NWE-THF-4275

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

June 28, 2023

Re: NorthWestern Energy filing Thompson Falls Hydroelectric Project P-1869-060
Updated Study Report Meeting Summary Supplement

Dear Secretary Bose:

On June 8, 2023, NorthWestern submitted to the Federal Energy Regulatory Commission, per 18 C.F.R. § 5.15 (f), a Summary of the Updated Study Report Meetings held on May 24, 2023 in Missoula, Montana and on May 25, 2023 in Thompson Falls, Montana.

Transcripts of the meetings were not kept nor were the meetings recorded. NorthWestern requested meeting attendees submit written requests for additional information or to comment on the Updated Study Reports. Per the subsequent request of FERC Licensing Staff, NorthWestern submits the enclosed additional detail from the meetings, organized by reference to the studies discussed at the meetings.

Feel free to contact me if there are any questions.

Sincerely,

Mary Gail Sullivan
Director, Environmental & Lands Permitting & Compliance

enclosure

Thompson Falls Hydroelectric Project Relicensing

Supplement to NorthWestern Energy's Updated Study Report Meeting Summary

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DAY MEETING:

Hydraulic Model Study:

- Can the study indicate average water velocity data in addition to surface water velocity? NorthWestern notes that the Initial Study Report on Hydraulic Modeling included results of the two dimensional hydraulic model, with depth averaged water velocities. That report is available on NorthWestern's Thompson Falls Relicensing website: https://www.northwesternenergy.com/docs/default-source/default-document-library/clean-energy/environmental-projects/thompson-falls/thompson-falls-relicensing/p1869-isr-hydraulic-conditions-study.pdf
- Does the model consider the fact conditions in the zone of passage may change overtime since the bathymetry of the tailwater is not uniform? NorthWestern response: The models are steady-state looking at volume flow rate with a specified flow rate through the entire channel. Modeling dynamic flows would be a more complex analysis and one that is not part of the study plan determination.

Fish Behavior Study

- What is the timing of third study season results relative to comment periods in the ILP? FERC clarified it is not unusual that a study goes beyond study period. There will be an additional comment period after the Final License Application is filed, and again after FERC releases their NEPA analysis.
- Were fish that entered Prospect Creek wanting to pass the dam, and were they using Prospect Creek as a thermal refuge? NorthWestern indicated the fish that went up Prospect Creek were few in number and stayed quite a while. Not much difference in fish movement and behavior whether the fish go to fish passage facility or not.
- Were there hybrids tagged? No. Not based on phenotypic characteristics.
- Why use surrogates when studying bull trout? NorthWestern and USFWS indicated the use of surrogates to analyze bull trout is necessary because there are so few bull trout. The surrogate approach was born out of the Biological Opinion for construction of the fish ladder. Bull Trout that move in the spring covered by Rainbow Trout and fall movements covered by Brown Trout.
- Could the number of fish reaching the fish ladder be high because of location of capture? NorthWestern responded that location could influence results but also there are different motivation factors in fish. Fish may become trap shy and less likely to enter the fish passage facility after capture, or they may learn the route to the fish passage facility and then enter the

fish passage facility more readily. These are not anadromous species, so we expect different behaviors.

- Are there additional ways to influence or encourage behavior to increase the number of fish entering the ladder? NorthWestern will continue to analyze data.
- Can NorthWestern explain the metrics used for gauging swimming capabilities of fish – prolonged vs burst speeds? This was addressed in the Initial Study Report. Numbers here are consistent with that literature review.
- Could there be bias based on size of fish? NorthWestern responded that the size of fish in the study were what would be expected to migrate upstream.
- Can NorthWestern explain its spill schedule? NorthWestern explained that spill changes as flows change. Below 23,000 cfs all water is going through Powerhouse so panels on the right side of the main dam are raised for fish attraction. As inflows increase panels on the left side may be pulled.
- Why didn't NorthWestern use stationary tags? NorthWestern explained no "sentinel" tags were used in the study because of the difficult location of the radio telemetry.
- Was there a difference in behavior of fish captured electrofishing vs at the ladder? NorthWestern explained that the fish behavior data was looked at by these groupings and no differences in behavior was identified.
- Why do fish move into the Dry Channel? There is some leakage in the dry channel.
- What is the depth of detection for the tags used? Max is about 40-50 feet.

<u>TDG Study</u>

- What impacts to fish are expected based on the data collected? NorthWestern explained no effects at 110% TDG have been documented in the project area. Columbia River system records TDG around 120%.
- What depth refugia is available to fish in the in the Project area? NorthWestern noted that water depths at different flows are available in the Hydraulic Modeling Study Reports.

<u>Cultural Resource Study</u>

- MT SHPO agreed with inventory methodology.
- Can NorthWestern provide documentation of areas not inventoried? NorthWestern plans to include maps of areas inventoried at the reconnaissance level in the DLA.
- Will NorthWestern update historic record for areas where nothing was found or why the record is not updated? NorthWestern indicated mapping is based on hand drawn boundaries as opposed to GPS so it would be difficult to provide an update beyond stating we covered the APE extensively and didn't find it inside. NorthWestern intends to clarify this issue in the DLA.
- MT SHPO requested that NorthWestern submit formal requests for concurrence concerning the National Register eligibility statuses of all sites documented in the APE.
- Did NorthWestern request permission from private property owners to access properties within the APE? NorthWestern explained its process for seeking approval, and that landowner access denials did not prevent NorthWestern from visibly inspecting (at very close range) privately owned shorelines from the water, nor did the lack of access prevent NorthWestern from completing its inventory.
- Has NorthWestern sought involvement from Native American Tribes? NorthWestern and FERC confirmed tribal consultation.
- Is there Montana-specific nomenclature for cultural resources studies? NorthWestern explained Montana standards.

- How did NorthWestern identify low probability areas? NorthWestern will clarify how they were determined and what was inventoried in low probability areas in the DLA.
- Will NorthWestern explain Historic district additions? NorthWestern prepared an Additional Documentation and Boundary Modification Nomination in 2022 and those have been accepted by the National Register.
- Can NorthWestern explain the difference between the APE and FERC Boundary? NorthWestern will distinguish in DLA.
- Can NorthWestern improve its maps, to depict where sites overlap with APE and FERC Boundary? NorthWestern will address in DLA.
- Can NorthWestern explain the placement of the APE relative to proposed correction of Project Boundary? NorthWestern confirmed APE is bigger than proposed project boundary so all changes were covered in the APE and inventory.

Environmental Justice Study

- Should the environmental justice analysis compare the change in angling opportunities and species that occurred due to the creation of the Reservoir (as compared to when this location was a free-flowing river)? NorthWestern and FERC confirmed the baseline for the study is with the existing dam present.
- FERC recommended using the most current data in the draft License Application. NorthWestern indicated it intended to use the most recent data.
- Can NorthWestern explain the basis for its conclusion of no disproportionate effect? NorthWestern explained the rationale for this conclusion.

Operations Study

- Any changes to address sediment deposition? NorthWestern responded no changes anticipated.
- Did NorthWestern identify any fish stranding during 2.5 foot drawdown? NorthWestern responded none observed during 2022 testing because study only went down to 1.8 ft.
- Why did NorthWestern use 1.8 feet in study of 2.5 foot drawdown? NorthWestern explained that it went with what the plant required at the time.
- What is NorthWestern's proposed operation plan during high water? NorthWestern confirmed flexible operations may be needed during high water.
- Will NorthWestern consider limiting drawdown to 1 foot from Memorial Day to Labor Day? NorthWestern confirmed the system needs the capability throughout the year.
- Will NorthWestern consider other limits to its proposal, such as limiting any single event to a 1.5 foot drawdown with a maximum drawdown of 2 feet? NorthWestern acknowledged this recommendation.

EVENING MEETING

Hydraulic Model Study

- What would be the optimal velocity? NorthWestern explained the CFD models and how they are analyzed to find optimum "attractant" flow at the ladder. FERC added that when looking at literature review, the velocity of 14 fps was the limit for most fish to move upstream.

Environmental Justice Study

- What is the basis for the environmental justice requirement? NorthWestern explained FERC requested the study because it is following new Biden Administration requirements.

Operations Study

- Is the reservoir level fluctuated to its maximum level today? NorthWestern responded that the current license allows using 4' of the reservoir but the proposal is to only use 2.5 ft, thus reducing operating limit by 1.5 ft.
- Why did NorthWestern not present the 2021 data on fish stranding? NorthWestern indicated the 2021 data was presented in the Initial Study Report and meeting last year.
- Was there stranding at 2.5 ft down? NorthWestern said there was some stranding observed at this level. Below that level more fish were stranded as documented in the Initial Study Report.
- Were there recreation surveys of Wild Goose Landing? Yes. Results presented in the Initial Study Report. FERC mentioned all study reports are available on NorthWestern's Relicensing website.
- Can fluctuations be limited to winter months to avoid boat waves causing erosion under his dock when the reservoir is down? NorthWestern reiterated the need for flexible generation is year-round. Also, pointed out boat wave rules are the jurisdiction of FWPs.