

January 24, 2012

**SUBJECT:** Steelhead Recovery Planning Status and Proposed Next Steps  
**TO:** Puget Sound Salmon Recovery Council  
**FROM:** PSSRC Steelhead Steering Committee

Action Requested

The SRFB allocated \$250K to the PSP to support steelhead recovery planning, specifically for engaging Puget Sound Lead Entities in reviewing and developing elements of a Puget Sound steelhead recovery plan that incorporate watershed-scale strategies and actions. At its December 1 meeting, the PSSRC charged a Steelhead Steering Committee with developing a recommendation for the most effective use of this funding. The Steering Committee recommends that the PSSRC authorize it to continue refining the following approach, and to bring a final recommendation to the PSSRC for decision at its March 22, 2012, meeting:

Utilize \$50K for marine survival research and approximately \$75-100K for a region-level report that would include a gap analysis, limiting factors analysis ground-truthed in several watersheds, and finer application of the Steelhead Foundations report's Intrinsic Potential model results. Lead Entities would also receive individual allocations (\$6-7K per Lead Entity) to provide salary support for the engagement of watershed scientists in this region-level work.

Recent studies have identified poor marine survival as a serious problem facing juvenile salmonids – and especially juvenile steelhead – in the Salish Sea. Furthering this important research through the ongoing, collaborative Salish Sea Marine Survival Project, coordinated by Long Live the Kings, will help NOAA and its recovery planning partners in the Puget Sound region identify the causes of poor marine survival and the types of actions that could address this problem.

A gap analysis based on those factors believed to limit steelhead production and survival throughout their range is an important next step in recovery planning that will highlight what actions need to be taken to recover steelhead in addition to those already planned for Puget Sound Chinook, Hood Canal summer chum, and bull trout. As part of the gap analysis, existing geospatial model analyses of current and potential steelhead capacity in Puget Sound watersheds would be enhanced at a finer scale, (e.g., moving from 100K to 24K resolution NHD hydrography) as recommended in the Steelhead Foundations report. This would illuminate how much additional freshwater habitat is important to protect and restore, when the unique attributes of steelhead are taken into consideration.

An analysis of limiting factors as a part of the overall gap analysis is critical to understanding the factors contributing to high mortality at different points in the steelhead life cycle, foundational information for a recovery plan. This work would build off of and be related to the population viability criteria report for Puget Sound steelhead currently under development by NOAA's Steelhead Technical Recovery Team.

While these actions do not substitute for the development of a comprehensive recovery plan for steelhead, they would provide elements of a recovery plan and fill major, Puget Sound-wide information gaps that when filled, will contribute to the development of effective actions for steelhead recovery.

The remainder of this memo presents additional background information and a high-level summary of Steelhead Steering Committee meetings to date.

## Background and Context

The Steelhead Technical Recovery Team (TRT) released a draft Puget Sound steelhead (*Oncorhynchus mykiss*) population identification report in November 2011, dividing the Puget Sound steelhead Distinct Population Segment (DPS) into three Major Population Groups (MPGs) – including the North Cascades MPG, South and Central Puget Sound MPG, and Olympic Peninsula MPG – and 32 Distinct Individual Populations (DIPs) within those MPGs. The TRT is now working to develop viability criteria for the identified MPGs and DIPs, which will inform a ranking of those populations that are critically depressed relative to others, and assist in the development of recovery goals across MPGs and DIPs. Recent communication with the TRT indicates that it will likely release a draft viability criteria report in late February or early March 2012.

Meanwhile, Washington Department of Fish & Wildlife is moving forward with several actions identified in its Fall 2011 Steelhead Short-Term Action Plan. Among others, these include the identification of potential Wild Steelhead Reserves within the Puget Sound DPS where hatchery interactions would be minimized and recreational fishing would be restricted or eliminated.

Additionally, the NOAA Fisheries Northwest Fisheries Science Center (NWFSC) has hired a post-doc to complete a life cycle model for Puget Sound steelhead that includes habitat, harvest, and hatchery considerations. The model is also expected to address some of the underlying questions related to resident and anadromous steelhead, such as how resident fish contribute to the viability of anadromous populations.

In the short term, PSP has a \$250K allocation from the SRFB to advance steelhead recovery planning in coordination with Lead Entities, particularly for reviewing and developing elements of a Puget Sound steelhead recovery plan that incorporate watershed-scale strategies and actions. Within the January 1-March 22 (2012) timeframe, the Steelhead Steering Committee, PSSRC, and other recovery partners will continue working to develop an approach for utilizing this funding in the most effective way possible. The preferred approach will be presented to the SRFB at its April 18-19 meeting in Olympia.

## Goals and Objectives

Our goal is to develop an approved recovery plan for Puget Sound steelhead, and to put that plan into effect to achieve recovery and delisting of steelhead. However, even before the recovery plan is finished, it is important to take other steps in support of recovery that are: 1) responsive to local, state, and federal-level requests to take action now; 2) closely connected to – and scientifically defensible in light of – population viability criteria and other modeling coming out of the Steelhead TRT's work; 3) well coordinated with hatchery, harvest, and other actions taken by the co-managers; 4) capitalizing on the interest around steelhead recovery among Lead Entities and other organizations; and 5) leveraging and building on efforts underway to recover other listed species.

## Steelhead Steering Committee

The Steelhead Steering Committee was convened to support the PSSRC's engagement in steelhead recovery. The sub-group is intended to reflect the wide variety of technical and policy expertise represented both on the PSSRC, and within the salmon recovery community in Puget Sound. Current participants include:

- Alan Chapman, Lummi Nation
- Chris Ellings, Nisqually Tribe
- David Price, WDFW
- Elizabeth Babcock, NOAA/NMFS
- George Pess, Steelhead Technical Recovery Team
- Jacques White, Long Live the Kings
- Jeanette Dorner, PSP
- Jeff Hard, Steelhead Technical Recovery Team
- Jim Myers, Steelhead Technical Recovery Team
- Ken Currens, PSP
- Kit Rawson, Tulalip Tribes
- Lloyd Moody, GSRO
- Pat Stevenson, Stillaguamish Tribe
- Richard Brocksmith, Hood Canal Coordinating Council
- Sandra Romero, Thurston County Board of Commissioners
- Sara LaBorde, WDFW
- Thom Johnson, Point No Point Treaty Council

PSP staff convened the Steelhead Steering Committee twice in mid-December and once in mid-January, to discuss approaches for utilizing the SRFB's \$250K allocation and consider a number of next steps for advancing steelhead recovery planning. A number of ideas were articulated that generally fall into the categories of 1) habitat protection and restoration; 2) planning; and 3) research.

Within each of these categories, the brief descriptions below are a mix of longer-term needs in developing a recovery plan, and shorter-term actions that immediately address declines.

#### *Habitat Protection and Restoration*

- Additional stream typing work (e.g. increasing stream surveys in order to identify fish-bearing waters) to increase regulatory protections
- Monitor and enforce existing land use regulations
- Accelerating habitat protection in general, including coordinating with WDFW's work to designate wild steelhead reserves, and considering in particular where steelhead habitat does not overlap with Hood Canal summer chum, Puget Sound Chinook, and bull trout habitat
- Coordinate with WA Department of Transportation to better align infrastructure projects with the need to improve habitat quality and access for steelhead
- Designation of critical habitat for Puget Sound steelhead by NOAA Fisheries
- Continued implementation of habitat restoration and protection actions in the existing salmonid recovery plans, particularly those that benefit multiple listed species

#### *Planning*

- Build steelhead recovery messaging into existing outreach for Chinook recovery
- Distribute an allocation (of the SRF Board funds) specifically to 3-4 Lead Entities, each of whom would work to develop regional strategies for advancing recovery at the level of Major Population Groups (MPGs). The ultimate approach taken could be distinct for each MPG

### *Research*

- Continue and support existing efforts that will help illuminate the causes of low marine survival of juvenile salmonids (e.g., provide funds for the ongoing collaborative Salish Sea Marine Survival Project coordinated by LLTK)
- Undertake a gap analysis to identify where the existing Chinook Recovery Plan does not incorporate the needs of steelhead, likely in concert with a broader, life cycle-level limiting factors analysis for Puget Sound steelhead.

### *Revised Options: SRFB Allocation*

Taking into account the needs described above and based on feedback from Salmon Recovery Lead Entities and scientists familiar with steelhead ecology, the Steelhead Steering Committee and PSP staff considered the following approaches as the most effective means of advancing steelhead recovery in coordination with Lead Entities:

#### *Option A*

Utilize the \$250K allocation to complete a gap analysis identifying where the existing Chinook and summer chum recovery plans fail to incorporate the needs of steelhead. The Steelhead TRT would help develop and affirm key assumptions and guidance for a gap analysis.

##### *Option A1*

Evenly allocate the \$250K across 15 Lead Entities to develop watershed-by-watershed gap analyses (\$16,666 per Lead Entity), which would then be “rolled up” to a region- level report

##### *Option A2*

Utilize \$130K of the SRFB allocation to retain a consultant or other entity to serve as a regional lead for engaging Lead Entities in a limiting factors/gap analysis report. Each Lead Entity would also receive \$8K to support its engagement in this process, ensuring that watershed-specific information was included and “rolled up” within the regional report

#### *Option B*

Utilize \$50K of the SRFB allocation to continue existing efforts – coordinated by Long Live the Kings – which will help illuminate the causes of low marine survival of juvenile salmonids, and the remaining \$200K to undertake the gap analysis work described above

##### *Option B1*

Utilize \$50K for marine survival research and the “even allocation” approach described in A1 above (\$13,333 per Lead Entity) for a watershed-by-watershed gap analysis

##### *Option B2*

Utilize \$50K for marine survival research and the “regional lead” approach described in A2 above (\$100K to the regional lead and \$6,666 per Lead Entity) for a region-level limiting factors/gap analysis incorporating watershed-specific information contributed by Lead Entities and others

### Proposed Approach

(NOTE: This mirrors, and provides some additional detail on, the “Action Requested” section from Page 1 above)

The Steelhead Steering Committee recommends further refining a modified version of Option B2, above, and bringing a final recommendation to the PSSRC for decision at its March 22, 2012, meeting:

Utilize \$50K for marine survival research and approximately \$75-100K for a region-level report that would include a gap analysis, limiting factors analysis ground-truthed in several watersheds, and finer application of the Steelhead Foundations report’s Intrinsic Potential model results. Lead Entities would also receive individual allocations (\$6-7K per Lead Entity) to provide salary support for the engagement of watershed scientists in this region-level work.

Recent studies have identified poor marine survival as a serious problem facing juvenile salmonids in the Salish Sea. Furthering this important research through the ongoing, collaborative Salish Sea Marine Survival Project, coordinated by Long Live the Kings, will help NOAA and its recovery planning partners in the Puget Sound region identify the causes of poor marine survival and the types of actions that could address this problem. The \$50K would help support the projects Technical Team and a regional workshop in the fall of 2012 focused on narrowing potential sources of mortality for juvenile for steelhead, Chinook and Coho in the Salish Sea, and on designing a focused research plan necessary to identify specific factors limiting survival in the marine environment. Understanding all sources of mortality will improve recovery plans, and assure that resources and enforcement actions are targeted where they will do the most good towards achieving delisting.

A gap analysis is an important next step in recovery planning that will highlight what actions need to be taken to recover steelhead in addition to those already planned for Puget Sound Chinook, Hood Canal summer chum, and bull trout. As part of the gap analysis, existing geospatial model analyses of current and potential steelhead capacity in Puget Sound watersheds would be enhanced at a finer scale, (e.g., moving from 100K to 24K resolution NHD hydrography) as recommended in the Steelhead Foundations report. This would illuminate how much additional freshwater habitat is important to protect and restore, when the unique attributes of steelhead are taken into consideration.

An analysis of limiting factors as a part of the overall gap analysis is critical to understanding the factors contributing to high mortality at different points in the steelhead life cycle, critical information for a recovery plan. This work would build off of and be related to the population viability criteria report for Puget Sound steelhead currently under development by NOAA’s steelhead Technical Recovery Team.

While these actions do not substitute for the development of a comprehensive recovery plan for steelhead, they would provide elements of a recovery plan and fill major, Puget Sound-wide research gaps currently inhibiting the development of effective actions for steelhead recovery. Additionally, the Recovery Council and NOAA could use these products to advocate for the funding, capacity, and other resources necessary to ensure the recovery of wild steelhead.

