

# **Puget Sound Partnership and Recovery Implementation Technical Team 2010 Three Year Work Program Review Stillaguamish Watershed**

## Introduction

The 2010 Three-Year Work Program Update is the fifth 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.

In April 2010, two of the fourteen watershed chapter areas submitted early three-year work program updates on accomplishments, status of actions, and proposed actions that built on the work programs since 2006. The remaining twelve watershed chapter areas submitted their three-year work program updates in May 2010, with one submitting in June 2010.

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 2010 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: a regional technical review that identifies and discusses technical topics of regional concern; 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; a regional policy review that identifies and discusses policy topics of regional concern; and 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 2010. 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: 2010 Three-Year Work Plans – Common Themes**

##### **RITT Regional Themes**

In addressing the review questions at the watershed level, as outlined above, the RITT also noted general comments common to all watersheds within the region. Four of these region-wide themes are listed below.

## 1. H-Integration

The work plans continue to emphasize habitat restoration projects for understandable reasons. However, salmon recovery also requires habitat protection, and hatchery and harvest management actions. **H-integration** has been considered in a number of watersheds by assessing progress towards plan goals in all of the H's. New projects using EPA funds to specifically address habitat protection for some watersheds came about because an overview of progress in all H's showed that habitat protection had received less attention than the other H's. It is important for all watersheds to assess how the work in each H will affect and be affected by the other H's. For example, do exploitation rate ceilings in harvest management provide sufficient fish to take advantage of newly restored habitat; is progress in restoring one type of habitat negated by the loss of the same kind of habitat due to inadequate protection? These kinds of questions will be an important component of adaptive management. Therefore, it would be advantageous to address them in subsequent 3-year work plans.

A challenge that still has not been met in most watersheds is to coordinate actions in all H's to the same set of hypotheses and strategies that underlie the watershed's recovery plan chapter. For example, it should be clear how a hatchery program set up to supplement production addresses the limiting factors for that watershed in a fashion complimentary to the habitat restoration and protection work in the same watershed. It is important to keep in mind that actions in all H's are aimed at moving the populations towards recovered levels of the same set of VSP parameters. Therefore, it would be advantageous for the managers of all the H's to work with each other towards a common vision of how their actions, in combination, will achieve this recovery.

Six steps of H-integration were suggested at a Shared Strategy workshop in 2006 to help groups begin this process). Some watersheds are working through them in a systematic fashion. We continue to support these steps as useful guidance for assuring that all H's are part of each watershed's recovery plan implementation.

1. Identify the people needed to participate, covering all Hs. Bring them into the process.
2. Gain a common understanding of how the H's influence the salmon system.
3. Agree upon common goals for improving salmon.
4. Select a suite of complimentary actions covering the Hs that address the goals (these should then be placed in the work plans).
5. Document implementation of actions and expected outcomes (in work plans).
6. Monitor, report, and adjust (adaptive management!).

## 2. Adaptive Management

One of the biggest challenges that the RITT has consistently identified for implementing the Puget Sound Chinook Recovery Plan is the development of realistic, useful, and applicable **adaptive management plans** at the watershed level. The Recovery Plan identified these as the key tool for addressing the scientific uncertainties inherent in the

plan, yet developing this tool remains a challenge in 2010. To help identify needs, to provide a consistent template for planning and prioritizing monitoring, to develop a process for refining short-term objectives and 10-year goals, and to increase the technical capacity of the watersheds to complete these plans, the RITT began working with three watersheds – San Juan Islands, Skagit, and Hood Canal - using the Open Standards conservation planning approach with the intent of expanding the work sequentially to other watersheds. As this work began, however, watersheds that did not want to wait for the RITT asked that it develop a template that they could use to prepare for RITT involvement. The template will be completed by July 1, 2010. The RITT will continue to work with watersheds on developing adaptive management plans using this template under a revised time table. Although RITT support will be 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.

### **3. Climate Change**

Climate change is expected to affect the fundamental aquatic and terrestrial processes that control the quality and quantity of habitats for Pacific salmon. This change is the subject of global and regional research, modeling, and planning. For the RITT, Puget Sound Partnership, watershed groups, and other salmon recovery entities, climate change is likely to become a core issue when considering the types and designs of restoration efforts. Specific watershed-scale planning guidance regarding the effect of climate change on salmon and their habitats will require additional study. However, empirical data clearly demonstrate rising air temperatures in the Pacific Northwest during the 20<sup>th</sup> century, and regional climate models predict that this trend will continue. Resulting changes can be expected in watershed hydrology (magnitude and timing of peak and base flows), stream and ocean temperatures, ocean currents and coastal circulation, salinity gradients, sea level, and biological diversity. Salmon production is intimately linked with many of these variables.

As ecosystem processes and functions respond to climate change, adaptive strategies will need to be developed to mitigate and compensate in the implementation of salmon recovery efforts. The Puget Sound Chinook Recovery Plan and accompanying NOAA Supplement both indicate that climate change impacts on salmon need to be considered in evaluating recovery. The NOAA Supplement also identifies climate change as one of several “specific technical and policy issues for regional adaptive management and monitoring.” To this end, the RITT will work with watershed groups, Puget Sound

Partnership, and other stakeholders to develop of adaptive management plans that address climate change.

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](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 website:

[http://www.ecy.wa.gov/climatechange/ipa\\_resources.htm](http://www.ecy.wa.gov/climatechange/ipa_resources.htm).

#### **4. Protection of Ecosystem Functions**

An important element of recovering salmon in Puget Sound is the protection of existing habitat. Adequate protection of salmon habitat in Puget Sound continues to be an issue in all watersheds and continued degradation is noted throughout the area. While habitat restoration is relatively easy to implement by watersheds, given funding, protection of existing habitat is reliant on local regulations and their enforcement. Many regional policy drivers impact salmon habitat, including the Shoreline Management Act, Growth Management Act, National Marine Fisheries Service's Biological Opinion on the Federal Emergency Management Agency's implementation of the National Flood Insurance Program, and the Army Corps of Engineers' revised levee vegetation management policy. These regulations address many of society's concerns about the environment, but not necessarily salmon recovery first and foremost. Stakeholders in salmon recovery

(e.g., the watershed groups, PSP, and RITT) need 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.

### **Watershed Specific Technical Review: Stillaguamish Watershed**

- 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)?*

Yes. Most actions are consistent with the strategies and organization of the Stillaguamish recovery plan in the areas of habitat restoration, harvest management, and hatchery management. Habitat restoration projects are organized around the six habitat limiting factors identified in the plan. All six factors are given equal weight because the watershed group feels that action is required in all of them to promote Chinook recovery. The project list is set up in a way that shows potential sponsors where the greatest needs or gaps are, which could be helpful in directing future work towards unmet needs, assuming project sponsors use the list in this way. The project list includes work directed at removal of invasive species, but it isn't clear how these actions are related to the plan's strategies.

A significant part of the work plan involves supplementation of both the North Fork and South Fork populations with hatchery-produced fingerlings. The North Fork portion of this work is well documented in the 2005 plan, but the South Fork portion was developed after the original plan was adopted and was not discussed in the original plan. Although there has been a lot of planning and analysis to support the South Fork program, this is not reflected or referenced in the three-year work plan other than being included in the project list. It is not clear from the three-year work plan which, if any, of the six limiting factors are being temporarily or permanently addressed by these supplementation programs. This sort of analysis would be helpful in predicting the likely effectiveness of these programs and in evaluating their effectiveness after implementation. The harvest management portion of the plan is proceeding as outlined in the 2005 recovery plan, and overall exploitation rates are now generally at or below the rebuilding exploitation rate established in the harvest management plan.

The original recovery chapter did not address habitat protection in detail. The three-year work plan makes it clear that the watershed group feels that major habitat protection issues must be addressed at the regional level, and that the Stillaguamish Watershed Council does not have the appropriate authority to force changes in land use and other policies that would improve habitat protection. Continued work to relate habitat protection to the limiting factors that have already been identified would help make the case for habitat protection to the appropriate regional authorities and help them understand what needs to be done. The narrative suggests that the increasing frequency and magnitude of peak flows is associated with forest practices, which implies that better habitat protection in headwater areas is called for. They make it clear that regulatory and other policy changes at the state and federal levels are the most critical needed actions to correct these problems. It would help to make this case if the narrative included more of the information on which this conclusion is based, or, if it is difficult to obtain data from forest

managers, to say that. There is also, apparently, some analysis that informs the choice of which areas to acquire as a mean to protection, but this is not clearly articulated in the narrative.

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?*

The project list is organized in a manner that documents the progress of habitat restoration relative to 10-year goals developed in the 2005 plan. The plan appears to be on pace for several of the limiting factors (e.g. riparian restoration and sediment reduction) and several are behind the pace called for in the plan (e.g. placement of large wood, removal of hardened banks and reconnection of the river to its floodplain). There is a very nice summary of the quantity of habitat restored. For some factors (e.g., removal of hardened banks and reconnection of the river to its floodplain) the narrative discusses the balance between restoration and degradation and points out that, despite lots of work to restore habitat, the balance between restoration and loss is actually negative. In other words, the watershed is apparently actually losing ground in those areas, although the information on which this conclusion is based is not referenced in the narrative and is not clear from the project list. This kind of information is extremely valuable for communicating to regional policy makers that much more than just implementation of restoration projects is required to achieve salmon recovery.

The narrative states that increases in peak flows, a documented factor limiting Chinook salmon recovery in the basin, are continuing to get worse and that changes in state and federal legislation are a key part of the solution to this problem. It would be helpful to back this statement up with statistics and to point out more specifically how changes in state and federal legislation could help improve this situation. In addition, based on new data analysis, the watershed is beginning to revise its thinking about the most important factors affecting performance of the Chinook populations, with a new emphasis on estuary processes. This has already led to modified priorities for acquisition and restoration, and could lead to a fundamental change in sequencing and priorities for this watershed, and the new information underlying this should be documented or referenced clearly in the three-year work plan.

Information provided in the plan suggests that the exploitation rate on North Fork Stillaguamish Chinook, at least, has been close to the rebuilding exploitation rate (RER) level of 0.25 in most years since the listing and is continuing to decline or stay low. The North Fork hatchery program has been proceeding pretty much according to the plan. The South Fork program, as described above, is new.

3) *Sequence/Timing question: Is the sequencing and timing of actions appropriate for the current stage of implementation?*

The narrative states that much of this question will be answered by the watershed's monitoring and adaptive management plan that is still being completed. One outcome of that work will be the development of a project prioritization protocol and movement towards greater h-integration. The watershed anticipates developing prioritization within limiting factors but not among limiting factors, preferring to maintain the equal status of all limiting factors for now. Given this structure, the implementation of h-integration would be greatly facilitated by relating all plan

actions (for example the North and South Fork supplementation programs) to the six limiting factors as much as possible.

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?*

The narrative reports that downstream migrant monitoring continues to support the negative correlation between peak flow level and juvenile production, presumably caused by the effects of flows on eggs and fry in the gravel. From this they conclude that upstream land uses, mainly forestry, need to be managed to reduce peak flows as much as possible. In order to evaluate this conclusion, the RITT would need to see more information on the relationship of land use to the observed pattern of peak flows as well as the analysis correlating juvenile out migrant abundance to the flow pattern.

A new Snohomish County requirement for proposed restoration projects to be reviewed by the Agricultural Advisory Board poses a new challenge in completing necessary restoration. The RITT has previously commented that a blanket prohibition on restoration projects in agricultural lands would not be consistent with reaching the Chinook recovery goals for Stillaguamish Chinook. This statement is still true for the 2010 update. In the past year a related matter has arisen in that dikes surrounding Legue Island were naturally breached, effectively restoring estuary habitat. The debate over whether or not to repair this dike breach is now part of the same debate over the preservation of agricultural lands versus restoration of salmon habitat. Based on the hypotheses of the Stillaguamish Chinook recovery plan, keeping the habitat made available by this dike breach would contribute to the recovery of Stillaguamish Chinook.

The Stillaguamish Flood Control District has expressed concerns about more removal of bank armoring, which is part of the recovery strategy for Stillaguamish Chinook. This is another area where the watershed would like help from regional entities in getting support for the actions needed to promote Chinooks salmon recovery.

## **II. Policy Review Comments**

The Recovery Council Work Group, an interdisciplinary policy team made up of lead policy staff in federal, state, local agencies, as well as a lead policy staff representative from the Northwest Indian Fisheries Commission, evaluated each of the fourteen watershed work plans. In addressing their review questions, outlined above, the interdisciplinary team noted both general comments common to all watersheds within the region, as well as significant advancements and issues needing advancement that are watershed specific and need special attention. The general and watershed specific comments follow below.

## **Regional Policy Review: 2010 Three-Year Work Plan – Common Themes**

The region wants to call attention to the significant amount of work and effort that each of the watershed groups put into updating the three year work plan narratives and spreadsheets. Each year, the watershed groups build off of the previous year's reviews and information, incorporating this into the update. The watershed groups continue to demonstrate an increasing amount of sophistication in implementing the recovery plan, advancing strategically important projects by doing long-term planning, sequencing work, and ultimately prioritizing where funding is focused.

We look forward to continuing to work with watersheds to identify and facilitate high priority projects to move forward and to refine the process and three year work plans.

### **Adaptive Management and Monitoring**

Advancing monitoring and adaptive management remains a high priority both regionally and at the watershed scale. The majority of watersheds continue to indicate that this is a significant, 'next big challenge' in their areas. The NOAA Supplement has identified this gap in the Recovery Plan as a critical weakness. As part of the approval process, NOAA indicated that developing this plan was a requirement.

A coordinated monitoring and adaptive management framework that supports refinement at both the regional and watershed scales is critical to understand the pace and effectiveness of recovery actions. This framework and the resulting programs need to support an integrated approach to recovery implementation tracking, incorporate uncertainties around climate change, and develop or refine recovery plan goals where needed.

The region continues to be committed to supporting watersheds in advancing their efforts to develop and implement a monitoring and adaptive management plan in a way that acknowledges the interaction across habitat, harvest, hatchery, and hydropower management decisions. At the regional scale, several actions have been initiated to advance adaptive management, including:

1. RITT guidance on monitoring and adaptive management
2. RITT/PSP template for monitoring and adaptive management that builds a framework within which each watershed that can connect their monitoring information to other watersheds and the ESU.
3. RITT/PSP coordinated approach to support the development/advancement of monitoring and adaptive management programs in each watershed chapter area.

Significant resources are and will continue to be needed to support involvement in the development of these programs across the Puget Sound and then in the implementation of the programs via focused monitoring funds. Resources need to include having involvement from all sectors of salmon recovery working together: hatchery, harvest, habitat protection, habitat restoration, and hydropower.

### Protecting Ecosystem Functions

Preserving options and addressing threats are critical components of recovery implementation both at the local and regional scale. Recovering salmon in Puget Sound requires effective regulatory protection of existing habitat, along with acquisition, incentives, and education and outreach programs around existing land uses. The protection of habitat through these and other approaches remains a high priority.

At this time, there are several opportunities to strengthen the nexus between habitat protection, salmon recovery, and different regulatory mechanisms.

- *Shoreline Master Programs and Critical Area Ordinances*: Local jurisdictions across the Puget Sound are working to update their shoreline master programs, through the Shoreline Management Act, and their critical areas ordinances, through the Growth Management Act. These two regulatory programs are critically important to our collective ability to protect and manage habitat since they address the management of riverine and marine shorelines, streams, wetlands, water recharge zones, and other ecologically important habitats for salmon. There is a strong need to incorporate existing information from the salmon recovery plan and implementation efforts into these regulatory updates in order to strengthen the relationship between land use management and the needs of salmon. Although the watershed groups are not the empowered entity for leading the effort to incorporate information from the salmon plan into the regulatory update, it is the responsibility of everyone involved to support local jurisdictions in adopting the regulations necessary to preserve recovery options for the future. This includes making information accessible as well as understandable within a regulatory context.
- *FEMA's National Flood Insurance Program (NFIP)*: NOAA recently issued a Biological Opinion on FEMA's NFIP, concluding that the program jeopardizes and adversely modifies designated critical habitat for salmon recovery. Since this decision in 2009, there has been a significant amount of concern and conversation about how to respond. Local jurisdictions, along with FEMA, NOAA, PSP, and others, are working to identify a clear path forward for protecting floodplains in terms of ecosystem recovery and human health and well-being. Implementation of an agreed-upon approach to limit the impacts of development in the floodplain will require additional resources at the local and state level and need to be tracked as part of understanding the status of salmon recovery efforts.
- *Army Corps of Engineers Levee Vegetation Management Policy*: A significant amount of riparian habitat sits on top of levees within the floodplains and deltas of the Puget Sound. The Corps' policy requires the removal of vegetation over two inches in diameter. This new levee vegetation management policy removes significant amounts of vegetation, which provide salmon habitat in already degraded riparian areas. A regional response to this policy is underway and important to continue to support in order to reduce the negative impact for salmon recovery. Numerous entities, including state agencies, local governments, non-profits, tribes, and the Puget Sound Partnership, sent a letter to the Corps urging that this policy be changed to allow for retention of more trees on levees.

Additionally, there are non-regulatory mechanisms that are timely. This includes:

- *Education and Outreach*: Many of the watersheds identified education and outreach programs as an element of their work plans. Working with the public to advance a comprehensive understanding and individual actions associated with recovery is critically important. Advancing programs across the watersheds and that are mutually supportive within the watersheds will help strengthen the effort.
- *Nearshore Technical Assistance*: protection of the nearshore remains a high priority for salmon recovery across the Puget Sound. There are emerging tools and resources available, including technical work from the General Investigation for the Puget Sound nearshore, the monitoring and adaptive management template, and watershed-based prioritization approaches for nearshore. Continuing to advance the thinking around fish utilization and critical nearshore habitats will support a refined approach to protection and balancing different uses along the nearshore.

### Focus on salmon recovery

Salmon recovery implementers continue to be pulled in many directions by other mandates. The Puget Sound Partnership and the Policy Work Group recognize that implementation of salmon recovery actions remains a high priority. Maintaining a focus on the priorities in the salmon recovery plan, as described in each watershed chapter plan, will be increasingly challenging, and will require a continued investment of time, resources and support.

### Funding

Establishing consistent, reliable funding for capital and non-capital projects to implement the recovery plan chapters continues to be a challenge. It is critically important to fund implementation of the plan, at an adequate level, in order to keep the momentum and focus on recovery. Lack of capacity across member organizations of watershed groups remains a significant limiting factor for advancing recovery objectives. The advancement of H-integration and adaptive management objectives, in particular, call for continued funding to support ongoing coordination and participation.

### Balancing Land Uses

The Puget Sound Partnership funded a report, *Obstacles to Implementing Important Capital Project for Salmon Recovery* (Blackmore Consulting, 08/27/09), to identify obstacles for implementing habitat restoration for salmon recovery around the Puget Sound. The report identified the following key obstacles that continue to be a challenge and require significant regional and local resources:

- Balancing working lands, primarily agriculture and working forests, with salmon recovery. This is especially important in the estuaries where both working agriculture and salmon restoration is located.
- Supporting a decision-making approach that incorporates salmon recovery needs, based on the plan, into decisions at the federal, state, and local scale. This is often difficult due to variable politics and community support but ultimately has a significant impact on our collective ability to complete capital projects on pace to achieve recovery goals

## **Watershed Specific Policy Review: Stillaguamish**

### *2010 Significant Advancements*

- The Stillaguamish watershed acknowledged their work to advance prioritizing within the six limiting factors. There still may be a need to continue work to sequence and prioritize between these limiting factors. Continued refinement of the project list as prioritization occurs that allows for a more refined/articulated list will be helpful in continuing a strategic implementation approach.
- Though this three-year work plan does not mention it, the recent EPA grant received by the Stillaguamish tribe will help with addressing the hydrology issues in the watershed. Award of this grant is a significant achievement and the results can hopefully help describe/explain key issues and will be important in creating robust strategies and solutions.
- The Stillaguamish watershed continues to advance an integrated ecosystem approach to salmon recovery that includes water quality issues. The Partnership is encouraged that a broad ecosystem approach is being considered for future 3-year work plans as various ecosystem components will certainly benefit the recovery of Chinook salmon. The watershed will need to continue to describe how Chinook recovery and ecosystem recovery overlap, and in areas where there is not obvious overlap identify how best to articulate the unique needs of the Chinook salmon populations.
- Great progress has been made on further refining the Stillaguamish Adaptive Management and Monitoring plan over the last year. As this work continues, an emphasis on all H-integration will be helpful for better understanding how all H's are working together to achieve recovery. The RITT adaptive management and monitoring effort may provide one tool for looking at salmon recovery in the watershed in an all H context. Other tools may also exist.

### *2010 Issues Needing Advancing*

- Partnerships with County, State and Federal agencies that have interest in the watershed should continue to be strengthened to address the concerns of the watershed regarding those factors/stressors that are highlighted in this three-year work plan update. Particular emphasis could be placed on strengthening the co lead entity partnership between Snohomish county and the Stillaguamish tribe. As these partnerships develop a broader participation from the watershed in developing the 3-year work plan would provide an avenue to strengthen relationships as well as the mutual understanding of the recovery plan and progress toward goals.
- With the soon to be completion of the two major estuary projects, the watershed is very close to achieving the 10 year targets for estuary restoration. There will be a need to work closely with stakeholders through the SWC and other avenues to evaluate how these projects are performing and to develop a shared understanding of future targets and needs.
- The watershed has recently been invited to engage in a process to address the issues identified in the three-year work plan update between agricultural viability and habitat

restoration projects. The watershed can also work with local stakeholders to identify creative, mutually agreeable solutions to achieve multiple benefits both through the broader process as well as on a case by case locally based process.

- Habitat protection continues to be a challenge. As mentioned in the 3-year work plan update, the watershed is losing ground faster than it is gaining through restoration. This indicates a need to engage multiple partners to further strengthen the full suite of habitat protection tools within the watershed. This includes but is not limited to strategically focused education and outreach, regulatory updates at the city, county, regional and state levels, fee simple acquisitions, incentive programs, and others.