CENWW-OD-T **September 15, 2018**

MEMORANDUM FOR THE RECORD 18 LGS 19 Primary Bypass due to columnaris

SUBJECT: Primary Bypass Operations at Little Goose Dam due to elevated mortality likely associated with columnaris

Fish in the daily condition sample at Little Goose Juvenile Fish Facility have been showing elevated levels of disease, likely to be columnaris disease (*Flavobacterium columnare*), for the past few weeks, however, daily collection mortality rates were below 6% until September 6 (see Table 1). Collection mortality exceeded 6% for three consecutive days on September 11. In accordance with the Fish Passage Plan (FPP), Appendix B, section 3.4.1, the Transportation Coordinator notified NOAA Fisheries on September 12 regarding elevated mortality rates associated with disease and potential of ending transport from Little Goose Dam as described in the FPP, Appendix B, Section 4.6.5. On September 13 the daily condition sample mortality exceeded 10% for three consecutive days. In accordance with the FPP (Appendix B, section 4.6.5), collection for transport ended at 0700 September 15 at Little Goose Dam, the bypass operation was changed from collection for transportation to primary bypass, and daily condition sampling was changed from daily to every third day.

<u>Estimated mortalities by species, and origin:</u>

A. Species – See Table 1
B. Origin – See Table 1
C. Length – N/A
D. Marks and tags – N/A
E. Marks and Injuries found on carcass – Most mortalities had frayed fins and skin ulcerations typically associated with columnaris disease during this time of the year.
F. Cause and Time of Death – Fish had symptoms similar to those of columnaris disease.
G. Future and Preventative Measures –Salt was added to transport tanks containing transported fish. Collection for transport ended and sampling frequency was reduced as outlined in FPP Appendix B, section 4.6.5.

Sincerely,
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Table 1. Daily collection, incidence of disease (%), mortality numbers, and overall mortality rates at Little Goose Dam from August 15 through September 15, 2018.

			Daily Facility Mortality					
Date	**Collection**		**Subyearling Chinook**		**Sockeye/Kokanee**			
	Total	**% with Disease***	**Clipped**	**Unclipped**	**Clipped**	**Unclipped**	**Daily Total**	**Overall % Mortality**
15-Aug	285	10.3%	0	2	0	0	2	0.7%
16-Aug	188	7.3%	0	0	0	0	0	0.0%
17-Aug	179	5.6%	0	1	0	0	1	0.6%
18-Aug	227	2.8%	0	2	0	0	2	0.9%
19-Aug	462	2.9%	0	5	1	0	6	1.3%
20-Aug	312	7.4%	0	1	0	0	1	0.3%
21-Aug	99	18.2%	0	0	0	0	0	0.0%
22-Aug	156	10.8%	2	0	0	0	2	1.3%
23-Aug	206	9.8%	0	0	0	0	0	0.0%
24-Aug	155	8.3%	0	3	0	0	3	1.9%
25-Aug	63	21.3%	0	1	0	0	1	1.6%
26-Aug	48	30.4%	0	2	0	0	2	4.2%
27-Aug	29	10.7%	0	1	0	0	1	3.4%
28-Aug	24	43.5%	0	1	0	0	1	4.2%
29-Aug	74	27.1%	1	2	0	0	3	4.1%
30-Aug	136	23.3%	2	5	0	0	7	5.1%
31-Aug	142	17.0%	0	2	0	0	2	1.4%
1-Sep	228	25.5%	1	2	0	0	3	1.3%
2-Sep	197	19.2%	1	0	0	0	1	0.5%
3-Sep	158	6.7%	0	0	0	0	0	0.0%
4-Sep	109	26.2%	1	4	0	0	5	4.6%
5-Sep	34	38.2%	0	0	0	0	0	0.0%
6-Sep	56	32.7%	1	3	0	0	4	7.1%
7-Sep	91	42.4%	1	6	0	0	7	7.7%
8-Sep	110	41.5%	0	4	0	0	4	3.6%
9-Sep	88	41.3%	1	14	0	0	15	17.0%
10-Sep	74	29.0%	0	5	0	0	5	6.8%
11-Sep	65	23.1%	0	20	0	0	20	30.8%
12-Sep	99	34.9%	1	12	0	0	13	13.1%
13-Sep	61	54.4%	0	7	0	0	7	11.5%
14-Sep	53	35.4%	1	2	0	2	5	9.4%
15-Sep	32	56.0%	1	9	0	0	10	31.3%

*Most disease signs were those which are typically associated with columnaris disease during this time of the year.