

Shared Strategy for Puget Sound Comments on April 2006 Three Year Work Plan Nisqually Watershed

Introduction

In April, 2006, watersheds submitted three-year work programs that would enable them to get on a recovery trajectory in the first three years of implementation. The work programs were reviewed by the Puget Sound Technical Recovery Team (TRT) and the Shared Strategy Interdisciplinary Policy Team.

This feedback is intended to assist your watershed as you refine your three-year work program and continue with implementation of your Chinook recovery plan. The feedback will also be used by the TRT and Shared Strategy Work Group to inform the development of the regional work program. A summary of the watersheds' work plans was developed by Shared Strategy staff to stimulate discussion on recovery objectives to determine what the best investments are for salmon recovery over the next three years.

Objectives provided as guidance for the development of work programs

The following objectives were provided as guidance to watersheds in the development of the work plan. The Shared Strategy Work Group and TRT developed the objectives pursuant to consultation with watershed implementation leads and the Recovery Council.

- Improve the level and certainty of protection for habitat
- Protect the twenty two existing Chinook populations by beginning to address the most immediate and potentially greatest threats that could cause populations to decline in this timeframe
- Preserve options for increasing ESU diversity
- Restore ecosystem processes for Chinook and other species by preserving options for habitat restoration, and by addressing the most immediate and potentially greatest threats in
 - estuarines
 - mainstem
 - upper watershed
 - freshwater tributaries and nearshore
 - water quality and quantity
- Advance the integrated management of harvest, hatchery and habitat to address the most immediate and potentially greatest threats
- Continue to expand and deepen individual and community support for key priorities
- Develop and implement adaptive management and monitoring program
 - monitoring
 - accountability system for evaluation and decision making
- Build capacity in each watershed to implement the full breadth of prioritized programs and projects needed to get on a recovery trajectory in the first three years

- Support multi-species

I. Puget Sound Technical Recovery Team Review

The TRT reviewed fourteen individual watershed salmon recovery three-year work programs in May 2006. Three questions were addressed. The questions and TRT's review comments on the Nisqually three-year work program are below.

- 1. Is the work program consistent with the hypotheses and strategy for the watershed? (The 'work program' includes hypotheses and strategies in the Puget Sound Draft 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. As noted in the work program description, this watershed has spent considerable effort developing watershed hypotheses and protection and restoration strategies based on modeling using EDT and more recent AHA models. This work program continues to use the conclusions of those modeling efforts to guide and prioritize watershed restoration and salmon recovery. The work program (especially the projects in the Mashel and Ohop valleys) notes the benefits of increased diversity as well as increased abundance to Chinook salmon. This is nice to see during implementation because although diversity was mentioned in Recovery Plan, the Plan largely emphasized abundance and productivity as the target VSP attributes. Projects such as these would also appear to support spatial structure; but, none of the projects mentioned were tied directly to this VSP attribute. This may be a reflection of the watershed's reliance on EDT, which does not address spatial structure in the same way.

A key recommendation found in nearly every section—habitat, hatchery, and harvest—of the 2005 TRT review of the Nisqually plan was to actually monitor fish and habitat. Key data on this population are lacking. At some point fairly soon, the watershed's reliance on qualitative EDT analyses, which were useful for developing recovery and protection strategies, needs to switch to analysis of quantitative monitoring data. EDT model runs simply cannot replace data in monitoring and adaptive management. It is good to see that this was addressed at least partially in the work program by identifying the need for 2 FTE positions that would be used to develop monitoring and adaptive management.

- 2. Is the sequencing and timing of their work program 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 builds on that success and continues with that direction.

Although not stated explicitly, the watershed's overall sequencing strategy appears to be to protect and restore the habitat first and then address harvest and hatchery management issues later. Time will tell if this is successful, but given the difficulty of protecting and restoring habitat as it is threatened by increasing human population pressures and development, it may be that this strategy will ultimately lead to faster recovery of Chinook and other species than alternative sequencing strategies. The attainment of one objective, the reduction of hatchery origin recruits to less than 30% of the spawning population, is contingent upon the reduction of local and international harvest rates that will not be re-negotiated until 2008. This may push the objective out well beyond the three-year timeframe.

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 asserts that hatchery management changes, especially the operation of the weir, depend on successful harvest management negotiations to lower harvest rates. Specifically, they state that weir project operation cannot begin until harvest rates are reduced to MSY because doing otherwise would mean that "there would not be enough returning natural origin fish to support the continued viability of the stock." Although we understand this logic, it is worth making three minor points. First, it is not clear how the watershed arrived at this conclusion because neither of the models they have cited—EDT and AHA—are population viability models. Second, the work program gives us no idea of when the harvest management negotiations would be expected to be successful (is this outside of the 3-year action period?) Third, weirs such as the one that is proposed here can be very difficult to operate effectively and often require years of trial and error to become successful if they ever do succeed. It might make sense to begin construction and trial operation of the weir sooner than planned to work through these difficulties.

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

In general, the major components needed to move forward are here. 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. In the TRT's view, this is an important piece although it was not specifically highlighted. The absence of a consideration of spatial structure is a bit troubling. Although the protection measures that are proposed target remaining occupied spawning areas, and restoration actions are proposed for the Mashel and Ohop Rivers, these are not explicitly intended to enhance the current population distribution. This seems important if a locally adapted population is the goal since spatial structure may be thought of as a useful indicator of selective regimes. It is also possible that, given the low number of natural origin recruits, actions to enhance spatial structure are not advisable during the first three years.

Comments on how well the work program addresses objectives

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

Yes. 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. The protection measures proposed, and the on-going coordination and proposed staffing (for farm planners, for example) increase the probability for successful protection.

2. *Preserve 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; yet, successful realization of this objective rests on the plan's ability to negotiate lower harvest limits on the population that, in turn, allows for a reduction in the influence of hatchery origin fish on the process of local stock adaptation. Without the reduction in hatchery influence, the population is unlikely to adapt successfully to local watershed conditions and provide the evolutionary value of a local population.

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

The protection/acquisition projects mentioned for the Mashel and Nisqually mainstem appear to be sufficiently large or accumulative that the critical link between channel and floodplain/riparian processes will be maintained. This preserves process-function linkages where they are in good working order and allows for restoration (as in the case of the Mashel) where they are not. The early restoration projects proposed—the estuary, the mainstem and the Ohop—are also large and may reflect critical in-channel processes at that scale. The upland/terrestrial link to floodplains and channels appears to be missing but this may come later.

4. *Advance the integrated management of harvest, hatchery, and habitat*

The Plan's use of AHA as an evaluative tool and the explicit acknowledgement of the various roles of the Hs in achieving the objectives of the plan make this watershed a model for H-Integration. 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.

It is important that the watershed recovery team continue to review the May 2005 Technical Gap Analysis to ensure that uncertainties are addressed in the adaptive management plan and work program refinements.

II. Policy Review Comments

The Shared Strategy Interdisciplinary Policy Team evaluated each of the fourteen watershed work plans. The following questions guided the evaluation of the work plans.

1. Is the work program consistent with the policy feedback and recommendations from the 2004 documents “Watershed Policy Feedback Summaries”, Recovery Plan December 2005, Volume I, Watershed Profiles results section, and NOAA’s federal supplement published in the Federal Register on Dec. 16, 2005?
2. Is the work program tied to the objectives identified at a pace sufficient to achieve the watershed’s ten-year goals?
3. Are there significant elements missing and how might these be addressed?

The interdisciplinary policy review team discussed the Nisqually plan with the TRT and noted strengths of the three-year work program as well as special issues warranting attention. Specific comments are provided below, followed by a short discussion of elements common to all watersheds.

Comments and special issues

- The work program provides a nice connection to the Watershed Plan developed under the 2514 process.
- The work program would benefit from tighter prioritization in order to tie in with funding opportunities.
- It will be important to link to the regional adaptive management plan as it is developed.

Elements in common with other watershed work programs

All Puget Sound watersheds’ work program refinements and recovery plan implementation activities will benefit from additional efforts to achieve H-Integration and the development of an adaptive management plan. Protecting and restoring ecosystem processes for Chinook and other species by preserving options and addressing threats is a critical component of recovery planning both at the local and regional scale and warrants further attention. Strengthening the capacity to implement needed actions and to expand and deepen support for recovery program objectives is also critical to ESU-wide recovery and must be addressed. Recommendations on how to achieve these and closely related objectives are contained in a Shared Strategy document entitled “Watershed Work Plans Related to Key Puget Sound Recovery Objectives” currently under discussion.