

Quicksilver Portfolio: Restoring Puget Sound Steelhead & Fisheries

Updates and initial efforts underway | Oct. 2024



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Quicksilver Portfolio: Restoring Puget Sound Steelhead & Fisheries

Updates from 2021-23 biennium and initial efforts underway in 2023-25

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Cover photo: A large wild steelhead with stunning red cheeks and lateral stripe caught and released in the Skagit River Basin during the 2024 fishing season. Photo by Theodore Charles.

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Report Summary

In the 2021-23 biennium budget, the Washington State Legislature allocated \$1.68 million, known as the “Quicksilver Proviso,” on a onetime basis, to the Washington Department of Fish and Wildlife (WDFW). This funding was intended to begin implementing recommendations from the Quicksilver Portfolio, a framework developed between 2017 and 2020 by the Puget Sound Steelhead Advisory Group (PSSAG) and WDFW to restore Puget Sound steelhead and fisheries.

In the following legislative sessions, an additional \$3.8 million was provided through the 2022 Supplemental Budget, effective July 1, 2022, under the “Freshwater Monitoring Proviso.” These funds expanded support for additional projects within the Quicksilver Portfolio.

For the 2023-25 biennium, the legislature once again funded the Quicksilver Proviso on a onetime basis, but with a slightly reduced allocation of \$1.6 million. Simultaneously, the Freshwater Monitoring budget was carried forward at \$6.5 million for the biennium, bringing the total funding for the two year period to \$8.1 million. These resources support the monitoring of recreational salmon and steelhead harvests in streams and rivers throughout Puget Sound as well as along the Washington coast.

WDFW remains committed to implementing the Quicksilver Portfolio recommendations, along with other initiatives within the freshwater monitoring package for Puget Sound watersheds. This work is carried out in collaboration with co-manager tribes in the Puget Sound region, federal agencies, scientists, non-governmental organizations, and steelhead anglers and guides, following [Washington’s Statewide Steelhead Management Plan](#). The projects currently funded by these provisos and implemented under the guidance of the Quicksilver Portfolio are outlined below.

Highlights of Quicksilver Portfolio work include:

- Increased monitoring of wild steelhead presence and spawning activity in the Nooksack, Samish, Skagit, Stillaguamish, and Snohomish watersheds to better understand their population status and run timing.
- Development of hydroacoustic/sonar and video monitoring tools on the Skagit, Samish, and Nooksack to gauge steelhead and salmon returns in real-time.
- Initiation of a wild summer steelhead broodstock program and fishery on the Skykomish River to replace the prior hatchery program which used out-of-basin Skamania steelhead stock.
- Conducted catch and release fisheries for wild steelhead on the Skagit and Sauk rivers under a federally approved Resource Management Plan (RMP) valid from March 2023 through April 2032.

Further details and background are provided below.



A wild steelhead caught and released in the Skagit River. Photo by Gregory Fitz

Quicksilver Portfolio: Background

Beginning in 2017, WDFW staff and the Puget Sound Steelhead Advisory Group (PSSAG)—a group of anglers, scientists, conservation leaders, local residents, guides, and other steelhead supporters—embarked on an unprecedented task: develop a portfolio of watershed-specific conservation, fishery, and hatchery strategies for Puget Sound steelhead.

It was not an easy task. Despite [steelhead](#) (*Oncorhynchus mykiss*) being Washington’s official State Fish, Puget Sound steelhead returns are less than 5-10 % of their historical level. Passions for steelhead across various fishing, conservation, and other stakeholder groups have at times led to bitter disagreements on the path forward. The Puget Sound steelhead Distinct Population Segment (DPS) is also listed under the federal Endangered Species Act (ESA). Part of the genesis of the PSSAG was the need to carefully manage fisheries and hatcheries while supporting the recovery of wild steelhead in the face of uncertain conditions.

PSSAG work spanned three years of meetings and included more than forty presentations from steelhead experts and scientists, and hundreds of hours of challenging discussions. With this information, PSSAG built a collective vision and broad consensus for a portfolio of proactive management strategies and actions, including:

- Watershed-scale experiments,
- Population monitoring,

- Fishery planning, monitoring, and adaptive management,
- and hatchery planning, production, and monitoring.

The Quicksilver Portfolio aims for a future where wild steelhead returning to the Puget Sound Basin are no longer threatened with extinction and are healthy enough to support sustainable fishing. It envisions a future in which the rich tradition of “steelheading” is continued and passed on to future generations. It also lays out an important blueprint for regional collaboration on fisheries conservation, recovery, and angling opportunities.

The final recommendations of the Quicksilver Portfolio—[available online](#)—were released in May 2020 and presented to Washington’s Fish and Wildlife Commission and WDFW leadership that year. The portfolio focuses on using common sense coupled with solid science to direct steelhead management. It provides a diverse portfolio of steelhead rivers that achieve both conservation and fishery goals. The Quicksilver Portfolio also seeks to navigate growing challenges for steelhead in the increasingly developed Puget Sound region, from widespread habitat loss and degradation from human development to the effects of climate change. This work also supports the goals of the [Statewide Steelhead Management Plan: Statewide Policies, Strategies, and Actions](#).

WDFW leadership conducted conversations with tribal co-managers in the Puget Sound Basin regarding the Quicksilver Portfolio recommendations, and tribal co-managers generally support the initial actions and goals outlined below.

In the 2021-23 biennium, WDFW received \$1,682,000 for Puget Sound steelhead management and additional funding in the 2023-25 biennium for work on behalf of Puget Sound steelhead monitoring and other freshwater fisheries management. This enabled WDFW to begin implementing the Quicksilver Portfolio recommendations.

More information on Puget Sound steelhead management is available [on this WDFW webpage](#). Additional information on hatchery steelhead smolt stocking is available [on this webpage](#).

Updates from 2021-23 and plans for 2023-25

Nooksack River

In the Nooksack River including the North, Middle, and South forks, WDFW and partners:

- Expanded fishery monitoring to better understand fishery impacts and economic benefits from fisheries targeting early-winter hatchery steelhead produced at the Kendall Creek Hatchery on the North Fork Nooksack. 107,400 early-winter hatchery steelhead smolts were released by this program in 2023.
- Monitored and surveyed for early-winter wild steelhead in 2022, 2023, 2024. The estimated wild steelhead return to the Nooksack River Basin in winter 2023-24 was 1,448 fish (not final).

Skagit Basin

In the Skagit Basin including the Skagit, Sauk, Suiattle, and Cascade Rivers, WDFW and partners:

- WDFW and Skagit co-managers submitted a new 10-year Skagit River Steelhead Fishery Resource Management Plan (RMP) in 2022, which Fisheries and U.S. Fish and Wildlife Service approved in early 2023. More information is available in this [March 2023 news release](#) and on the [NOAA Fisheries project webpage](#).
- Under this 10-year RMP, similar wild steelhead fisheries will be held in winter-spring 2024, and were announced in a [news release on Jan. 16, 2024](#). The state-managed recreational catch and release fishing season is scheduled to be open five days per week Feb. 3 through April 17.
- During the 2024 season, biologists with WDFW and co-manager tribes conducted in-season monitoring including creel sampling and test fisheries—as well as extracting scale samples and genetic data—to improve our understanding of the Skagit steelhead population and inform future fishery management.
- The estimated wild steelhead return to the Skagit River Basin in winter 2023-2024 was 6,722 fish (not final). The 2024-25 return forecast is in development and will be announced in late 2024 or early 2025 along with fishery updates.
- WDFW also expanded monitoring of Skagit Basin fisheries in fall and winter targeting coho, bull trout, coastal cutthroat trout, and other species to help better understand abundance and fishery impacts for wild steelhead. This monitoring data is also being utilized in the development of an electronic in-season status/update tool.
- Initiated sonar monitoring tools with WDFW salmon managers and scientists, and tribal co-managers, putting hydroacoustic infrastructure and staffing in place in summer 2023 and continuing operations on the lower Skagit River near Sedro-Woolley in 2024. Funding for this advanced salmon and steelhead monitoring effort was provided by the State Legislature in the 2022 Supplemental Operating Budget and in the 2023-25 biennium.
- Continued to engage in the ongoing relicensing process for Seattle City Light's Skagit Hydroelectric Project consistent with WDFW's mandate to preserve, protect, perpetuate and manage the fish and



*Fly fishing anglers and drift boat on the Sauk River.
Photo by Luke Kelly.*

wildlife of the state, including the anadromous fish runs of the Skagit River and the many Washingtonians who value them. More information is [available on Seattle City Light's webpage](#), and further updates are expected in early 2025.

Samish River

In the Samish River and its tributaries, WDFW and partners:

- Installed systems for counting steelhead and salmon, including three new methods in 2022 at the renovated Samish Hatchery weir: a video feed, sonar array, and fish trap for mark-recapture efforts, including PIT tags.
- Testing these monitoring methods on the winter steelhead population in the Samish River served as a trial for deploying similar monitoring tools in the Skagit, Nooksack and other Puget Sound rivers.



Sonar monitoring array installed on the Samish River. Photo by WDFW.

- The estimated wild steelhead return to the Samish River in 2023-2024 was 899 fish.

Stillaguamish River

In the Stillaguamish River including the North and South forks, WDFW and partners:

- Monitored the presence of early-winter hatchery steelhead (Chambers Creek Program) and wild steelhead to assess fishery impacts and economic benefits, including expanded creel sampling and other monitoring. 131,456 early-winter hatchery steelhead were released in 2022.
- Conducted adult spawner sampling and began a mark-recapture study on the Deer Creek wild summer steelhead population to better understand current abundance levels and population status despite the logistical challenges of studying steelhead in this dynamic, fast-flowing environment. More than 500 wild summer steelhead were counted in both 2022 and 2023.
- The forecasted wild steelhead return to the Stillaguamish River Basin in 2023-2024 was 1,609 fish.
- Discussed the possibility of using a video weir at Granite Falls or a sonar array at Deer Creek for monitoring and outreach on steelhead and other species.
- Coordinated with WDFW's Stillaguamish Integrated Conservation and Rebuilding (SICoR – pronounced "sigh-core") cross-program working group, tribes, and others to assess feasibility for

restoring consistent fish passage at Granite Falls Fishway. More information on Stillaguamish restoration and recovery work is available at wdfw.wa.gov/stillaguamish.

Snohomish Basin

In the Snohomish Basin including the Skykomish, Snoqualmie and Pilchuck Rivers, WDFW and partners:

- Initiated a new summer steelhead wild broodstock program on the Skykomish River out of the Reiter Ponds Hatchery to replace the out-of-basin Skamania stock. Permits are in place and wild broodstock was taken from the Sunset Falls. The hatchery has upgraded the infrastructure to support the program as well. 80,180 integrated broodstock summer-run hatchery steelhead smolts were released in early 2022 and 26,521 in early 2023, expected to return in 2023 and 2024.
- Continued early-winter hatchery steelhead production and fisheries as well as season-long monitoring in the Skykomish River to assess wild steelhead. This early-winter hatchery steelhead fishery continues to receive strong angler interest, in part due to proximity to populated metro and suburban areas.
- In 2023, 139,832 early-winter hatchery steelhead smolts were released into the Skykomish at Reiter Ponds, 26,594 were released into the Wallace River, and 75,331 into Tokul Creek on the Snoqualmie River.
- The forecasted wild steelhead return to the Snohomish River Basin in 2023-2024 was 1,456 fish.
- Expanded fishery monitoring to analyze fishery impacts and economic benefits.
- For more information on the Tokul Creek Hatchery steelhead program, please see [WDFW's October 2024 statement](#).

Green/Duwamish Basin

In the Green/Duwamish Basin and its tributaries, WDFW and partners:

- Continued late-winter steelhead production in the Green River. Permits are in place to collect wild broodstock from the river and spawn them with first generation hatchery fish at Soos Creek Hatchery for this highly integrated program. The purpose of this program is for conservation and recovery of Green River wild steelhead genetic legacy. 55,861 integrated broodstock hatchery winter steelhead smolts were released in early 2022. 46,748 hatchery summer steelhead smolts were released in 2023 to support fisheries.
- Monitored steelhead population genetic diversity through tissue collection at various life stages. Utilizing a juvenile screw trap, hatchery broodstock collection, and 4d research angling efforts, WDFW can analyze gene flow and population recovery.

Note: this initial report captures the work done in the North Puget Sound Region (WDFW Region 4). The scope of the Puget Sound Steelhead Advisory Group and Quicksilver Portfolio also covered rivers flowing into South Puget Sound and the Strait of Juan de Fuca.

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Sunrise over the Skykomish River near the town of Sultan during winter. Photo by Chase Gunnell.