

Puget Sound Partnership 2008 Three Year Work Program Update Nisqually Watershed (WRIA 11)

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 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 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 Recovery 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.

Nisqually Watershed

As noted in the 2008 Nisqually Work Program Update, the major pieces of the three-year work program have not changed except for the addition of several harvest management projects and the addition of more detailed information on costs and timeframes.

Puget Sound Recovery Implementation Technical Team Review

1. *Is their work plan consistent with the hypotheses and strategy for their watershed?*

Yes, the work program is consistent with the hypotheses and strategy for the watershed. As noted in the work program description, the watershed has spent considerable effort developing watershed hypotheses and protection and restoration strategies based on modeling using EDT and more recent AHA models. The work program continues to use the conclusions of those modeling efforts to guide and prioritize watershed restoration and salmon recovery. The work program includes projects aimed to improve all four attributes of viable salmonid populations (abundance, productivity, diversity and spatial structure).

A key recommendation from the TRT's 2005 review of Nisqually Plan and the 2006 and 2007 reviews of the three-year work program was to monitor changes in fish characteristics and habitat. Key data on this population and watershed are lacking. This work program identifies a

number of habitat and population monitoring projects. High priority projects are monitoring juvenile salmon use of the Nisqually River estuary and nearshore, life history assessment of Chinook salmon through otolith analyses, and research of juvenile steelhead migration in the Puget Sound. The first two are consistent with the Chinook Recovery Plan. The latter, which will provide ecological information on a population listed for protection under ESA after the Chinook Recovery Plan was completed, does not address any hypotheses or strategies in the Chinook Plan. This project could be important for understanding the survival and life history of steelhead from the Nisqually and other South Sound streams, but the TRT has no information to evaluate this against other options. Habitat monitoring projects, including the development of a watershed-wide monitoring plan, are identified as projects in the 2008 work program but are not prioritized. Therefore, the RITT continues to emphasize the TRT's earlier recommendation. In the RITT's view, it is critical for Nisqually to develop and implement monitoring not only because of the data limitations in the watershed but also because the watershed is leading the way in many areas of salmon restoration and the region cannot afford to lose the opportunity to learn from these efforts.

2. Is the sequencing and timing of their work plan appropriate for the first 3 years of implementation?

In general, it appears that the sequencing and timing of the actions in the work program are appropriate. The work program does not explicitly address sequencing—except for the issue of whether control of excess hatchery fish or harvest management changes should come first—but it is possible to infer a sequencing strategy from most of the projects that were selected and the recent history of protection and restoration in the watershed. As noted, in recent years the watershed has invested considerable effort in protection of key habitats and restoration of the estuary. The work program continues to build on that success.

It was clear from the 2005 TRT review of the Plan that successful H-sector integration, especially changes in hatchery and harvest management, will be a major challenge in this watershed. The work program strongly asserted that hatchery management changes, especially the operation of the weir that could be used to control hatchery-wild proportions on the spawning grounds, depend on successful harvest management negotiations to lower harvest rates. In 2006 and 2007, the TRT noted that it might make sense to begin construction and trial operation of the weir sooner than planned to be able to work through logistical and technical problems that are likely to occur. Actions to complete the design, financing, and construction of the weir continue to be high priority in the 2008 work program with construction and installation to be completed in 2010. The work program continues to identify negotiating the necessary changes in harvest rates as a general task, but it also highlights two related high priority projects—determining encounter rates in the recreational terminal fishery and investigate selective fishery methods for the tribal net fishery—that could be informative in changing harvest rates on wild Chinook salmon.

3. *Are there significant components missing from the work plan? If so, what are these and what can be done about them in the 3-year work plan?*

In general, the work program contains the major components needed to advance recovery. As noted earlier, key data on this population are not available. It is good to see that this was addressed at least partly in the work program. The Nisqually work program also builds on the Recovery Chapter in prioritizing habitat restoration and protection projects based on increasing life-history diversity as estimated by modeling, but the 2008 work plan also begins to prioritize collecting data on actual Chinook salmon life histories. As noted in earlier reviews, it would be useful for the watershed to incorporate more explicit recognition of spatial structure into their thinking. This may be occurring, but it is not as explicit as other VSP attributes.

Puget Sound Partnership Questions

- *Does the Update provide information on the improved level and certainty of protection for habitat and the 22 existing populations*

The update does not provide qualitative or quantitative information on whether the level and certainty of habitat protection is improving, staying the same, or declining. That said, the work program builds on successful protection efforts. Protection and acquisition projects in the tributaries, mainstem, and estuary appear to be sufficiently large or accumulative so that channel, floodplain, and riparian processes and functional linkages are maintained and improved with restoration.

- *Does the Update provide information on preserving options for achieving the future role of this population in the ESU?*

Yes, the work program preserves options for the future role of this population in the ESU. The recent abundance, productivity, diversity, and spatial structure of this population (which is largely derived from introduced hatchery stocks) have depended mostly on operation of the hatchery program. Nothing indicated in the program indicates a change that would threaten what is currently there and the direction of the work program is to improve the future role of the population. This depends on harvest changes that are not entirely within local watershed control. The overall focus of this work program on habitat protection and restoration of the Nisqually River and estuary should also help preserve options for the future role of this population. The RITT also considers a well-planned and implemented adaptive management program a key part of preserving future options. Although the Nisqually Recovery Plan has been an excellent example for the whole region for how to plan recovery within an adaptive management framework, as noted above, implementing key parts of this—such as monitoring—remain an important area for advancement.

- *Does the Update provide information on ensuring protection and restoration of ecosystem processes for Chinook salmon?*

See comments on protection above. The work program's emphasis on restoration in the estuary, mainstem, and tributaries support this objective.

- *Does the Update provide a high level of protection and restoration for ecosystem processes for multi-species?*

The overall focus of this work program on habitat protection and restoration of the Nisqually River and estuary should benefit other species of salmonids as well as other fish, invertebrates, birds, and wildlife but the work program does not provide enough information to determine whether this is a "high" level.

- *Advance the integrated management of harvest, hatchery, and habitat*

The Nisqually's analysis of the interactions of harvest, hatchery, and habitat management needed to achieve goals has been careful and systematic. As currently described, overall success depends on the ability to negotiate lower harvest rates on the population, which in turn will lead to changes in hatchery management. The amendments to the Plan and the work plan have described this well. If these actions do occur, the watershed will need an improved adaptive management system to determine if the actions were successful in meeting population goals and this is identified in the work program.

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 Nisqually 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.

Watershed-Specific Comments

The Nisqually Watershed Three-Year Work Plan Update is a coordinated effort through the Lead Entity to further salmon recovery, focusing specifically on refining project prioritization and sequencing, H-integration efforts, working to complete significantly large and complex restoration and protection projects, and engaging in education and outreach.

Significant Advancements

- Utilizing more specific project tiering and prioritization
- H-integration (e.g., weir project and completion of 6-Step H-Integration process)

- Detailed assessment of capacity needs, including specific staff positions, number of FTEs, and resources for partner groups
- Continued focus on strong education and outreach program

Issues Needing Advancement

- Monitoring and adaptive management planning, including how assessment and monitoring information validates goals and objectives
- Strategic planning to integrate and guide programmatic efforts and capital projects
- Document use of additional funds (e.g., 2007 capacity funds)