

**OFFICIAL MEMO of COORDINATION (MOC) FOR
NON-ROUTINE OPERATIONS & MAINTENANCE**

COORDINATION TITLE- MCN T1-T7 Oil Leak Repair Project

COORDINATION DATE- November 10, 2020

PROJECT- McNary Lock and Dam

RESPONSE DATE- November 24, 2020

Description of problem. The McNary Transformer 1 (T1) needs to be taken off-line for a month to undergo oil leak repairs, which will take turbine units 1 and 2 out of operation. The Corps plans to repair this transformer during the month of August 2021 because work needs to be performed when 1) the fish screens are deployed and 2) during the better weather conditions months. Units 1 and 2 provide a part of the attraction flow for the Oregon Shore Fish Ladder south powerhouse entrance. The fish pumps and 1000 cfs supply conduit would still be functional during the outage.

There are seven transformers (T1 through T7) that will undergo oil leak repairs and be out of service between July through December 2021. The work needs to be conducted at a time when the fish screens are not on the top deck (ESBSs are down April 15 through December 13th). The Oregon Ladder north powerhouse entrance and the North Shore (Washington) Fish Ladder will not be affected by this effort.

- 1. Type of outage required** (relate to deviation from FPP). Unscheduled outage.
- 2. Dates of impacts/repairs.** Transformer 1 will be off-line from August 1st through August 31st, 2021.
- 3. Length of time for repairs.** Repairs will take approximately one month in August.
- 4. Impact on fish facility operation** (*fishway, JFF, etc.*). Partial attraction flow to the Oregon Shore south Fish Ladder entrances will be lost.
- 5. Impact on project operations** (*unit priority, forebay/tailwater operation and/or spill*). Transformer Out of Service, no powerhouse attraction water from units 1,2 at Oregon Shore Ladder.
- 6. Analysis of potential impacts to fish.**

- a. 10-year average passage of adults and juveniles of each affected listed species during dates of impact.

For the Month of August: Chinook counts for 10-year average is 15,598. Steelhead 10-Year Average is 24,299. Sockeye 10-year average is 875. Coho 10-year average is 121. Bull trout 10-year average is 1. Lamprey 10-year average is 537.

Smolt index: (smolts are passing in low numbers in August but a unit 1 and 2 outage should have no impact on juvenile passage in any month.)

- b. Statement about the current year's run (e.g., higher or lower than 10-year average).

Forecast for salmon and steelhead returns for 2021 are not yet available. Counts for Chinook salmon (20,431), steelhead (7,978), sockeye (1,164) and Coho (814) salmon at McNary Dam in 2020 were 118%, 32%, 132%, and 528% of the 10-year averages, respectively.

- c. Estimated exposure to impact of adults and/or juveniles, as appropriate, by species (number or percentage of 10-year average that occurs during dates of impact).

Fall Chinook salmon and to a smaller extent sockeye and coho salmon and bull trout utilize McNary Dam fish passages and can rest/migrate through the forebay, located on the upstream side of the dam. Both fish ladders will remain open as usual; however, there will be a shift of attraction flow for the Oregon south powerhouse entrance fish ladder from Unit 1 to Unit 3 during this time.

- d. Type of impact to adults and/or juveniles, as appropriate, by species (e.g., increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.). Adult fish travelling upstream may experience slightly reduced attraction flow at the OR shore south ladder entrance vicinity.
- e. Final judgment on scale of expected impacts (negligible, minor, significant) on:
 - i. Downstream migrants. minor.
 - ii. Upstream migrants (including Bull Trout). Negligible. Fish can continue to utilize both ladders.
 - iii. Lamprey. Minor impact to adults. (The flow reduction might even be helpful).

7. Comments from agencies.

8. Final coordination results.

9. After Action update.

References:

Pre-season – NOAA adult returns forecast:

www.nwfsc.noaa.gov/research/divisions/fe/estuarine/oeip/g-forecast.cfm.

Columbia River Compact 2020 report

Columbia Basin Research Data

NOAA fisheries Summary of Ocean Indicators 2019.