

# **Puget Sound Partnership and Recovery Implementation Technical Team 2011 Three Year Work Program Review Island 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 next 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, 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. Regional technical review that identifies and discusses technical topics of regional concern
2. 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. Regional policy review that identifies and discusses policy topics of regional concern
4. 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://ces.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://ces.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](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://www.ecy.wa.gov/climatechange/ipa_resources.htm)

[http://wdfw.wa.gov/conservation/climate\\_change/](http://wdfw.wa.gov/conservation/climate_change/)

### **Watershed Specific Technical Review: Island Watershed**

***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)?***

In general, the actions identified in the three-year work plan are consistent with the hypotheses and strategies offered in the watershed recovery chapter in support of Island watershed four stated goals:

**Goal 1** – Over the long-term, achieve a net increase in salmon habitat through protection, enhancement,

and restoration of naturally functioning ecosystems that support self-sustaining salmon populations and the species that depend on salmon.

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

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

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

A project matrix is provided that describes the categories of projects and identifies how they support Salmon Recovery Plan goals. Island County has completed actions related to Goal 1, including Habitat Restoration, Habitat Protection, voluntary Protection and potential Future Restoration through Acquisition, and In-Stream Flow Protection. They are achieving Goal 1 as the monitoring component is yet to be developed. Habitat restoration in the recent past included restoring access of salmonids to over 200 acres of tidal marsh, and removal of 357 derelict fishing nets (estimated 32 remain). In 2010, SRFB funding allowed restoration work of ~1100 feet of shoreline in Cornet Bay. Also ~ 40 derelict nets were removed and 11 acres of spartina were treated. Restoration work over the next three years is planned but a large (>\$1.9 million) funding gaps exists. Actions for Habitat Acquisition for protection appear to be only conceptual for this 3 year planning window. However, a high priority nearshore habitat protection project at Swede Hill has been added, though little information is provided other than it is an opportunity for acquisition. No projects in the category Acquisition for Future Restoration are provided; two projects were completed in 2009. Non-capital Habitat Protection projects in 2010 included initiation of work on updating the SMP by Island County. Staff has been hired and assigned and additional organizations are also participating. Current expectation is for this to be completed in 2013, but a funding gap of over \$1 mil is stated. A new project to assess protection/restoration activities on North Camano/Utsalady has been added. Finally, In-Stream Flow Protection is identified as relating to Goal #1, but no work has been done in this category and it remains a data gap for WRIA 6.

Work on Goal # 2 is presented in the Harvest Management Support, Future Habitat Project Development, In-Stream Flow Protection, Habitat Project Monitoring, Stock Monitoring Support, and Research. Harvest Management Support includes a proposed test fishery to assess specific Whidby Basin populations. No clarification of this concept is presented. Future Habitat Project Development includes completion of an assessment at Ala Spit (2009) and restoration feasibility assessments for 2 pocket estuaries in 2010. One of these sites was determined to be feasible (Lowell Point). Other feasibility assessments in 2010 included improving connectivity at Deer Lagoon, Swan Lake, and Dugualla and Livingston bays. In-Stream Flow Protection is identified as relating to Goal #2, but no work has been done in this category and it remains a data gap for WRIA 6. Habitat Project Monitoring is not well defined, but critical to meeting salmon recovery goals. An overarching adaptive management and monitoring program will be devised ultimately, new and additional activities will be identified and funding sources are not yet identified. Otherwise, general fish data collections are being conducted under multiple projects and sites, with multiple research and baseline data objectives. Minimal funds have been secured to fund this work. Stock Monitoring Support has great importance for WRIA 6 salmon recovery, as well as marine fish assessments, stock identification, and marine trophic interactions. It will

be an integral part of H-integration. In 2010, the juvenile salmon origins project was near completion, and funds are available for this project. No new projects were added in 2011. Research projects identified in WRIA 6 include forage fish, shorebird, and hydrological modeling. An ongoing shorebird project to monitor pigeon guillemot burrows and life history is ongoing. Some work on habitat related to forage fish has been completed but is not well specified.

Outreach and Policy goals (#3 and 4) are listed under categories Habitat Project Deveopment, Habitat Protection, Watershed Plan implementation, and Outreach and Education. Various efforts have been completed in 2010, an education/outreach plan was begun, progress on SMP updates has been made, development of a project on N. Camano/Utsalady has begun, funding for Lead Entity core functions was secured, and a “Communication Plan” has been added to the matrix. All categories have secured approximately 1/4 to 1/3 of the estimated needed funding. Concerns regarding adequate funding for multiple agencies participating in the SRP implementation and coordination are discussed, and indeed listed as a likely hindrance to implementation to all the described actions in the next three years.

***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?***

It is difficult to answer if Island watershed is on track for achieving the 10 year goals, as there are no quantitative ten-year goals in their plan. The watershed leads identify that implementation of many actions is behind schedule at this time.

Significant restoration and protection through acquisition projects have been done in recent years however the Protection through Acquisition projects are primarily conceptual for this 3 year planning window. These activities are contributing to Goal 1. Comparing the habitat gains with potential habitat losses to determine whether there is a net increase cannot be done without an operational monitoring program. No activities have been done on this in 2010. Island County is well poised to benefit greatly from the initial work by the RITT in Skagit River which is nearly complete as a first draft. The RITT encourages WRIA 6 leads to prepare a plan to proceed with this task. As they define in their narrative, there are questions of who and how the Adaptive Management and Monitoring plan will be overseen in the watershed. Also of concern are funding for this task, expertise needed, goals of the AMM plan, issues (policy and biological), and H-integration. Progress on Harvest and Hatchery Management within WRIA 6 has not been made in 2010. The RITT encourages WRIA 6 to address these aspects of salmon recovery (see regional issues)

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

Sequencing and timing of actions related to habitat restoration (concept, feasibility, design, monitoring) and habitat protection through acquisition are appropriate. The addition of several habitat restoration, protection, and habitat acquisition projects is great. A priority to focus on monitoring and adaptive management is appropriate. A similar sequencing process for drift cell based habitat protection was developed for identifying parcel-by-parcel scale protection and restoration strategies for implementation. This work is in progress and RITT is interested in the findings/basis of these studies/assessments and what specific protections actions are/will be



implemented. This approach may be a good model for other watersheds to help further elements of habitat protections.

Sequencing and timing of the projects is listed in the matrix, but difficult to track, and the matrix includes all projects which address goals in the SRP. The approach of implementation is flexible and opportunistic by nature. Specific hurdles can occur on individual projects or circumstances, but activities progress on others despite setbacks.

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

No priorities have changed since the previous IWP update. Priorities include SMP update, AMM plan, and completion of the nearshore protection prioritization list.

The watershed's stated challenges include those identified in earlier years including: (1) developing a monitoring and evaluation system, and (2) diversifying and strengthening resource base and capacity (i.e., having enough funding and the right people). It is unclear how sequencing and timing of actions aimed at achieving Goals 3 and 4 help achieve Goal 1. Recently completed and ongoing research to be completed in 2010 (actions in support of Goal 2) could help to refine and quantify Goal 1 for the next 3 year work plan update. Integrating actions for all 4 goals into a single monitoring and adaptive management strategy should also help. This is needed in order to evaluate the effectiveness of each program element and to evaluate status of recovery, making changes in the recovery strategy as necessary to achieve recovery.

## **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 been 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 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 funding for salmon and ecosystem recovery.

## **Watershed Specific Policy Review: Island Watershed**

### *Significant Advancements*

- The completion of Island Watershed protection matrix should help further refine the types of protection necessary for each drift cell unit in Island Watershed. The resources being deployed to develop this tool underscore the timely importance of habitat protection for salmon recovery. The Island Watershed protection matrix could be used as an example across the region for evaluating protection opportunities. The Partnership will be interested to hear how implementation of the recommendations from this tool goes for the watershed.
- SMP updates provide a great opportunity to incorporate salmon recovery into regulatory protection and restoration tools. The addition of salmon tag members to the Island County Planning process is a great way to operationalize and link regulatory tools with salmon recovery efforts in the watershed. The watershed is doing an excellent job to facilitate this communication early on in the SMP update process.
- Involvement of citizens into science, such as Island watersheds success at using WSU beachwatchers to monitor meaningful data for the salmon recovery effort, can be a model for other areas in the region interested in engaging a broader citizen base in recovery efforts.
- The 2011 three-year work plan update was thorough and provided additional answers to questions raised in the 2009 work plan review. The Island three-year work plan continues to advance key topics for salmon recovery. Engagement with watershed partners for these updates including both the narrative and project list update process, will continue to be important.
- Completion of the Education/Outreach strategy builds from comments in last year's 3 year work plan and further refines the areas strategy for education and outreach, advancing one of the critical goals of the Island recovery plan.
  - A large component of the Island recovery plan is education and outreach. It is critical to support public engagement and outreach that is focused on the most important issues for salmon recovery and tailored to the appropriate audiences using social science strategies such as social marketing. As mentioned in the 3-year work plan update, it is important to develop a strategic plan for public engagement and outreach. The watershed may find it helpful to develop this strategic plan to distinguish between
    - outreach activities intended to build public awareness and involvement surrounding planning processes,
    - outreach activities that are designed to educate the public about the salmon resource, and
    - activities that are designed to promote specific behaviors and best management practices.

It is helpful if the education and outreach strategic plan clearly articulates the specific objectives of the outreach effort(s), the intended audience, what is expected of the audience to do as a result of these efforts, and how the watershed will evaluate whether or not your efforts achieved your objective. Opportunities exist to link this salmon recovery effort in the Puget Sound Partnerships public engagement strategy and networks such as Whidbey Eco Network and the Snohomish Camano Eco Network

- Consistent funding for lead entity staff and supporting partners engaged in salmon recovery continues to be a significant need in Island watershed as well as the region.

Over the past year a significant step was taken by Island County by passing the Clean Water Utility District. This will provide the watershed with consistent funding to support capacity and implementation of important programs related to Puget Sound recovery, including salmon recovery. This work and leadership shown by the County should be commended.

*Issues to Advance*

- Creating an adaptive management and monitoring approach will provide a meaningful mechanism to incorporating new information into salmon recovery and the recovery plan. Developing the adaptive management and monitoring approach will take a focused and concerted effort to get the appropriate watershed partners to the table to work on this project, collect the appropriate data, and to begin the conversations with the RITT. The watershed has taken the critical first steps by allocating grant resources to this work. More resources may be needed in the future.
- Within Island watershed there are great efforts being made to integrate across programs, entities, and topics. There is also a need to continue to advance integration of elements in the salmon recovery plan, including research needs, education/outreach program, and habitat protection, and other H's. These items can help create a conversation grounded in previous salmon recovery work to help inform other integration efforts.