

**Stock Status and Harvest Management Plan
For Steelhead Returning to the Chehalis River
In the Winter of 2021-22**

A Joint Report Prepared By:

**The Quinault Indian Nation Department of Fisheries
And
The Washington Department of Fish and Wildlife**

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1.0 Introduction

This report provides final stock status information and harvest management plan for the 2021-22 winter steelhead fisheries in the Chehalis River system, jointly managed by the Washington Department of Fish and Wildlife (WDFW) and the Quinault Indian Nation (QIN).

This report is the result of a joint effort by both parties to design a mutually agreeable management plan for the 2021-22 season that provides sharing and ensures fisheries are regulated and monitored in a manner that promotes conservation of the resource. Only those details pertinent to the operation of the fisheries are reported herein.

No part of this management plan, or the basis thereof, shall be construed as setting any precedent for future years except where expressly stated.

2.0 Chehalis River

2.1 Pertinent Geographic information

The Chehalis River system is the second largest river basin in the state of Washington outside the Columbia River basin and draining portions of the Olympics, the Cascades, the Black Hills, and the Willapa Hills. The total drainage area of the Chehalis River Basin is 2,660 square miles of which approximately 85% is forest lands. The basin includes parts of Lewis, Thurston, Cowlitz, Pacific, Grays Harbor, Mason, Jefferson, and Wahkiakum counties. There are four major population centers, Chehalis, Centralia, Aberdeen and Hoquiam. The entire drainage is on State, Forest Service, or private lands. The system includes the following major tributaries: Black, Newaukum, Satsop, S. F. Chehalis, Skookumchuck, Wishkah, and the Wynoochee Rivers' (Figure 1).

The treaty fishery, conducted by the QIN, typically occurs in the lower Chehalis as well as in Areas 2A, 2A-1, and 2D in the estuary. Most of the treaty commercial steelhead effort is concentrated in the lower three river miles of the Chehalis River.

The non-treaty sport fishery typically takes place in all the major tributaries as well as the mainstem. In addition, the Confederated Tribes of the Chehalis Reservation (Chehalis Tribe), which does not have treaty status, typically conducts a commercial fishery on its reservation near Oakville (Figure 1). The Chehalis Tribe was not included in U.S. v. Washington because of its status as an administratively recognized Indian tribe. In 1992, the Federal Court heard a case requesting the resolution of conflicting views with regard to the Chehalis Tribe's fishing rights. In 1998, the outcome of this case was that the Chehalis Indian tribes' share is part of the non-treaty allocation.



Figure 1.

3.0 Stock Status and Pre-season Forecasts

3.1 Hatchery Fish

The WDFW has stocked the Chehalis River system with winter steelhead smolts since the early 1960's (Appendix Table 1). Originally, early timed South Puget Sound (Chambers Creek) stock was used for smolt plants, but poor returns suggested use of native stocks for hatchery programs. Native stocks in the Skookumchuck, Satsop, and Wynoochee were developed with sportsmen cooperation. Mitigation programs on the Skookumchuck and Wynoochee rivers also use native stocks.

The Satsop River winter steelhead program is integrated with an annual production goal to produce 55,000 smolts at about 6 fish per pound. Hatchery production that will contribute to the 2021-22 return for three-year old fish was 47,200 smolts release and 60,600 smolts contributing to the four-year old fish return.

The Skookumchuck River hatchery program consists of a native late-timed winter steelhead stock, with a majority of the release into the Skookumchuck River and with a smaller plant into

the Newaukum River (Lake Carlisle project) and Eight Creek. The annual production goals for these programs are 75,000 smolt releases into the Skookumchuck, 30,000 for net pens in Lake Carlisle, and 32,000 for Eight Creek acclimation ponds. Hatchery production that will contribute to the 2021-22 return for three-year old fish are from 100,000 smolts released into the Skookumchuck River rearing pond, 34,500 smolts from Lake Carlisle net pens, and 25,000 smolts from Eight Creek acclimation ponds. For the four-year old return, hatchery production was from 102,000 released into the Skookumchuck rearing pond, 29,000 from Lake Carlisle net pens, and 25,000 from Eight Creek acclimation ponds. A portion of these programs are for mitigation.

The Wynoochee River winter steelhead program is an integrated program using locally adapted hatchery and wild steelhead collected from the fish trap associated with the barrier dam on the upper river. This is a mitigation program with an annual production goal of releasing 170,000 smolts into the Wynoochee River. They are reared at Lake Aberdeen Hatchery, which gets most of its water supply from the Wynoochee River. Hatchery production that will contribute to the 2021-22 return for three-year old fish was 173,300 smolts release and 171,700 smolts contributing to the four-year old fish return. A summer run steelhead program on the Wynoochee River is maintained at about 60,000 smolts annually.

The use of early timed Chambers Creek stocks and later timed native winter stocks in the Chehalis system historically contributed to a combined entry timing of hatchery steelhead that stretches from November into April, much like the wild stock timing. The use of early-timed winter run stock derived from Chambers Creek was discontinued. The combined hatchery stock run timing is currently similar to wild stock. Catches of hatchery fish for the 1991-92 to 2019-20 seasons are given in Table 1.

The pre-season forecast for hatchery fish returning to the Chehalis drainage is for the three- and four-year-old components. The total forecasted return for hatchery winter steelhead in 2021-22 is 6,451.

3.2 Wild Fish

The total forecasted return for wild winter steelhead in 2021-22 is 5,681. Wild winter steelhead enter the Chehalis river November through May.

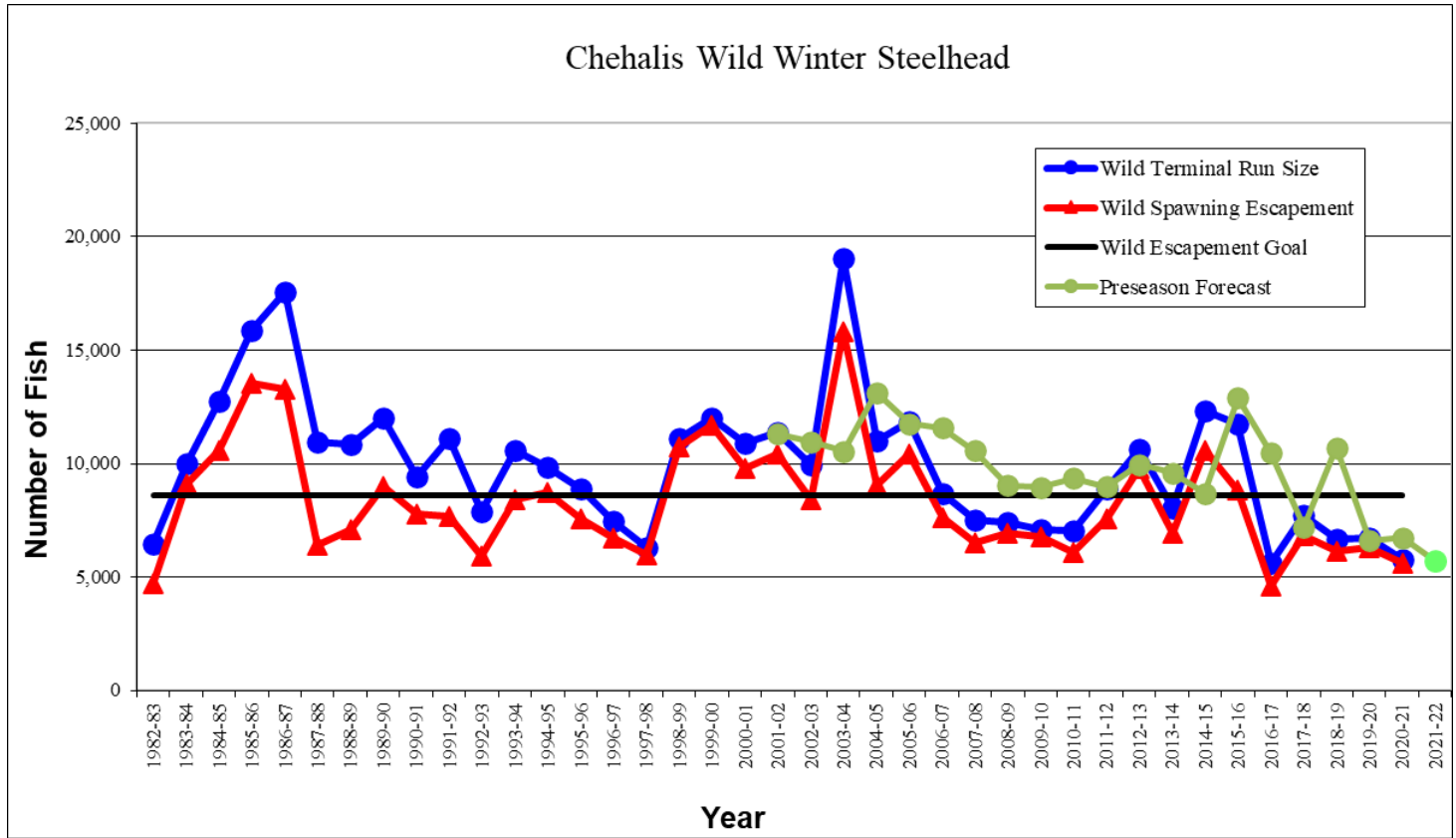
Historic catches, escapements, and run sizes are summarized in Table 1.

Table 1. Commercial (Quinault Tribal and Chehalis Tribal) and sport catches, spawner escapements, and run sizes of Chehalis River system winter steelhead, 1991-92 to 2019-20.

	Commercial Catch								Run Size	
	Wild		Hatchery		Sport Catch		Spawner Escapement		Wild	Hatchery ^{a/}
	Quinault ^{b/}	Chehalis ^{b/}	Quinault ^{b/}	Chehalis	Wild ^{c/}	Hatchery	Wild	Hatchery ^{a/}	Wild	Hatchery ^{a/}
1991-92	798	371	1,294	254	2,284	2,339	7,652	1,152	11,105	5,039
1992-93	288	245	425	558	1,463	1,439	5,904	720	7,900	3,142
1993-94	642	412	337	135	1,140	999	8,391	474	10,585	1,945
1994-95	290	311	386	42	542	1,712	8,713	747	9,856	2,887
1995-96	328	212	459	112	763	3,340	7,585	2,139	8,888	6,050
1996-97	226	350	558	157	155	2,778	6,714	2,702	7,445	6,195
1997-98	148	61	140	19	126	1,835	5,964	1,898	6,299	3,892
1998-99	113	78	124	72	225	1,299	10,720	1,124	11,136	2,619
1999-00	66	52	49	48	209	3,965	11,679	740	12,006	4,802
2000-01	628	189	617	175	263	3,547	9,802	788	10,882	5,127
2001-02	499	228	1,019	157	214	7,872	10,440	2,568	11,381	11,616
2002-03	1,156	181	1,026	175	207	5,954	8,424	1,685	9,968	8,840
2003-04	2,807	145	3,595	126	274	7,958	15,825	1,471	19,051	13,150
2004-05	1,474	301	3,221	875	148	5,155	9,059	1,524	10,982	10,775
2005-06	885	449	1,596	225	126	6,977	10,418	1,590	11,878	10,388
2006-07	720	271	2,633	214	107	5,111	7,602	1,890	8,700	9,848
2007-08	488	476	695	410	79	3,782	6,193	1,178	7,236	6,065
2008-09	45	357	318	350	79	1,764	6,956	654	7,437	3,086
2009-10	31	213	331	332	75	3,570	6,764	1,144	7,083	5,377
2010-11	551	329	2,366	326	75	3,848	6,089	1,182	7,044	7,722
2011-12	770	434	1,290	800	100	9,502	7,592	1,277	8,896	12,869
2012-13	530	203	758	200	113	7,325	9,776	1,593	10,622	9,876
2013-14	333	496	551	722	86	5,225	6,944	1,435	7,958	7,933
2014-15	1,256	272	2,807	210	130	8,057	10,568	3,156	12,350	14,230
2015-16	2,165	531	4,179	689	124	9,018	8,824	2,972	11,734	16,858
2016-17	274	597	493	975	60	5,051	4,618	2,255	5,622	8,774
2017-18	383	380	1,023	991	82	5,770	6,840	2,567	7,742	10,350
2018-19	348	89	453	119	70	2,661	6,130	1,064	6,682	4,297
2019-20	66	202	183	772	72	2,117	6,283	2,433	6,699	5,505
2020-21	19	3	127	2	61	1,293	5,634	2,178	5,793	3,601

- a. Spawning ground surveys were started March 15, wild fish timing. Therefore, the escapement portion of hatchery run size was calculated using the mean exploitation rate (0.77) of Humptulips hatchery steelhead (mid-1980's). This method was used through the 1992-93 season. From 1993-94, the actual collection rack returns have been used as they have exceeded the exploitation rate based estimate. From 2002-03 on; for hatchery rack releases an escapement rate of 23% was applied
- b. Includes net drop out
- c. Includes non-harvest mortality from the 1996-97 season to 2015-16

Figure 2. Wild winter steelhead escapement in the Chehalis River from 1982-83 to 2020-21.



4.0 Harvest Management Plan

In 2021-22, the wild forecast is 2,919 fish below the escapement goal, which is 34% under the goal before any fishing occurs. A precautionary management framework shall be used during the 2021-22 season.

The Non-Treaty sport fishery in all Chehalis basin, mainstem and tributaries will be close December 1, 2021 through April 2022.

Chehalis Tribe and Quinault Indian Nation will not open fisheries during the steelhead management period, during statistical weeks 49-18.

Table 2. Preseason Forecasts, Escapement Goals and Harvestable Number

	Wild	Hatchery	Total
Preseason Run Size Forecasts (PSF)	5,681	6,451	12,132
Escapement Goal	8,600	410	9,010
Total Harvestable Number	0	6,041	6,041

5.0 In-season Adjustments

No in-season adjustments to run sizes will be made; pre-season forecasts were used to set management plans for the 2021-22 season.

6.0 In-season Updates on catches.

No fisheries are scheduled during the steelhead management period, so no catch updates are necessary.

7.0 Pre-season Planning Schedule

The following schedule will be used to develop annual steelhead management plans prior to the beginning of the 2021-22 season.

Deadline	Task
July 15	Survey data exchange
August 8	Preliminary spawning escapement estimate exchange
August 15	Finalize spawning escapement estimates
August 22	Finalize forecasting dataset
September 1	Exchange pre season forecasts
October 1	Finalize pre season forecasts
October 15	Policy meeting to develop annual FMP
November 15	Finalize Co-manager negotiations on annual FMP

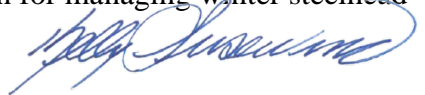
APPENDIX TABLES
Fisheries Management Data for Steelhead Returning to the Chehalis River

Table 1. Winter run steelhead smolts (~6/lb.) stocked into the Chehalis River system, 2008-2019

Year Stocked	Newaukum River	East Fork Satsop	Skookumchuck	Wynoochee	Total
2008		58,800	93,520	104,540	256,860
2009	32,000	47,400	103,000	140,380	322,780
2010	25,000	64,100	97,000	175,000	393,100
2011		58,800	89,000	170,000	317,800
2012	30,000	57,700	85,000	170,500	372,200
2013	30,000	90,400	100,000	171,500	415,900
2014	5,000	57,200	90,000	171,730	351,455
2015	29,500	61,100	97,000	88,740	305,389
2016	30,000	81,000	100,000	169,510	410,660
2017	35,000	64,300	87,000	175,570	386,070
2018	35,000	56,300	106,000	171,000	398,300
2019	29,000	72,000	102,000	169,950	397,950


**Agreement Between
The Quinault Indian Nation
and
The Washington Department of Fish and Wildlife
for Winter, 2021-22**

This agreement is the culmination of the efforts of the undersigned to resolve differences in management approaches through the design and implementation of one joint plan for managing winter steelhead returning to the Chehalis River in the winter of 2021-22.



For this season only, the parties agree to manage the Chehalis River winter steelhead fishery in accordance with the plan set forth in the document entitled "Stock Status and Harvest Management Plan for Steelhead Returning to the Chehalis River in the Winter of 2021-22." No part of this management plan or the basis thereof shall be construed as setting any precedent for future years except where expressly stated.

Agreed to this _____ Day of _____ 2021.



Kelly Susewind
Director
Washington Department of
Fish and Wildlife

Ed Johnstone
Fisheries Policy Spokesperson
Quinault Indian Nation