

**Puget Sound Partnership
Salmon Recovery Council Management Brief**

January 28, 2021 – Topic 8

TOPIC:

“Factors Limiting Progress in Salmon Recovery” White Paper

MEMO STAFF CONTACT:

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PRESENTERS:

Staff: Erin Murray, Ecosystem Recovery Coordinator

Other(s): Bob Bilby, Bob Fuerstenberg, Greg Blair, Kurt Fresh

TYPE OF PRESENTATION:

- Oral presentation for a decision
- Oral presentation for discussion
- Oral presentation for information only
- Written briefing only
- Other: _____

ISSUE/QUESTION:

The Salmon Recovery Council will hear a presentation on the Salmon Science Advisory Group’s recently completed White Paper: “Factors Limiting Progress in Salmon Recovery.” This paper includes five findings that have contributed to continued declines in salmon populations in Puget Sound. The committee will have an opportunity to discuss the recommendations and determine how these findings may inform the upcoming March retreat about whether and how to reallocate resources for salmon recovery.

BACKGROUND AND KEY CONTEXT:

The Salmon Science Advisory Group (SSAG) is an advisory body for the Salmon Recovery Council and the Science Panel, available to provide input on key science questions underpinning implementation and adaptive management of the Puget Sound Salmon Recovery Plan. During the May 2019 SRC meeting where members discussed changing the regional funding allocation model, SSAG members maintained that more information on the effectiveness of projects funded under the current allocation formula was needed for an informed conversation on potential changes.

This white paper “Factors Limiting Progress in Puget Sound Salmon Recovery” examines reasons why Pacific salmon in the Puget Sound may not be showing signs of improvement to habitat restoration programs and concludes with some suggestions that may improve effectiveness of efforts in Puget Sound.

After a presentation from the SSAG members outlining their paper’s findings and recommendations, the SRC will have an opportunity to ask questions and discuss the white paper. This completion of this paper

is strategic in that it could inform funding prioritization and the allocation formula discussions planned for the March SRC retreat.

ANALYSIS:

Despite the substantial investments made in habitat restoration and protection for salmon recovery, the response of vulnerable salmon and steelhead populations has been disappointing (NWFSC 2015, Willams et al. 2016, PSP 2019). In Puget Sound, abundance trends for Puget Sound Chinook Salmon have not shown positive responses to restoration efforts, despite more resources being dedicated to this species than the other listed Puget Sound fish populations combined. Most populations of Puget Sound steelhead also have declined in abundance.

Identifying the most important constraints on salmon response is challenging. Recovery depends not only on an understanding of the biology of the fish. Social, economic, legal, and political considerations also influence restoration. The challenge of operating in this social-ecological system make salmon recovery complex. In practice, restoration must consider three major factors to be successful: the characteristics of the watershed, the characteristics of the fish populations, and the characteristics of the restoration actions. Successful restoration depends on matching the location, scale, and intensity of restoration activities to the characteristics of the watershed and the fish populations with the goal of improving survival and growth of the fish. Furthermore, detecting a response in abundance or productivity and learning to improve restoration success requires monitoring.

Considering these challenges, the Salmon Science Advisory Group identified five key reasons that explain the apparent slow response to restoration efforts.

1. Insufficient time has elapsed for the effects of habitat restoration on the fish to be fully expressed.
2. Not enough restoration has been implemented to cause a detectable change in salmon populations.
3. Projects being implemented are not addressing the key factors constraining salmon (the wrong actions or the wrong locations).
4. Habitat degradation is occurring rapidly enough to offset any benefits associated with restoration efforts.
5. Monitoring of responses to restoration efforts have not been adequate to separate the increase in salmon abundance or salmon productivity (signal) from the temporal variation (noise) due to factors other than habitat condition, such as variation in ocean conditions.

These reasons for lack of response are not mutually exclusive. It is very likely all are contributing to various degrees across Puget Sound watersheds and salmon populations. However, the relative importance of each factor varies by location and project type and may vary seasonally or from year to year.

FINANCIAL AND ADMINISTRATIVE IMPACTS:

N/A

NEXT STEPS:

After discussion with the SRC, the findings within the white paper could be proposed to be utilized during the SRC’s March retreat when discussing the funding prioritization and potential revisions to the allocation formula. Partnership staff and SSAG members will finalize the white paper and explore options for publication.

ATTACHMENTS:

Attachment 1 – Draft “Factors Limiting Progress in Puget Sound Salmon Recovery” white paper