

Mcclellan, Barbara A (DFW)

From: Willapa Bay (DFW)
Sent: Thursday, October 1, 2020 11:52 PM
To: Aaron Miller; Al Ramsaur ; Alex Dugan ; Allan Cabe; Allan Hollingsworth; Amy Fenlon ; Andrew Olson; Andy Mitby; Angel Lund; Angie Butrick ; Anthony Koehn; Art Holman; Baylee Hadaway ; Ben Overmars; Bill Buchkowski; Bill Lushenko; Bill Mabe ; Bill Osborn ; Bill Thomas WBGN; Bill Ward ; Bob Haefs; Bob Lake ; Bob Lucas; Bob Muhlhauser ; Bob Rose; Bob Smith; Brian Davern ; Brian Kraemer; Brock Orton ; Bruce Boyles; Bruce Ogren ; Bruce Urquhart; Bud Wild ; C Biener ; Carl Hagen; Carl Kellogg; Cary Hofmann; Casey Bradley ; Charles McKown; Chris Ching ; Chris Holm; Chris Phillips; Chris Wegerben ; Chris White ; Chuck J ; Cindy Pierce; Criss Stewart; Dale Beasley ; Dallas Durham ; Dan Dettmann ; Dan Peterson ; Dan Quaschnik ; Daniel Downard; Darrell Johnson ; Dave Hamilton ; Dave Nettnin ; David Hadsell ; David Hollingsworth; David Patrick; Dean Antich; Dean Takko; Dennis Harman; Dennis Parks; Diana Bone ; Don Porter; Donna Schellenberger ; Dottie Dunthorn ; Duane Inglin; Duane Rogers ; Dwayne Everson; Earl Davis; Eben Brown ; Ed Tharp; Eric Heikkila; Eric Mitby; Frank Blake ; Frank Porembski; Frank Wolfe; G. Blevins; Gail Petersen; Gary Emberley ; Gary Mawhorter; George Leach ; Greg Frister; Greg Klueh ; Greg Larson; Gunther Boettcher; Hope Rieden ; Jack Berryman; Jack Hollingsworth; Jacob Pratt; James Caron ; Jamie Goodson; Jason Lake ; Jay Steele; Jeff Clemons; Jeff McKean; Jeff Skriletz; Jerry Charlton; Jerry Lowe ; Jim Babcock; Jim Paul; Joe Deutsch ; Joe Durham; Joe Koski; Joe Muller; Joe Superfisky; Joe Weber ; John Baugher; John Bronson ; John Campbell ; John Rabey; John Stanislay; John Stigall; John Tieder ; Josh Bradley; Josh Fuller; Karen Carter; Kelli Erickson; Ken Wirkkala; Kerri Burlove ; Kirby Denger ; Kirk Johnston ; Kristi Nelson; Lance Gray ; Lane Chilman; Larry Brown; Leah Thomas; LeeRoy Wisner; Leslie Pederson; Lisa Olsen; Loren Gee; Lori Craig Ashley; Lucas Stigall; Lyle Cabe; Marina May ; Mark Barrager ; Mark Coleman; Mark Eastham; Mark Lund ; Mark Miller ; Matt Chandler ; Melanie Rabaglia; Michael Bos ; Michael Egans ; Mike Ainsworth ; Mike Anning ; Mike Backman ; Mike Butler ; Mike Morris ; Mike Nordin ; Mike Riggs; Mike Runyon ; Mike Shirley ; Mike Stephens; Mike Wallace; Miranda Wecker; Nicholas Kato ; Nick Jensen; Nick Larson; Nick Nikkila; Norm Reinhardt; Pat Edwards ; Patric Gaffney; Paul Beese; Pete Markantes; Ray Gilbertson; Rebecca Chaffee; Rich Runyon; Richard Chaney; Richard Lapinski; Rick Durkin; Rick Lovitt ; Rob Nowowiejski; Robert Coty ; Robert Groves; Robert Rao; Roger Shaw ; Roger Werth ; Roland Culver; Ron Meek; Ron Rinear ; Ron Schweitzer; Ross Barkhurst ; Russ Perkins; Ryan Johnson; Ryan Moore; Sam Arvan; Sam Arvan ; Sam Chesley ; Shawn Murray; Shawn Murray; Shelley Willet; Steve Aust; Steve Boerner; Steve Fransen ; Steve Gacke; Steve Gray ; Steven McCombs ; Ted Schuman; Tim Williams; Todd Bennington; Tom Gibbs WBGN; Tom Guntle ; Tom Moonan; Tom Moonan; Tom Peterson; Walt Weber; Wayne Banta ; Wes Bradley ; Woody Pierson Jr.; Woody Pierson Sr.; Francis Estalilla; Greg McMillan; Jim Sayce; Mara Zimmerman ; Marlisa Dugan; Tim Hamilton; Ross Kary Herring, Chad J (DFW); Jennings, Lyle F (DFW); Zimmer, Ryan C (DFW); Baltzell, Mark E (DFW); Pope, Jody M (DFW); Losee, James P (DFW); Allan, Robert C (DFW); Larson, John (DFW); Phillips, Brittany P (DFW); Moulton, Garrett J (DFW); McManus, Kristin S (DFW); Kent, Annmarie F (DFW); Dolgoff, Samuel M (DFW)
Cc:
Subject: 2020 Willapa Bay Recreational Marine Area Monitoring In-Season Update through September 30 - management week 40
Attachments: 2020 WB Marine Area Recreational Data & Catch Estimate Summary DRAFT 09.30.2020.pdf; 2020 WB impacts by area total catch summary Draft week 40 10.01.2020.pdf; 2020 WB Hatchery Chinook Eggtake 10.01.2020.pdf
Follow Up Flag: Follow up

Hi Everyone,

This email is to provide you a weekly in-season update on Willapa Bay fisheries, hatcheries, and spawner surveys through September 30, 2020.

Recreational Marine Fishery

As of yesterday, September 30, 2020, the recreational monitoring in the Willapa Bay marine area 2.1 is officially complete for 2020. It has been an interesting season. First, we had to figure out how to deal with COVID and how to complete the work interacting with the public while keeping our staff as safe as possible. Next, the fishery started slow relative to effort and catch then things picked up in August and September. Effort peaked the week of August 24 – 30. Chinook catch peaked the same week as effort but coho catch peaked two weeks later the week of Labor Day, September 7 – 13. We sampled 4,270 anglers and observed 2,104 boats at the Tokeland and South Bend boat launches during our four days per week monitoring dockside. We actually sampled 346 hatchery Chinook and 300 coho for the season. Given the issues we have all faced the last six months due to COVID-19, I think this recreational marine season turned out pretty well. (See attachment: [2020 WB Marine Area Recreational Data & Catch Estimate Summary Draft 09.30.2020.pdf](#))

Commercial Fishery

Over the last two weeks, the Department has made four adjustments to the commercial fishery via emergency regulation changes.

- First, the Department closed two of the commercial fishing areas (2M and 2U) on Sept. 17 due to concerns regarding unmarked Chinook impacts.
- Second, the two days scheduled in week Sept. 22 – 25 were shifted by one day from Monday, September 21, and Thursday, September 24, to Tuesday, September 22, and Friday, September 25 to allow for additional data analysis after each opening day.
- Third, the Department switched the allowable gear for that same week in the second bullet from small mesh gear to the smaller tangle net gear to help minimize the impacts to any remaining unmarked Chinook.
- Finally, the Department added an additional day to the commercial fishery this week, Sept. 28 – Oct 2, by removing the originally scheduled day, Thursday, Oct. 1, and adding Wednesday, Sept. 30 and Friday, Oct. 2. This additional day was due to several factors:
 - The Department uses a modeling tool to evaluate the runsize of coho in-season that is based on the catch per unit effort (CPUE) of the current commercial fishery. The significance of the model improves as more data are added. Currently, we are in statistical week 40 and the in-season update model (ISU) is predicting a higher natural origin coho runsize than the preseason forecasted runsize that we started with during North of Falcon.
 - The Department also utilizes a model to plan fisheries preseason, the Willapa Bay Terminal Area Management Model (TAMM). This model will estimate catch, impacts, escapements, and harvest rates for each fishery by species. When adding the data from the ISU model to the TAMM, the TAMM model predicts a natural origin coho escapement almost three times higher than the natural origin escapement goal of 13,600 fish.
 - Since the commercial fishery lost opportunity early in the season to conserve unmarked Chinook salmon coupled with the predicted increase in harvest potential of hatchery coho, the Department decided to add the additional day this week.
- Early indications from the ISU and TAMM models suggests the preseason management objectives would still be attained for all three species; Chinook salmon (14% impact rate cap), coho (13,600 natural origin spawners), and chum (10% impact rate cap).

The Department is actively monitoring each day the commercial fishery is open and analyzing the data as quickly as possible as well as having daily updates on hatchery broodstock and spawner surveys. (See attachment: [2020 WB impacts by area total catch summary Draft week 40 10.01.2020.pdf](#))

As of today, after further evaluation of recreational and commercial fisheries as well as hatchery returns to-date and the in-season update of the coho runsize (see above), the data collected to-date indicates there are remaining unmarked Chinook impacts available as well as a coho runsize larger than the preseason prediction. Based on these factors, the Department will be making additional changes to the freshwater recreational fisheries within Willapa Bay.

1. Sections currently open in the Willapa and Naselle rivers will see an increased bag limit from a two fish salmon adult bag to a three fish salmon adult bag limit, one of which may be a wild coho and a release requirement for unmarked Chinook.
2. The section in the Naselle River from Hwy 4 bridge to 300' below the upstream entrance of the Naselle Hatchery attraction channel will remain closed until October 16th as planned preseason but will have similar regulation as the rest of the Naselle River when it opens.
3. The sections of the Nemah River (Middle, North, and South) will open for salmon with a 1 fish adult bag limit and a release requirement of all Chinook.
4. All other traditional freshwater fishing areas of Willapa Bay that had been closed to salmon fishing for 2020 (North River, Smith Creek, and Bear River) will be open with a one adult bag limit with a release requirement for unmarked Chinook.
5. The emergency regulation will be filed tomorrow, Oct. 2. These regulations are planned to take effect as of Saturday, October 3, and run to their traditional closing dates of either December 31 or January 31.

The commercial fishery schedule will also be adjusted next week, October 5 – 9, from two twelve-hour openers scheduled for Monday (Oct. 5) and Thursday (Oct. 8) to three openers planned for Monday (Oct. 5), Wednesday (Oct. 7), and Friday (Oct. 9). All other rules will remain in effect.

Hatchery Chinook Rack Returns

We started spawning Chinook salmon this week. We typically spawn one day a week per facility but we have so many fish at the hatchery, both Chinook and coho, that we spawned twice at Nemah Hatchery this week and three times at Naselle Hatchery (Tuesday, Wednesday, today) this week. Our first day spawning at Forks Creek Hatchery was today as well. We have a high proportion of coho that have already volunteered into all three facilities. This is probably due to the higher than predicted coho runsize we are seeing for 2020 (see the commercial fishery update above). We are also finding at all three facilities that there are a lot of Chinook, both males and females, that are still not ready to spawn. (See attachment: [2020 WB Hatchery Chinook Eggtake 10..01.2020.pdf](#)).

Naselle Hatchery:

The Chinook program release goal for the Naselle Hatchery is 5,000,000 eggs. The increase in production for Naselle is directed at increasing prey availability for Southern Resident Killer Whales. To make program goal, we will need 1,833 females. To-date, we have spawned 305 female Chinook. To make the program goal, we still need an additional 1,528 female Chinook. Currently, we have 2,000 Chinook on-hand (males and females combined) in the pond. These fish on-hand will be kept in the pond until next week then we will attempt to spawn more fish if they are ready.

Nemah Hatchery:

The Chinook program release goal for the Nemah Hatchery is 3,300,000 eggs. To make program goal, we will need 1,210 females. To-date, we have spawned 271 female Chinook. To make program goal, we still

need an additional 939 female Chinook. Currently, we have 1,653 Chinook on-hand (males and females combined) in the pond. As with Naselle Hatchery, these fish on-hand will remain in the pond until we spawn next week.

Forks Creek Hatchery:

The Chinook program release goal for Forks Creek Hatchery is 400,000 eggs. Today was the first day we have spawned Chinook at Forks Creek Hatchery. Those data have yet to be entered from today's spawn but to make program goal, we will need 147 females. Typically, we have made program goal at Forks Creek for Chinook.

Spawning Ground Surveys

Salmon spawning season in Willapa Bay is officially in full swing. We saw 4,100+ coho and Chinook salmon staging below the weir on the Naselle and we recorded 30+ Chinook redds. The survey below the weir on the Nemah River had 61 redds and a large number of live Chinook. Surveys throughout Willapa Bay are observing Chinook spawning from Fall River to the Upper SF Willapa. There have been no coho redds observed yet, but we expect to start seeing them in next couple of weeks. A couple of chum have been observed in Canon River, which is early considering traditional run timing, but hopefully a positive sign for things to come. We will be conducting more surveys over the next few days to complete this week. We are excited to see what is out there in the rivers.

As always, in-season data is preliminary and subject to change. This email and any attachments will be posted to our website using the link provided below for the Willapa Bay Marine Area 2.1 Recreational Creel Monitoring.

If you have any comments or questions regarding any of the information provided in these emails, please submit your comments to WillapaBay@dfw.wa.gov.

Additionally, if you know of anyone who might be interested in receiving these weekly in-season updates or any other information we may send out regarding Willapa Bay fisheries, please forward this email and have them reply stating they would like to be added to our email distribution list.

Thank you and **Happy Fishing!**

Barbara McClellan
Willapa Bay Fisheries Management
WDFW Region 6 Montesano

Online reference links you may be interested in:

Willapa Bay Marine Area 2.1 Recreational Creel Monitoring: <https://wdfw.wa.gov/fishing/reports/creel/willapa-bay>
Willapa Bay Advisory Group: <https://wdfw.wa.gov/about/advisory/wbsag>
Willapa Bay and Grays Harbor (non-treaty) Commercial Salmon Fisheries (regulations and landed catch): <https://wdfw.wa.gov/fishing/commercial/gillnet#information>

2020 Willapa Bay Marine Area Recreational Catch Estimate

PRELIMINARY / DRAFT
updated 10/1/2020

CHK = Chinook
AD = Adipose clipped (hatchery origin)
UM = Unmarked (natural origin)
CPUE = Catch per unit effort
Effort = An individual angler trip

Strata 1 - Mon - Thurs
Strata 2 - Fri - Sun

July (Ocean 2 Rules)

Unmarked Chinook retention allowed

Mgmt Week	Expanded Data		Expanded Data - Chinook				Expanded Data - Coho						
	# Boats	# Anglers	Estimated Total Chinook Kept	Total Chinook CPUE	Estimated Total UM Chinook Kept	Willapa Origin Chinook UM Impacts	Estimated Total AD Chinook Kept	Willapa Origin Chinook AD Impacts	Estimated Total Coho Kept	Estimated Total UM Coho Kept		Estimated Total AD Coho Kept	Total Coho CPUE
25	11	30	0	0.000	0	0	0	0	0	0	0	0.000	No coho retention allowed
26	20	45	0	0.000	0	0	0	0	0	0	0	0.000	
27	20	47	2	0.043	0	0	2	1	1	0	1	0.021	No wild coho retention
28	31	69	0	0.000	0	0	0	0	0	0	0	0.000	
29	105	264	21	0.080	12	4	9	3	14	0	14	0.053	
30	54	123	2	0.016	1	0	1	0	1	0	1	0.008	
31	96	208	10	0.048	2	1	8	2	0	0	0	0.000	
Season Total	337	786	35	0.045	15	4	20	6	16	0	16	0.020	

August and September

Unmarked Chinook retention illegal as of August 1

Mgmt Week	Dates	Strata	Strata Description	Boats and Anglers					Chinook Retained				Chinook Released				Marked Coho		Unmarked Coho			Total Coho												
				Actual Raw Data			Expanded # Total Boats		Sample Rate		Actual Raw Data		Expanded # Total Anglers		# CHK AD Kept	CHK AD CPUE	Expanded # CHK AD Kept	# WB Origin CHK AD Impacts	# CHK UM Kept	CHK UM CPUE	Expanded # CHK UM Kept	# CHK UM Released	CHK UM CPUE	Estimated Expanded CHK UM Encounters	Estimated Total CHK UM Impacts	# WB Origin CHK UM Impacts	# Coho AD Kept	Coho AD CPUE	Expanded # Coho AD Kept	# Coho UM Kept	Coho UM CPUE	Expanded # Coho UM Kept	Total Coho CPUE (AD+UM)	Total Expanded # Coho Kept (AD + UM)
				# Boats Sampled	# Boats Not Sampled	# Total Boats	# Anglers Sampled	# Anglers per boat	# Anglers Sampled	# Anglers per boat	# Anglers Sampled	# Anglers per boat																						
31	8/1-8/2	2	Sat - Sun	83	1	84	90	92%	191	2.30	208	7	0.037	8	5	0	0.000	0	3	0.016	3	0	0	1	0.005	1	0	0.000	0	0.005	1			
32	8/3 - 8/6	1	Mon - Thur	37	1	38	78	47%	78	2.11	164	4	0.051	8	5	0	0.000	0	2	0.026	4	1	0	0	0.000	0	0	0.000	0	0.000	0			
32	8/7 - 8/9	2	Fri - Sun	110	6	116	178	62%	280	2.55	454	11	0.039	18	11	0	0.000	0	6	0.021	10	1	1	1	0.004	2	0	0.000	0	0.004	2			
33	8/10 - 8/13	1	Mon - Thur	124	5	129	267	46%	290	2.34	624	49	0.169	105	67	0	0.000	0	11	0.038	24	3	2	3	0.010	6	0	0.000	0	0.010	6			
33	8/14 - 8/16	2	Fri - Sun	208	2	210	326	64%	474	2.28	743	34	0.072	53	34	0	0.000	0	24	0.051	38	5	3	0	0.000	0	0	0.000	0	0.000	0			
34	8/17 - 8/20	1	Mon - Thur	113	2	115	230	49%	226	2.00	460	19	0.084	39	25	0	0.000	0	12	0.053	24	3	2	0	0.000	0	0	0.000	0	0.000	0			
34	8/21 - 8/23	2	Fri - Sun	140	7	147	221	63%	300	2.14	473	16	0.053	25	16	0	0.000	0	17	0.057	27	4	2	5	0.017	8	0	0.000	0	0.017	8			
35	8/24 - 8/27	1	Mon - Thur	164	14	178	380	43%	360	2.20	835	56	0.156	130	82	0	0.000	0	39	0.108	90	13	8	8	0.022	19	3	0.008	7	0.031	26			
35	8/28 - 8/30	2	Fri - Sun	245	13	258	413	59%	579	2.36	977	71	0.123	120	76	0	0.000	0	50	0.086	84	12	7	18	0.031	30	6	0.010	10	0.041	40			
36	8/31 - 9/3	1	Mon - Thur	109	3	112	232	47%	219	2.01	466	19	0.087	40	26	0	0.000	0	10	0.046	21	3	2	11	0.050	23	6	0.027	13	0.078	36			
36	9/4-9/6	2	Fri - Sun	192	51	243	378	51%	495	2.58	974	33	0.067	65	41	2	0.004	4	25	0.051	49	7	4	45	0.091	89	18	0.036	35	0.127	124			
37	9/7-9/10	1	Mon - Thur	118	12	130	270	44%	263	2.23	602	15	0.057	34	22	3	0.011	7	17	0.065	39	5	3	23	0.087	53	8	0.030	18	0.118	71			
37	9/11 - 9/13	2	Fri - Sun	102	16	118	184	55%	246	2.41	443	10	0.041	18	11	1	0.004	2	14	0.057	25	4	2	74	0.301	133	21	0.085	38	0.386	171			
38	9/14 - 9/17	1	Mon - Thur	43	3	46	96	45%	110	2.56	244	0	0.000	0	0	0	0.000	0	5	0.045	11	2	1	16	0.145	36	5	0.045	11	0.191	47			
38	9/18 - 9/20	2	Fri - Sun	61	7	68	106	58%	124	2.03	215	2	0.016	3	2	0	0.000	0	3	0.024	5	1	0	10	0.081	17	12	0.097	21	0.177	38			
39	9/21 - 9/24	1	Mon - Thur	8	1	9	19	43%	16	2.00	37	0	0.000	0	0	0	0.000	0	1	0.063	2	0	0	1	0.063	2	2	0.125	5	0.188	7			
39	9/25 - 9/27	2	Fri - Sun	7	3	10	16	45%	16	2.29	36	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	2	0.125	4	0	0.000	0	0.125	4			
40	9/28 -9/30	1	Mon - Wed	2	1	3	5	43%	3	1.50	7	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	1	0.333	2	0	0.000	0	0.333	2			
TOTALS				1,866	148	2,014	3,488		4,270	2.29	7,963	346	0.081	667	423	6	0.001	13	239	0.056	458	64	41	219	0.051	426	81	0.019	158	0.070	584			

2020 Willapa Bay Origin PreSeason Recreational Data

Preliminary/Draft
Updated 10/1/2020

Willapa Bay Natural-Origin Fall Chinook							Willapa Bay Hatchery-Origin Fall Chinook					
Mgmt Wk	Date	Harvest Rate Proportions	Preseason Prediction		In-season Estimate		Harvest Rate Proportions	Preseason Prediction		In-season Estimate		
			NOR	Cumulative Total	WB Origin	Cumulative Total		HOR	Cumulative Total	WB Origin	Cumulative Total	
25	6/20 - 6/21	0.0372	0	0	0	0	0.0049	0	0	0	0	
26	6/22 - 6/28	0.0372	0	0	0	0	0.0049	0	0	0	0	
27	6/29 - 7/5	0.0372	5	5	0	0	0.0049	12	12	1	1	
28	7/6 - 7/12	0.0226	3	8	0	0	0.0066	16	28	0	1	
29	7/13 - 7/19	0.0991	14	22	4	4	0.0091	22	49	3	3	
30	7/20 - 7/26	0.0596	8	31	0	4	0.0263	63	112	0	4	
31	7/27 - 8/2	0.1246	17	48	1	5	0.0274	66	178	7	11	
32	8/3 - 8/9	0.0886	12	60	1	6	0.1049	252	430	17	27	
33	8/10 - 8/16	0.0848	12	72	5	11	0.1489	357	788	101	128	
34	8/17 - 8/23	0.1445	20	93	5	16	0.2247	539	1,327	40	169	
35	8/24 - 8/30	0.1430	20	113	16	31	0.2465	592	1,919	158	327	
36	8/31 - 9/6	0.0635	9	121	9	40	0.1140	274	2,193	67	394	
37	9/7 - 9/13	0.0586	8	130	11	51	0.0609	146	2,339	33	427	
38	9/14 - 9/20	0.0177	2	132	1	53	0.0220	53	2,392	2	429	
39	9/21 - 9/27	0.0423	6	138	0	53	0.0013	3	2,395	0	429	
40	9/28 - 9/30	0.0141	2	140	0	53	0.0011	3	2,398	0	429	
			140		53	0.379				2,401	429	0.179

Stat Week	Dates	Catch Areas																				Basin Total Landed	Basin Willapa Origin NOR Landed	Basin Willapa Origin HOR Landed
		2T				2U				2N				2R				2M						
		Total Landed	UM %	Landed NOR	Landed HOR	Total Landed	UM %	Landed NOR	Landed HOR	Total Landed	UM %	Landed NOR	Landed HOR	Total Landed	UM %	Landed NOR	Landed HOR	Total Landed	UM %	Landed NOR	Landed HOR			
36	Aug. 30 -Sept. 5	Closed																				0	0	0
37	Sept. 6 - 12	0	N/A	0	262	N/A	262	49	N/A	49	Closed				Closed				311	0	311			
38	Sept. 13 - 19	80	N/A	80	Closed				17	N/A	17	Closed				Closed				97	0	97		
39	Sept. 20-26	21	N/A	21	39	N/A	39	0	N/A	0	Closed				95	N/A	95	155	0	155				
40	Sept. 27 - Oct. 3	19	N/A	19	32	N/A	32	2	N/A	2	Closed				32	N/A	32	85	0	85				
41	Oct. 4 - 10		N/A	0		N/A	0		N/A	0	Closed					N/A	0	0	0	0				
42	Oct. 11-17	Closed					N/A	0		N/A	0	Closed					N/A	0	0	0	0			
43	Oct. 18 - 24	Closed																				0	0	0
Total Landed		120		0	120	333		0	333	68		0	68	0		0	0	127		0	127	648	0	648

E-reg closing 2T 9/11/20

E-reg closed all areas 9/14/20, swtichi

E-reg to open three days week (Mond

2020 WB Total CHINOOK Fishery Impacts

Actual Catch + impacts

MSF

Preliminary Draft

Stat Weeks	2T		2U		2N		2R		2M		In-season NOR Impacts	In-season HOR Impacts	PRESEASON Total NOR Impacts (Local + Non local)	PRESEASON Total HOR Impacts (Local + Non local)
	NOR Impacts	HOR Impacts												
36														
37			106	279	2	51					108	330	32	579
38	12	80			2	17					14	97	76	646
39	12	23	11	43	0	0			25	95	48	161	32	175
40	11	30	28	37	0	2			0	37	39	106	21	113
41	0	0	0	0	0	0			0	0	0	0	11	57
42			0	0	0	0			0	0	0	0	4	20
43														
Totals	36	133	146	359	3	70	0	0	25	132	209	695	176	1,590

2020 WB Total CHINOOK NOR Fishery Impacts Summary

MSF

Preliminary Draft

Stat Weeks	2T		2U		2N		2R		2M		In-season Estimated Natural-Origin Impacts		Preseason Predicted Natural-Origin Impacts	
	In-season Total NOR Impacts	In-season Local NOR Impacts	In-season Total NOR Impacts	In-season Local NOR Impacts	In-season Total NOR Impacts	In-season Local NOR Impacts	In-season Total NOR Impacts	In-season Local NOR Impacts	In-season Total NOR Impacts	In-season Local NOR Impacts	Weekly	Cumulative	Weekly	Cumulative
	36	Closed										0	0	
37	Emergency Closure 9/11		106	101	2	1	Closed		Closed		102	102	25	25
38	12	7	Emergency closure 9/14 & 9/17		2	1			Emergency closure 9/14 & 9/17		8	111	64	89
39	12	7	11	11	0	0			25	23	41	151	26	115
40	11	7	28	20	0	0			0	0	27	178	18	133
41	0	0	0	0	0	0			0	0	0	178	8	141
42	0	0	0	0	0	0			0	0	0	178	3	144
43	0	0	0	0	0	0			0	0	0	178	0	144
Totals	36	21	146	132	3	2	0	0	25	23	178	178	144	144

Tangle Net	15	112	2	23
------------	----	-----	---	----

2015-2019 Genetic Data by Area updated 09.21.2020

2T	0.592	0.634
2U	0.948	0.942
2N	0.722	0.727
2M	0.933	0.923

Stat Week	2T				2U				2N				2R				2M				WB In-season			WB Preseason Predicted		
	Landed Catch	UnMarked %	Estimated NOR	Estimated HOR	Landed Catch	UnMarked %	Estimated NOR	Estimated HOR	Landed Catch	UnMarked %	Estimated NOR	Estimated HOR	Landed Catch	UnMarked %	Estimated NOR	Estimated HOR	Landed Catch	UnMarked %	Estimated NOR	Estimated HOR	NOR	HOR	Total	NOR	HOR	Total
36	Closed												0	0	0											
37	Closed				1,468	0.121	178	1,290	51	0.060	3	48	Closed				Closed				181	1,338	1,519	114	582	696
38	1,221	0.337	411	810	Closed				160	0.066	11	149	Closed				Closed				422	959	1,381	297	1,433	1,730
39	648	0.425	275	373	1,400	0.388	543	857	0	0.000	0	0	Closed				2,857	0.075	216	2,641	1,034	3,871	4,905	97	683	780
40	968	0.724	701	267	383	0.612	234	149	143	0.000	0	143	Closed				2,605	0.175	455	2,150	1,391	2,708	4,099	274	1,034	1,308
41							0	0			0	0	Closed								0	0	0	397	452	849
42	Closed												Closed								0	0	0	72	179	251
43	Closed												0	0	0	0	0	0								
Total	2,837		1,388	1,449	3,251		955	2,296	354		14	340	0		0	0	5,462		671	4,791	3,027	8,877	11,904	1,251	4,363	5,614

2020 Estimated WB Commercial **CHUM** Mortalities

yellow = Chum release required

Preliminary Draft

Gillnet release mortality + drop off	0.59
Tangle net + drop off	0.34

Stat Week	Landed Chum	Chinook Landed	Coho Landed	Encounter Ratio	Chum Encounters	Stat Weeks	In-season Estimated Chum		Preseason Predicted Chum Impacts	
							Weekly	Cumulative	Weekly	Cumulative
36	Closed					36	Closed		Closed	
37	0	311	1,519		0	37	0	0	2	2
38	0	97	1,381		0	38	0	0	6	8
39	11	155	4,905		0	39	11	11	7	15
40	129	85	4,099		0	40	129	140	51	66
41		0	0			41		0	1,010	1,076
42		0	0			42		0	567	1,643
43	Closed					43	Closed		Closed	
Totals	140	648	11,904		0	Totals	140		1,643	1,643

NR = Non-Retention

2020 Willapa Bay CHINOOK Broodstock Summary

10/1/2020 updated
preliminary/draft

Naselle Hatchery

Program Release	10% add'l for mortality	Total eggs needed	Fecundity # eggs/female	# of Females Needed	# Females Spawned to-date	# Females still needed	# Adults On-hand at the facility (males & females combined)	# Eggs on Hand	Mortalities		
									Females	Males	Jacks
5,000,000	500,000	5,500,000	3,000	1,833	305	1,528	2,000	915,000	166	164	10

Nemah Hatchery

Program Release	10% add'l for mortality	Total eggs needed	Fecundity # eggs/female	# of Females Needed	# Females Spawned to-date	# Females still needed	# Adults On-hand at the facility (males & females combined)	# Eggs on Hand	Mortalities		
									Females	Males	Jacks
3,300,000	330,000	3,630,000	3,000	1,210	271	939	1,653	813,000	171	294	17

Forks Creek Hatchery

Program Release	10% add'l for mortality	Total eggs needed	Fecundity # eggs/female	# of Females Needed	# Females Spawned to-date	# Females still needed	# Adults On-hand at the facility (males & females combined)	# Eggs on Hand	Mortalities		
									Females	Males	Jacks
400,000	40,000	440,000	3,000	147	0	147					