

Mcclellan, Barbara A (DFW)

From: Willapa Bay (DFW)
Sent: Thursday, September 19, 2019 1:58 PM
To: Andy Mitby; Bob Lake ; Francis Estalilla; Greg McMillan; Jack Hollingsworth; Jim Sayce; Lance Gray ; Mara Zimmerman ; Marlisa Dugan; Norm Reinhardt; Ross Barkhurst ; Steve Boerner; Tim Hamilton; Aaron Miller; Al Ramsaur ; Allan Hollingsworth; Amy Fenlon ; Andrew Olson; Angel Lund; Angie Butrick ; Anthony Koehn; Art Holman; Bill Buchkowski; Bill Lushenko; Bill Mabe ; Bill Osborn ; Bill Ward ; Bob Haefs; Bob Lucas; Bob Muhlhauser ; Bob Smith; Brian Davern ; Brian Kraemer; Bruce Ogren ; Bruce Urquhart; Bud Wild ; C Biener ; Carl Kellogg; Cary Hofmann; Casey Bradley ; Charles McKown; Chris Holm; Chris Philips; Chris White ; Dale Beasley ; Dan Dettmann ; Dan Quaschnik ; Dave Hamilton ; Dave Nettnin ; David Hadsell ; David Hollingsworth; David Patrick; Dean Antich; Dean Takko; Dennis Harman; Dennis Parks; Diana Bone ; Don Porter; Dottie Dunthorn ; Duane Inglin; Duane Rogers ; Dwayne Everson; Earl Davis; Ed Tharp; Eric Mitby; Frank Blake ; G. Blevins; Gail Petersen; Gary Mawhorter; George Leach ; Greg Klueh ; Greg Larson; Gunther Boettcher; Hope Rieden ; Jack Berryman; James Caron ; Jason Lake ; Jeff McKean; Jeff Skriletz; Jerry Charlton; Jerry Lowe ; Jim Babcock; Jim Paul; Joe Durham; Joe Koski; Joe Muller; Joe Superfisky; Joe Weber ; John Baugher; John Campbell ; John Rabey; John Stanislav; John Stigall; John Tieder ; Josh Bradley; Kelli Erickson; Ken Wirkkala; Kirby Denger ; Kirk Johnston ; Kristi Nelson; Lane Chilman; Larry Brown; Leah Thomas; LeeRoy Wisner; Leslie Pederson; Lisa Olsen; Loren Gee; Lori Craig Ashley; Lucas Stigall; Lyle Cabe; Mark Coleman; Mark Eastham; Mark Lund ; Mark Miller ; Melanie Rabaglia; Michael Bos ; Mike Ainsworth ; Mike Backman ; Mike Morris ; Mike Nordin ; Mike Riggs; Mike Runyon ; Mike Shirley ; Mike Stephens; Mike Wallace; Miranda Wecker; Nicholas Kato ; Nick Larson; Nick Nikkila; Pat Edwards ; Patric Gaffney; Paul Beese; Ray Brown; Ray Gilbertson; Rebecca Chaffee; Rich Runyon; Richard Chaney; Richard Lapinski; Rick Durkin; Rick Lovitt ; Rob Nowowiejski; Robert Coty ; Robert Groves; Robert Rao; Roger Shaw ; Roland Culver; Ron Meek; Ron Rinear ; Ron Schweitzer; Ross Kary ; Russ Perkins; Ryan Moore; Sam Arvan; Sam Arvan ; Shawn Murray; Shawn Murray; Shelley Willet; Steve Aust; Steve Aust; Steve Fransen ; Steve Gacke; Steve Gray ; Ted Schuman; Tim Williams; Todd Bennington; Tom Gibbs WBGN; Tom Guntle ; Tom Moonan; Tom Moonan; Tom Peterson; Walt Weber; Wayne Banta ; Wes Bradley ; William Thomas WBGN; Woody Pierson Jr.; Woody Pierson Sr.
Cc: Herring, Chad J (DFW); Peterson, Damon M (DFW); Jennings, Lyle F (DFW); Zimmer, Ryan C (DFW); Losee, James P (DFW); Phillips, Larry C (DFW); Allan, Robert C (DFW); John, Ryan W (DFW)
Subject: 2019 Willapa Bay weekly update for stat weeks 37 and part of week 38
Attachments: 2019 WB Recreational Marine Area Catch Estimate thru week 37 09.19.19.pdf; 2019 WB Commercial Fishery Data thru 09.18.19.pdf; Naselle Hatchery CHK Rack Returns 09.18.19.pdf

Hi Everyone,
Below is the weekly update for Willapa Bay.

Willapa Bay Recreational Marine Creel Fishery and Monitoring

Last week's recreational fishery effort dropped a bit compared with the week before (week 36). There was a mid-morning high tide at the first half of the week then that switched to an afternoon high tide. The morning high tide made for a better fishing experience. Chinook catch was down by half from the previous week (week 36) but we are still seeing about the same amount of coho being landed compared to the previous week even with less effort. The number of unmarked Chinook that were encountered was down by half relative to the previous week. See attached file: 2019 WB Recreational Marine Area Catch Estimate through week 37 09.19.19.pdf.

The boat survey work we have been conducting is showing that 92.6% of the boats fishing this year in the marine area are exiting the fishery either in Tokeland or South Bend. These are locations where we have staff dockside monitoring four days a week. This is a slight increase from last week when the rate was at 92.2%. That means a few less anglers are utilizing other launch locations to exit the fishery.

Willapa Bay Commercial Fishery and Monitoring

The commercial fishery had three days of fishing during statistical week 37 (Sept 8 – 14) at the south end of the bay in area 2N using tangle net gear. Effort has been low as anticipated in our model and because of weather issues. There were four boats fishing on Monday (9/9), two boats Wednesday (9/11), and five boats on Friday (9/13). Coho catch was much lower than predicted for week 37. Hatchery Chinook landed was considerably lower for the week compared to the preseason prediction. Currently, we are below the prediction for unmarked Chinook encounters.

Starting this past Monday (9/16), all areas (2N, 2M, 2T, and 2U) opened to fishing using standard gillnet gear. Monday, Sept 16, was a very good day of fishing at least at the north end of the bay. There were quite a bit of coho caught on this first day in areas 2T and 2U. The south end of the bay in area 2N and 2M did not land as many fish. This indicates that the coho are possibly still milling around in the north end of the bay and have not moved south yet. Since Monday however, fishing in all areas has been slow.

See attached file: 2019 WB Commercial Fishery Data thru 09.18.19.pdf

Hatchery Rack Returns:

We have had a steady influx of Chinook into both Nemah and Naselle hatcheries. Due to that influx, hatchery staff had to open the temporary weirs at both locations to allow fish to move into the adult pond.

The summaries we have been sending out in previous weekly updates were actual individual fish counts into the temporary weir at Naselle Hatchery. The summary that is included here through week 37 includes those individual counts. However moving forward and due to the influx we had last week, we will no longer be able to individually count each fish. Starting this week, the summary included with this weekly update will be a visual estimate of the number of fish at Naselle Hatchery.

Naselle Hatchery: Attached is the update for the Naselle Hatchery. As I said above, we had lots of fish move into the hatchery earlier last week. To-date, we have had 1,046 hatchery and 49 natural Chinook recruit to the hatchery. All natural fish were passed upstream. We are currently in week 38 so any data provided in the spreadsheet for week 38 is incomplete.

See attached file: Naselle Hatchery CHK Rack Returns 09.18.19.pdf

Nemah hatchery: Since hatchery Chinook are volunteering into the pond and the fact we had some higher flows this week, hatchery staff decided to remove the temporary weir. Again, we will now be doing a visual estimate since we no longer have the ability to count individual fish as they enter.

Spawning Ground Surveys

We started stream surveys below the weir in Nemah and Naselle rivers at the beginning of August. We have seen Chinook staging in the rivers but we have only found a few redds to-date.

Advisory Group:

We held an advisory group meeting last night (9/18/19) here at the Regional office in Montesano. All of the documents will be posted to our website (except for the audio) by tomorrow. The audio has been sent to the IT staff in Olympia but it does take a day or two before they can get it posted. The link to the advisory group page is listed below if you are interested in any of those documents.

As always, in-season data is preliminary and subject to change.

If you have any questions regarding any of the information provided, please reply to this email or send an email to WillapaBay@dfw.wa.gov.

Thank you,
Barbara McClellan
Willapa Bay Fisheries Biologist
WDFW Region 6 Montesano

WDFW online links:

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 & Grays Harbor (non-treaty) commercial salmon fisheries (regulations & landed catch)
<https://wdfw.wa.gov/fishing/commercial/gillnet#information>

2019 Willapa Bay Marine Area Recreational Catch Estimate

PRELIMINARY/DRAFT

updated 9/18/2019

CHK = Chinook
AD = Adipose clipped (hatchery origin)
UM = Unmarked

CPUE = Catch per unit effort
Effort = An individual angler trip

July (Ocean 2 Rules)

Stat Week	Expanded Data				Estimated Total Chinook Kept	Willapa Origin Chinook UM Impacts	Expanded Data				Total Coho CPUE	
	# Boats	# Anglers	Estimated Total Chinook Kept	Total Chinook CPUE			Estimated Total AD Chinook Kept	Willapa Origin Chinook AD Impacts	Estimated Total Coho Kept	Estimated Total AD Coho Kept		Estimated Total UM Coho Kept
25 & 26	31	70	4	0.057	0	0	4	1	0	0	0	0.000
27	62	169	24	0.142	4	1	20	6	5	5	0	0.030
28	77	176	45	0.256	3	1	42	12	16	16	0	0.091
29	40	93	15	0.161	3	1	12	4	14	14	0	0.151
30	196	443	222	0.501	28	8	194	57	43	43	0	0.097
31	81	153	32	0.209	6	2	26	8	2	2	0	0.013
Season Total	487	1,104	342	0.310	44	13	298	88	80	80	0	0.072

August and September

Stat Week	Dates	Strata	Strata Description	Actual Data			Expanded # Total Boats	Sample Rate	Actual Data		Chinook Retained				Chinook Released				Marked Coho			Unmarked Coho			Total Coho						
				# Boats Sampled	# Boats Not Sampled	# Total Boats			# Anglers Sampled	# Anglers per boat	# CHK AD Kept	CHK AD CPUE Kept	Expanded # CHK AD Kept	# WB Origin CHK AD Impacts	# CHK UM Kept	CHK UM CPUE Kept	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)	
31	08/01/19	1	Thur	26	1	27	29	89%	55	2.12	62	5	0.091	6	4	0	0.000	0	0	0	0	0	0	0	0	0	0	0	0.018	1	
31	8/2 - 08/4	2	Fri - Sun	46	2	48	78	59%	99	2.15	167	11	0.111	19	12	0	0.000	0	5	0.051	8	1	1	4	0.040	7	0	0.000	0	0.040	7
32	8/5 - 8/8	1	Mon - Thur	97	3	100	216	45%	199	2.05	443	44	0.221	98	62	0	0.000	0	15	0.075	33	5	3	4	0.020	9	1	0.005	2	0.025	11
32	8/9 - 8/11	2	Fri - Sun	128	26	154	249	51%	281	2.20	548	74	0.263	144	91	1	0.004	1	13	0.046	25	4	2	14	0.050	27	4	0.014	8	0.064	35
33	8/12 - 8/15	1	Mon - Thur	100	2	102	220	45%	213	2.13	469	21	0.099	46	29	1	0.005	1	9	0.042	20	3	2	9	0.042	20	3	0.014	7	0.056	26
33	8/16 - 8/18	2	Fri - Sun	240	23	263	426	56%	551	2.30	978	90	0.163	160	101	0	0.000	0	47	0.085	83	12	7	19	0.034	34	3	0.005	5	0.040	39
34	8/19 - 8/22	1	Mon - Thur	177	12	189	408	43%	381	2.15	879	51	0.134	118	75	0	0.000	0	21	0.055	48	7	4	15	0.039	35	6	0.016	14	0.055	48
34	8/23 - 8/25	2	Fri - Sun	294	49	343	556	53%	697	2.37	1,317	104	0.149	197	125	0	0.000	0	62	0.089	117	16	10	42	0.060	79	19	0.027	36	0.088	115
35	8/26 - 8/29	1	Mon - Thur	171	2	173	374	46%	358	2.09	782	66	0.184	144	91	2	0.006	3	51	0.142	111	16	10	21	0.059	46	5	0.014	11	0.073	57
35	8/30 - 9/01	2	Fri - Sun	115	8	123	199	58%	293	2.55	508	19	0.065	33	21	1	0.003	2	24	0.082	42	6	4	29	0.099	50	24	0.082	42	0.181	92
36	9/2-9/5	1	Mon - Thur	100	8	108	233	43%	216	2.16	504	16	0.074	37	24	0	0.000	0	21	0.097	49	7	4	51	0.236	119	15	0.069	35	0.306	154
36	9/6-9/8	2	Fri - Sun	168	14	182	393	43%	372	2.21	870	50	0.134	117	74	0	0.000	0	39	0.105	91	13	8	80	0.215	187	37	0.099	87	0.315	274
37	09/6-9/12	1	Mon - Thur	98	2	100	216	45%	197	2.01	434	17	0.086	37	24	0	0.000	0	11	0.056	24	3	2	49	0.249	108	40	0.203	88	0.452	196
37	9/13-9/15	2	Fri - Sun	127	2	129	209	61%	280	2.20	461	17	0.061	28	18	0	0.000	0	21	0.075	35	5	3	59	0.211	97	26	0.093	43	0.304	140
38																															
38																															
39																															
39																															
				1,887	154	2,041	3,806	50%	4,192	2.22	8,421	585	0.140	1,183	750	5	0.001	7	339	0.081	688	96	61	397	0.095	819	183	0.044	377	0.138	1,195

Willapa Bay Origin PreSeason Recreational Data

Preliminary/Draft

Stat Wk	Date	Harvest Rate Proportions	Willapa Bay Natural-Origin Fall Chinook				Willapa Bay Hatchery-Origin Fall Chinook				
			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
25-26	6/22 - 6/29	0.0043	1	1	0	0	0.0046	1	1	1	1
27	6/30/2007	0.0043	1	2	1	1.2	0.0046	7	8	6	7
28	7/8 - 7/14	0.0022	0	2	1	2	0.0070	10	18	12	20
29	7/15 - 7/21	0.0119	2	4	1	3	0.0102	15	33	4	23
30	7/22 - 7/28	0.0043	1	5	8	11	0.0297	44	77	57	81
31	7/29 - 8/3	0.0142	2	7	3	14	0.0287	42	119	23	104
32	8/4 - 8/10	0.0857	15	22	6	20	0.1062	157	276	154	257
33	8/11 - 8/17	0.1490	25	47	11	31	0.1343	198	474	131	388
34	8/18 - 8/24	0.2299	39	86	15	45	0.2176	321	794	199	587
35	8/25 - 8/31	0.2829	48	134	18	64	0.2487	367	1,161	112	699
36	9/1 - 9/7	0.1013	17	152	12	76	0.1167	172	1,333	98	797
37	9/8 - 9/14	0.0826	14	166	5	81	0.0664	98	1,431	41	838
38	9/15 - 9/21	0.0194	3	169		81	0.0251	37	1,468		838
39	9/22 - 9/28	0.0073	1	170		81	0.0015	2	1,470		838
40	9/29 - 9/30	0.0037	1			81	0.0014	2	1,472		838
41		0.0000	0			81	0.0007	1	1,473		838
			170		81			1,474		838	

Naselle Hatchery Chinook Rack Returns

Preliminary/DRAFT *

9/18/2019

Year	2015						2016						2017						2018						2019 *					
Origin	Hatchery			Natural																										
Stat Week	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing	Daily Total	Cumulative	% Run Timing
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0.0%	-	-	-	1	1		1	1	
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	0.2%	-	-	-	9	10		0	1	
33	-	-	-	-	-	-	-	-	-	-	-	-	13	13	0.4%	2	2	0.3%	11	17	0.6%	2	2	0.4%	23	33		3	4	
34	-	-	-	-	-	-	-	-	-	-	-	-	23	36	1.1%	5	7	0.9%	12	29	1.0%	3	5	1.0%	48	81		5	9	
35	-	-	-	-	-	-	-	-	-	-	-	-	26	62	1.9%	6	13	1.6%	44	73	2.5%	7	12	2.5%	145	226		7	16	
36	205	205	4.2%	24	24	2.7%	0	0	0.0%	1	1	0.2%	63	125	3.8%	11	24	3.0%	16	89	3.0%	5	17	3.5%	347	573		24	40	
37	30	235	4.9%	0	24	2.7%	199	199	9.9%	32	33	6.6%	133	258	7.9%	33	57	7.1%	784	873	29.8%	87	104	21.3%	373	946		9	49	
38	2,016	2,251	46.5%	155	179	20.4%	25	224	11.1%	9	42	8.4%	1,179	1,437	43.8%	148	205	25.7%	128	1,001	34.2%	7	111	22.7%	100	1,046		0	49	
39	1,449	3,700	76.4%	134	313	35.7%	801	1,025	50.8%	143	185	36.9%	128	1,565	47.7%	17	222	27.8%	123	1,124	38.4%	15	126	25.8%						
40	481	4,181	86.3%	269	582	66.4%	229	1,254	62.1%	68	253	50.5%	304	1,869	57.0%	117	339	42.4%	196	1,320	45.1%	65	191	39.1%						
41	281	4,462	92.1%	217	799	91.2%	665	1,919	95.1%	54	307	61.3%	1,103	2,972	90.6%	321	660	82.6%	560	1,880	64.2%	114	305	62.4%						
42	278	4,740	97.9%	67	866	98.9%	86	2,005	99.4%	182	489	97.6%	184	3,156	96.2%	113	773	96.7%	654	2,534	86.6%	85	390	79.8%						
43	25	4,765	98.4%	1	867	99.0%	0	2,005	99.4%	9	498	99.4%	88	3,244	98.9%	21	794	99.4%	219	2,753	94.1%	36	426	87.1%						
44	37	4,802	99.1%	6	873	99.7%	0	2,005	99.4%	3	501	100.0%	16	3,260	99.4%	2	796	99.6%	166	2,919	99.7%	58	484	99.0%						
45	20	4,822	99.5%	3	876	100.0%	2	2,007	99.5%	0	501	100.0%	6	3,266	99.5%	0	796	99.6%	7	2,926	100.0%	5	489	100.0%						
46	11	4,833	99.8%	0	876	100.0%	6	2,013	99.8%	0	501	100.0%	14	3,280	100.0%	2	798	99.9%	0	2,926	100.0%	0	489							
47	8	4,841	99.9%	0	876	100.0%	4	2,017	100.0%	0	501	100.0%	0	3,280	100.0%	1	799	100.0%	0	2,926	100.0%	0	489							
48	-	4,841	99.9%	-	876	100.0%	1	2,018	100.0%	0	501	100.0%	0	3,280	100.0%	0	799		0	2,926	100.0%	0	489							
49	-	4,841	99.9%	-	876	100.0%	-	-	-	-	-	-	0	3,280	100.0%	0	799		0	2,926	100.0%	0	489							
50	3	4,844	100.0%	0	876	100.0%	-	-	-	-	-	-	0	3,280	100.0%	0	799		0	2,926	100.0%	0	489							
51													1	3,281	100.0%	0	799		1	2,927	100.0%	0	489							
Total	4,844			876			2,018			501			3,281			799			2,927			489			1,046			49		

yellow = incomplete week

2019 Willapa Bay CHINOOK Landed Catch

MSF

Preliminary Draft

Commercial Fishery

Stat Week	Dates	Catch Areas																				Basin Total Landed	Basin Willapa Origin Landed	Basin Willapa Origin 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	Sept. 2 - 8	Closed				Closed				258	N/A	258		Closed				428	N/A	428		686	0	686
37	Sept. 9 - 15	Closed				Closed				78	N/A	78		Closed				0	N/A	0		78	0	78
38	Sept. 16 - 22	126	N/A	126		166	N/A	166		26	N/A	26		Closed				140	N/A	140		458	0	458
39	Sept. 23 - 29		N/A	0			N/A	0			N/A	0		Closed					N/A	0		0	0	0
40	Sept. 30 - Oct. 6		N/A	0			N/A	0			N/A	0		Closed					N/A	0		0	0	0
41	Oct. 7 - 13		N/A	0			N/A	0		Closed				Closed				Closed				0	0	0
42	Oct. 14 - 20	Closed				0	0	0																
43	Oct. 21 - 27	Closed				0	0	0																
44	Oct 28. - Nov. 3		N/A	0			N/A	0			N/A	0		Closed					N/A	0		0	0	0
45	Nov. 4 - 10		N/A	0			N/A	0			N/A	0		Closed					N/A	0		0	0	0
46	Nov. 11 - 17		N/A	0			N/A	0			N/A	0				0	0		N/A	0		0	0	0
47	Nov. 18 - 24		N/A	0			N/A	0			N/A	0				0	0		N/A	0		0	0	0
48	Nov. 25 - Dec. 1		N/A	0			N/A	0			N/A	0				0	0		N/A	0		0	0	0
Total Landed		126	0	126		166	0	166		362	0	362		0	0	0	0	568	0	568		1,222	0	1,222

2019 WB Total CHINOOK Fishery Impacts

Actual Catch + impacts

MSF

Preliminary Draft

Stat Weeks	2T		2U		2N		2R		2M		Inseason NOR Impacts	Inseason HOR Impacts	Predicted Total NOR Impacts (Local + Non local)	Predicted Total HOR Impacts (Local + Non local)
	NOR Impacts	HOR Impacts												
36	0	0	0	0	13	263			28	436	41	698	37	489
37	0	0	0	0	6	81			0	0	6	81	49	626
38	5	137	7	180	1	28			13	146	26	492	228	1,164
39	0	0	0	0	0	0			0	0	0	0	112	393
40	0	0	0	0	0	0			0	0	0	0	61	202
41	0	0	0	0	0	0			0	0	0	0	30	94
42	0	0	0	0	0	0			0	0	0	0	0	0
43	0	0	0	0	0	0			0	0	0	0	0	0
44	0	0	0	0	0	0			0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	2	6
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	2
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	5	137	7	180	19	372	0	0	41	582	73	1,271	519	2,976

2019 WB Total CHINOOK NOR Fishery Impacts Summary

MSF

Actual Catch + impacts

Preliminary Draft

Stat Weeks	2T			2U			2N			2R			2M			Stat Weeks	Inseason Estimated Natural-Origin Impacts		Preseason Predicted Natural-Origin Impacts	
	Total NOR Impacts	Local NOR Impacts	Predicted NOR Impacts	Total NOR Impacts	Local NOR Impacts	Predicted NOR Impacts	Total NOR Impacts	Local NOR Impacts	Predicted NOR Impacts	Total NOR Impacts	Local NOR Impacts	Predicted NOR Impacts	Total NOR Impacts	Local NOR Impacts	Predicted NOR Impacts		Weekly	Cumulative	Weekly	Cumulative
36	0	0	0	0	0	0	13	9	16	0	0	0	28	26	13	36	36	36	30	30
37	0	0	0	0	0	0	6	4	36	0	0	0	0	0	0	37	4	40	36	66
38	5	3	41	7	7	95	1	1	14	0	0	0	13	12	44	38	23	62	194	260
39	0	0	31	0	0	18	0	0	5	0	0	0	0	0	38	39	0	62	92	352
40	0	0	11	0	0	32	0	0	1	0	0	0	0	0	8	40	0	62	53	405
41	0	0	13	0	0	6	0	0	0	0	0	0	0	0	4	41	0	62	24	429
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0	62	0	429
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	62	0	429
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	62	0	429
45	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	45	0	62	2	431
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	62	0	431
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	0	62	0	431
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0	62	0	431
Totals	5	3	97	7	7	152	19	14	72	0	0	0	41	38	107	Totals	62	62	431	431

Tangle Net

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Willapa Bay COHO Commercial Accounting

Preliminary Draft

Stat Week	2T				2U				2N				2R				2M				WB Actual			WB 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				Closed				77	0.241	19	58	Closed				109	0.174	19	90	38	148	186	30	379	409	
37	Closed				Closed				113		0	113	Closed				Closed				0	113	113	139	670	809	
38	901	0.20	178	723	900	0.07	63	837	67	0.10	6	61	Closed				445	0.108	48	397	295	2018	2313	1,892	5,523	7,415	
39			0	0			0	0			0	0	Closed						0	0	0	0	0	0	681	4,496	5,177
40			0	0			0	0			0	0	Closed						0	0	0	0	0	0	2,094	5,600	7,694
41			0	0			0	0	Closed				Closed				Closed				0	0	0	3,120	1,500	4,620	
42	Closed																										
43	Closed																										
44			0	0			0	0			0	0			0	0			0	0	0	0	0	0	0	0	
45			0	0			0	0			0	0			0	0			0	0	0	0	0	1,267	506	1,773	
46			0	0			0	0			0	0			0	0			0	0	0	0	0	122	84	206	
47			0	0			0	0			0	0			0	0			0	0	0	0	0	452	212	664	
48																				0	0	0	72	25	97		
Total	901		178	723	900		63	837	257		25	232	0		0	0	554		67	487	333	2279	2612	9,869	18,995	28,864	

2019 Estimated WB Commercial CHUM Mortalities

yellow = Chum release required

Preliminary Draft

Gillnet release mortality 0.59 includes drop off

Stat Week	Landed Chum	Chinook Landed	Coho Landed	Encounter Ratio	Chum Encounters	Stat Weeks	Inseason Estimated Chum Impacts		Preseason Predicted Chum Impacts	
							Weekly	Cumulative	Weekly	Cumulative
36	0	686	186		0	36	0	0	3	3
37	0	78	113		0	37	0	0	2	5
38	5	458	2,313		0	38	5	5	23	28
39		0	0		0	39	0	5	98	126
40		0	0		0	40	0	5	395	521
41		0	0		0	41	0	5	2,099	2,620
42	Closed					42	0	5	0	2,620
43	Closed					43	0	5	0	2,620
44		0	0		0	44	0	5	0	2,620
45		0	0		0	45	0	5	1,291	3,911
46		0	0		0	46	0	5	613	4,524
47		0	0		0	47	0	5	175	4,699
48		0	0		0	48	0	5	95	4,794
Totals		1,222	2,612		0	Totals	5		4,794	

