

Puget Sound Partnership 2008 Three Year Work Program Update Stillaguamish Watershed

Introduction

In April 2008, each of the fourteen watersheds submitted three-year work program updates on accomplishments, status of actions, and proposed actions that built on the 2006 and 2007 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 2008 Three-Year Work Program Update is the last of the first three years for implementation since the Recovery Plan was finalized in 2005. As salmon recovery in the Puget Sound is now part of the Puget Sound Partnership's legislative responsibility, the Puget Sound Partnership will perform 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 Regional 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 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 2008 work program updates

Factors to be considered by the Puget Sound Regional Implementation Technical Team in performing its technical review of the Update:

- a. Is the Update consistent with the recovery plan hypotheses and strategy for the watershed's work program?
- b. Is the sequencing and timing of the action in your updated three-year work program appropriate?
- c. Are there significant components missing from the work program? If so, what is missing and what can be done about them in the three-year work program update or at a regional scale?

Watersheds were also provided with the following seven questions, answers to which the Recovery Council Work Group and the Partnership salmon recovery watershed liaisons assessed in performing their policy review of the three-year work program

1. Is the work program consistent with the policy feedback and recommendations from the 2004 documents, Puget Sound Salmon

- Recovery Plan Volume I, Watershed Profiles – Results section, NMFS Supplement, as well as the regional Nearshore Chapter, where applicable?
2. Is the work program tied to the identified three-year objectives and scheduled to proceed at a pace sufficient to achieve the watershed’s ten-year goals?
 3. Is the work program narrative tightly linked to individual projects and priorities?
 4. Do programmatic actions address protection objectives?
 5. To what extent are habitat, harvest and habitat actions integrated and included in the work program?
 6. How is the capacity to implement the updated three-year work program addressed?
 7. What are the three-year work program objectives and how well does the updated program address them? This includes:
 - Improves the level and certainty of protection of habitat and the 22 existing Chinook populations;
 - Preserves options for achieving the future role of this population in the ESU;
 - Ensures habitat protection and restoration and restores ecosystem processes for Chinook; and
 - Advances the coordinated/integrated management of habitat, harvest, and hatchery.

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 early June 2008. Three primary questions were addressed along with additional regional questions. The questions and the RITT’s review comments are below.

Stillaguamish Watershed

1. Is the Update consistent with the hypotheses and strategy for the watershed’s Work Program? (The ‘work program’ includes hypotheses and strategies in the Puget Sound Recovery Plan, including the watershed plan, TRT review comments and NOAA Supplement comments).

Yes, the work program is consistent with the hypotheses and strategy for the watershed. This watershed has put in considerable effort developing watershed hypotheses and protection and restoration strategies based on modeling using EDT. This work program continues to use the conclusions of those modeling efforts to guide and prioritize watershed restoration and salmon recovery.

The habitat actions in this plan are all focused on restoration or acquisition with no link to other approaches to protection, such as regulations and voluntary incentives. The watershed group acknowledges this situation and claims, accurately, that they do not have

the necessary members or the authority to include actions outside of restoration and acquisition. But, as they also accurately point out, protection of habitats and retention of important natural processes that create and maintain habitats is a necessary component of Chinook recovery in the Stillaguamish system. Therefore this plan will not be successful unless some means is found to effect the necessary protection actions. As the watershed group points out, some of the necessary authorities and programs are at the watershed level (such as local land use regulations) and some are at the regional or larger level (such as forest practice rules, water quantity protection programs, etc.). Although the watershed group lacks the direct authority to implement these protections, the likelihood of them being implemented would be greatly increased if the plan were augmented to include specific recommendations for habitat protection.

2. Is the sequencing and timing of the actions in the updated 3-Year Work Program appropriate for this second full year of implementation of the Puget Sound Salmon Recovery Plan?

In general, the sequencing and timing of the actions in the work program are appropriate. The work program entails identification and restoration of key habitat components in the estuary, log jams, and restoration of natural river banks combined with restrictive harvest management and hatchery supplementation programs to promote colonization of spawning habitats.

The 10-year plan approved in 2007 is projected to achieve approximately 30% of the recovery goal. The first 3-year implementation plan would have kept the watershed on, or slightly ahead of that pace. However, according to the update, implementation of projects has fallen off the pace anticipated in the 3-year plan due to shortfalls in funding or capacity to complete projects. The likelihood of obtaining funding to get back on track would be increased if the plan included a summary of where projects are on track and where they are falling behind the pace originally envisioned. This could be organized around the six habitat limiting factors that structure the plan.

The updated three-year work program continues to put increased emphasis on the South Fork population because recent years of apparent low abundance have increased the urgency of actions to assure that the South Fork population does not become extinct in the near term. The plan for the South Fork includes a project to test whether a supplementation program similar to the one in the North Fork will stem the decline of the South Fork population. This project, combined with work to prioritize engineered log jam construction and identify, and eventually control, sources of excess sediment in the South Fork, appears to be the right set of initial actions to address the current situation with the South Fork population. However, it is important that the supplementation program be carried out in a manner that does not jeopardize the potential for the South Fork population to recover in the long term. Starting out this program at a low level is important, so that little will be lost if something major goes wrong. It will also be important to pay close attention to details of where and how many natural fish are taken for broodstock, as well as the balance between hatchery and natural production to guard against potentially deleterious domestication effects. The TRT has not had an

opportunity to review these aspects of the proposed supplementation program. Given that these potential risks are adequately addressed, the South Fork supplementation program, combined with concurrent habitat protection and restoration in the South Fork Stillaguamish, has the potential of greatly benefiting the South Fork population.

The updated three-year plan also put more focus on nearshore habitats, important to critical early marine rearing lifestages. This has been possible because of efforts to coordinate among the watersheds with shorelines in the Whidbey basin area. The nearshore protection and restoration projects resulting from this coordination will be important to support the productivity of the Stillaguamish basin Chinook populations as recovery actions in other areas are implemented.

This three-year update does not reflect any results from last year's nearshore consortium and other coordination.

3. Are there significant components missing from the work program? If so, what are these and what can be done about them in the three-year work program update or at a regional scale?

Protection of existing well functioning habitats and habitats forming and maintaining processes will be a key to success of salmon recovery in the Stillaguamish basin, as the watershed group points out. The watershed has begun to identify overlaps between land use planning programs and salmon recovery. It will be important to advance this to the point where land use planning takes salmon recovery objectives explicitly into account. The watershed group is also working with forest land managers to explore incentive programs that may eventually support restoration of key habitat forming processes in the basin. In general, this watershed's work is very advanced on the technical and project implementation level. However, there needs to be evidence of more engagement by decision makers in the work program. Restoration of appropriate streamflow patterns and management of forestry consistent with hydrological processes appropriate for salmon recovery will also be key for ultimate achievement of goals in the Stillaguamish. These are not directly addressed in this three-year workplan and will probably best be addressed through regional efforts that hopefully will focus on the Stillaguamish as one specific example watershed.

Partnership Questions

1. Improve the level and certainty of protection for habitat and the 22 existing populations

The work program builds on successful protection efforts. Protection and acquisition projects in the tributaries, mainstem, and estuary will contribute to maintaining the production base for the two Chinook populations that spawn in the Stillaguamish system. In addition, the watershed had been working on a project to integrate the salmon recovery plan with existing watershed habitat protection plans. However, it is unclear what progress has been made in this area. Therefore it is difficult to assess how well important protection programs such as Snohomish County's Critical Areas Regulations and

Shoreline Master program are coordinated with salmon recovery in the Stillaguamish basin. In addition the watershed has initiated contact with the US Forest Service and Washington DNR to integrate the watershed's adaptive management program for forest road maintenance and abandonment into their programs as well as exploring new mechanisms to finance upper watershed restoration projects. They are also partnering with WSU Extension to work on stewardship activities with small forest landowners. These are steps in the right direction towards improved forest management in the upper watershed that should affect streamflow and sedimentation patterns throughout the watershed. However, it is unclear what progress has been made in these areas over the past year. The update states that the TMDL and salmon recovery plan implementation are occurring simultaneously, but it is unclear how these efforts are coordinated. The update reiterates the point that effective habitat protection will require action at the regional and state levels as well as locally. However, this plan could include more specific information regarding how these protection programs could best advance Chinook salmon recovery in the Stillaguamish basin.

2. Preserve options for achieving the future role of this population in the ESU?

The work program preserves options for the future role of these populations in the ESU. The plan relies on maintaining the North Fork population through hatchery intervention until the functioning of the watershed is restored sufficiently that the population can sustain itself. Because the South Fork population has not been sustaining itself in all years, the plan includes a program for beginning hatchery intervention there as well. Both programs are clearly focused on restoration of these populations, and harvest is managed consistent with this goal to the extent possible given interceptions north of the US/Canada border. Because of the dire condition of the South Fork population, the plan also includes early habitat protection and restoration actions there. The plan also anticipates derivation of harvest management guidelines specific to the South Fork population, which will be important for preserving this population.

The Stillaguamish Plan includes a detailed adaptive management component, which the watershed group attempts to update annually, depending upon the cooperation of management entities that provide key data.

3. Ensure protection and restoration preserves and restores ecosystem processes for Chinook salmon?

There is emphasis on restoration of estuary and tidal marsh habitats, which will be critical for restoring fundamental ecosystem processes in the Stillaguamish system. Protection and restoration projects in the floodplain will be tied in with a comprehensive floodplain management strategy to be developed by all parties with authority and responsibility for floodplain management and supported by Snohomish County with technical analysis of bank armoring removal and outreach to the agricultural community. Sediment and hydrological processes are addressed through improved landslide remediation and some projects in forestry areas. However, a clear connection with forestry policy is missing, although the efforts to coordinate with the US Forest Service, Washington DNR, and small private landowners are initial steps in that direction. The plan reflects the wide

scope of water quality monitoring that is going on in the basin. Much of this will be useful for establishing trends and spatial patterns that will be useful for developing future salmon recovery actions. However, these programs were designed around objectives that do not directly address salmon recovery. The watershed has expressed a desire to integrate TMDL, water quality monitoring, and clean up priorities with the priorities for dissolved oxygen and temperature in the salmon recovery plan. However, no progress in this area is reported in the current update.

4. Ensure protection and restoration preserves and restores ecosystem processes for multi-species?

This plan does not directly address species other than Chinook salmon. Many of the restoration and protection actions aimed at Chinook will provide benefits for other species. Although not noted in the plan, there are harvest management programs in place for coho, chum, pink, and steelhead that give priority to management for wild stocks.

5. Advance the integrated management of harvest, hatchery, and habitat

This three-year plan reflects the high level of integration that has already occurred in recovery planning in the Stillaguamish. The hatchery supplementation program is designed to overcome specific habitat limitations in the North Fork. The proposed program for the South Fork is also specific to habitat problems there. The harvest management plan is based on an assessment of the performance of the North Fork Stillaguamish population under current habitat conditions and it takes into account the goals of the hatchery program. As more work focuses on the South Fork and more South Fork specific data becomes available, the harvest and hatchery plans should be reviewed relative to their effects on the South Fork population. Because of the new emphasis on the South Fork and particularly because of increased emphasis on supplementation there, a detailed all-H modeling analysis, using AHA or a similar model, would be a useful tool for the watershed to use in deciding how to allocate available resources among the h's.

II. Policy Review Comments

The Recovery Council Work Group, an interdisciplinary policy team, evaluated each of the fourteen watershed work plans. In addressing the questions identified above, the interdisciplinary team noted accomplishments and strengths as well as gaps and issues warranting special attention. The team assessed each of the watersheds' three-year work plans, as well as the general themes that applied across the region. The general comments addressing common accomplishments and opportunities for advancement are discussed below as well as specific comments for the Stillaguamish watershed.

General Comments for 2008 Three-Year Work Program Updates

The 2008 watershed three-year work program updates reflect advancement in terms of project and programmatic identification. Watersheds received capital and non-capital funding through the 2007 biennial budget process, providing a significant increase in resources relative to previous years. Despite these gains, both in funds and in work program, many of the watersheds continue to have gaps, to varying degrees, that were identified in the NOAA supplement as well as the 2006 and 2007 work program reviews. Regional assistance to the watershed planning and implementation teams will be needed to address how best to fill the needs identified below.

Work Plan Accomplishments, Status Updates, Sequencing and Prioritization: As identified in 2007, work program updates are a useful tool for defining progress toward recovery plan goals and ESU-wide recovery. 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.

Work program updates can be strengthened by providing a more focused description of how needed recovery projects and actions are identified, developed, prioritized and sequenced. It is also important that the narrative provide sufficient information to enable watershed teams and regional reviewers to determine whether the pace of implementation is appropriate to achieve each watershed's ten-year goals and if not, to be able to identify the types of changes necessary to get them on pace. This can include information on adaptive management, status updates on actions, and monitoring data.

Integrated Management of Habitat, Harvest and Hatcheries: All Puget Sound watersheds' work programs would benefit from additional efforts and regional resources to achieve H-Integration. Several watersheds advanced their understanding and application of the six steps of H-Integration during 2007 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. By the end of 2008, it is anticipated all watersheds with Chinook populations will be engaged in actions that reflect an integrated management of habitat, harvest, and hatcheries for Chinook recovery. The Puget Sound Partnership and RITT liaisons will continue to assist those watersheds without

independent Chinook populations to integrate management and capacity of the nearshore to sustain natural and hatchery-origin populations of all salmonids. As integration advances, it will be important for each watershed to document how their actions are integrated and advancing in the work programs.

Monitoring and Adaptive Management: At the end of 2007, Shared Strategy staff along with a work group of technical experts completed a regional draft monitoring and adaptive management plan. The completion of this draft plan included a workshop and a gathering of comments on the plan. Since the completion of this draft plan, the Puget Sound Partnership has officially assumed responsibility for completing a regional adaptive management and monitoring plan, including the monitoring of fish populations and the tracking of implementation and effectiveness of actions identified in the Chinook Recovery Plan. At the regional scale, several actions have been initiated to advance adaptive management, including: 1) a pilot program directed at developing an implementation tracking system at both the watershed and regional scale; 2) a status and trends approach for Washington State, which includes directed resources for the Puget Sound; and 3) an accountability system to identify and hold responsible the appropriate entities at the local, regional, state, and federal levels.

Some watersheds have already begun developing their own monitoring and adaptive management frameworks and initial monitoring tasks. The regional team working on the diverse aspects of adaptive management will coordinate with those watersheds to ensure that the monitoring and adaptive management plans are consistent and complementary. During this transitional time, the Puget Sound Partnership staff, the work group, and the RITT acknowledge that they play an important role in providing assistance to all of the Puget Sound watersheds to advance in their development, refinement, and implementation of an adaptive management and monitoring approach. This is important in order to enable watersheds and the region to assess progress in reducing uncertainties in the population and ESU-wide recovery.

Protecting and restoring ecosystem processes for Chinook and other species by 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 underway through the San Juan Initiative and through the Action Agenda work of the Puget Sound Partnership. Initial findings and recommendations from the San Juan Initiative are expected by the end of 2008. The Action Agenda will be completed by December 2008.

Recovery actions are continuing to become more complex and expensive. All watersheds are challenged in terms of their capacity to acquire land in order to secure future options and to implement large-scale, multi-year projects. It will be important for watersheds to coordinate and partner with other groups, organizations, and agencies locally and regionally to increase capacity and enhance their ability to successfully identify and implement habitat acquisition and restoration efforts. Increased capacity for the key participants in watershed recovery efforts is essential to successfully implement their recovery chapters and protect and restore the ecosystem processes that Chinook and other species require. The Puget Sound Partnership staff and the work group members acknowledge that additional efforts will be needed at the regional scale to

assist in securing on-going resources for the watershed groups to protect and restore ecosystem processes.

Water quality and Water quantity: Water quality and water quantity will continue to be important issues for the long-term recovery of all populations within the ESU.

Work on water quality issues is associated with both urban and rural sources. The authority to address these sources is within the purview of the Washington State Department of Ecology and is primarily being addressed through the NPDES permit program, the establishment of TMDLs under the Clean Water Act, and the Forest Practice Rules. It is important to apply these programs and resources in a manner that supports the watershed groups and advances the recovery of salmon in their areas. It is recognized that emerging water quality threats to the health of Puget Sound (e.g. endocrine disruptors) are not adequately addressed under current regulatory regimes and significant new resources are needed to identify and resolve these threats. Watersheds continue to play an important role in ensuring that local jurisdictions implementing these permits adopt water quality programs that include actions and regulations that protect and enhance water quality in rivers and streams critical for salmon recovery.

Work on water quantity issues is also important at both the regional and local watershed scale. At the regional level, the Water Quantity Sub-Committee, coordinated by the Washington State Department of Ecology, is working on advancing the science on instream flows and viable salmon populations (VSP). In May of 2008, the Water Quantity Sub-Committee held an instream flow and VSP workshop to discuss the current state of instream flow/VSP science and flow assessment tools, and to identify and develop a future science agenda for instream flow/VSP work over the next five to 10 years. The workshop also focused on trying to determine the appropriate scale for flow assessment tools and VSP concepts. Additionally, the impacts of climate change will need to be assessed and integrated into salmon recovery planning on a regional scale.

Locally, watershed groups can help move these issues forward in a manner that reflects their priorities for salmon recovery. Each watershed should consider (1) advocating for appropriate instream flow rules in places where they are needed; and (2) working with the Department of Ecology to begin creating protection and enhancement programs (PEPs) in areas where instream flows hinder the recovery of fish populations.

The RITT and the Puget Sound Partnership liaisons will continue to assist watersheds in advancing water quantity and water quality actions.

Nearshore Habitats and Processes: There continues to be a need to advance our understanding of nearshore habitats and processes associated with Chinook recovery. Several nearshore fish presence assessments were funded through the 2007 biennial budget and SRFB round. These assessments are a crucial step in advancing our knowledge of salmonid use of the nearshore and nearshore processes. The Puget Sound Partnership and RITT liaisons recognize the need to support these watersheds in translating the assessments into protection and restoration projects. The Puget Sound Partnership and the work group also acknowledge that we need to increase the scientific certainty regarding sequencing and prioritizing which nearshore areas to protect across

the Puget Sound. Finally, we need to develop a standardized framework to not only monitor nearshore fish presence, but to also assess fish utilization of those areas.

Multi-species planning: The Puget Sound Steelhead were listed in May 2007 and a NOAA-appointed Technical Review Team (TRT) is working to define the population and habitat criteria for the listing. This information is anticipated to be available in March 2009. The Puget Sound watersheds will play an instrumental role in sequencing and prioritizing actions across multiple species in order to gain the highest ecosystem benefit. NOAA, the co-managers, and the watersheds are currently discussing options for Puget Sound Steelhead recovery planning. It is expected that the planning process will be defined by the end of 2008. Resources are needed to support the watersheds in steelhead planning over the next several years.

Stillaguamish Watershed-Specific Comments

The 2008 Work Program provides an update on the actions underway and those new actions identified for implementation of the recovery plan. This includes actions across all the limiting factors as well as non-capital actions for harvest, stewardship, adaptive management, planning, and coordination.

Significant Advancements

- The 2008 work program continues to advance on a thoughtful recovery plan and reflects the priorities of this plan;
- The work program demonstrates a continued allotment of resources directed towards the South Fork Supplementation program;
- Actions across hatchery, harvest, and habitat are represented within the work program and demonstrate the continued progress in each of these areas;
- Clear information on the needs within the Stillaguamish watershed in order to advance on adaptive management and on coordination within the watershed, including strategic planning for an estuary conservation strategy and a floodplain function strategy.

Issues Needing Advancement

- Documentation of the progress being made associated with capital and non-capital funding;
- There remains a need to advance on prioritizing and sequencing projects in a way that helps the SIRC make strategic decisions on advancing the implementation of the recovery plan;
- Continue to identify and clarify what type of capacity support is needed across the watershed in order to advance implementation of the recovery plan. This includes, but is not limited to identifying how the existing capacity funds are being directed towards priority areas as well as providing information on the needs for additional support;
- Per the 2007 comments, as protection programs are advanced, including in-stream flows and upper watershed hydrology and sedimentation, it will be important to identify the existing gaps and strategies for filling these gaps associated with the implementation of the salmon recovery plan.