock & Pier removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual								2012	SPSSEG	\$200,000		SRFB
Acquisition for Protection																					
ss	Anderson Island estuary protection (3 sites)	protect small pocket estuaries	nearshore habitat protection	Nearshore	protects intact shoreline		Chinook		Conceptual								2015	SPSSEG	\$150,000	\$150,000	PSAR, SRFB
ss	Anderson Island feeder bluff protection (2)	protect feeder bluffs	nearshore habitat protection	Nearshore	protects intact shoreline		Chinook		Conceptual								2015	SPSSEG	\$150,000	\$150,000	PSAR, SRFB
ss	Oro Bay estuary protection	protect small pocket estuary	nearshore habitat protection	Nearshore	protects intact shoreline		Chinook		Conceptual								2015	SPSSEG	\$150,000	\$150,000	PSAR, SRFB
ss	Ketron Island estuary protection	protect small pocket estuary	nearshore habitat protection	Nearshore	protects intact shoreline		Chinook		Conceptual								2015	SPSSEG	\$150,000	\$150,000	PSAR, SRFB
ss	Devils Head	protect ecologically intact shoreline	nearshore habitat protection	nearshore	protect intact shoreline	1 mile, 94 acres	Chinook	chum, coho, steelhead, cutthroat, forage fish	acquisition complete								2010	CLC, Pierce Co Parks, Key Pen Parks	\$3,375,000	\$1,687,500	WWRP, other LE's
ss	Filucy Bay estuary protection	protect small pocket estuary	nearshore habitat protection	Nearshore	protects intact shoreline		Chinook		Conceptual								2015	SPSSEG	\$150,000	\$150,000	PSAR, SRFB
ss	Ketron Island shoreline protection	protect ecologically intact shoreline	nearshore habitat protection	nearshore	protect intact shoreline	unknown	Chinook	chum, coho, steelhead, cutthroat, forage fish	Conceptual	Scoping	\$10,000	acquisition	300,000	acquisition	\$300,000		2014	Nisqually Land Trust, Nisqually Tribe	\$2,500,000		PSAR, ESRP
ss	Southworth Point protection	protect ecologically intact shoreline	nearshore habitat protection	nearshore	protect intact shoreline	unknown	Chinook	chum, coho, steelhead, cutthroat, forage fish	Conceptual	Scoping	\$10,000	conservation easement	300,000				2012	Great Peninsula Conservancy	\$310,000		PSAR, ESRP

ss	Jacobs Point shoreline acquisition	protect ecologically intact shoreline	nearshore habitat protection	nearshore	protect intact shoreline	unknown	Chinook	chum, coho, steelhead, cutthroat, forage fish	feasibility completed	Scoping	\$44,000	complete acquisition	2,187,880			2012	Anderson Island Park District	\$2,300,000		WWRP, ALEA, Cons. Futures
Future Habitat Project Develop																				
ss	WRIA 15 water Typing	update fish and LFA for streams	NA	NA	NA	NA	all salmonids		on going	North Kitsap streams	\$177,500	expand assessment	\$100,000	on-going	\$100,000	2015	Wild Fish Conservancy	\$377,500		PSAR, Suquamish Tribe, WFC
ss	WRIA 15 Nearshore Prioritization	use studies for proj. selection	NA	NA	NA	NA	all salmonids		completed							2011	SPSSEG	\$100,000	\$15,000	SRFB, SPSSEG
Outreach & Education																				
ss	Marine education in the schools	Classroom education =promotion of marine stewardship	NA	NA	NA	NA	all salmonids		Currently available		\$25,000		\$30,000		\$50,000	Ongoing	Pierce CD, Kitsap SSWM, UW/WSU	\$105,000 (Pierce CD)		Private donations, additional grant funding
ss	Shoreline stewardship	Beach programs =stewardship	NA	NA	NA	NA	all salmonids		On going		\$65,000		\$70,000		\$70,000	Ongoing	Pierce CD, Kitsap SSWM, UW/WSU, COBI	175000 (Pierce CD) 30000 COBI		Private donations, additional grant funding
ss	Realtor Workshops	training, tools =to real estate professionals	NA	NA	NA	NA	all salmonids		Available		\$8,000		\$8,000		\$8,000	Ongoing	Pierce, Kitsap Cons. Districts	\$30,000	\$30,000	Pierce, Kitsap Cons. Districts
ss	Natural Yard Care	Provide education & activities	NA	NA	NA	NA	all salmonids		Currently available		\$75,000		\$75,000		\$75,000	Ongoing	TPCHD	\$225,000		TPCHD, PC Solid water
Instream Flow Protection																				
	WRIA 15 water Typing	SEE ABOVE	NA	NA	NA	NA	all salmonids													
Habitat Project Monitoring																				
ss	Nearshore project effectiveness	project effectiveness monitoring	NA	NA	NA	NA	all salmonids		conceptual	develop		implement	\$40,000	on-going	\$40,000	2017	SPSSEG, Kitsap DCD	\$80,000		PSAR, ESRP
Total Non-Capital Need:											\$414,500		\$3,110,880		\$643,000			\$9,897,500	\$2,332,500	
Priority Projects and Programs	Benefiting Non-Listed Species																			
ss	Little Minter Fish Passage	replace culvert w/ bridge	fish passage, stream morphology	riparian	fish passage	2 mile spawning habitat	coho, chum	Chinook, steelhead, cutthroat	partially designed	design, permit	\$20,000	construction	\$160,000	close out	\$10,000	2011	SPSSEG	\$190,000	\$28,500	PSAR/SRFB

ss	Ray Nash Creek Restoration	resize 3 culverts, remove invasives	fish passage, invasives, riparian cover	riparian	fish passage, riparian planting	2000 ft stream	coho, chum	cutthroat	conceptual	planning		design	\$20,000	permit, construct?	\$50,000	2011	Pierce CD, SPSSEG	\$70,000	\$10,000	FFFP, CSF
ss	Warren Creek Fish Passage	restore fish passage	fish passage	riparian	fish passage	.5 mile	coho	cutthroat, chum	on County TIP	construction	\$500,000					2012	Pierce Co.	\$500,000		Pierce County
ss	Goodnough Ck.culvert replacements	restore fish passage and habitat at mouth	fish passage, nearshore functions	riparian	fish passage	.5 mile	coho	cutthroat, chum	conceptual	planning		design	\$25,000	construct				\$580,000	\$100,000	Pierce Co.