

**MEMORANDUM FOR THE RECORD - 16 MCN 10 MFR McNary Fish Pump 1 Outage**

**SUBJECT: McNary Fish Pump 1 Outage**

At 0608 hours on June 1 (today), a governor oil pump triggered a temperature alarm which in turn forced fish pump 1 out of service. Oregon ladder entrance weir configurations were optimized for 1 pump operation per the 2016 Fish Passage Plan, McNary Section 3.3.2.4 (iv), as fish pump 2 is currently out of service for major overhaul. The governor pump filter indicator had failed. When inspected, the indicator falsely displayed that the filter was in good condition when in reality, filter replacement was warranted. As a result, the governor oil pump remained in service and pumped oil back into the actuator. The remaining oil in the pump reached 200 degrees F., which resulted in a high oil temperature alarm and emergency shutdown. Mechanics subsequently replaced the indicator and filters and returned the governor pump and fish pump to service at 0928 hours. The entrance weirs were returned to their normal configuration at 0935 hours.

The adult passage data below is from the Portland District website:

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

McNary Oregon Shore												
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
5/22/2016	2087	1889	198	0	0	0	0	0	0	0	0	0
5/23/2016	1391	1174	217	1	0	1	0	0	0	0	0	0
5/24/2016	1597	1428	169	0	0	0	0	0	0	0	0	0
5/25/2016	1266	1124	142	2	2	0	0	0	0	0	0	0
5/26/2016	1086	995	91	1	-1	2	0	0	0	0	0	0
5/27/2016	468	396	72	4	4	0	0	0	0	0	0	0
5/28/2016	809	738	71	1	0	1	0	0	0	0	0	0
5/29/2016	822	737	85	3	1	2	0	0	0	0	0	0
5/30/2016	632	571	61	2	1	1	0	0	0	0	0	0
5/31/2016	836	727	109	0	0	0	0	0	0	2	0	0
<b>total</b>	<b>10994</b>	<b>9779</b>	<b>1215</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>

**24-Hour**

Date	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15	H16
5/22/2016	43	91	287	313	350	200	157	103	84	80	58	53	92	58	77	40
5/23/2016	124	89	106	260	55	22	64	95	88	88	68	61	108	74	42	48
5/24/2016	55	48	164	68	241	233	209	142	70	95	83	41	58	48	17	26
5/25/2016	22	36	79	25	140	208	122	160	64	115	84	56	70	56	8	20
5/26/2016	35	36	88	120	98	115	109	95	91	72	70	56	48	32	6	14
5/27/2016	49	29	36	25	36	41	59	37	8	2	25	22	14	35	24	25
5/28/2016	37	12	35	64	82	67	61	68	62	59	47	98	55	22	28	12
5/29/2016	74	26	67	107	101	78	72	66	43	2	70	49	18	20	14	13
5/30/2016	48	22	67	83	40	71	37	41	68	36	47	19	14	13	19	7
5/31/2016	121	40	20	22	126	80	142	61	47	22	47	29	14	28	28	11
<b>average</b>	<b>60.8</b>	<b>42.9</b>	<b>94.9</b>	<b>108.7</b>	<b>126.9</b>	<b>111.5</b>	<b>103.2</b>	<b>86.8</b>	<b>62.5</b>	<b>57.1</b>	<b>59.9</b>	<b>48.4</b>	<b>49.1</b>	<b>38.6</b>	<b>26.3</b>	<b>21.6</b>

- A. Species – Spring Chinook salmon have been the predominant species using the Oregon ladder for the past week. The operation of only one fish pump for about 3.5 hours could have impeded passage by reducing attraction flows for approximately 200 to 300 fish.
- B. Origin – Unknown.
- C. Length –Unknown.
- D. Marks and tags – Unknown.
- E. Marks and Injuries found on carcass – no fish mortalities incurred.
- F. Cause and Time of Death – no fish mortalities incurred.
- G. Future and Preventative Measures –

Current Measures: monitor the governor pumps for both fish pumps more closely.

Future Measures: install new filter indicators on the governors, change to new filters with larger openings which should reduce the frequency of filter exchanges.

Sincerely,

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