

FPP Change Form

January 12, 2010

Change Request Number: 10AppGBON002

Date:

Proposed by: CRITFC, WDFW, IDFG

Location of Change- AppG_ BON 3.9

Current Language:

3.9. No more than two picket leads will be down while trapping activities are in operation. Additional leads may be requested through the Project Biologists.

Proposed Change:

3.9. (Assumes the center (dividing) pickets has been removed). Four picket leads will be allowed during trap operations for up to 5 continuous hours for fish counts of less than a total of 6000 adult salmonids as enumerated at the Washington Shore count station for the previous day. (12,000 shad, not including salmon) *Need to work out max weight concept. Using the 1lb per 0.3 cubic feet criteria, max number of fish between two weirs is ~5000 shad and 1250 chinook salmon at any one time or hour. Need to determine a rate but I used these number to inform the break point in operations)* For a previous day adult salmonid count at Washington Shore between 6000 – 12,000 four picketed leads may not be used for more than 4 hours continuously. For adult salmon numbers above 12,000 all four picketed leads may not be down for longer than 2 hours and then at least one picketed lead needs to be raised for a minimum 1 hour before going back to 4 picketed leads. Researchers will also be required to monitor the ladder every 1.5 hours to ensure that crowding is not taking place. If evidence of crowding is occurring at least two picketed lead will be raised for a minimum 1 hour before all 4 picketed lead may be deployed again.

Add:

4.2.1 (Temperatures greater than 70 degree F and the center picket has been removed) Four picketed leads may be used for no more than 4 hours continuously before the picketed leads need to be raised. The density criteria and monitoring of the adult ladder by the researchers as outlined in 3.9 also apply

Reason for Change:

1. Under current operations 2-3 picketed leads does not appear to adequately insure the number of Chinook and steelhead needed to meet sample and statistical needs for the research and monitoring being conducted at AFF, and mandated by numerous state, federal and international agreements. In addition this configuration results in trapping bias (see #7).
2. Elimination of the center pickets is required to remove the observed sampling bias.
3. Operating four picketed leads does appear to significantly improve the ability to achieve sampling rates, and reduces the sampling bias observed with the center picket/ 2-3 picketed lead configuration.
4. Allowing more fish to be diverted into the trap could potentially reduce the hours of trap operation, allowing researchers to efficiently collect data as more fish moved through the trap.

5. An alternative to the proposed language is to allow all four pickets to be engaged at least during the first four hours of operation. This action would potentially allow researchers to complete duties prior to peak temperature/salmonid passage.
6. This monitoring supports the data needs of the Pacific Salmon Commission's U.S. Chinook Technical Committee, U.S. v. Oregon's Technical Advisory Committee, Harvest Biop, 2008 FCRPS BiOp, and 2009 Adaptive Management Implementation Plan and the Columbia River Accords for monitoring ocean abundance, in-season harvest, run reconstruction and forecasting, and stock specific escapement of Chinook and sockeye salmon, and steelhead. Sampling at BON allows for fisheries agencies to meet international treaty obligations (Pacific Salmon Treaty), federal court decision (US V Oregon), and develop the best available science for fisheries management, ESA risk assessments, and many other purposes. We need to continue to work together to meet joint goals such as recovering salmon and steelhead populations and using the best available science for extinction risk, harvest, hydro, and other assessments
7. See following tables showing bias for smaller sized salmonids

Table showing the percentage of previously PIT tagged Chinook that are jacks on the AFF and far side of the fish ladder when pickets are down. (Coils 12 and 14 are in the area where fish proceed to the AFF, coils 11 and 13 are in the area where fish bypass the AFF when pickets are down.) Statistically significant results (using a test comparing proportions in independent samples) are highlighted. In 20 out of 24 weeks, the higher percentage of jacks used the AFF side of the ladder.

2009 Statistical Week	Far side of ladder (Coils 11 and 13)			AFF side of the ladder (Coils 12 and 14)			Combined Percentage Jacks	T- Statistic
	JACK S	NON JACKS	% Jacks	JACKS	NON JACKS	% JACKS		
17	1	14	7%	1	4	20%	10%	0.86
18	4	42	9%	1	13	7%	8%	-0.18
19	36	100	26%	10	19	34%	28%	0.87
20	45	83	35%	30	3	91%	47%	5.72
21	50	98	34%	23	30	43%	36%	1.25
22	12	30	29%	2	12	14%	25%	-1.07
23	18	37	33%	12	11	52%	38%	1.61
24	24	31	44%	9	7	56%	46%	0.89
25	32	38	46%	13	3	81%	52%	2.57
26	28	29	49%	6	1	86%	53%	1.83
27	39	41	49%	17	1	94%	57%	3.54
28	16	19	46%	9	2	82%	54%	2.10
29	3	4	43%	2	0	100%	56%	1.43
30	2	6	25%	0	1	0%	22%	-0.57
31	1	1	50%	1	0	100%	67%	0.87

33	6	9	40%	3	0	100%	50%	1.90
34	17	25	40%	7	4	64%	45%	1.37
35	20	33	38%	17	11	61%	46%	1.97
36	39	42	48%	16	8	67%	52%	1.60
37	60	73	45%	60	16	79%	57%	4.76
38	53	55	49%	51	8	86%	62%	4.76
39	27	36	43%	35	8	81%	58%	3.95
40	0	2	0%	8	1	89%	73%	2.55
41	0	0		0	1	0%	0%	
Total	533	848	39%	333	164	67%	46%	10.89
Overall, 26.2% of the previously PIT tagged fish passing upstream when the trap was in operation used the AFF side of the ladder.								

Table showing the percentage of previously PIT tagged Chinook that are jacks on the AFF and far side of the fish ladder when pickets are up (trap is not in operation). Statistically significant results are highlighted. In 12 out of 24 weeks, the higher percentage of jacks used the AFF side of the ladder.

2009	Far side of ladder (Coils 11 and 13)			AFF side of the ladder (Coils 12 and 14)				
Statistical Week	JACKS	NON JACKS	% Jacks	JACKS	NON JACKS	% Jacks	Combined Percentage Jacks	T-statistic
17	3	34	8%	1	35	3%	5%	-1.00
18	18	93	16%	15	96	14%	15%	-0.57
19	63	150	30%	58	147	28%	29%	-0.29
20	142	246	37%	110	169	39%	38%	0.74
21	52	149	26%	37	84	31%	28%	0.91
22	39	117	25%	27	73	27%	26%	0.36
23	35	79	31%	27	66	29%	30%	-0.26
24	65	103	39%	36	66	35%	37%	-0.56
25	88	121	42%	33	48	41%	42%	-0.21
26	41	50	45%	13	16	45%	45%	-0.02
27	16	18	47%	7	7	50%	48%	0.19
28	23	26	47%	6	7	46%	47%	-0.05
29	17	19	47%	11	11	50%	48%	0.21
30	1	5	17%	2	3	40%	27%	0.87
31	3	5	38%	3	5	38%	38%	0.00
33	2	3	40%	2	2	50%	44%	0.30
34	4	15	21%	6	12	33%	27%	0.84

35	32	59	35%	18	28	39%	36%	0.46
36	109	142	43%	76	97	44%	44%	0.10
37	132	162	45%	155	199	44%	44%	-0.28
38	146	179	45%	145	170	46%	45%	0.28
39	120	137	47%	108	124	47%	47%	-0.03
40	91	98	48%	64	70	48%	48%	-0.07
41	0	5	0%	20	22	48%	43%	2.04
Total	1242	2015	38%	980	1557	39%	38%	0.38

Overall, 43.8% of the previously PIT tagged fish passing upstream when the trap was in operation used the AFF side of the ladder.

Comments from others:
Record of Final Action: