2008-2009

WINTER STEELHEAD HARVEST MANAGEMENT PLAN for the PORT ANGELES and SEQUIM – PORT TOWNSEND MANAGEMENT UNITS of the EASTERN STRAIT OF JUAN DE FUCA

DRAFT

Joint Report Prepared by:

Washington Department of Fish and Wildlife
Point No Point Treaty Council
(Jamestown S'Klallam Tribe - Port Gamble S'Klallam Tribe)
Lower Elwha Klallam Tribe

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INTRODUCTION

The Washington Department of Fish and Wildlife (WDFW), the Point No Point Treaty Council (on behalf of the Jamestown S'Klallam Tribe and the Port Gamble S'Klallam Tribe), and the Lower Elwha Klallam Tribe agree on the following harvest management plan for the 2008-09 winter fishing seasons in the eastern Strait of Juan de Fuca. This plan outlines the management guidelines for the steelhead resources of two management units comprising several small independent streams between the Elwha River and Admiralty Inlet.

PREMISES AND FISHERY OBJECTIVES

The provisions of this plan cover all treaty and non-treaty fisheries for steelhead occurring in the Port Angeles and the Sequim – Port Townsend MU streams and nearshore marine areas. The co-managers agree to a philosophy of cooperation in implementing management programs to maintain, perpetuate and enhance the steelhead resource and the natural ecosystem that supports it.

This plan is intended to ensure that treaty and non-treaty fishers, subject to their respective regulatory authorities, shall be afforded the opportunities to harvest their shares as determined in United States v., Washington, 384 F. Supp. 312, aff'd 520 F.2d 676 (9th Cir. 1975), cert. denied 423 U.S. 1086, aff'd sub nom Washington v. Washington State Commercial Passenger Fishing Vessel Association, 443 U.S. 658 (1979) and other orders under the court's continuing jurisdiction.

The co-managers agree to enact and recommend for enactment by the Pacific Fishery Management Council and the Pacific Salmon Commission, appropriate regulations for marine salmonid fisheries that will provide for adequate escapement of steelhead into the Eastern Strait of Juan de Fuca watersheds, to achieve the goals and purposes of this plan.

MANAGEMENT UNITS

This Plan covers two Management Units (MUs) in the Eastern Strait of Juan de Fuca, each composed of a number of sub populations. The MUs, and their components, along with available information, are described as follows:

Port Angeles Management Unit:

The Port Angeles MU includes the aggregate of sub populations in independent streams between the Elwha River and the Dungeness River. Most sub populations are presumed to be composed of wild steelhead aggregations. The sub populations in this unit are;

Morse Creek; Available information on this sub population is outlined in Table 1
Siebert Creek Available information is outlined in Table 2
McDonald Creek Available information is outlined in Table 2.

Table 1. Total Winter Steelhead Harvest, Wild Escapement Index and Hatchery – Reared Smolt Releases in Morse Creek.

Winter Return Year	Recreational Harvest a/	Treaty Harvest	Total Harvest	Index Escapement Estimate	Smolt Year	Smolts Stocked
1980-81	357	166	523		**1979**	12,826
1981-82	290	116	406		**1980**	12,325
1982-83	310	258	568		**1981**	18,014
1983-84	546	216	762		**1982**	15,420
1984-85	285	351	636	145	**1983**	16,388
1985-86	235	281	516	105	**1984**	15,460
1986-87	223	200	423	118	**1985**	15,852
1987-88	188	283	471	138	**1986**	18,819
1988-89	215	58	273	60	**1987**	15,227
1989-90	189	45	234	78	**1988**	15,034
1990-91	90	0	90	91	**1989**	15,514
1991-92	135	0	135	100	**1990**	10,034
1992-93	96	12	108		**1991**	14,655
1993-94	195	0	195		**1992**	10,058
1994-95b/	117	2	119	128	**1993**	15,438
1995-96	300	11	311	89	**1994**	15,338
1996-97	150	0	150	183	**1995**	15,029
1997-98	73	0	73	102	**1996**	5,076
1998-99	53	0	53	81	**1997**	5,000
1999-00	110	0	110	162	**1998**	5,000
2000-01	49	0	49	99	**1999**	5,010
2001-02	145	0	145	71	**2000**	5,000
2002-03	33	0	33	84	**2001**	5,000
2003-04	36	0	36	121	**2002**	5,000
2004-05	166	3	169		**2003**	5,000
2005-06	51	3	54	124	**2004**	5,000
2006-07	33	0	33	118	**2005**	0
2007-08	10	0	10		**2006**	0
10 year mean 1998-99 to 2007-08			**69**	**108**		

a/ Hatchery and wild steelhead recreational harvest numbers available since 1986-87 from WDFW Catch Record Cards.
b/ Wild steelhead release regulations in recreational fishery since 1994-95.

Table 2. Wild Winter Steelhead index escapement estimates and smolt production in streams of the Port Angeles Winter Steelhead MU.

Spawning Year	McDonald Creek Index Escapement	Smolt Emigration Year	McDonald Creek smolts	Siebert Creek smolts
1985		**1985**		
1986		**1986**		
1987		**1987**		
1988		**1988**		
1989		**1989**		
1990		**1990**		
1991		**1991**		
1992		**1992**		
1993		**1993**		
1994		**1994**		
1995		**1995**		
1996		**1996**		
1997		**1997**		
1998	308	**1998**		1,626
1999	217	**1999**	1,861	551
2000	251	**2000**	3,343	937
2001	143	**2001**		
2002	125	**2002**		513
2003	63	**2003**		758
2004	29	**2004**		975
2005	89	**2005**		769
2006	206	**2006**	1,125	235
2007	63	**2007**	1,424	558
2008		**2008**	1,170	793

Sequim – Port Townsend Management Unit

The Sequim – Port Townsend MU includes the aggregate of sub- populations in independent streams between the Dungeness River and Admiralty Inlet. In this MU, streams empty into distinct embayments (Sequim Bay, Discovery Bay, Port Townsend Bay) and all associated basins lie in the "rain shadow" of the Olympic mountains. All of the sub- populations are presumed to be composed of wild steelhead aggregations. The sub- populations in this unit are;

Jimmycomelately (JCL) Creek (Sequim Bay)
Salmon Creek (Discovery Bay)
Snow Creek (Discovery Bay)
Chimacum Creek (Port Townsend Bay)

Available information is summarized in Tables 3 – 5.

WILD STEELHEAD ESCAPEMENT and SMOLT PRODUCTION

In the Port Angeles Management Unit, estimates of natural spawners are limited to index counts, in Morse Creek and McDonald Creek and more recently, in Siebert Creek. (Table 2). It is anticipated that these index enumerations will continue; however, spawner surveys have been limited to periods after March 1 in most seasons and stream flows may often be high during the recommended spawner survey period and the amount of information collected will depend on suitable river conditions. Smolt production from these spawners is largely unavailable, so direct estimates of productivity and productive capacities have not been possible. For this reason, no specific escapement goals have been established for these MUs.

The best life history information available on wild steelhead in this region comes from the Snow Creek trap (Sequim – Port Townsend MU) near river mile 0.8. The numbers of wild steelhead adults and smolts including smolt-to-adult survival rates have been documented since the late 1970s (Table 3). The numbers of wild Snow Creek steelhead adults by age and percent age composition are summarized in Tables 4 and 5, respectively. Figure 1 shows the percentage of wild adult steelhead returning to the Snow Creek trap by month from 1978 to 1994

.Table 3. Number of JCL Creek and Snow Creek wild steelhead smolts, Snow Creek wild steelhead adult returns, and smolt-to-adult return rates.

	Jimmycome lately Creek	Snow Creek							
Smolt Emigration Year(n)	Total Wild Smolts	Wild Smolts Above Weir (a)	Total Wild Smolts (b)	1-salt Adults (n+1)	2-salt Adults (n+2)	3-salt Adults (n+3)	Total Wild Adults	Adults / Smolt (d)	Adults / Smolt (e)
1978		1,403	1,551	2	88	11	101	0.065	0.072
1979		892	1,040	9	98	4	111	0.107	0.124
1980		1,357	1,505	3	78	4	85	0.056	0.063
1981		1,541	1,689	0	33	4	37	0.022	0.024
1982		1,733	1,881	4	102	8	114	0.061	0.066
1983		1,270	1,418	10	130	9	149	0.105	0.117
1984		1,107	1,255	10	45	5	60	0.048	0.054
1985		2,074	2,222	5	59	18	82	0.037	0.040
1986		517	665	3	38	6	47	0.071	0.091
1987		1,861	2,009	0	21	3	24	0.012	0.013
1988		541	689	1	6	2	9	0.013	0.017
1989		1,713	1,861	0	30	4	34	0.018	0.020
1990		1,336	1,484	0	44	5	49	0.033	0.037
1991		1,162	1,310	0	21	6	27	0.021	0.023
1992		2,079	2,227	2	35	0	37	0.017	0.018
1993		1,513	1,661	0	45	8	53	0.032	0.035
1994		1,583	1,731	0	131	5	136	0.079	0.086
1995		297	445	0	52	3	55	0.124	0.185
1996		2,015	2,163	2	56	6	64	0.030	0.032
1997		1,164	1,312	0	43	4	47	0.036	0.040
1998		778	926	4	152	8	164	0.177	0.211
1999		(f)	1,478	3	44	5	52	0.035	0.039
2000		1,285	1,433	2	23	4	29	0.020	0.023
2001		2,346	2,494	0	78	5	83	0.033	0.035
2002	62	2,298	2,446	2	30	1	33	0.013	0.014
2003	105	2,589	2,737	0	14	0	14	0.005	0.005
2004	191	525	673	0	22	0	22	0.033	0.042
2005	130	1,103	1,251	?	?				
2006	91	660	808	?					
2007	133	920	1,068						
2008	108								

a/ Number of steelhead smolts collected at WDFW trap at RM 0.0
b/ Includes estimated number of steelhead smolts produced downstream of WDFW trap
c/ Number of adults includes fish trapped at trap and estimated number of adults spawning downstream of trap; includes repeat spawners
d/ Includes number of steelhead smolts collected at trap RM 0.8 plus estimate of smolts downstream of trap
e/ Includes only number of steelhead smolts collected at trap RM 0.8.
f/ No smolt count due to damaged downstream trap. For calculations, used average from 1978 to 1998 for the purpose of estimating smolt production.

Table 4. Number of wild steelhead adults in Snow Creek for the return years 1976-77 through 2006-07.

Run Year a/	1-salt b/ (x.+)	2-salt b/ (x.1+)	3-salt b/ (x.2+)	Repeat spawners b/ x.1+S+ ex.	Total Wild Escapement
1976-77	6	78	2	20	106
1977-78	2	117	2	19	140
1978-79	2	61	6	12	81
1979-80	9	88	10	12	119
1980-81	3	98	11	16	128
1981-82	0	78	4	27	109
1982-83	4	33	4	11	52
1983-84	10	102	4	15	131
1984-85	10	130	8	6	154
1985-86	5	45	9	2	61
1986-87	3	59	5	5	72
1987-88	0	38	18	15	71
1988-89	1	321	6	1	29
1989-90	0	6	3	3	12
1990-91	0	30	2	2	34
1991-92	0	44	4	3	51
1992-93	2	21	5	2	30
1993-94	0	35	6	0	41
1994-95	0	45	0	0	45
1995-96	0	131	8	0	139
1996-97	2	52	5	14	73
1997-98	0	56	3	5	64
1998-99	4	43	6	2	55
1999-00	3	152	4	7	166
2000-01	2	44	8	4	58
2001-02	0	23	5	0	28
2002-03	2	78	4	6	90
2003-04	0	30	5	5	40
2004-05	0	14	1	0	15
2005-06	0	22	0	0	22
2006-07	?	?	?	?	34

a/ Run year equals winter steelhead that return to streams between November and December of year "n" and January through May of year "n+1")

b/ The letter"x" refers to the freshwater age of steelhead at Snow Creek. The time spent in freshwater prior to the first saltwater entry is shown by an Arabic numeral and/or a "+" followed by a period. The numbers of completed winters at sea prior to the last freshwater entry (a spawning run for example) is designated by (an) Arabic numerals (s) and are placed after the period. A "completed winter" on a scale is a series of tightened circuli (annulus) followed by more widely spaced circuli (spring or summer growth). Partial years at sea are denoted by a "+". An "S" is used to designate a spawning check (scale resorption).

Table 5. Percent age composition of Snow Creek wild steelhead adults referred to in Table 4.

Run Year	Percentage of First Time and Repeat Spawners				Age Composition of First Time Spawners		
	1-salt(x.+	2-salt x.1+	3-salt x.2+	Repeat spawners	1-salt x.+	2-salt x.1+	3-salt x.2+
1976-77	5.7%	73.6%	1.9%	18.9%	7.0%	90.7%	2.3%
1977-78	1.4%	83.6%	1.4%	13.6%	1.7%	96.7%	1.7%
1978-79	2.5%	75.3%	7.4%	14.8%	2.9%	88.4%	8.7%
1979-80	7.6%	73.9%	8.4%	10.1%	8.4%	82.2%	9.3%
1980-81	2.3%	76.6%	8.6%	12.5%	2.7%	87.5%	9.8%
1981-82	0.0%	71.6%	3.7%	24.8%	0.0%	95.1%	4.9%
1982-83	7.7%	63.5%	7.7%	21.2%	9.8%	80.5%	9.8%
1983-84	7.6%	77.9%	3.1%	11.5%	8.6%	87.9%	3.4%
1984-85	6.5%	84.4%	5.2%	3.9%	6.8%	87.8%	5.4%
1985-86	8.2%	73.8%	14.8%	3.3%	8.5%	76.3%	15.3%
1986-87	4.2%	81.9%	6.9%	6.9%	4.5%	88.1%	7.5%
1987-88	0.0%	53.5%	25.4%	21.1%	0.0%	67.9%	32.1%
1988-89	3.4%	72.4%	20.7%	3.4%	3.6%	75.0%	21.4%
1989-90	0.0%	50.0%	25.0%	25.0%	0.0%	66.7%	33.3%
1990-91	0.0%	88.2%	5.9%	5.9%	0.0%	93.8%	6.3%
1991-92	0.0%	86.3%	7.8%	5.9%	0.0%	91.7%	8.3%
1992-93	6.7%	70.0%	16.7%	6.7%	7.1%	75.0%	17.9%
1993-94	0.0%	85.4%	14.6%	0.0%	0.0%	85.4%	14.6%
1994-95	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%
1995-96	0.0%	94.2%	5.8%	0.0%	0.0%	94.2%	5.8%
1996-97	2.7%	71.2%	6.8%	19.2%	3.4%	98.1%	8.5%
1997-98	0.0%	87.5%	4.7%	7.8%	0.0%	94.9%	5.1%
1998-99	7.3%	78.2%	10.9%	3.6%	7.5%	81.1%	11.3%
1999-00	1.8%	91.6%	2.4%	4.2%	1.9%	95.6%	2.5%
2000-01	3.4%	75.9%	13.8%	6.9%	3.7%	81.5%	14.8%
2001-02	0.0%	82.1%	17.9%	0.0%	0.0%	82.1%	17.9%
2002-03	2.2%	86.7%	4.4%	6.7%	2.4%	92.9%	4.8%
2003-04	0.0%	75.0%	12.5%	12.5%	0.0%	85.7%	14.3%
2004-05	0.0%	93.3%	6.7%	0.0%	0.0%	93.3%	6.7%
2005-06	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%
2006-07							
Mean	**2.7%**	**79.3%**	**9.0%**	**9.0%**	**3.0%**	**86.9%**	**10.1%**
Min.	**0.0%**	**50.0%**	**0.0%**	**0.0%**	**0.0%**	**66.7%**	**0.0%**
Max.	**8.2%**	**100.0%**	**25.4%**	**25.0%**	**9.8%**	**100.0%**	**33.3%**