

MEMORANDUM FOR THE RECORD 19 MCN 14**SUBJECT: Loss of Fish Pumps 2 and 3**

On August 5, at 1724 hours, Bus 1 failed at the BPA substation resulting in transmission lines 1 through 5 tripping off and most of the turbine units at McNary Dam being removed from service. With the loss of power, fish pumps 2 and 3 tripped off line. There was about a half-acre grass fire at the substation at the time which may have contributed to the Bus failure. With the turbines out of service, much of the flow was spilled as outline in the table below (data provide by Kathleen Carter, PSMFC). Unit 9 provide power for the project. The Oregon ladder was out of criteria with about 0.3 feet differential at the south entrance pool. All four entrance weirs were switched to manual mode. As the operators brought systems and units back on line, the spill volume was reduced. During the process switching occurred, resulting in the juvenile fish facility (JFF), the juvenile collection channel (JCC), both ladder exits and the Washington ladder entrances having brief power outages, 10 minutes or less. None of the outages adversely affected the systems involved. The last system returned to service was the fish pumps, which came on line at 2032 hours and all Oregon ladder entrances were returned to automatic mode. By the following day, no additional issues were found in the JCC and both ladders remained in criteria. The only issue noted was with ESBSs. The screens in unit 1 had to be reconnected to the control system (the unit was in standby as part of the sawtooth unit pattern). The screens in unit 8 had to be returned to timer mode.

McNary Dam Daily Discharge**5-Aug-19**

HOUR	TOTAL	POWER	SPILL	% Spill
16	148.4	59.0	84.7	57%
17	153.4	61.2	87.4	57%
18	134.9	24.6	105.6	78%
19	149.5	0.7	144.2	96%
20	145.9	21.5	119.8	82%
21	152.7	49.0	99.1	65%
22	144.8	57.6	82.5	57%
23	143.6	57.0	81.9	57%

Species – no fish mortality occurred. Due to the volume of spill, juvenile passage may have been altered for approximately three hours (reflect as 4 hours in the table above). Due to flow volume, adult fish passage could have been delayed during the three hours that the Oregon ladder was out of criteria.

- A. Origin – NA
- B. Length – NA
- C. Marks and tags – NA
- D. Marks and Injuries found on carcass – NA
- E. Cause and Time of Death – NA
- F. Future and Preventative Measures – Since the issue occurred at the BPA substation, any measures taken would have to be done by BPA.

No photo available.

Sincerely,

Bobby Johnson/Denise Griffith
Project Fisheries Biologists
McNary Lock and Dam