Puget Sound Partnership and Recovery Implementation Technical Team
2011 Three Year Work Program Review
North Olympic Peninsula Elwha-Dungeness Watershed

Introduction

The 2011 Three-Year Work Program Update is the sixth year of implementation since the Recovery Plan was finalized in 2005. The Puget Sound Partnership, as the regional organization for salmon recovery, along with the Recovery Implementation Technical Team (RITT), as the NOAA-appointed regional technical team for salmon recovery, perform an assessment of the development and review of these work programs in order to be as effective as possible in the coming years. These work programs are intended to provide a road map for implementation of the salmon recovery plans and to help establish a recovery trajectory for the first three years of implementation.

The feedback below is intended to assist the watershed recovery plan implementation team as it continues to address actions and implementation of their salmon recovery plan. The feedback is also used by the RITT, the Recovery Council Work Group, and the Puget Sound Partnership to inform the continued development and implementation of the regional work program. This includes advancing on issues such as adaptive management, all H integration, and capacity within the watershed teams. The feedback will also stimulate further discussion of recovery objectives to determine what the best investments are for salmon recovery over the next three years.

Guidance for the 2011 work program update reviews

Factors to be considered by the RITT in performing its technical review of the Update included:

1) *Consistency question*: Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?
2) *Pace/Status question*: Is implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, why and what are the key priorities to move forward?
3) *Sequence/Timing question*: Is the sequencing and timing of actions appropriate for the current stage of implementation?
4) *Next big challenge question*: Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?

Watersheds were also provided with the following four questions, answers to which the Recovery Council Work Group and the Partnership ecosystem recovery coordinators assessed in performing their policy review of the three-year work program:

1) *Consistency question*: Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the needs identified in the Recovery Chapter (Volume I and II of the Recovery Plan, NOAA supplement)? Are the

suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the Action Agenda?
2) *Pace/Status question*: Is implementation of salmon recovery on-track for achieving the 10-year goals?
3) *What is needed question:* What type of support is needed to help support this watershed in achieving its recovery chapter goals? Are there any changes needed in the suites of actions to achieve the watershed's recovery chapter goals?
4) *Next big challenge question*: Does the three-year work program reflect any new challenges or adaptive management needs that have arisen over the past year either within the watershed or across the region?

Review

The following review consists of four components:

1. *a regional technical review that identifies and discusses technical topics of regional concern*
2. *a watershed-specific technical review focusing on the specific above-mentioned technical questions and the work being done in the watershed as reflected by the three year work plan*
3. *a regional policy review that identifies and discusses policy topics of regional concern*
4. *a watershed-specific policy review focusing on the specific above-mentioned policy questions and the work being done in the watershed as reflected by the three year work plan. These four components are the complete work plan review.*

I. Puget Sound Recovery Implementation Technical Team Review

The RITT reviewed each of the fourteen individual watershed chapter's salmon recovery three-year work program updates in May and June 2011. The RITT evaluated each individual watershed according to the four questions provided above. In the review, the RITT identified a common set of regional review comments for technical feedback that are applicable to all fourteen watersheds, as well as watershed specific feedback using the four questions. The regional review, along with the watershed specific review comments, are included below.

Regional Technical Review: 2011 Three-Year Work Plans – Common Themes

H integration

In most watersheds the recognized group (lead entity) used by the Partnership as a point of contact for salmon recovery planning, implementation, and status assessment is charged with only a subset of the actions needed for salmon recovery. For example, the Skagit Watershed Council's purview only extends to voluntary habitat restoration and protection through acquisition. However, salmon recovery in every watershed requires significant action in all of the so-called H's: habitat restoration, habitat protection, harvest management, and hatchery management. Because most of the lead entities are limited in their scope, the three-year workplans we reviewed are not comprehensive across all Hs, and we are not able to adequately evaluate the integration of actions across all Hs.

There is a regional need to form more comprehensive watershed forums or groups, with the capability and commitment to implement and coordinate recovery plan actions for all Hs. This issue, and the obvious lack of intentional H integration, has hampered RITT review of 3 year work plans since their inception. We suggest that the Recovery Council work with the co-managers and others to take a strong role in forming functional watershed-level groups for implementing and coordinating actions for all Hs.

Monitoring - Status and Trends of Habitat

Most watersheds have no organized, systematic way of monitoring habitat status and trends. This is especially important for assessing the true progress of salmon recovery in Puget Sound, because most watersheds' recovery plans require that existing habitat be protected. For example, the Skagit plan stipulates that approximately 60% of the habitat burden (which includes habitat protection and habitat restoration) needed for achieving the Chinook recovery goals is based on protecting existing habitat, defined as the amount and quality of habitat in 2005. Thus, tracking whether the quantity and quality of existing habitat is changing is an important need for recovery plan implementation. Continued lack of this information is not necessarily neutral to salmon recovery because losses in habitat may not be reversible or economically feasible, thus limiting options to adaptively manage the issue in the future. Ignoring this necessary status and trends monitoring only serves to hide potential problems with habitat loss (out of sight, out of mind). Without status and trends information it is impossible to evaluate the success of recovery plan implementation to date.

A topic related to status and trends monitoring of habitat is the need for a "balance sheet" system to account for habitat related to mitigation projects. All Puget Sound Chinook recovery plans require a net gain in salmon habitat. Any use of mitigation strategies for damaged habitat needs to ensure that there is not any loss at the scale that Puget Sound Chinook populations operate. Monitoring the big picture for all mitigation programs in the context of individual Puget Sound Chinook salmon populations is critical because mitigation does not always occur on site within the same habitat type, nor does it consistently restore natural process (often engineered habitat). Some possible consequences of mitigating habitat damage using these procedures are:

- an influence to species or populations other than those damaged by the habitat action (different site, different habitat type)
- a lack of functioning and sustainable habitat (limitations in restoring natural processes that form and sustain habitat).

Without keeping a detailed "balance sheet" of changes in habitat quantity, quality, and location, it is possible that the mitigation process ultimately produces no net gain in habitat.

Protection of ecosystem functions and habitat

Protection of existing well-functioning habitat is an essential component of salmon recovery in Puget Sound. Most watershed groups continue to express concerns about ongoing degradation and loss of habitat. Their concerns are supported by habitat change analyses that document continued loss of key habitats in a number of Puget Sound watersheds, with little change in the rate of loss since the listing of Puget Sound Chinook in 1999. Some watersheds have noted that habitat loss may be offsetting any gains they are making through restoration projects.

While habitat restoration can be accomplished through the watershed groups, given adequate funding, protection of existing habitat is mainly reliant on local regulations and their enforcement. Many local, state, and federal policy drivers impact salmon habitat, for example, the Shoreline Management Act (SMA), Growth Management Act (GMA), state Hydraulic Permit Approvals (HPA), NOAA's reviews of federal actions under Section 7 of the ESA, and the Army Corps of Engineers' revised levee vegetation management policy.

During 2010, the RITT was briefed on the SMA, GMA, and HPA in order to better understand how practical implementation of habitat protection could be better incorporated into salmon recovery. While these acts all include some consideration of environmental protection needs, they also require regulators to balance a number of other societal benefits, such as economic development and access to the shoreline and navigable waters. We found that none of these acts is sufficiently integrated with the Puget Sound Salmon Recovery Plan for us to be able to provide specific guidance regarding how habitat protection should be implemented to support salmon recovery. Therefore, while some of our watershed-specific comments suggest ways that individual watershed groups could better integrate habitat protection into their recovery plan implementation, we also recognize that much of the solution to this problem lies in revising the underlying planning processes. We suggest that the Recovery Council, the watershed groups, and the RITT should work together to develop ways to provide the technical input for integrating, to a greater extent, actions that promote salmon recovery into these local and regional decisions and regulations affecting salmon habitat.

Funding for monitoring

Salmonids and the ecosystems on which they depend are naturally dynamic. For this reason, and because our understanding of both salmonids and their ecosystems is incomplete, adaptive management is necessary. Adaptive management, however, cannot proceed without monitoring, and monitoring requires stable funding.

A recent meta-analysis of >37,000 river restoration projects nationwide found that few included any form of monitoring, and most that did were not designed to monitor project effectiveness or to distribute monitoring results (Bernhardt et al. 2005). The authors concluded that opportunities to improve future practices by learning from successes and failures were being lost, particularly for small-sized projects whose cumulative cost and extent exceeded those of larger, better monitored projects.

The Puget Sound region, like the rest of the country, needs to elevate its prioritization of monitoring – not just effectiveness monitoring of restoration projects, but also other types of monitoring (e.g., status and trends monitoring) of the numerous ecological endpoints relevant to listed salmonids. A critical impediment to additional monitoring is adequate funding. Some funding sources explicitly exclude monitoring proposals; others simply give higher priority to habitat manipulation than to monitoring. We encourage all funding sources to recognize the need to allocate a portion of resources to monitoring.

Adaptive Management and Monitoring

One of the biggest challenges for implementing the Puget Sound Salmon Recovery Plan is the development of substantive but also realistic, useful, and applicable adaptive management plans

at the watershed level. The NOAA Supplement to the Puget Sound Recovery Plan identified these as the key tool for addressing the scientific uncertainties inherent in the Plan. A number of watersheds have made good progress on development of adaptive management and monitoring plans. Meanwhile, the RITT has embarked on development of a general approach that can be tailored to each watershed's plan while providing a means of evaluating progress across watersheds. While much progress was made in 2010 on both fronts, most watersheds' adaptive management plans remain incomplete.

The RITT has developed a draft framework for adaptive management and monitoring, both to support individual watershed's needs and to integrate the watersheds' work through a common terminology and template at the regional scale. The draft framework is in the process of being finalized with the intent of distribution later this year. The framework has been applied, with RITT support, in three "case study" watersheds – San Juan Islands, Skagit, and Hood Canal – using the Open Standards for Conservation planning approach, in order to:

1) identify needs,
2) provide a consistent template for planning and prioritizing monitoring,
3) develop a process for refining short-term objectives and 10-year goals, and
4) increase the technical capacity of the watersheds to complete these adaptive management and monitoring plans.

Expansion of RITT support to work with other watersheds has also begun and will continue in 2011 and 2012. Although RITT support is available to each watershed, the process of building the adaptive management and monitoring plans will still demand time, commitment, and resources from the watershed leads, planners and implementers of actions associated with the Recovery Plan.

Climate Change Adaptation

Climate change is expected to affect the environmental and ecological processes that, in turn, control the quality and quantity of habitats for Pacific salmon. This cascade of changes is the subject of global and regional research, modeling, and planning efforts. For the Recovery Council, RITT, Puget Sound Partnership, watershed groups, and other salmon recovery entities, climate change is likely to become an increasingly important issue when considering restoration actions. Specific watershed-scale planning regarding the effects of climate change on salmon and their habitats will require additional study. However, current empirical data clearly demonstrate increased air temperatures in the Pacific Northwest during the 20th century, and regional climate models predict that this trend will continue. Increasing air temperatures will result in changes to watershed hydrology such as the magnitude and timing of peak and base flows. In addition to changes in watershed hydrology, it is anticipated that climate change will result in changes to ocean acidity, salinity, biodiversity, temperature, currents and coastal circulation, as well as sea level. Salmon production is intimately linked with these variables.

As ecosystem processes and functions respond to climate change, salmon recovery strategies will need to adapt to these changing environmental conditions. The Puget Sound Salmon Recovery Plan and accompanying NOAA Supplement both indicate that climate change impacts on salmon need to be considered in evaluating recovery. The NOAA Supplement identifies climate change

as one of several "specific technical and policy issues for regional adaptive management and monitoring." The RITT will work with the Puget Sound Partnership, and other stakeholders to develop of adaptive management plans that consider climate change.

Those interested in "a place-based exchange of information about emerging climate, climate impacts, and climate adaptation science in the Pacific Northwest" should consider attending the second annual Pacific Northwest Climate Science Conference, scheduled September 13-14, 2011 in Seattle, Washington. Details on registration and abstract submission can be found at http://cses.washington.edu/cig/outreach/pnwscienceconf2011/.

The following online references synthesize various agencies' efforts at understanding the potential impacts of climate change on natural resources in Washington State:

University of Washington Climate Impacts Group. 2009. The Washington climate change impacts assessment: Evaluating Washington's future in a changing climate. http://cses.washington.edu/cig/res/ia/waccia.shtml
University of Washington Climate Impacts Group. 2010. Hydrologic climate change scenarios for the Pacific Northwest Columbia River basin and coastal drainages. http://www.hydro.washington.edu/2860/

Lawler, J.J. and M. Mathias. 2007. Climate change and the future of biodiversity in Washington. Report prepared for the Washington Biodiversity Council. http://www.biodiversity.wa.gov/documents/WA-Climate-BiodiversityReport.pdf

National Wildlife Federation. 2009. Setting the stage: Ideas for safeguarding Washington's fish and wildlife in an era of climate change. http://wdfw.wa.gov/wlm/cwcs/nwf_climatechange09.pdf

For a comprehensive listing of resources regarding climate change impacts, preparation, and adaptation, see the Washington Department of Ecology and Fish and Wildlife websites:

http://www.ecy.wa.gov/climatechange/ipa_resources.htm
http://wdfw.wa.gov/conservation/climate_change/

Watershed Specific Technical Review: North Olympic Peninsula Elwha-Dungeness Watershed

The North Olympic Peninsula Lead Entity (NOPLE) is tasked with understanding and integrating a complex set of interdependent salmon recovery elements that address, primarily, the independent populations of Dungeness and Elwha Chinook and complementary actions to address Hood Canal summer chum salmon that are under the purview of the Hood Canal Coordinating Council Lead Entity. Within this watershed program are several premiere salmon recovery and science efforts that are ongoing and administered through long-standing programs that are well-represented on the NOPLE technical advisory group through mutual members. This workplan presents an improved integration of all elements and represents a substantial

revision and update of the watershed's entire workplan, originally integrated and produced in 2008. The efforts of the lead entity group, policy leaders, the technical reviewers and citizens are evident in results from work in October 2010 to review and offer possible additions, deletions and revision to the workplan. Compared with the 2008 version, only minor revisions were made to the overall salmon recovery strategy, while there were changes and a few new project criteria added to the overall scoring process. Those changes are noted herein.

This workplan presents a policy to conduct a major workplan revision every three years, allowing this workplan to be used in 2011, 2012 and 2013, before another major review in 2014. The lead entity will still issue a call for major updates to existing workplan projects, as well as adding new projects to be considered and those projects will be scored or rescored. There will be scoring of all projects on the workplan only once every three years. This approach may work with adaptive management frameworks being developed and implemented by the RITT and PSP through the Open Standards but revisions may need to be considered as NOPLE program is implemented and possibly prior to 2014.

Development and finalization of a project evaluation and scoring system is a hallmark of this year's work. While not described in detail in the workplan narrative, RITT members have followed the development and recognize the rigor and potential value of this approach.. As well, we note the integration of habitat protection into the overall plan through the efforts of the Lead Entity staff to keep the larger work group informed of opportunities to contribute to public processes in the areas of land use, land development and land.

The 3-year plan is similar to last year's with many new projects on the list. The narrative continues to be an improvement over previous years because it provides substantial project details in actual project descriptions, including species and, to some degree, the life stages and specific populations that may benefit. The overall program remains focused on capital projects and sequencing of actions that are dominated by practical opportunities with recognition of complex, long-standing ecological challenges (e.g. Dungeness stream flow) that are continued work through the multi-faceted efforts of the watershed team.

1. ***Are the suites of actions and top priorities identified in the watershed's three year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?***

WRIA 18(Elwha/Duyngeness)
The workplan, while revised, remains consistent with the Recovery Plan Chapter. The suite of capital and non-capital projects that continue from prior planning and have been added to this year generally address the hypotheses inherent to EDT analyses for the Dungeness and the distinct and somewhat integrated planning effort for the Elwha. Reference for this statement is the NOPLE response to Shared Strategy Development Questions (2005) that provide a concise summary of hypotheses and actions. As mentioned earlier, salmon recovery efforts in the Elwha are nested within the planning area and largely driven by Elwha River Fish Restoration Plan (NOAA Technical Memorandum NMFS-NWFSC-90, 2008).

WRIA 19 (Lyre/Hoko)

Because this WRIA is geographically outside of the Puget Sound ESU this chapter is not part of the larger Puget Sound Chinook Recovery Plan. Therefore, we can only evaluate this portion of the three-year workplan for consistency with this draft chapter and not as part of the Puget Sound Salmon Recovery Plan. Continuing projects address acquisition for protection to improve channel structure and riparian conditions. Ongoing restoration and acquisition work continues in this area, particularly in the Pysht and Salt Creek areas, as well as recovery plan and conservation plan development. Most of the projects listed for WRIA 19 are instream projects and it is not clear that these would help with recovery of the two listed populations in this section of the ESU. Still, it not without reason that improvements in estuarine and nearshore conditions in this area are utilized and of benefit to early marine life histories of Elwha and Dungeness Chinook conducting complex life histories and nearshore migrations. Programmatically, the efforts and funding expended here must be carefully balanced with priority needs for core independent Chinook populations which are the focus of this review.

2. Is the implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, why not and what are the key priorities to move forward?

Restoration actions in the Elwha are the preeminent effort in the planning area and can reasonably be considered to be on track for the 10 year plan. Removal of the Elwha dams is scheduled for this year (2011) and has been designed, planned, and fashioned by recovery planning efforts that stand separate but aligned with lead entity efforts. This workplan provides a substantial improvement over previous years in description of projects and progress of projects that are under the Elwha Dam Removal project. This occurs primarily due to the overlap of staff scientists who serve to inform both teams. The expectation and opportunity is that in out years there can be complementary project work and further integration of efforts.

Progress for other watersheds in the planning area is much less certain. This is recognized in the workplan narrative in part because of the indistinct nature of planning goals and in part due to the practical consequences of reduced and reducing funding for implementation. The workplan narrative states that projects may not be, for many reasons, on trajectory and that most ost remain in the conceptual or design phasewith some progress towards completion. The pace of restoration is not likely on track for the ten year goals due to funding and logistic constraints that all other lead entities in Puget Sound face.

Generally, the priorities for proposed projects seem to be in line with the 10 year recovery goals. Most of the proposed or ongoing projects in the Dungeness also address the measurable objectives set out in the 10 year goals.

3. Is the sequencing and timing of actions appropriate for the current stage of implementation?

The sequence and timing of the projects for the Elwha and Dungeness are distinct. The Elwha is guided by a comprehensive, heavily funding program developed by a multi-disciplinary team and time-certain events. In contrast the efforts in the Dungeness are driven by long-standing, but well understood constraints on channel form and floodplain function at lower elevations. While the prioritization approach for Dungeness projects is transparent and well documented the

potential biological response of Chinook may be some years out when improvements in flow and rearing habitats at middle elevations can be improved and effectively advanced in priority. This may become increasingly important as a scoring element as tools and consideration of climate change and instream flow management issues increase.

4. *Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?*

The removal of the Elwha dams brings with it an increased effort on restoring lower Elwha River floodplain and estuarine habitats – and these have efforts and associated monitoring elements have been developed for some time (2007). The benefit of the Elwha program is to inform monitoring and adaptive management efforts in the planning area – to the extent that research-level methods and approach can be adopted or adapted. They will probably benefit from meetings with RITT this fall to start to address these issues, and a meeting and/or workshop is planned for September/October. The RITT supports this agenda.

Completing and implementing an adaptive management plan and strategy that directly identifies key uncertainties and how to use existing and new knowledge to make effective decisions to recover salmon. Efforts to do this are underway both through the Open Standards work being developed by pilot watershed groups pioneering applications of RITT in collaboration with PSP staff. The RITT understands this priority as it existed last year and like many other efforts was limited by time and resources. This remains a priority; however, the project the Adaptive Management and Monitoring products developed for key ecological attributes will soon be complete and available to aid watershed efforts. From these tools and through Open Standards can begin the steps to complete and implement an adaptive management plan and strategy that directly identifies goals/targets, monitoring plans, key uncertainties needing assessment and how to use existing and the newly gained knowledge to make effective, sequenced decisions about salmon recovery actions.

Tracking of harvest on both the Elwha and Dungeness Chinook populations continues to be an issue with there being no good current estimates of harvest impacts on either population. The watershed provides a thorough understanding of adjustments in fisheries to consider ESA listed Chinook from Puget Sound and the challenges that continue with tag sampling in Canadian waters and the effects of local (Straits) commercial and sport harvest on naturally-spawned Chinook. The lack of a coded-wire tagged hatchery indicator stock is the main problem for assessing harvest in pre-terminal areas (which are considered to be the major portion of the harvest on these stocks) and should be addressed in the hatchery management plan. This is especially important for the Elwha with the rapid provision of access to spawning habitat after dam removal and with the potential for artificial production to supplement early recolonization and production in the Elwha.

Notably, the challenge of H-integration is recognized in the workplan narrative and is described in some detail. Significant issues resulting from the lack of communication and integration among those working on the various elements of habitat, harvest, hatchery and hydro are recognized and are common throughout other watersheds. Improvements in communication and information sharing through policy and the lead entity process are appropriately described and

progress on these issues can be expected in the future, particularly as increasingly common ground is established by all parties contributing to salmon recovery in these watersheds.

II. Policy Review Comments

The Recovery Council Work Group is an interdisciplinary policy team of tribal, federal, state, and local agency policy staff. The team developed both general comments on common themes across the watersheds within the region, as well as significant advancements and issues needing advancement that are watershed specific. The general and watershed specific comments follow below.

Regional Policy Review: 2011 Three-Year Work Plan – Common Themes

It has been twelve years since the listing of Puget Sound Chinook. Although there has considerable advances towards recovery, significant difficult challenges remain. The following is our sense of some of these key challenges. We acknowledge the complexities and enormous efforts undertaken to advance recovery, and the Region remains steadfast in its support of the watershed approach to salmon recovery.

The Region wants to again highlight the significant amount of thought, time, and energy that each of the watershed groups put into updating their specific three-year work plans – they continue to be more sophisticated and are critical in the work of implementing recovery. The work plan is becoming more refined, and ultimately is helping advance regional recovery through a strategic process that results in the most important projects being done.

We appreciate the efforts of the watersheds, and look forward to further refining this process and its utility in the future.

Continue to Support Multi-Level Relationships and Discussions
Decisions that affect salmon recovery are made at the federal, state, and regional scales and are often in need of reconciliation at the watershed level. The Region remains committed to supporting difficult conversations that are relevant to salmon recovery to find common ground and common solutions. This includes decisions around land use, how to sequence and identify regionally significant actions, and the functional relationships within the Action Agenda.

Focus on Salmon Recovery
The work to recover the Puget Sound ESU is complex, multi-faceted, and is being advanced in many different forums. This includes the effort to integrate decisions across the H's, adaptively manage the salmon recovery plan, refine the Action Agenda, participate in the development of LIOs, and support the integration of salmon recovery into shoreline master program updates. The salmon recovery community must engage in all these arenas, but it is also critically important to focus the time and resources in a way that leads to recovery of salmon. The Region

recognizes that implementation of salmon recovery actions remains a high priority and is committed to continuing to strengthen and implement the salmon recovery plan to realize this goal.

Protecting Ecosystem Functions
The protection of existing habitat is essential to supporting healthy ecosystem functions. Improving our ability to protect habitat continues to be a high priority for the Region. There are several timely initiatives associated with our ability to protect habitat underway right now, including the Shoreline Master Program Updates and response to the Biological Opinion on FEMA's NFIP. Other tools are necessary for this work include voluntary efforts, technical assistance, incentives, education and outreach work, and acquisition of property. The Region recognizes the importance of these tools and initiatives and supports continued work to refine and improve our use.

Adaptive Management and Monitoring
The development of a coordinated watershed/regional monitoring and adaptive management program remains a high priority for the region. This is key to strengthen recovery chapter implementation, adaptation, and overall assessment of recovery efforts. Many of the watersheds indicated the challenges of advancing this work, due in part to the limited regional and watershed capacity

The Region continues to be committed to advancing adaptive management in a way that describes the relationship between habitat, harvest, hatchery, and hydropower management decisions. The following describes several actions occurring at the regional scale to advance this effort:
- Compilation of VSP monitoring data throughout the Sound by NOAA and co-managers;
- Establishment of the Salmonid Work Group with PSP, NOAA, and USFWS to develop an assessment of ongoing VSP monitoring and how it relates to listed Chinook, steelhead, and summer chum.
- Framework to link together the hypotheses and monitoring information associated with each of the watershed chapters and the regional chapter information. This has been developed by the RITT and is now being tailored to the watersheds, starting with three (San Juan, Skagit, and Hood Canal)
- RITT/PSP commitment to work with all the watersheds to tailor the monitoring and adaptive management framework/template and support monitoring and adaptive management plan development.

To be successful in this work, a significant amount of resources are, and will continue to be, needed. In addition, the right people must be at the table, including the technical and policy experts in the hatchery, harvest, habitat protection, habitat restoration, and hydropower sectors.

Emerging Issues Affecting Salmon Recovery
There continues to be issues that emerge that can ultimately affect the trajectory of recovery. Local, state, tribal, and federal representatives in the salmon community should continue to engage and connect salmon recovery needs to such discussions and coordinate messages that offer the broadest level of support possible. Such initiatives include:

- Shoreline Master Program updates: Occurring across the Puget Sound and is critically important for maintaining and improving the ecosystem functions associated with the riparian habitat and freshwater and nearshore systems that support salmon.
- FEMA's National Flood Insurance Program: Local Jurisdictions are responding to a NOAA/NMFS Biological Opinion on the program that will impact how and where development occurs in the floodplains across the Sound.
- Corps of Engineers Levee Vegetation Management Policy: The Corps is working on an approach to vegetation management on levees along rivers and streams that contain salmon.
- Large Woody Debris Installation: Jurisdictions are balancing the need for sustainable, functional salmon habitat with boater safety and flood management.
- Hatchery Genetic Management Plans: their development their connection to the Puget Sound Harvest Management Plan and watershed plans aimed at system recovery

Funding

The Salmon Recovery Plan identified a need for a $120 million investment per year for the first ten years. This represents the need for both a sustained investment that is consistent and reliable for capital and non-capital actions, as well a protection of the existing resources. We are falling short of this need to make salmon recovery successful and it is imperative that the Region and its partners continue to think broadly about diversified funding sources. Leveraging the efforts of others, and forging new relationships with non-traditional allies will only help increase efficiencies to advance recovery. The Region is committed to exploring creative ways to leverage and secure new finding for salmon and ecosystem recovery.

Watershed Specific Policy Review: North Olympic Peninsula Elwha-Dungeness Watershed

Significant Improvements

- There has been good progress implementing projects in all priority areas, as well as good progress noted on projects in WRIA 19
- The area continues to advance strategic approach for prioritizing and sequencing capital and non-capital projects for funding, including improving project evaluation criteria, updating criteria weighting, and using normalized scoring results to objectively limit the prioritized list of work plan projects that would be eligible for funding in the 2011 SRFB/PSAR round
- The work plan reflects project updates by revising 24 project narratives and associated data and adding seven new projects, including a critically important revegetation project on the Elwha River that was timely to include in preparation for the effects of dam removal
- There are continued efforts to track implementation status of actions on the work plan project list
- There is an increased emphasis on hatchery operations (i.e. use of new and existing hatchery facilities as safe refuges during removal of Elwha dams; steelhead captive brood stock program) that support recovery of Elwha River fish in preparation for dam removal.

Issues to Advance

- Capacity resources needed to continue to advance efforts to track implementation status and effectiveness of actions

- Additional funding and resources are needed to accelerate implementation of the recovery plan, particularly for large restoration projects that are analogous to the scale and complexity of public works efforts; Increased capacity is needed for existing local, state, federal, tribal, and non-profit entities who participate in these efforts;
- Knowing that implementation of salmon recovery plans and the Action Agenda are critical to recover the Puget Sound ecosystem, continue to inform and engage programmatic efforts led by other groups that are also important to salmon recovery, including updates of Shoreline Master Programs and stormwater management programs, forest and agricultural conversion policies as the opportunity arises, setting of and implementing instream flows, and outreach and education efforts. Perhaps additional capacity is needed for these tasks.
- Direct and continuous involvement are needed by harvest and hatchery staff from WDFW in all lead entity salmon recovery processes; A similar level of involvement is needed from federal agency staff (e.g., Olympic National Park, USFWS, USFS, etc.) working on local salmon recovery efforts, particularly in regard to stock preservation and weir operations, monitoring, and habitat restoration priorities on the Elwha River.
- Work with the Partnership and NOAA to integrate the final version of the salmon recovery plan, fish use, and genetic data for Watershed Resource Inventory Area 19 (WRIA 19) into Puget Sound salmon recovery efforts.
- Continue to prepare for the opportunity to participate in the RITT-led effort to advance a watershed scale adaptive management and monitoring program within the North Olympic Peninsula watersheds. To support and prepare for this effort, work to integrate hatchery and harvest information and actions into annual salmon recovery strategic planning, updates of the 3-Year Work Plans, and project evaluation, prioritization, and implementation.