United States Department of the Interior

NATIONAL PARK SERVICE
Alaska Region
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January 13, 2014

Kimberly D. Bose
Federal Energy Regulatory Commission (FERC)
888 First Street, N.E.
Washington, D.C. 20426

Subject: NPS preliminary comments and recommendations on subsequent Draft License Application and Preliminary Draft Environmental Assessment for Federal Energy Regulatory Commission (FERC) Project No. 13563-001, Sweetheart Lake Hydroelectric Project

Dear Secretary Bose:

The National Park Service's (NPS's) Hydropower Assistance Program has reviewed 1) Juneau Hydropower Incorporated's (JHI's) Subsequent Draft License Application (DLA), tendered on October 15, 2013, and 2) JHI's successive Preliminary Draft Environmental Assessment (PDEA), also dated October 15, 2013. NPS's comments on the DLA and NPS's preliminary license recommendations for this project are as follows:

The Secretary, acting through the NPS, has special responsibilities over outdoor recreation and cultural resources of the United States. These responsibilities include evaluation of recreational resources; and assuring effective and beneficial use and management of such resources through coordination and consultation with federal, state, tribal and local government agencies, 16 U.S.C. § 460*l* to 460*l*-22. The Department also has special responsibilities under the National Historic Preservation Act, 16 U.S.C. § 470 to 470*w*-6, the National Trails System Act, 16 U.S.C. § 1246(a), and the Wild and Scenic Rivers Act, 16 U.S.C. § 1271 to 1287. Federal Power Act regulations mandate that applicants consult with NPS on proposed hydropower projects, 18 CFR 4.38(a) and 16.8(a), and identify topics for consultation, 18 CFR 4.51(f)(4) to (6), including recreational resources, historic and archaeological value, land management, and aesthetics.

The proposed Sweetheart Lake hydroelectric project would consist of:

(1) the existing Lower Sweetheart Lake, raised from the existing surface water elevation of 551 feet Mean Lower Low Water (MLLW) with a surface area of 1,414 acres, to a new minimum surface water elevation of 576 feet MLLW with a surface area of 1,449 acres, and a maximum water surface elevation of 636 feet MLLW with a surface area of 1,702 acres;

(2) a new, roller compact concrete dam 111-foot-high (from the downstream toe to the top of dam) 280-foot-long, 100 foot-thickness at the base constructed at the outlet of Lower Sweetheart Lake;
(3) an intake on the dam connecting to a 15 X 15 foot straight leg horse shoe, 9,625-foot-long unlined tunnel;
(4) a 9-foot-diameter, approximately 870-foot-long penstock installed within the lower portion of the tunnel, with approximately another 150 feet of buried 7-foot diameter penstock and manifold connecting to the powerhouse;
(5) a powerhouse containing three new Francis generating units (6.6 megawatts (MW) each) with a total installed capacity of 19.8 MW;
(6) a new natural appearing tailrace discharging flows to Sweetheart Creek;
(7) a switchyard with a salmon smolt re-entry pool located adjacent to the powerhouse;
(8) a new approximately 4,400-foot-long road from the powerhouse to the dock/landing site;
(9) a new dock/landing site for boat, seaplane, barge/landing craft ramp and/or helicopter access, located on the east shore of Gilbert Bay;
(10) a quarry adjacent to the marine facilities that will be refilled with tunnel spoils and provide a base for a caretaker facility and a proposed US Forest Service cabin;
(11) a new 138-kilovolt (kV) transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments);
(12) a new 10,400 foot 12.47 kV service transmission line extending from the dam site to the marine facility; and
(13) appurtenant facilities.

Consultation with NPS

To date, JHI and NPS have consulted throughout the Alternative Licensing Process for this project on the Communications Protocol, PAD, Scoping Documents, recreation and aesthetics study plans, study plan results, and previous DLA and PDEA. NPS believes that JHI's efforts to document the baseline condition of these resources have been sincere and that, in general, its studies of these resources have yielded useful information that will support the development of license terms and conditions to protect, mitigate and enhance these resources. The NPS recognizes, however, that the primary land manager of the proposed project area, the U.S. Forest Service (USFS), possesses Section 4(e) mandatory conditioning authority that supersedes any NPS recommendations in the case of conflict. We also recognize that the project's compatibility with the USFS's Semi-Remote and Timber Harvest Land Use Designations for the area, along with the Roadless Rule, has not yet been determined.

Subsequent Preliminary Draft Environmental Assessment and Draft License Application

The revised PDEA includes much of the information the NPS has previously requested about the project's likely impacts. However, we note that there are still deficiencies in the information provided; in particular, the visual impact assessment, although much improved, still lacks needed detail; and without knowing whether a recreation cabin will be built or not, it is not possible to determine whether it or other recreational measures would satisfy impact mitigation needs. Also,

text is still missing from parts of the revised DLA and PDEA, e.g. a missing section reference on page B-21 of the DLA (see the paragraph after "1") near the bottom of the page.

As previously stated in our comments on the original PDEA and DLA, until these deficiencies are remedied, NPS will be unable to develop final recommendations for license terms and conditions to protect recreation and aesthetics resources.

Our specific comments on the PDEA and DLA are as follows:

Minimum Flow Releases

The applicant proposes to release a minimum instream flow of 3 cubic feet per second (cfs) to the bypass reach. While the PDEA documents development of a flow model from gage data and a reference watershed, and states that accretion flows contribute another 3% to flows in the bypass reach (presumably at the mouth of this reach), it is not clear what the decision to release 3 cfs was based on, or whether alternatives were considered. If they were, this is not described in Exhibit B of the DLA. Also, the applicant only provides information on the lowest expected mean *monthly* minimum flows in the bypass reach with the 3 cfs release (see PDEA pp 222-223). Monthly flow averages are not particularly useful in assessing the potential impacts of low flows on biota or aesthetics. Daily or hourly minimums would be far more useful.

What are the likely environmental consequences of the proposed 3 cfs release? The PDEA implies that Dolly Varden populations (which it claims consist of fish washed into Sweetheart Creek from the lake) might not survive. If this would be the case, the PDEA ought to state it explicitly. The PDEA also suggests that sediment transport flow releases to maintain spawning beds in the anadromous reach might be required, and that sediment size could be monitored. The DLA does not, however, appear include this environmental measure, nor does it include a program to monitor the accumulation of fines in spawning beds. If sediment monitoring and the need for flushing flows would be addressed during development of the proposed Water Management Plan, the PDEA should include this.

Facilities

The applicant proposes to restore the quarry and use this site for a caretaker cabin/shop building, along with a recreational use cabin. However, no details are provided about the schedule for rehabilitating this site, or the methods and materials that would be used (see construction schedule Gantt chart on p. C-2 of the DLA). Assuming the USFS supports its construction, how long after the project is licensed would it be before the recreational cabin is ready for occupancy?

It is not clear from the PDEA whether these uses will be compatible with one another. Will activities at the project buildings create impacts on visitors using the cabin, e.g. will there be noise, artificial lights, or privacy issues? If the caretaker and visitors are to share the same potable water supply, does that mean they would share the same waste facilities? Is a vault toilet or septic field proposed? While re-use of the quarry site would minimize ground disturbance, this may not be the best site for a recreational use cabin.

The applicant's preferred road alignment would place the buried transmission line barely above the mean high tide elevation for almost its entire terrestrial route. Is this wise from a maintenance point of view? What are the likely impacts of high tides and seas caused by coastal storms and tsunamis on the road and buried transmission line? Is land in this region rebounding or subsiding, i.e. what is the rate and direction of sea level change in relation to land elevation change? It would be useful if the applicant could provide examples of the reliability of buried transmission lines (not true submarine cables) in other Southeastern Alaska intertidal environments. Line or road failures would not only have negative impacts on project reliability and safety, but would presumably entail additional excavations in the intertidal zone, causing additional biological, water quality, and aesthetic impacts not described in the PDEA.

The applicant states that the tailrace would be constructed to resemble a natural waterway, with two 90 degree meanders. NPS commends JHI's efforts to naturalize this constructed feature and recommends that a consultant experienced in bioengineering be involved in this design to ensure that the tailrace will actually function to maximize habitat. Likewise, the proposed velocity barrier and wildlife crossing should be designed and revegetated to minimize the adverse visual impacts such man-made structures can have in natural settings where straight lines and large areas of bare grey concrete are not otherwise found.

Recreational Resources

Consistent with our previous comments, NPS continues to assert that it is not valid to conclude that Sweetheart Lake is of low recreational value merely based on difficult access and low current levels of recreational use. The PDEA does not assess impacts on recreation or aesthetics of the dam or lake drawdown. We contend that this information should be included in the project's NEPA analysis so that appropriate protection, mitigation and enhancement measures (PMEs) may be developed.

Aesthetics Resources

While the revised PDEA provides useful visual simulations of many project facilities from vantage points in the middle of Gilbert Bay, it lacks depictions of the road, dock, tailrace, powerhouse, etc. from key observation points and routes closer to shore or on land near the mouth of Sweetheart Creek. Visitors utilizing the dock, potential cabin, as well as those engaged in shore-based fishing, will have a different view than boaters experiencing the more distant vistas depicted in the photo renderings. In addition, there was no assessment of the project's impacts on Sweetheart Lake (dam, shelter, and drawdown zone) or the cascades above the barrier falls. These areas can be seen from planes. In our comments on the original PDEA, NPS requested that the applicant add key observation points (KOPs) for the anadromous reach, but this was not included in the 2013 aesthetics report.

Environmental Measures

DLA Table D-6 and PDEA Table 62 describe the applicant's proposed environmental measures and related costs. Some of this information requires correction or clarification. For example, NPS believes it is inaccurate to claim that various measures, including the smolt tank, buried

transmission line, and natural tailrace, will "improve" the project's aesthetics, when in reality use of a tank v. a line, etc. merely *reduces* (or mitigates) the aesthetic impacts of the project on the pre-construction baseline. Also, many of the measures listed under the table's "Recreation" heading directly benefit project operations and/or non-recreational resources, e.g. the waste management plan, which presumably includes waste associated with project construction and operation, benefits wildlife (bears), and the substantial costs associated with road maintenance also clearly benefit project operations.

It is not clear from the DLA and the PDEA whether the applicant or the USFS would pay for the maintenance of the potential recreational use cabin. Table D-6 includes a budget for this expense, but on p. 26 of the PDEA, the applicant states that the USFS would be responsible. If the applicant proposes to pay the USFS to perform this maintenance, both documents should reflect this. In addition, the PDEA makes it clear that the USFS does not necessarily support construction of the cabin. If so, the DLA should make this uncertainty explicit, and it may not be appropriate to include the cost of cabin construction and maintenance in the Environmental Measures section.

NPS appreciates the opportunity to review the revised PDEA and DLA for this project. If you have questions, please contact Cassie Thomas, NPS Hydro Program coordinator for the Alaska Region at (907) 350-4139 or cassie_thomam@nps.gov.

Sincerely,

/s/

Richard L. Anderson
Alaska Regional External Review Coordinator