

Puget Sound Partnership 2009 Three Year Work Program Update STILLAGUAMISH WATERSHED

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 STILLAGUMAISH 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 actions are consistent with the strategies and organization of the 2005 Stillaguamish recovery plan in the areas of habitat restoration, harvest management, and hatchery management, with one exception discussed below. Habitat restoration projects are organized around the six habitat limiting factors identified in the plan. Effort is not allocated among limiting factors in any predetermined way, as the plan does not specify any allocation. However, the project list is set up in a way that shows potential sponsors where the greatest needs or gaps are, which should be helpful in directing future work towards unmet needs. A significant part of the workplan 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 apparently been a lot of planning and analysis to support the South Fork program, this is not reflected or referenced in the three-year workplan. The addition of the South Fork supplementation is a significant modification to the original plan, and should be documented. The watershed group could benefit from guidance from the region and NOAA as to the most appropriate way to document this plan change.

The original recovery chapter did not address habitat protection in detail, and the three-year workplan does not comprehensively address protection (only acquisition projects are included). 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. However, no specific actions in this area are included in the three-year plan.

2. 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 and several are behind the pace called for in the plan. There is a very nice summary of the quantity of habitat restored, but there is no comparable analysis of habitat lost or degraded since the beginning of plan implementation (this lack is common to most plans). 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. The North Fork hatchery program has been proceeding pretty much according to the plan. The South Fork program, as described above, is new. Harvest management is proceeding as outlined in the 2005 recovery plan.

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

Beyond describing the general areas of needed effort, the plan does not prescribe sequencing of recovery actions. The way that the project list shows progress to date and needed future work should help potential project proponents direct efforts where needed. The addition of hatchery supplementation in the South Fork should be accompanied by analysis of how this production will fit in to harvest plans and whether the habitat restoration program is providing what is needed for the supplementation fish to thrive in the watershed. There is also a need for assessment of the overall loss and degradation of key habitats to compare with the gains from the recovery efforts.

The watershed group might usefully apply some analytical tools to the question of prioritizing and sequencing restoration actions among the six habitat limiting factors. One approach would be to put the highest priority to those factors that are farthest behind the near-term implementation goals. Another would be to use the EDT modeling that has already been done to assess where the most effective next steps for restoration would be. All watersheds are being asked to discuss this with their RITT liaisons.

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

Integration of habitat restoration with habitat protection, harvest management, and hatchery management is critical to the success of all recovery plans. Hatchery supplementation programs

are an integral part of the Stillaguamish recovery plan. It is important for the watershed documents to reflect the analysis that has been developed to guide the supplementation programs and also to be sure that habitat restoration and protection take into consideration the needs of the fish that will be returning from these programs. The RER that guides harvest management is based on an assessment of stock performance under recent habitat conditions. At some point this will need to be reassessed as habitat condition change due to the combination of restoration efforts and habitat degradation. In addition, the RER was developed using data specific to the North Fork population. It will be important to monitor the performance of the South Fork population to ascertain whether this exploitation rate is also appropriate there. As is the case for all the watershed plans, habitat protection is not addressed in depth in the Stillaguamish plan. One initial step in monitoring habitat protection would be to look at the tradeoff between habitats restored towards the 10-years goals compared with the amount of the same habitats lost during the period of plan implementation.

All of the above considerations, and others, will be part of the watershed adaptive management plan that will be a focus of the watersheds and the RITT in the coming 2 years. RITT plans to prioritize getting the watersheds going on adaptive management within the next 16 months and will start working directly with the Stillaguamish in the fall of 2009.

Regarding specific new challenges raised in the Stillaguamish narrative:

1. The plan hypothesizes that the long term increase in peak flows in the North Fork is associated with forest practices and road drainage networks. The watershed group sees this as a regional issue and is working with the Puget Sound Partnership to find a solution. Clearly, the increasing peak flows are a cause of reduced productivity of Stillaguamish Chinook, and may be a large part of the explanation of why escapement in this watershed has not shown the same response to reduced harvest rates that is seen in the adjacent Snohomish and Skagit watersheds. As the PSP and the watershed work on a solution to this, the RITT feels that it is important to clearly state the hypothesis or hypotheses for why the peak flows may be increasing and develop solutions based on the best current knowledge and that are adaptive to changing knowledge.
2. The narrative also raises an issue of a potential conflict between agricultural uses and salmon recovery projects. We note that arbitrarily excluding salmon recovery projects from agricultural areas would make it impossible to adequately address all of the key habitat limiting factors in the Stillaguamish plan. The Puget Sound Salmon Recovery Plan recognizes that this is the case in many watersheds and calls for cooperative efforts between agriculture and salmon recovery. Therefore it may be necessary to resolve the policy issue that is causing this conflict.
3. The narrative also points out potential conflict between removal of bank armoring and flood protection. Because the goals of this recovery plan cannot be reached without removal of at least some existing bank armoring to open up floodplain habitat it will be critically important to find a solution to this conflict as well.

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 for the STILLAGUAMISH WATERSHED

Significant Advancements

- The Stillaguamish watershed has developed and implemented an adaptive management and monitoring approach and continues to advance and refine the thinking around salmon recovery in the watershed. In the coming year, it will be useful to continue to advance this work and integrate it with the RITT lead Adaptive management and monitoring effort.
- Inclusion of clear harvest data furthers the understanding and thinking of H-integration in the watershed.
- Clear identification of progress toward 10-year habitat goals and articulation of the financial need to achieve that goal. It is less clear how the watershed is advancing programmatic and non-capital actions.

Issues Needing Advancing

- Habitat protection: As protection programs are advanced, including in stream flows and upper watershed hydrology, it will be important to document and identify the existing gaps and strategies for filling these gaps in order to strengthen the overall salmon recovery program. Though many of these actions are taking place at a regional or county level scale it is important to identify what is needed to be done at the local/watershed scale to further advance some of the same issues and topics.
- Prioritization and Sequencing Actions: As has been highlighted in past policy reviews, there continues to be a need to advance on prioritizing and sequencing projects in a way that helps the SRIC make strategic decisions on advancing the implementation of the recovery plan. For example, clarifying project specific actions necessary for the next three years. As a first step toward this, there was work to advance this item as demonstrated in the three-year work plan update.

- Salmon Recovery and Agriculture: 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).