

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

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Subj: January Hatchery and Natural Production Report

Date: 3 February 2017

Cc: Distribution list.

HATCHERY ACTIVITIES

At Methow Hatchery, all 2015 brood fish were held on a mix of 95% surface and 5% well water, and all 2016 brood fish were held on 100% well water during the month. At Wells Hatchery, the 2015 brood yearling Chinook and rainbow trout were held on a mix of well and surface water containing 90% and 98% surface water, respectively, and all 2016 brood fish were held on 100% well water during the month.

2015 Twisp Spring Chinook Salmon

A total of 40,363 fish were on-station at the end of the month with 19 additional fish reported as mortalities. These fish had mean fork lengths ranging between 111.9 and 117.8 mm and were between 22 and 27 fish per pound (FPP; Table 1). The number of fish on-station that apply to HCP mitigation obligations are listed in Appendix A.

2015 Methow Composite Spring Chinook Salmon

A total of 202,268 fish were on-station at the end of the month with 54 additional fish reported as mortalities. Across eight raceways and Pond 13, these fish had mean fork lengths ranging between 111.0 and 116.4 mm and were between 23 and 29 fish per pound (Table 1). The number of fish on-station that apply to HCP mitigation obligations are listed in Appendix A.

Table 1. 2015 brood spring Chinook salmon length and weight sampling at Methow Hatchery during the month of January. MC = MetComp.

Raceway	Stock-Release	Fork length (mm)				FPP
		Mean	<i>N</i>	SD	CV	
1	MC-Chewuch	115.4	100	10.8	9.4	23
2	MC-Chewuch	115.0	100	10.8	9.4	25
3	MC-Chewuch	114.2	100	8.3	7.3	25
4	MC-Chewuch	114.4	100	10.2	9.0	25
5	MC-Goat Wall	116.4	100	10.6	9.1	23
6	MC-Goat Wall	114.6	100	8.4	7.3	24
7	MC-On Station	114.2	100	10.6	9.3	24
8	MC-On Station	111.8	100	8.9	8.0	26
13	MC-On Station	111.0	100	7.0	6.3	29
14	Twisp	114.5	100	9.3	8.1	25
15	Twisp	117.8	100	9.4	8.0	22
16	Twisp	111.9	100	9.9	8.8	27

2016 Twisp Spring Chinook Salmon

A total of 31,009 fish were on-station at the end of the month with no fish reported as mortalities. The number of fish on-station that apply to HCP mitigation obligations are listed in Appendix A.

2016 Methow Composite Spring Chinook Salmon

A total of 222,931 fish were on-station at the end of the month with no additional fish reported as mortalities. Approximately 67,000 and 29,000 of the WxW MetComp fry on-station are destined for the Chewuch (61,000 release target) and Goat Wall (25,000 release target) acclimation ponds, respectively. The number of fish on-station that apply to HCP mitigation obligations are listed in Appendix A.

2015 Wells Summer Chinook Salmon

Wells Hatchery had 336,117 summer Chinook Salmon progeny for the yearling program on-station at the end of the month and no mortalities were reported. Monthly length sampling indicated these fish had a mean fork length of 161 mm and were at approximately 12 FPP. These fish are being reared to fulfill HCP mitigation obligations (Appendix A).

2016 Wells Summer Chinook Salmon

Wells Hatchery had an estimated 513,238 fry on-station for the subyearling program and 372,107 eggs on-station for the yearling program. An additional 69,762 subyearling program progeny were listed as mortalities during the month of January. These progeny are being reared to fulfill HCP mitigation obligations (Appendix A).

2016 Summer Steelhead

Wells Hatchery had a total of 441,547 steelhead parr on-station at the end of the month including an estimated 34,542 Omak WxW progeny, 56,754 Twisp progeny, and 350,251 progeny for Okanogan, Columbia, and Methow River releases. Monthly mortality included 130 fish from the Twisp WxW group. Steelhead progeny are being reared to fulfill HCP mitigation obligations (Appendix A).

2017 Summer Steelhead

Trapping of 2017 brood summer steelhead began in August and finished during November with a total of 386 adults trapped from the Wells Dam fish ladders or the Wells Hatchery volunteer channel. A total of 163 of the hatchery-origin fish trapped were retained for broodstock and pre-spawn mortality has totaled five fish by the end of January (3%). Spawning of the broodstock began on 4 January 2017, and a total of 28 fish were spawned by the end of the month.

2015 Spokane Rainbow

Wells Hatchery had 33,741 rainbow trout on-station at the end of the month after subtracting 80 mortalities. About 2,500 of these fish are larger sized fish at about 1.8 FPP, with the remaining fish at about 4.3 FPP. These fish are reared to fulfill the Off-License Settlement Agreement (Appendix B).

2016 Spokane Rainbow

Wells Hatchery had 68,293 fry from the 2016 brood on-station at the end of the month after subtracting 4,585 mortalities. These fish are reared to fulfill the Off-License Settlement Agreement (Appendix B).

2016 White Sturgeon

Wells Hatchery had 9,495 sturgeon progeny on-station at the end of the month after accounting for a positive population adjustment of 152 fish. No mortalities were reported during January. White sturgeon progeny are reared at Wells Hatchery under the Aquatic Settlement Agreement (Appendix C).

NATURAL PRODUCTION ACTIVITIES

PIT Tag Antenna Arrays

Data collected at all Methow basin PIT tag interrogation sites operated under this program, including Twisp (TWR), lower Methow (LMR), Lost River (LOR), Early Winters Creek (EWC), Gold Creek (GLC), Libby Creek (LBC), and Wolf Creek (WFC) are uploaded to the PTAGIS database regularly, and can be viewed at the following website: <http://www.ptagis.org/data/quick-reports/small-scale-site-detections>

Appendix A. Number of fish reared at Wells and Methow hatcheries to meet Douglas County PUD Habitat Conservation Plan mitigation objectives and other hatchery rearing agreements. Values are derived by applying fixed mitigation levels to the entire population on-station, and do not necessarily reflect separate rearing or release strategies.

Brood year	Species	Life stage	Program	Target release No.	Month												Total released /transfer	
					Feb '16	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan '17		
2014	Spring Chinook	Yearling smolt	CCPUD NNI	60,516 <i>released</i>	71,847	71,821	--	--	--	--	--	--	--	--	--	--	--	71,812
2014	Spring Chinook	Yearling smolt	GCPUD Priest Rapids NNI	134,126 <i>released</i>	159,240	159,183	--	--	--	--	--	--	--	--	--	--	--	159,161
2014	Spring Chinook	Yearling smolt	DCPUD Wells NNI	29,123 <i>released</i>	34,576	34,564	--	--	--	--	--	--	--	--	--	--	--	34,559
2015	Spring Chinook	Yearling smolt	CCPUD NNI	60,516 <i>released</i>	65,330	65,270	65,259	65,211	65,701	65,697	65,695	65,692	65,691	65,666	65,638	65,618	--	--
2015	Spring Chinook	Yearling smolt	GCPUD Priest Rapids NNI	134,126 <i>released</i>	144,794	144,664	144,638	144,531	145,618	145,610	145,604	145,600	145,595	145,541	145,478	145,435	--	--
2015	Spring Chinook	Yearling smolt	DCPUD Wells NNI	29,123 <i>released</i>	31,440	31,411	31,405	31,382	31,618	31,616	31,615	31,614	31,613	31,602	31,588	31,578	--	--
2016	Spring Chinook	Yearling smolt	CCPUD NNI	60,516 <i>released</i>	--	--	--	--	--	--	--	--	68,677	68,677	68,677	68,677	--	--
2016	Spring Chinook	Yearling smolt	GCPUD Priest Rapids NNI	134,126 <i>released</i>	--	--	--	--	--	--	--	--	152,213	152,213	152,213	152,213	--	--
2016	Spring Chinook	Yearling smolt	DCPUD Wells NNI	29,123 <i>released</i>	--	--	--	--	--	--	--	--	33,050	33,050	33,050	33,050	--	--
2014	Summer Chinook	Yearling smolt	DCPUD Fixed Hatchery Compensation	320,000 <i>released</i>	358,953	358,953	43,953	--	--	--	--	--	--	--	--	--	--	350,000
2015	Summer Chinook	Sub-yearling	DCPUD Fixed Hatchery Compensation	484,000 <i>released</i>	427,696	427,075	439,709	--	--	--	--	--	--	--	--	--	--	439,709
2015	Summer Chinook	Yearling smolt	DCPUD Fixed Hatchery Compensation	320,000 <i>released</i>	350,845	348,172	345,069	344,395	344,121	343,198	336,304	336,117	336,117	336,117	336,117	336,117	--	--
2016	Summer Chinook	Sub-yearling	DCPUD Fixed Hatchery Compensation	484,000 <i>released</i>	--	--	--	--	--	--	--	--	--	583,000	583,000	513,238	--	--

Appendix A. Continued.

Brood year	Species	Life stage	Program	Target release No.	Month												Total released /transfer
					Feb '16	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan '17	
2016	Summer Chinook	Yearling smolt	DCPUD Fixed Hatchery Compensation	320,000	--	--	--	--	--	--	--	--	--	368,940	372,107	372,107	
			<i>released</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2015	Summer steelhead	Yearling smolt	DCPUD Fixed Hatchery Compensation ¹	300,000	310,158	310,143	134,985	--	--	--	--	--	--	--	--	--	--
			<i>released</i>	--	--	130,363	177,334	--	--	--	--	--	--	--	--	--	--
2015	Summer steelhead	Yearling smolt	DCPUD Wells NNI ¹	8,000	8,270	8,270	3,599	--	--	--	--	--	--	--	--	--	--
			<i>released</i>	--	--	3,476	4,729	--	--	--	--	--	--	--	--	--	--
2015	Summer steelhead	Yearling smolt	GCPUD Priest Rapids NNI	80,000	82,709	82,705	35,996	--	--	--	--	--	--	--	--	--	--
			<i>released</i>	--	--	34,764	47,289	--	--	--	--	--	--	--	--	--	--
2016	Summer steelhead	Yearling smolt	DCPUD Fixed Hatchery Compensation ¹	300,000	--	--	--	--	358,776	371,024	373,452	337,536	331,315	317,688	314,795	314,694	
			<i>released</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2016	Summer steelhead	Yearling smolt	DCPUD Wells NNI ¹	8,000	--	--	--	--	9,567	9,893	9,958	9,001	8,835	8,471	8,395	8,392	
			<i>released</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2016	Summer steelhead	Yearling smolt	GCPUD Priest Rapids NNI	80,000	--	--	--	--	95,673	98,939	99,587	90,009	88,350	84,716	83,945	83,918	
			<i>released</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2016	Summer steelhead	Yearling smolt	GCPUD Priest Rapids NNI	20,000	--	--	--	--	34,627	34,010	34,716	34,616	34,616	35,606	34,542	34,542	
			<i>transferred</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--

¹40,000 Inundation steelhead to be released in the Twisp with 8,000 NNI fish to total 48,000. 100,000 inundation steelhead to be released in the Methow as a safety net program. 160,000 inundation steelhead to be released directly to the Columbia.

Appendix B. Fish reared at Wells or Methow hatcheries under the Off-License Settlement Agreement.

Brood year	Species	Life stage	Program	Target (pounds) disposition	Month												Total released /transfer
					Feb '16	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan '17	
2014	Rainbow trout	Juv	WDFW sport fish		33,617	13,732	10,709	3,037	--	--	--	--	--	--	--	--	50,717
					(11,566)	(6,638)	(4,951)	(1,380)	(740)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	
2015	Rainbow trout	Juv	WDFW sport fish	Number (pounds) released	74,402	73,936	63,618	63,352	60,608	36,100	36,052	33,026	32,949	32,897	32,975	33,741	20,000 (873)
					(39)	(114)	(260)	(792)	(1,377)	(1,570)	(2,488)	(3,471)	(4,308)	(5,178)	(7,516)	(8,656)	
					--	--	--	--	--	20,000	--	--	--	--	--	--	
2016	Rainbow trout	Juv	WDFW sport fish	Goal is 20,000 pounds annual combined	--	--	--	--	--	--	--	--	--	--	72,878	68,293.	--
					(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(73)	
2016	Lahontan cutthroat	Juv	WDFW sport fish		--	--	200,000	161,503	156,757	--	--	--	--	--	--	--	150,000 (200)
					(--)	(--)	(200)	(161)	(156)	--	(--)	(--)	(--)	(--)	(--)	(--)	
					--	--	--	--	--	150,000	--	--	--	--	--	--	

Appendix C. Fish reared at Wells Hatchery pursuant to the Aquatic Settlement Agreement – White Sturgeon Management Plan.

Brood year	Species	Life stage	Program	Target disposition	Month												Total released/culled /transferred
					Feb '16	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan '17	
2015	White sturgeon	Juvenile rearing	Wells White Sturgeon Supplementation	Up to 5,000	7,405	5,203	5,198	5,153	--	--	--	--	--	--	--	--	1,462 5,000 5,288
				Culled	--	--	--	--	--	--	--	--	--	--	--	--	
				Transferred	--	2,200	--	--	--	--	--	--	--	--	--	--	
				Wells reservoir	--	--	--	--	5,288	--	--	--	--	--	--	--	
2016	White sturgeon	Juvenile rearing	Wells White Sturgeon Supplementation	Up to 5,000	--	--	--	--	35,845	25,087	17,246	15,235	13,560	10,458	9,343	9,495	--
				Culled	--	--	--	--	--	--	--	--	--	--	--	--	
				Transferred	--	--	--	--	--	--	--	--	--	--	--	--	
				Wells reservoir	--	--	--	--	--	--	--	--	--	--	--	--	