

# **Puget Sound Partnership and Recovery Implementation Technical Team 2011 Three Year Work Program Review Skagit 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: Skagit 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)?***

The actions identified in the Three-Year Work Plan are consistent with the hypotheses and strategies offered in the watershed recovery chapter, with an emphasis on habitat restoration and protection through acquisition of estuarine and freshwater rearing habitat in large river floodplains. The work plan also contains actions in upper watershed areas addressing sediment concerns consistent with the watershed recovery chapter. Needed assessment and research actions are also listed.

An updated “Strategic Approach for the Skagit Watershed Council” is more directly aligned with Skagit Chinook Recovery goals. This updated approach focuses projects to strategic areas within the landscape, sustainability, and to types of projects linked to the limiting factors of the Skagit Chinook populations.

The recovery plan chapter also includes important hypotheses about how these habitat restoration and acquisition efforts will interact with management of harvest and hatcheries, and protection of existing functioning habitat through means other than acquisition, to work together to move the six Chinook populations in the system towards their recovery goals. The Three-Year Work Plan does not contain actions for harvest and hatcheries, and protection of existing functioning habitat through means other than acquisition. Therefore, it is impossible to fully evaluate the consistency of the actions in Three-Year Work Plan with the overall recovery plan without understanding what actions are ongoing or planned in the areas of harvest and hatchery management and habitat protection.

As one means of addressing this failure to address all the Hs in the workplan, the lead entity has worked with the RITT as we fit the Skagit plan into the all-H template we are developing for adaptive management and monitoring (AMM). The Three-Year Work Plan correctly reports that the RITT has been behind schedule on this work, although we hope to complete initial tailoring of the Skagit plan by mid-2011. As part of this effort, the lead entity and managers responsible for harvest and hatchery management, and we hope habitat protection management as well, will be convened together to develop a basin-wide monitoring plan. We agree with statements in the Three-Year Work Plan that this process will help move H-integration forward in the Skagit basin.

***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?***

Although the recovery plan does not have specific 10-year goals, the Three-Year Work Plan reports: 1) that tidal delta restoration is approximately on pace to achieve restoration goals, assuming linear progress towards a completion date 50 years from the date the plan was adopted, and 2) generally, restoration projects have proven to be more complex than first thought, and thus harder to implement and often more costly. Comparing past projects with projects within this 3yr period suggests the pace of implementation will slow even further in this 3 year planning window.

The Three-Year Work Plan also reports that nearly one half of restoration funds have gone towards acquisition of functioning floodplain habitat. Although this is not quantified in terms of progress towards recovery, the early focus on protection of floodplain habitat, with the only tool available to the Lead Entity group, is consistent with the recovery plan’s priorities. However, overall progress in achieving the ultimate goal for floodplain habitat can only be evaluated by comparing gains from protection and restoration with potential losses from human land uses or other disturbances. This would require a basin-wide assessment of habitat trends, which the Three-Year Work Plan says is not currently available.

There was no information to evaluate the pace of actions related to harvest, hatchery, and habitat protection through regulatory means provided in the Three-Year Work Plan. Such information is readily available for harvest and hatchery management actions. However, this lack of harvest and hatchery reporting was intentional and brings up an important issue— the lack of a forum, or group, with jurisdiction, capability, and commitment to coordinate implementation of all the Hs. This issue is not unique to the Skagit watershed. In general, collaboration between the lead entity and the management agencies responsible for harvest and hatchery management would be a good starting point for reporting implementation status on harvest and hatchery actions.

The net effect of actions in all the Hs determines the trends in abundance, productivity, spatial distribution, and diversity of the six Chinook populations in the basin. Some of this kind of information, such as spawning escapement estimates and juvenile outmigration numbers, is readily available from the co-managers. This Three-Year Work Plan would be greatly enhanced by the inclusion of some of that information to document the status of the Chinook salmon resource. We note that the narrative alludes to a possible upward trend in juvenile outmigrant numbers, which was helpful information.

### ***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, construction) and habitat protection through acquisition are appropriate. The long term juvenile Skagit Chinook monitoring (i.e., Skagit IMW) has been underway since 2005. This monitoring effort is designed to detect a juvenile Chinook population response to habitat changes (restoration) in the tidal delta and to a lesser degree the freshwater and nearshore rearing life stages. However, effectiveness monitoring is generally not done due to a lack of financial support. With projects now completed, it is time to begin effectiveness monitoring. One large, and high profile, tidal delta project (Wiley Slough Restoration) was completed in 2009 but it is not being monitored. This is currently a lost opportunity to “tell a success story of restoration” or conversely find out what really is happening after project implementation.

A priority to focus on adaptive management and monitoring (AMM) with the RITT is appropriate and timely. We expect that this work will help to improve coordination of agencies responsible for the different “Hs”, thus addressing many of the concerns raised in this review.

We are unable to evaluate the sequencing and timing of actions related to harvest, hatcheries, or habitat protection through regulatory means from the information provided in this Three-Year Work Plan.

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

The Three-Year Work Plan references several challenges (some with new opportunities) that are currently inhibiting salmon recovery efforts within the Skagit including:

- Lack of support for (certain actions in) the plan;



- No recognized forum with authority (and commitment or capacity) to address coordination of all the Hs in the Skagit watershed.;
- A completed adaptive management and monitoring (AMM) template for the Skagit Recovery Plan.

How do you proceed with doing restoration –or other action types– when you don’t have “permission” to complete them? Several new recommendations and opportunities exist that help remedy this problem and the above listed challenges:

1. Effectiveness monitoring results, especially from high profile projects, may help offset lack of support of the plan and provided needed data for adaptive management if necessary. Effectiveness monitoring funding has been lacking to date. Partners exist that are willing and capable to complete this type of plan implementation.
2. Form a more functional forum, or group, capable and committed to implementing and coordinating recovery plan actions for all Hs in this watershed. We suggest this group use the “soon to be completed” AMM template for the Skagit Plan. We suggest that the Partnership and/or the Co-managers take a strong role in forming such a functional watershed level group for implementation and coordinating all Hs.
3. The completed AMM template for the Skagit Plan could be used to bring others responsible for the different H’s together in a coordinated way at the watershed level. The Watershed Council has the authority to address the capital program and undertakes that responsibility fully. Other groups (e.g., Co-managers) need to participate in using this new H-integration tool.

## **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 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: WDFW is Ps and 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: Skagit Watershed**

### *Significant Improvements*

- The Skagit Watershed Council continues to evolve its approach and work to implement restoration actions within the Skagit watershed in a strategic and thoughtful way.
- The Skagit Three-Year Work Plan continues to be an effective communication tool on the restoration priorities and activities associated with restoration. This includes the description of the priorities (with a focus on the estuary and floodplain); identification of what this work plan is and what it is not; and context for the work being advanced in the Skagit.
- There has been significant work in the Middle Skagit to identify priorities and options, including projects for the 2011 funding round. This multi-year effort demonstrates the level of sophistication and thoughtfulness of the work in the Skagit.
- There has been a concerted effort to advance the tools associated with the Habitat Work Schedule. This effort can be a model for the region on how to use this tool in a strategic way that is connected to the work being done for monitoring and adaptive management.
- The Gant chart provided again this year provides a very helpful context for the work and demonstrates increased sophistication and strategic approach in use and timing of funding for restoration projects.

### *Issues to Advance*

- Continue to lack a coordinated effort across the elements of the Recovery Plan to implement salmon recovery in the Skagit watershed. A coordinated effort is needed to advance issues such as habitat protection, water quantity, water quality, and a comprehensive adaptive management and monitoring program. This comment has been made for the last few years and remains a priority to advance. This is revealed through the relatively incomplete three year work plan contents.
- Despite a severe lack of regional capacity to support the monitoring and adaptive management effort, the Skagit Watershed has continued to advance this effort and now needs the support of the region to move it further.
- Skagit County and several jurisdictions within the County are updating their SMP in the next few years. Incorporating salmon recovery information into these updates will be critical for advancing salmon recovery and related habitat protection.
- Education and Outreach around salmon recovery will be important to continue to engage broader group both locally and regionally.
- Support is needed to fund project effectiveness monitoring to help evolve our collective understanding of estuarine restoration actions.