

**Puget Sound Partnership
2009 Three Year Work Program Update
Nooksack Basin – WRIA 1**

Introduction

In May 2009, each of the fourteen watersheds chapter areas submitted three-year work program updates on accomplishments, status of actions, and proposed actions that built on the 2006, 2007, 2008 three-year work programs. These work programs are intended to provide a road map for implementation of the salmon recovery plans and to help establish a recovery trajectory for the first three years of implementation.

The 2009 Three-Year Work Program Update is the fourth year of implementation since the Recovery Plan was finalized in 2005. The Puget Sound Partnership, as the regional organization for salmon recovery performs an assessment of the development and review of these work programs in order to be as effective as possible in the coming years.

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 Puget Sound Recovery Implementation Technical Team (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 2009 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?

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 2009. 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.

Puget Sound Recovery Implementation Technical Team Review

RITT Review – 2009 3-yr work plans – Common Themes

The changes to the watershed questions and RITT review questions reflect a stronger focus on obtaining information associated with the status of implementation and the development of the Adaptive Management and Monitoring plans, as it relates to what actions are needed for the next three years. Many of the watersheds had a difficult time answering these questions and either did not answer these questions or did not provide much detail. The intent of the questions was to get watersheds to think about how actions identified on their three-year work plans relate to the current status of implementation, existing assessments, and Adaptive Management Plans. As the RITT reviewed all the work plans, we recognized some common themes we wished to bring to the attention of the watershed groups. While all these may not be able to be addressed in this year's 3-yr work plans, the RITT is available to work with the watersheds to address these in future plans or as part of the Adaptive Management Plan process now in progress.

1. Question 6 to the watersheds: "What is the **status or trends of habitat and salmon populations** in your watershed?" The intention of this question was to begin work on the relationship between projects and a baseline understanding of trends in each watershed and/or watersheds to think about trends, or at least what is happening to monitor/assess trends. This information will become important in developing the adaptive management plans and watersheds should be assembling existing information or developing projects to assess this.

2. Most work plans have been primarily focused on habitat restoration projects. Although habitat restoration is a critical aspect of salmon recovery, it is also important to identify actions related to the implementation of habitat protection and hatchery and harvest management that affect salmon populations, and then start thinking of all projects in terms of **H-integration**. How do each of the H's influence results from the other Hs? Again, this will be an important component of adaptive management, and therefore, should be addressed in the 3-yr work plans now. What is needed to get started on H-integration?

Six steps of h-integration have been suggested to help get started (Shared Strategy workshop 2006):

1. Identify the people needed to participate, covering all Hs
 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!)
3. **Habitat protection** was recognized as an important element of salmon recovery in both the Shared Strategy Puget Sound Chinook Recovery Plan and in the NOAA supplement to to the plan. NOAA, in the supplement, recognized there are a variety of tools available for habitat protection and that a combination of all approaches, including incentives and enhanced regulatory programs likely will be needed to achieve the level of habitat protection required to support salmon recovery in Puget Sound. What was unclear in the Recovery Plan in dealing with protection is whether the current rate of degradation or loss of habitat was taken into consideration when measuring the influence of habitat protection necessary for overall salmon recovery. There are a number of tools/models available for assessing net gain or loss of habitat, and these should be explored by the individual watersheds.

The RITT is available to work with the watersheds to support them in answering these questions and identifying gaps in information. This can be done both via the adaptive management process as well as by inviting RITT liaison/members to attend watershed meetings to address this.

4. Although significant advancement has occurred associated with **prioritization and sequencing** of suites of actions, additional refinement is important in order to restore the functions and processes of the watersheds for salmon recovery. There are a variety of tools that are available, and being used in some watersheds for this endeavor. RITT liaisons are available to talk with watershed leads about ideas on how to proceed.
5. **Updating Recovery Plan chapters**. Another issue that arose was what to do about, or how to document, changes that are being made now to the Salmon Recovery Plan chapter goals or directions. All watersheds have modified their thinking about limiting factors and appropriate strategies and actions to some degree since the plan was adopted. We

expect more changes in the future as we learn more about the systems and we apply results from the Adaptive Management process. Until there is a formal process adopted to document such changes in “plans”, each watershed should be carefully documenting changes in their recovery goals and directions, along with the back up supporting research or work, in their 3-yr work plan narratives. This will allow the RITT to take these changes into account while reviewing the work plans for consistency with “the plan.”

6. One of the biggest challenges associated with implementing the salmon recovery plan for Puget Sound Chinook is the development of realistic, useful, and applicable **Adaptive Management Plans** at the watershed level. The RITT has committed to working closely with the watershed over the next several years to getting these written and implemented. This will be done with a series of work sessions, both with individual watersheds and across watersheds. Much time, commitment, and resources are also needed from the watershed leads, planners and implementers of actions associated with the recovery plan. It will help the collaborative process greatly if watersheds begin addressing the above themes at greater detail each year as they develop their 3-yr work plans. Don't wait for your first workshop with RITT to get started.

Finally, one of the issues the RITT recognized was that, although the review questions ask for progress towards the “10-yr goals” in the Salmon Recovery Plan, not all Watershed Chapters identified quantitative 10-yr or other short-term goals. The RITT will work with watersheds to identify these types of short-term goals during the development of the Adaptive Management plans.

Watershed Specific Comments for the 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)?***

Yes, the WRIA 1 (Nooksack) work program is consistent with the hypotheses and strategy for their watershed. The WRIA 1 work program builds on the eight major suites of 10-year actions identified in Appendix B of the WRIA 1 Salmonid Recovery Plan and continues with actions that the TRT (now the RITT) concluded needed more emphasis. When the TRT reviewed the WRIA 1 plan, they noted “one of the strengths of the Plan is its detailed list of habitat recovery objectives and the 10-year and long-term strategies to improve landscape forming processes and habitat conditions.” In planning for the next round of projects this year, WRIA 1 has improved their process by focusing on prioritization of reaches for recovery actions and decomposing and sequencing the actions associated with larger-scale recovery projects into different components. The draft three-year work project plan, however, does not yet include the final prioritization of different projects.

The WRIA 1 work program gives highest priority to actions for early Chinook salmon that are expected to produce quick and significant improvements in the populations. These actions primarily fall into those that protect the populations from immediate extinction and that address

major limiting factors in the freshwater. These include development of a captive brood stock program for the nearly extinct South Fork population (somewhat confusingly described as “harvest management support” in the matrix of non-capital actions), habitat restoration in the South, Middle and North forks, and developing and implementing a funding strategy to restore passage at the Middle Fork Diversion Dam. These are consistent with known threats and strategies for addressing key limiting factors to the populations.

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?*

This is difficult to answer conclusively, but most likely implementation is not on track to achieve 10-year goals. There are several reasons for this. First, WRIA 1’s 10-year salmon recovery goals were aggressive, broad in scope, and focused on all major ecosystem components associated with the factors limiting recovery of salmon. Although actions addressing these factors remain on the three-year work plan, many (e.g., estuarine and nearshore, integration of salmon recovery and flood plain management, in-stream flows, hatchery straying) are in planning stages or have not been implemented at the scale necessary to achieve the goals. Actions that were implemented focused on high priority issues, such as providing protection for the South Fork population and habitat protection and recovery in freshwater. The narrative provided by WRIA 1 does not provide adequate information to identify specifically why progress in some areas is moving slower than desired, but experience with the development of the recovery plan and subsequent implementation suggests at least one major reason: inadequate capacity (people, money, and political relationships) to get all the work done. Developing and implementing an adaptive management strategy is a key priority in moving towards the 10-year goals. Although an adaptive management plan and strategy will not necessarily increase capacity, it would help refine the broad 10-year goals in the plan and ensure that WRIA 1 is moving with the capacity that it has and can acquire in the most efficient manner.

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

The sequencing of the work program appears to be appropriate. The WRIA 1 Salmon Recovery Board and co-managers have implemented actions to protect the South Fork population, which was at serious immediate risk of extinction, by starting a captive brood stock program. This appears to be succeeding in the short-term. As long as funding is available (the program will become more and more expensive as more and more salmon are brought into captivity each year), this buffer will allow planners, biologists, and decision makers to focus on effective habitat restoration activities. The recovery plan already identifies major actions, such as restoring passage to the Middle Fork. However, salmon recovery planners are also focusing on key assessments, such as tributary mapping and hydrologic modeling that will help them to prioritize and sequence actions more effectively. These actions are appropriate and timely at this stage of recovery.

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

A major need in this watershed is to complete and implement an adaptive management plan and strategy that directly identifies goals/targets, monitoring plans, key uncertainties needing assessment and how to use existing and the newly gained knowledge to make effective decisions to recover salmon. This is identified as an action for 2009. RITT plans to prioritize getting the watersheds going on adaptive management within the next 16 months and will start working directly with Nooksack on this in the fall of 2009.

Lack of sufficient funds and resources is a major challenge to salmon recovery for all watersheds; it is therefore important to use the funds received wisely and get the most knowledge for future direction out of a well-developed adaptive management plan.

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.

General Comments for 2009 Three-Year Work Program Updates

In 2009, the watershed three-year work program update process was refined, with input from both watershed groups and the region, to reflect the changing needs of the salmon recovery effort in Puget Sound. Although the spreadsheet will remain the same for the near-term, refinement of the process, including the schedule and questions, will likely continue over the years to accommodate emerging needs and issues.

The 2009 work program updates reflect the continued advancement and increased sophistication of watersheds in strategically identifying important projects and programs. This was perhaps best demonstrated during the recent process to identify ‘shovel-ready’ projects for the NOAA stimulus process, as well as compiling projects in preparation for the 2009-2011 biennial budget request. Similar to the 2007-2009 round of Puget Sound Acquisition and Restoration funds, funding in the 2009-2011 round provides watersheds another opportunity to advance important capital and non-capital priorities.

Despite these gains, both in funds and in work programs, many of the watersheds continue to have gaps, to varying degrees, identified in the NOAA supplement as well as in the 2006, 2007, and 2008 work program reviews. Regional assistance to the watershed implementation teams will continue to be needed to fill the needs identified within this 2009 Work Program (see below). Regional assistance will also be needed to continue work towards securing consistent capital and non-capital funds needed to advance recovery work.

Work Program Narratives (Accomplishments, Status Updates, Sequencing and Prioritization):
As identified in 2007 and 2008, work program updates are a useful tool for documenting

progress toward recovery plan goals and ESU-wide recovery. As a part of the updates, the narratives should continue to be refined to provide a sharper focus on what each watershed expects to accomplish within the three-year period. These narratives should also document what projects have been successfully completed, what programmatic actions are underway, and how successful the watershed has been in implementing the previous year's work plan. This includes documenting how the funds of the previous year are being applied for both on-the-ground projects and capacity within the watersheds. It is also helpful for narratives to include a focused description of how various recovery projects and programs are identified, prioritized, and sequenced. Finally, documentation of what support is needed to implement priority actions will help the region better understand how to support watershed implementation of recovery actions.

Monitoring and Adaptive Management: The majority of watersheds indicated that advancing monitoring and adaptive management was of high priority and the 'next big challenge' in their areas. Some watersheds have already begun developing their own monitoring and adaptive management frameworks and initial monitoring tasks. These efforts are critical to refining the implementation of recovery actions, and to help prioritize how funds are allocated. Additionally, several watersheds have continued to advance their understanding and application of the six steps of H-Integration through the strong support of co-manager resources. It is noteworthy that there is a strong connection between full co-manager engagement within the watershed context and significant progress toward salmon recovery implementation. This work to develop a monitoring and adaptive management plan, as well as advance the h-integration, directly fills a critical gap identified in by NOAA in their supplement to the Recovery Plan. Another element of this work is the recently agreed-upon Pacific Salmon Treaty, which should be funded and then the relevant components incorporated into the effort associated with monitoring and adaptive management.

The region is committed to supporting watersheds advance 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 near-term guidance for initial steps;
2. A program to advance monitoring and adaptive management in each watershed chapter area by the RITT and Partnership, which includes looking at the 6 steps of H-Integration;
3. Monitoring for habitat status and trends at the regional scale by the Department of Ecology, starting in the Puget Sound; and
4. Development of a performance management system to identify and hold accountable the appropriate entities at the local, regional, state, and federal levels for actions associated with salmon recovery.

In 2008, three watersheds participated in a pilot project to better understand how implementation actions can be tracked locally and regionally. These three watersheds – North Olympic Peninsula, Green/Duwamish, and Stillaguamish – used considerable resources to participate in this process and have integrated the information that they produced into their local processes in varying ways. The region is continuing to work on a tracking system and appreciates the effort that went into participating in this pilot project.

The regional team working on the diverse aspects of adaptive management will coordinate with these various efforts in order to ensure that they are consistent and complementary. It will be critical that these efforts continue to advance our existing work and be informed by guidance documents.

Protecting and restoring ecosystem functions and processes for Chinook and other species: Preserving options and addressing threats are critical components of recovery planning both at the local and regional scale. The Chinook Recovery Plan is predicated on the assumption that existing habitat will be protected. Regional work to assess this assumption and to strengthen the regulatory framework is important to advance salmon recovery. The San Juan Initiative has shown that existing regulations along the nearshore are generally not applied in the most protective manner and that nearshore habitat is being lost. The Action Agenda has similarly found that we are not protecting our landscape as originally assumed and that this is a high priority for ecosystem recovery. This includes ecosystem functions associated with water quality and water quantity.

Recovery actions continue to become more complex and expensive. All watersheds are challenged in terms of their capacity to protect habitat and ecosystem functions and processes, as well as to secure future options to implement large-scale, multi-year restoration projects. Protection tools include acquisition of land (e.g., through fee simple purchase or conservation easement), as well as regulations, incentive programs, and education/outreach. An additional tool for both protection and restoration is the continued establishment and coordination with working lands in a way that helps maintain these lands and protects ecosystem functions and processes. Several timely opportunities associated with regulatory tool of protection are currently available, including the upcoming Shoreline Master Program Updates and on-going Critical Areas Updates, as well as the results of the Biological Opinion by NOAA on FEMA's Flood Insurance Program.

Similarly, the availability of consistent, clean water continues to be a concern and a gap identified in the NOAA supplement. It is critical that the work associated with implementation the Action Agenda, primarily through the Department of Ecology and local jurisdictions, advances water quality and quantity issues in a way that supports the watershed groups and advances the recovery of salmon in their areas.

It will be important for watersheds to coordinate and partner with other groups, organizations, and agencies, both locally and regionally, to increase capacity and enhance their ability to successfully identify and implement habitat protection and restoration efforts. Increased capacity for the key participants in watershed recovery efforts is essential to successfully implementing recovery chapters and protecting and restoring the ecosystem functions and processes that Chinook and other species require. The Puget Sound Partnership and the Recovery Council Policy Work Group acknowledge that additional efforts will be needed at the regional scale to assist watershed groups in securing on-going resources needed to protect and restore ecosystem functions and processes.

Nearshore Habitats, Functions, and Processes: There continues to be a need to advance our understanding of nearshore habitats, functions, and processes associated with Chinook recovery. The results of several nearshore fish assessments funded in 2007 will be available in the

upcoming year and will help fill a major gap in our knowledge of salmonid use of the nearshore. The Puget Sound Partnership and Policy Work Group recognize the need to support these watersheds in translating the assessments into a prioritization framework for protecting and restoring the nearshore. We also recognize the importance of these assessments for advancing monitoring and adaptive management plans in the nearshore. Additionally, there is a continued need make decisions regarding the sequencing and prioritizing of nearshore areas for protection across the Puget Sound. Finally, we need to develop a standardized framework to not only monitor nearshore fish presence, but to also improve our understanding of how fish utilize these areas.

Multi-species planning and Action Agenda implementation: Implementation of the Action Agenda, along with multi-species planning efforts such as for the Puget Sound Steelhead, requires significant effort to sequence and prioritize resources and actions. The Puget Sound Partnership and the Policy Work Group recognize that implementation of salmon recovery actions remains a high priority, as identified in the Action Agenda. Maintaining a focus on the priorities within the salmon recovery plan, as identified in each watershed chapter plan, will be increasingly challenging and require continued investment of time, resources, and support.

In terms of multi-species planning efforts, Puget Sound Steelhead were listed as threatened under the Endangered Species Act in May 2007 and a NOAA-appointed Technical Review Team (TRT) is working to identify populations and habitat criteria for the listing. This information is anticipated to be available by the end of 2009. NOAA, the co-managers, and the watersheds are currently discussing options for Puget Sound Steelhead recovery planning. Resources are needed to support the watersheds in steelhead planning over the next several years.

Watershed-Specific Comments

Significant Advancements

- Successful implementation of the captive brood stock program to supplement the South Fork population;
- Continued progress on the coordination among entities through the WRIA 1 Salmon Recovery Program for implementation of the recovery plan;
- Identification of key assessments to help prioritize and sequence actions;
- Prioritization of restoring passage in the Middle Fork, which is identified as a top strategic priority in the recovery plan.
- Clear commitment to advancing a comprehensive adaptive management and monitoring framework for use throughout the basin.

Issues Needing Advancement

- Participate in regional adaptive management and monitoring effort;

- Continue to identify and clarify capacity needs across the watershed in order to strategically advance implementation of the recovery plan;
- Continue to advance partnerships and the collaborative approach between agriculture and salmon recovery groups to reach common goals and strategies as were initiated and described during the planning phase for the salmon recovery plan. Potential tools and approaches are available in the Puget Sound Salmon Recovery Plan Volume 1 (page 411-419).
- Continue strategic planning effort to prioritize projects.