



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
650 Capitol Mall, Suite 5-100  
Sacramento, California 95814-4700

July 23, 2021

Low Impact Hydropower Institute  
1167 Massachusetts Avenue  
Arlington, Massachusetts 02476  
[comments@lowimpacthydro.org](mailto:comments@lowimpacthydro.org)

*Electronic transmittal only*

Re: Comments Regarding the Application for Low Impact Certification of the Folsom Dam Hydroelectric Project

Dear Low Impact Hydropower Institute:

NOAA's National Marine Fisheries Service (NMFS) appreciates the opportunity to review the application for Low Impact Certification of the Folsom Dam Hydroelectric Project (Folsom Dam Project). NMFS has jurisdiction over anadromous fish species in California's Central Valley, including salmonids and sturgeon listed under the Endangered Species Act (ESA) and for Pacific Coast salmon under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). NMFS's California Central Valley Office (NMFS CCVO) coordinates with the U.S. Bureau of Reclamation (Reclamation) on operations of its American River Division (including the Folsom Dam Project) through the ESA and MSA consultations on Long-term Operations of the Central Valley Project and State Water Project<sup>1</sup>. NMFS issued a Biological Opinion (under the ESA) in October 2019 (2019 NMFS LTO BiOp) and completed the Essential Fish Habitat consultation (under the MSA) in January 2020. The Folsom Dam Project is most likely to affect California Central Valley steelhead (CCV steelhead, ESA-listed as threatened) and fall-run Chinook salmon (managed Pacific Coast salmon species under the MSA).

NMFS provides the following comments and suggestions for your consideration while evaluating Reclamation's application for Low Impact Certification for the Folsom Dam Project. These comments are based on our review of the "Folsom Nimbus LIHI Application 2021 – March 5 2021 final" document; all page and figure references are to the application document unless noted otherwise.

1. General Comments:

- A. NMFS appreciates that Reclamation tries to operate the American River Division to minimize effects to fish species within other constraints on operations, but despite those good faith efforts, NMFS does not concur that the Folsom Dam Project is a "low-impact" project.
- B. It is challenging to isolate impacts of the Folsom Dam Hydroelectric Project due solely to the hydropower facilities. Operations for power generation would likely occur very

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<sup>1</sup> Background and links to associated regulatory documents are available at: <https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/water-operations-central-valley-california>



differently than when considered as part of overall Folsom operations. The full summary of effects of the American River Division is provided in section 8.5 (pages 338-366) of the 2019 NMFS LTO BiOp

(<https://www.fisheries.noaa.gov/resource/document/biological-opinion-reinitiation-consultation-long-term-operation-central-valley>). The effects most directly affiliated with power generation are the unsuitably warm water temperatures in the summer (for rearing juvenile CCV steelhead) and fall (for rearing juvenile CCV steelhead, as well as fall-run Chinook salmon spawning and egg incubation), since the coldest water available in Folsom Reservoir at that time can only be released by bypassing power generation. Reclamation has approved power bypass operations during the fall to help drop water temperatures in the American River below Nimbus Dam, but approval of power bypass operations is not a commitment in the current operations proposed by Reclamation and evaluated in the 2019 NMFS LTO BiOp.

- C. The application improperly truncates Zone 4 (the “zone of effect” for the “regulated riverine reach” of the Lower American River; see Table 2 on p. 19, Figure 2 on p. 20 and Figure 5 on p. 23) by ending it upstream of Sunrise Boulevard. CCV steelhead and fall-run Chinook salmon use the Lower American River from Nimbus Dam all the way to the confluence with the Sacramento River during some times of year, and over-summering salmonids may be distributed as far downstream as Watt Avenue.
  - D. The description of the Flow Management Standard (FMS) on pages 25-28 of the application is confusing, and significant elements (such as the representation of the Minimum Release Requirements in Figure 7 on p. 27 and the bullets at the top of p. 28) are inaccurate. The application appears to be describing an outdated FMS that is not consistent with the operations proposed by Reclamation and evaluated in the 2019 NMFS LTO BiOp.
2. Comments specific to eligibility criteria
- A. Ecological Flow Regimes
    - i. The “**A-2: Agency Recommendation**” standard stated in the application may **be met** as stated in the application, but NMFS is concerned that the application appears to be describing an outdated FMS. See general comment 1.d, above. NMFS recommends that the Low Impact Hydropower Institute (LIHI) work with Reclamation to correct the FMS description before evaluating the application.
  - B. Water Quality
    - i. Page 7 of the LIHI Handbook says “In all cases, if any waterbody directly affected by the facility has been defined as being water quality limited (for example, included on a state list of impaired waters that do not fully support designated uses), the applicant must demonstrate that the facility has not contributed to the impairment in that waterbody.”
      - a. The application acknowledges that the lower American River (from Nimbus Dam to the confluence with the Sacramento River) is on the Clean Water Act 303(d) list ([https://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2012.shtml?wbid=CAR5192100019980813142021](https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml?wbid=CAR5192100019980813142021)), yet attributes all

impairments to historical mining, though mining seems relevant just to the mercury issue. The application does not mention other downstream reaches affected by American River operations, or address whether or not Folsom Dam operations contribute to the impairments.

- ii. The **“B-2: Agency Recommendation” standard stated in the application is not met**, since the description of that standard on page 7 of the LIHI Handbook includes, “The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility.”
  - a. While perhaps not expected at the time of application, water temperatures during summer 2021 (see water temperature data from USGS 11446500 at [https://waterdata.usgs.gov/usa/nwis/uv?site\\_no=11446500](https://waterdata.usgs.gov/usa/nwis/uv?site_no=11446500)) have been trending high. We question whether the statement in the application is likely to be true for all water year types.

#### C. Upstream Fish Passage

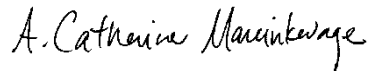
- i. The **“C-4: Acceptable Mitigation” standard stated in the application is not met**, since the description of that standard on p. 8-9 of the LIHI Handbook includes, “In all cases, resource agencies must approve the mitigation measures and must have determined that the total benefits provided by such mitigation measures equal or exceed the benefits of providing upstream passage provisions at the facility, measured in terms of reproductive success (for example, numbers of fish produced) or area of suitable fish habitat provided (compared to that lost upstream of the facility barrier).”
  - a. NMFS has not made such a determination.
  - b. The application straightforwardly acknowledges the absence of fish passage at Nimbus Dam and Folsom Dam; the inclusion of details about the ladder improvement into Nimbus Fish Hatchery is irrelevant as the ladder only goes into the hatchery, and does not provide any passage above the dam(s).

#### D. Threatened and Endangered Species Protection

- i. The **“F-3: Recovery Planning and Action” standard stated in the application is not met**, since the description of that standard on p. 8-9 of the LIHI Handbook includes “The facility is in compliance with relevant conditions in a species recovery plan, with relevant conditions in an incidental take permit or statement, biological opinion, habitat conservation plan, or similar government document...”
  - a. While perhaps not expected at the time of application, water temperatures during summer 2021 (see water temperature data from USGS 11446500 at [https://waterdata.usgs.gov/usa/nwis/uv?site\\_no=11446500](https://waterdata.usgs.gov/usa/nwis/uv?site_no=11446500)) have been trending high. We question whether the statement in the application is likely to be true for all water year types.

NMFS acknowledges the complexity of Reclamation's operations of the American River Division, and that there are some times of year in which the isolated impacts of hydropower generation may be low. However, because it is often difficult to tease apart the effects of hydropower generation from overall Folsom Dam Project operations, and because improvement of summer/fall water temperatures is often limited by power generation needs, **NMFS recommends against certification of the Folsom Dam Project as "Low Impact."** NMFS would be happy to provide further technical assistance to LIHI during your evaluation of this application. Please contact Barb Byrne, of my staff, at (916) 930-3600 or [barbara.byrne@noaa.gov](mailto:barbara.byrne@noaa.gov) if you have any questions about our comments.

Sincerely,



Cathy Marcinkevage  
Assistant Regional Administrator  
California Central Valley Office

cc: Copy to file: ARN 151422-WCR2021-SA00099

Electronic copy only:

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