

Idaho Department of Environmental Quality
Draft §401 Water Quality Certification

HELLS CANYON COMPLEX FERC PROJECT NO. 1971-079

Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (IDEQ) has authority to review Federal Energy Regulatory Commission (FERC) licenses and issue water quality certification decisions.

On July 29, 2016, Idaho Power Company (IPC) submitted an application to IDEQ for certification pursuant to Section 401 of the CWA of the issuance of a new license authorizing the continued operation of the Hells Canyon Complex, a 3-dam hydroelectric project comprised of the Brownlee Project, the Oxbow Project, and the Hells Canyon Project (collectively FERC Project No. 1971-079, hereafter “Project”). The Project is located on the Snake River. The stretch of the Snake River where the Project is located is in both Idaho and Oregon. Therefore, IPC submitted an identical application for certification to the Oregon Department of Environmental Quality. (The Idaho and Oregon Departments of Environmental Quality are hereinafter separately referred to as “IDEQ” and “ODEQ” and collectively referred to as the “DEQs”)

IPC’s application for certification includes measures proposed to ensure the operation of the Project complies with Oregon and Idaho Water Quality Standards, and the Snake River-Hells Canyon Total Maximum Daily Load (“TMDL”). The TMDL was jointly issued by the DEQs in 2004 and includes allocations to IPC and other sources to attain compliance with Oregon and Idaho Water Quality Standards. In the TMDL, the DEQs determined that the Project contributes to violations of Water Quality Standards related to nutrients and dissolved oxygen, salmonid spawning temperature and total dissolved gas and therefore provided allocations to IPC with respect to compliance with these Water Quality Standards. Subsequent to the TMDL, the DEQs have determined that IPC contributes to a violation of the applicable dissolved oxygen criteria below the Hells Canyon Dam.

Based upon its review of the above-referenced application and other relevant information, IDEQ certifies that if IPC complies with the terms and conditions imposed by the FERC license along with the conditions set forth in this water quality certification, then there is reasonable assurance the operation of the Project will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02), the TMDL’s allocations, and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits.

Antidegradation Review

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier 1 Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier 2 Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier 3 Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier 1 protection for that use, unless specific circumstances warranting Tier 2 protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

Pollutants of Concern

Pollutants of concern related to the Project are temperature, dissolved oxygen, nutrients, mercury and total dissolved gas.

Receiving Water Body Level of Protection

The Project includes a number of Assessment Units (AUs).

Brownlee Reservoir, AU ID17050201SW003_08 is designated for cold water aquatic life (CWAL), primary and secondary contact recreation (PCR/SCR) and domestic water supply (DWS). According to the 2012 Integrated Report (IR), this AU is not fully supporting CWAL and recreational uses.

Oxbow Reservoir, AU ID17050201SW002_08, is designated for CWAL, PCR and DWS. According to the 2012 IR, this AU is not fully supporting CWAL and DWS and recreational uses are not assessed.

Hells Canyon Reservoir, ID17050201SW001_08, is designated for CWAL, PCR, SCR and DWS. According to the 2012 IR, this AU is not fully supporting CWAL and recreational uses.

The Snake River downstream of the Hells Canyon Dam to Sheep Creek, AU ID17060101SL003_08 is designated for CWAL, salmonid spawning (SS), PCR and DWS. According to the 2012 IR, this AU is not fully supporting CWAL, and SS, DWS and recreational uses are not assessed.

The 2012 IR lists recreational uses in Oxbow Reservoir and the Snake River Hells Canyon Dam to Sheep Creek AUs as not assessed. When an AU is listed on the most recent approved IR as not assessed, DEQ must determine whether the water body is high quality based upon information available at the time of the proposed new or reissued permit or license. (IDAPA 58.01.02.052.05.b.) Mercury is a pollutant that is relevant to recreational uses (See IDAPA 58.01.02.210 which includes human health criteria applicable to recreational uses). These AUs are not on the 2012 IR as impaired for Mercury. However, sufficient mercury fish tissue data exists to propose listing Oxbow Reservoir and Snake River HCD to Sheep Creek (0.339 and 0.328 mg/kg mean mercury concentration is fish > 200mm, respectively) in the draft 2014 Integrated Report for mercury impairment (page 557). Therefore, based upon this information, DEQ will provide tier 1 protection only for recreational uses in Oxbow Reservoir and the Snake River Hells Canyon Dam to Sheep Creek.

In sum, DEQ will provide tier 1 protection only for all the AUs relevant to the Hells Canyon Complex.

Protection and Maintenance of Existing Uses (Tier 1 Protection)

As noted above, a Tier 1 review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with narrative and numeric criteria of the Idaho WQS, as well as other provisions of the WQS such as Section 055, which addresses water quality limited waters.

The numeric and narrative criteria in the WQS are set at levels that ensure protection of designated beneficial uses. The 401 certification includes conditions that require IPC implement measures to meet the narrative and numeric criteria in the WQS. With respect to salmonid spawning temperature criteria, the Project is solely responsible for the Snake River exceeding the applicable criteria during the fall chinook spawning period below the Hells Canyon dam. With respect to total dissolved gas, the Project is solely responsible for violating the TDG criteria below the 3 dams in the complex. For these pollutants and criteria, the certification includes requirements that provide a reasonable assurance that the operation of the complex will meet criteria. With respect to nutrients and dissolved oxygen, the violation of criteria is attributed to a number of sources, including the Project. In these circumstances, the certification includes requirements that provide reasonable assurance that IPC will meet its responsibility for contributing to the violation. IPC's responsibility for contributing to a violation with respect to nutrients and dissolved oxygen, temperature and total dissolved gas is outlined in the TMDL discussed below.

The AUs at issue in the Hells Canyon Complex are also impaired as a result of the violation of applicable mercury criteria. There has been no TMDL prepared with respect to mercury or

methylmercury. The contribution, if any, of the Project to a violation of mercury and methylmercury criteria is unknown at this time. The certification requires the continued study of mercury and methylmercury and the influence of the Project. The certification also requires IPC to produce for approval and implement a methylmercury management plan to address the role, if any, of the Project in the violation of criteria. These provisions provide reasonable assurance of compliance with the applicable mercury and methylmercury criteria.

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. A central purpose of TMDLs is to establish allocations, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharges must be consistent with the allocations in a TMDL. IDAPA 58.01.02.055.05.

As noted, the TMDL contains allocations to IPC and the Project for temperature, dissolved oxygen and nutrients and total dissolved gas. The conditions in the certification require IPC to take actions to meet the allocations provided in the TMDL, and therefore, address IPC's responsibility for contributing to a violation of criteria for these pollutants.

In summary, the conditions in the certification provide reasonable assurance of compliance with the narrative and numeric criteria in the WQS as well as the applicable allocations in the SR-HC TMDL. Therefore, DEQ has determined the permit will protect and maintain existing beneficial uses in the Snake River in compliance with the Tier 1 provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

Conditions Necessary to Ensure Compliance with Water Quality Standards and Other Appropriate Water Quality Requirements of State Law

I. Project Operation

The proposed operations are as particularly described in Exhibit A, which is incorporated herein its entirety by this reference. In accordance with applicable law, IPC shall notify the DEQs if FERC authorizes modification to these operations so as to allow the DEQs to determine whether such changes may affect compliance with water quality standards.

II. Temperature

- A. **Required Actions.** Idaho Power Company (IPC) shall take the following actions, which are further detailed in the conditions set out below, in order to comply with the TMDL temperature load allocation, and the Oregon and Idaho salmonid spawning criteria (IDAPA 58.01.02.286; OAR 340-041-0028(4)(a)), and Oregon's migration corridor temperature criteria (OAR 340-041-0028(4)(d))] ("applicable temperature criteria"):

1. Implement a Temperature Management and Compliance Plan (TMCP); and

2. Attain the Year 15 and 30 year thermal load reductions (“required thermal benefits”); or attain the TMDL temperature load allocation and applicable temperature criteria as provided in the approved Temperature Alternative Measures Plan (TAMP).
- B. Required Thermal Benefits.** IPC shall attain thermal benefits of 1211.6 billion kilocalories (“bkcal”) at the inflow to the Project by 30 years after the date that FERC issues a new license for the Project. IPC shall maintain the required thermal benefits throughout the term of the FERC license. No later than 15 years after the date that FERC issues the new license, IPC shall attain thermal benefits of 605.8 bkcal at the inflow to the Project. Or, if an alternative measure is implemented, IPC shall attain the TMDL temperature load allocation and applicable temperature criteria as provided in the approved TAMP.
- C. Implementation of the TMCP.**
1. IPC shall implement the TMCP in order to attain the required 15 and 30 year required thermal benefits. The TMCP shall include the Snake River Stewardship Program (SRSP) that is specifically described in Exhibit 7.1-1 of the Application, which by this reference is incorporated in its entirety. The TMCP shall also include a temperature monitoring plan, as described in Section II.D below.
 2. As part of the TMCP, IPC shall implement the SRSP, which includes the development and implementation of measures upstream of the Project in the mainstem of the Snake River and in tributaries to the Snake River, in order to attain the required thermal benefits. The thermal benefits attained by IPC through the implementation of the SRSP shall be determined as described in Section 2.3 of Exhibit 7.1-1 of the Application.
 3. The selection, design, implementation, monitoring and maintenance of specific projects shall be in accordance with Restoration Quality Standards and Guidelines (“Restoration Standards”) developed by IPC and described in Section 2.5.1 and Attachment 1 of Exhibit 7.1-1 of the Application. As part of the annual reporting process set forth in this section II.E below, IPC may propose modifications to the Restoration Standards to reflect information gathered from the implementation of projects. If approved by IDEQ, the modified Restoration Standards shall apply to all SRSP projects constructed after the date the modified Restoration Standards are approved.
 4. SRSP projects that are confirmed to be implemented consistent with the project design and the approved Restoration Standards shall count towards the required thermal benefits. The thermal benefits for a project shall continue to be counted towards the required thermal benefits as long as monitoring establishes that the project is maintained in accordance with the Restoration Standards.

5. As part of the annual and five year reporting set forth in this section II.E below, IPC shall describe the SRSP projects implemented, the status of maintenance on projects, and the thermal benefits IPC attributes to any project. Thermal benefits shall count towards the required thermal benefits if IDEQ, after consultation with ODEQ, concurs that the project has been implemented and maintained in accordance with the Restoration Standards. If IDEQ finds that a project is not implemented or maintained in accordance with the Restoration Standards, or fails the program audits, IPC shall not count the thermal benefits of such project towards the required thermal benefits unless subsequent monitoring shows the project is in compliance. Information obtained from monitoring will be used to inform the thermal benefit calculation for future projects, but will not be used to adjust credits already assigned to existing projects. Following review of the annual and five year reports, IDEQ shall notify IPC of the results of its review of projects, and the amount of thermal benefits claimed by IPC that count towards the required thermal benefits.

D. **Monitoring.** IPC shall monitor projects described in the SRSP and in accordance with the Restoration Standards. Within 90 days of the date of FERC's issuance of a new license for the Project, IPC shall submit to the DEQs for approval a Temperature Monitoring Plan. Once approved by IDEQ, after consultation with ODEQ, IPC shall implement the Temperature Monitoring Plan. IPC may submit proposed revisions to the Temperature Monitoring Plan and, if approved by IDEQ, shall implement the revised plan in accordance with the approval. The Temperature Monitoring Plan shall include the following components:

1. Proposed temperature monitoring locations. Locations shall be proposed that are representative of the Snake River flowing into Brownlee Reservoir, within Brownlee Reservoir, within Oxbow Reservoir, within Hells Canyon Reservoir and below Hells Canyon Dam;
2. Proposed data collection equipment and procedures;
3. Proposed frequency of monitoring;
4. A project-specific *Quality Assurance Project Plan* ("QAPP"); and
5. A proposal for data analysis and reporting.

E. **Reporting.** IPC shall provide the following reports to the DEQs:

1. **Annual Temperature Reports.** At the end of each calendar year following the issuance of the new license for the Project, IPC shall provide an Annual Report that includes but is not limited to the following:
 - a. A description of the SRSP projects implemented in that year, the status of implementation of projects, expected completion date and any other

information necessary to determine if the project has been implemented and maintained in accordance with Restoration Standards. IPC shall include a map showing the location of all projects implemented to date.

- b. The thermal benefits IPC attributes to projects implemented in that year. For projects implemented in prior years, a statement as to whether the project is being maintained in accordance with Restoration Standards and if so, the thermal benefits IPC claims from those projects.
- c. The results of the required monitoring of SRSP projects.
- d. A description of the proposed projects scheduled for implementation in the next year or future years, including IPC's estimate of the projects' aggregate thermal benefits.
- e. An audit review report, including a summary of whether the sites surveyed complied with the acceptance threshold for the audit and any remediation activities if necessary.
- f. The cumulative thermal benefits from that year and past years, and IPC's assessment of whether implementation of the TMCP, including the SRSP, is reasonably likely to achieve the 15 and 30 year required thermal benefits.
- g. A report of daily maximum temperatures and associated data files measured within three miles downstream of Hells Canyon dam, including a comparison between this data and data representing inflow to Brownlee and outflow temperatures in the Snake River below Hells Canyon dam.
- h. IPC may include a request for the DEQs to consider approval of alternative or additional measures, including but not limited to Plan B as described in Section 7.1.2.4.1.1 and Exhibits 7.1-2 and 7.1-3 of the Application. "Alternative Measures" are methods or approaches not included in the TMCP that will provide, or assist in providing, reasonable assurance that the required thermal benefits will be achieved, or in the case of Plan B, reasonable assurance that the TMDL temperature load allocation and applicable temperature criteria will be met. The DEQs shall review such a request as provided in this section II.F below. Such a request shall include the following:
 - i. The basis or reasons why IPC considers Alternative Measures to be necessary or appropriate.
 - ii. A detailed description of the proposed Alternative Measure.
 - iii. An analysis of how the Alternative Measure will provide, or assist in providing, reasonable assurance that the required thermal benefits will be attained.

- iv. A statement of whether the proposed Alternative Measures will cause or contribute to a violation of applicable water quality standards.

2. DEQs Response to Annual Temperature Reports.

- a. The DEQs shall review Annual Temperature Reports to determine whether SRSP projects were implemented and maintained in compliance with Restoration Standards. If IDEQ, after consultation with ODEQ, does not concur that projects were implemented and maintained in compliance with Restoration Standards, IDEQ shall notify IPC of the amount of thermal benefits in that year that shall be counted towards the required thermal benefits.
- b. IDEQ shall notify IPC whether it approves of or rejects any amendment to the TMCP to address issues associated with implementation.
- c. The DEQs shall respond to any Alternative Measures request as provided in this section II.F below.

3. Five Year Temperature Reports. At the end of every fifth calendar year following the issuance of a new license for the Project, IPC shall provide a Five Year Temperature Report that includes the following:

- a. All the required elements of the Annual Temperature Report for that year.
- b. Summary of data analysis, progress on implementation of the TMCP, and program effectiveness during the five year review period.
- c. Identification of any data gaps, program inefficiencies or challenges.
- d. An evaluation of observed changes occurring relative to pre-SRSP project conditions in monitored implemented projects (including vegetation, hydrology, morphology).
- e. A summary and evaluation of changes in applicable laws or regulations related to the regulatory baseline in the SRSP program area that may affect the thermal benefits assigned to projects.
- f. Any proposed changes to Restoration Standards, including changes to modeling of thermal benefits. Any such changes must be approved by IDEQ, after consultation with ODEQ, before implemented by IPC.
- g. Summary of thermal benefits associated with previously implemented projects that were not previously quantified, including any benefits unquantified due to a lack of data or recognized methodology. New benefits not previously quantified can only be counted towards meeting the required thermal benefits if IDEQ, after consultation with ODEQ, approves of the data and methodology for determining such benefits.

- h. Non-temperature benefits calculated, projected or observed specific to projects that have been implemented. This includes a discussion of progress towards meeting the non-temperature related goals of the in-stream work in the mainstem Snake river and the upland sediment reduction program as well as non-temperature benefits of the tributary restoration work. With respect to the upland sediment reduction program, a description of the projects implemented, acreage treated and amount of sediment reduced in the 5 year period.
 - i. Summary of any new SRSP restoration actions and quantification methodologies proposed.
 - j. Estimates of current trajectory of thermal benefits to achieve modeled conditions. A report and consolidation of the previous annual summaries of the progress toward achieving the required thermal benefits, including an analysis and updated assessment of whether the program is reasonably likely to achieve compliance with the 15 and 30 year required thermal benefits.
4. **DEQs Response to Five Year Reports.** The DEQs shall respond to a Five Year Temperature Report as follows:
- a. With respect to information that must or may also be included in the Annual Temperature Reports, the DEQs shall respond as set forth above in this section II.E.2 above.
 - b. IDEQ shall notify IPC whether it approves of or rejects any changes to the Restoration Standards proposed by IPC.
- F. **Alternative Measures.** The process and the standard for determining whether Alternative Measures are required or should be approved are set forth below.
1. **IPC Proposal.** In any Annual or Five Year Temperature Report, IPC may include a request for the DEQs to consider approval of Alternative Measures.
- a. Within 60 days of the receipt of IPC's proposal, the DEQs shall meet with IPC and discuss the proposal and any additional information that may be required by the DEQs in order to make a determination.
 - b. Within 90 days of the meeting and the submission of additional information, whichever occurs later, IDEQ, after consultation with ODEQ, shall notify IPC in writing of its approval or denial of the proposed Alternative Measures. If denied, IDEQ shall specify the basis for the rejection.
 - c. Within 120 days of approval, if any, of the proposed Alternative Measures, IPC shall submit to the DEQs for approval an Alternative Measures Plan, as described below.

2. **DEQs Determination that Alternative Measures are Required.** After the second Five Year Temperature Report, and after any subsequent five year report, the DEQs may determine that Alternative Measures are required in accordance with section II.F.4 below.
 - a. Within 60 days of the receipt of a Five Year Temperature Report, the DEQs and IPC shall meet to discuss the report, whether alternative measures are required and any other issues including but not limited to any additional information that may be required by IDEQ in order to make a determination.
 - b. Within 90 days of the meeting and the submission of additional information, whichever occurs later, IDEQ, after consultation with ODEQ, shall notify IPC if Alternative Measures are required.
 - c. Within 180 days of the notification, IPC shall submit to the DEQs for approval an Alternative Measures Plan, as described below.
3. **Temperature Alternative Measures Plan (TAMP).**
 - a. IPC shall include the following in any Alternative Measures Plan that addresses compliance with applicable temperature criteria:
 - i. Details of the measure to be implemented, including a comparison of the proposed measure to the current SRSP. If IDEQ, after consultation with ODEQ, requires Plan B as the Alternative Measure, the TAMP must provide details with respect to Plan B, including, at a minimum, the manner in which IPC shall determine whether Plan B achieves the TMDL temperature allocation and the applicable temperature criteria.
 - ii. An evaluation of whether the measure may cause or contribute to a violation of applicable water quality standards. The TAMP must include a detailed description of actions needed to avoid a violation of water quality standards.
 - iii. If the construction or implementation of the measure may require permitting or approval by any state or federal agency, a description of the process necessary and the estimated time period to acquire such permitting or approval.
 - iv. A schedule for the implementation of the measure.
 - b. The DEQs shall provide an opportunity for public review and comment regarding any Alternative Measure.
4. **Alternative Measures Standard.**
 - a. IPC shall implement Plan B or other approved Alternative Measures if, taking into account any previously approved revisions to the SRSP, projects

implemented and to be implemented under the SRSP, IDEQ, after consultation with ODEQ, determines that the SRSP does not appear reasonably likely to achieve the year 15 and 30 required thermal benefits. IDEQ, after consultation with ODEQ, may require that Plan B be submitted as the Alternative Measure if it determines that other proposed Alternative Measures, if any, are not likely to achieve the required thermal benefits or otherwise meet the TMDL temperature load allocation and the applicable temperature criteria.

- b. In determining whether to approve an Alternative Measure and TAMP, IDEQ, in consultation with ODEQ, shall consider the following:
 - i. Whether Plan B or the Alternative Measures as presented in the TAMP is reasonable likely to achieve the required thermal benefits or otherwise meet the TMDL temperature load allocation and the applicable temperature criteria.
 - ii. Whether Plan B or the Alternative Measure being considered, operated alone or in combination with other Alternative Measures, after consideration of any mercury or other water quality studies undertaken and any other information IDEQ deems relevant, may cause or contribute to a violation of applicable water quality standards. As provided in this section II.F.3.a above, IPC must include in the TAMP a detailed description of any actions necessary to avoid a violation of water quality standards; and
 - iii. Other issues relevant to the implementation of Plan B or another Alternative Measure, including whether the construction or implementation of the measure may require any permitting or approval by any state or federal agency, including FERC.

5. Implementation of the Temperature Alternative Measures.

- a. Upon IDEQ approval of the TAMP, IPC shall implement the TAMP in accordance with its terms and schedule, including any modifications made by the IDEQ as conditions of its approval.
- b. Unless and until IDEQ approve a TAMP in writing, IPC shall continue to implement the SRSP as set forth in Exhibit 7.1-1 of the Application and in accordance with the conditions of this certification to achieve the required 15 and 30 year thermal benefits.

III. Dissolved Oxygen (DO)—Brownlee Reservoir TMDL Load Allocation.

- A. **Required Actions.** IPC shall take the following actions, in order to comply with the Brownlee Reservoir Snake River Hells Canyon Total Maximum Daily Load Dissolved Oxygen allocation:
1. Implementation of the Riverside Operational Water-Quality Improvement Project (“ROWQIP”) or any approved Alternative Measure; and
 2. Attainment of the TMDL DO allocation by reducing phosphorus loads upstream of Brownlee by 9,343 kg during May through September (153 days) each year for the FERC license term.
- B. **Implementation of the ROWQIP.** Upon the issuance of a new FERC license for the Project, IPC shall continue to implement the ROWQIP as it is described in Section 7.2.1 of the Application, which by this reference is incorporated in its entirety, and in accordance with this 401 certification in order to meet the dissolved oxygen load allocation for the FERC license term unless an Alternative Measure is approved in accordance with subsection III.B.4 below.
1. **Monitoring Plan.** Within 120 days of the issuance of a new FERC license for the Project, IPC shall submit to the DEQs for approval a Monitoring Plan that monitors implementation of the ROWQIP. Once approved by IDEQ, after consultation with ODEQ, IPC shall implement the Monitoring Plan in accordance with its terms and schedule, including any modifications made by IDEQ as conditions of its approval. The Monitoring Plan shall include, at a minimum, a requirement that IPC will monitor for:
 - a. **Total phosphorus** concentrations in Riverside Canal tributary inflows.
 - b. **Total suspended solids** concentration in Riverside Canal tributary inflows.
 - c. **Flow data** collected at the Boise River diversion and other tributary inflow locations.
 - d. Total phosphorus monitoring at river mile 345
 2. **Annual DO Reports.** At the end of each calendar year following the issuance of the new license for the Project, IPC shall provide to the DEQs an Annual DO Report that includes the following information:
 - a. The results of monitoring accomplished in the past year in accordance with the approved monitoring plan;
 - b. Total phosphorus load reduction analysis demonstrating whether the implementation of the ROWQIP attained the DO load allocation, expressed as a total phosphorus reduction, for that year; and

- c. Any suggested changes to the ROWQIP and any Alternative Measures proposed by IPC. As used in this section III, “Alternative Measures” are methods or approaches not included in the ROWQIP that will provide, or assist in providing, reasonable assurance that the DO load allocation described in section III.A above will be achieved. IDEQ shall review such a proposal as provided in this section III.B.4 below. Any such a proposal must include the following:
 - i. The basis or reasons why IPC considers Alternative Measures to be necessary or appropriate;
 - ii. A detailed description of the proposed Alternative Measure;
 - iii. An analysis of how the Alternative Measure will provide, or assist in providing, reasonable assurance that the DO allocation will be attained; and
 - iv. A statement of whether the proposed Alternative Measure will cause or contribute to a violation of applicable water quality standards.
 - d. **DEQ Response to Annual DO Reports.** IDEQ, after consultation with ODEQ, shall respond to Annual DO Reports, if necessary, as follows:
 - i. Within 90 days, IDEQ shall either approve or reject proposed changes to the ROWQIP.
 - ii. IDEQ shall respond to a proposed Alternative Measure as set forth in this section III.B.4 below.
3. **Five Year DO Reports.** At the end of every fifth calendar year following the issuance of a new license for the Project, IPC shall provide a Five Year DO Report to the DEQs that includes the following:
- a. All the required elements of the Annual DO Report for that year;
 - b. Trend analysis of total phosphorus data collected at Brownlee Reservoir inflow; and
 - c. A discussion of how total phosphorus data collected at the inflow to Brownlee Reservoir compares to Snake River Hells Canyon TMDL target of 0.07 mg/L.
4. **Alternative Measures.** The process and the standard for determining whether Alternative Measures are required are set forth below.
- a. **IPC Proposal.** In any Annual DO Report, IPC may include a request for the DEQs to consider approval of Alternative Measures.
 - i. Within 60 days of the receipt of IPC’s proposal, the DEQs shall meet with IPC and discuss the proposal and any additional information that

may be required by the DEQs in order to make a determination whether alternative measures are needed.

- ii. Within 90 days of the meeting or the submission of additional information, whichever is later, IDEQ shall notify IPC in writing of its approval or denial of the proposed Alternative Measures. If denied, IDEQ shall specify the basis for the rejection.
 - iii. Within 120 days of approval of the proposed Alternative Measures, if any, IPC shall submit to the DEQs for approval an Alternative Measures Plan, as described in this section III.B.4.c below
- b. **DEQs Determination that Alternative Measures are Required.** After any Annual DO Report, IDEQ may determine that Alternative Measures are required in accordance with this section III.B.4.d below.
- i. Within 60 days of the receipt of an Annual DO Report, and after consultation with ODEQ, IDEQ shall notify IPC if Alternative Measures are required.
 - ii. Within 120 days of the notification, IPC shall submit to the DEQs for approval an Alternative Measures Plan, as described in this section III.B.4.c below.
- c. **DO Alternative Measures Plan.**
- i. IPC shall include the following in any DO Alternative Measures Plan:
 - a. Details of the measure to be implemented, including a comparison of the proposed measure to the ROWQIP.
 - b. Whether the Alternative Measure being considered, operated alone or in combination with other Alternative Measures, may cause or contribute to a violation of applicable water quality standards, and if so, the alternatives measures plan must include a detailed description of actions needed to prevent a violation of water quality standards.
 - c. If the construction or implementation of the measure may require permitting or approval by any state or federal agency, a description of the process necessary and the estimated time period to acquire such permitting or approval.
 - d. A schedule for the implementation of the measure.
 - e. The DEQs shall provide an opportunity for public review and comment regarding any Alternative Measure.

d. Alternative Measures Standard.

- i. IPC shall implement Alternative Measures, such as a measure to directly supplement dissolved oxygen in Brownlee Reservoir, if, taking into account any previously approved revisions to the ROWQIP, and after consultation with ODEQ, IDEQ determines that the ROWQIP is currently not attaining the DO load allocation or is not reasonably likely to attain the DO load allocation in the future.
- ii. In determining whether to approve an Alternative Measures and DO Alternative Measures Plan, the DEQs shall consider the following:
 - a. Whether the Alternative Measure is reasonably likely to attain the dissolved oxygen load allocation;
 - b. Whether the Alternative Measures being considered, operated alone or in combination with other Alternative Measures, may cause or contribute to a violation of water quality standards, and if so, whether there are any actions that can be undertaken to ensure no such violation occurs; and
 - c. Other issues relevant to the consideration of the Alternative Measure, including whether the construction or implementation of the measure may require any permitting or approval by any state or federal agency, including FERC.

e. Implementation of the DO Alternative Measures Plan.

- i. After consultation with ODEQ and upon IDEQ's approval of the DO Alternative Measures Plan, IPC shall implement the plan in accordance with the approved plan's terms and schedule, including any modifications made to the plan by IDEQ as a condition of approval.
- ii. Unless and until IDEQ approve a DO Alternative Measures Plan, IPC shall continue to implement the ROWQIP as set forth in Section 7.2.1 of the Application and in accordance with the conditions of this certification to achieve the DO load allocation as described in this section III.A above.

IV. DO—DO Criteria Below Hells Canyon Dam.

- A. **Required Actions.** IPC shall take the following actions, that are further detailed in the conditions set out below, in order to comply with the applicable DO criteria (IDAPA 58.01.02.250.f.i; OAR 340-041-0016):

1. IPC shall install and operate the distributed aeration systems on turbine units 1 through 4 at the Brownlee Powerhouse as described in Section 7.2.2 of the Application, which by this reference is incorporated in its entirety.
 2. IPC shall test each system following installation.
 3. Between July 1 and December 31 during the term of the FERC license, IPC shall add as much additional oxygen as possible or increase DO in the outflow from the Hells Canyon Dam by an average of 1.4 mg/L, whichever is greater, until any further addition or increase would cause an exceedance of the current total dissolved gas criterion set forth in this section VI below. IPC shall calculate this 1.4 mg/L requirement as a minimum of the seven consecutive-day floating average of the calculated daily mean dissolved oxygen concentration.
- B. Monitoring Plan.** Within 90 days of the issuance of a new FERC license for the Project, IPC shall submit to the DEQs for approval a DO Water Quality Monitoring Plan. Once approved by IDEQ, after consultation with ODEQ, IPC shall implement the monitoring plan in accordance with the approval. The DO Water Quality Monitoring Plan must, at a minimum, include the following components:
1. A description of the method IPC will use to determine whether the distributed aeration systems are achieving the required increase in DO.
 2. Identification of DO monitoring locations. IPC shall monitor DO at locations that are representative of the Snake River flowing into Brownlee Reservoir, and within Brownlee Reservoir, Oxbow Reservoir, Hells Canyon Reservoir and within three miles downstream of the Hells Canyon Dam.
 3. Identification of downstream monitoring locations for intergravel dissolved oxygen. IPC shall monitor for intergravel DO below Hells Canyon Dam at sampling locations that include, at a minimum, two sampling locations within 10 miles downstream of the Hells Canyon Dam.
 4. Proposed data collection procedures including description of equipment, methods and frequency of monitoring.
 5. A project-specific *Quality Assurance Project Plan* (QAPP); and
 6. A proposal for data analysis.
- C. Annual Outflow DO Reports.** At the end of each calendar year following the issuance of the new license for the Project, IPC shall provide to the DEQs an Outflow DO Annual Report that includes the following information:
1. Updates on the installation and testing of the distributed aeration systems currently scheduled for installation by mid-year 2019;

2. The results of monitoring accomplished in the year in accordance with the approved Monitoring Plan;
 3. An analysis regarding whether the systems are achieving or are anticipated to achieve the required increase in DO; and
 4. A discussion of how aeration affects total dissolved gas concentrations in the Snake River within and below the Project.
- D. **Alternative Measures.** If, after any Annual Outflow DO Report, the DEQs determine that the distributed aeration systems are not achieving or will likely not achieve an increase in DO in the outflow of Hells Canyon Dam of at least an average of 1.4 mg/L during the applicable period, then IDEQ shall notify IPC that Alternative Measures are required. Within 120 days of the notification, IPC shall submit to the DEQ for approval an Alternative Measures Plan.
1. IPC shall include the following in any Alternative Measures Plan:
 - a. Details of the measure to be implemented, including a comparison of the proposed measure to the proposed distributed aeration systems;
 - b. An evaluation of whether the measure may cause or contribute to a violation of applicable water quality standards, and if so, whether there are any actions that can be undertaken to ensure no such violation occurs;
 - c. If the construction or implementation of the measure may require permitting or approval by any state or federal agency, a description of the process necessary and the estimated time period to acquire such permitting or approval; and
 - d. A schedule for the implementation of the measure.
 2. The DEQs shall provide an opportunity for public review and comment regarding any Alternative Measures Plan, prior to approving the plan.
 3. Upon IDEQ approval of the Alternative Measures Plan, after consultation with ODEQ, IPC shall implement the plan in accordance with the approved plan's terms and schedule, including any modifications made to the plan by the IDEQ as a condition of approval.
 4. Unless and until the IDEQ approve an Alternative Measures Plan, IPC shall continue to operate the distributed aeration systems as set forth in this section IV.A.3 to achieve the required increase in DO in the outflow from Hells Canyon Dam.

V. Oxbow Bypass Destratification

- A. **Required Actions.** IPC shall take the following actions, which are further detailed in the conditions set out below, to comply with applicable DO criteria (IDAPA 58.01.02.250.f.i; OAR 340-041-0016).
- B. **Oxbow Bypass Destratification Operating Plan.** Within one year of the issuance of the new FERC license for the Project, IPC shall submit to the DEQs for approval the final Operating Plan for a destratification system. The system shall address thermal stratification in the deep pool of the Oxbow Bypass and the resulting anoxic conditions by introducing sufficient mixing (using diffused air bubbles) to prevent thermal stratification and development of anoxic conditions in the deep pool. The Oxbow Bypass Destratification Operating Plan shall include:
 - 1. Final design plans;
 - 2. Parameters and requirements for operation and expected performance;
 - 3. A monitoring plan to determine whether the system is meeting performance goals;
 - 4. Adaptive management protocols; and
 - 5. A Reporting schedule.
- C. **Installation and Operation of the System.** Within 6 months of DEQ's approval of the Oxbow Bypass Destratification Operating Plan, IPC shall install the system in accordance with the approved design and thereafter operate the system for the life of the Project license in accordance with the approved Operating Plan.

VI. Total Dissolved Gas (TDG).

- A. **Required Actions.** IPC shall take the following actions, which are further detailed in the conditions set out below, to comply with applicable TDG criteria (IDAPA 58.01.250.01.b and 300; OAR 340-041-0031(2)) and the TMDL load allocations:
 - 1. IPC shall meet and maintain a TDG level of less than 110% of saturation at the point of sample locations defined in this section VI.B.2 below, except when flows exceed the ten-year, seven-day average flood.
 - 2. IPC shall install and implement flow deflectors as described in Section 7.3.1.2 - .4 of the Application, which by this reference is incorporated in its entirety.
 - 3. IPC shall continue preferential Brownlee dam upper gate spill until the flow deflectors are installed and operating.
- B. **TDG Operating Plan.** Within 90 days of the issuance of the new FERC license for the Project, IPC shall submit to the DEQs a TDG Operating Plan that includes:

1. A proposed schedule for the submittal for approval of the design plans to FERC, and installation of flow deflectors at the Brownlee Dam spillway, the Oxbow Dam spillway and the Hells Canyon sluiceway;
 2. A monitoring plan to determine whether the system is meeting the applicable criteria and load allocation. The monitoring plan shall include, at a minimum, monitoring of TDG concentrations during spill events, specific locations to define point of sampling location below each dam for determining compliance, methodology and equipment for monitoring;
 3. Adaptive management measures as described in Section 7.3.2 of the Application, which is incorporated here in its entirety by this reference; and
 4. A Reporting schedule.
- C. **Installation and Operation of the System.** In accordance with the schedule in the approved TDG Operating Plan, IPC shall install the deflectors; and IPC shall monitor in accordance with the approved TDG Operating Plan to determine if TDG criteria and the load allocations are met at sampling locations defined in the monitoring plan.
- D. **Alternative Measures.** If IDEQ notifies IPC that monitoring indicates that TDG criteria and allocations are not being met, then within 120 days of such notification IPC shall submit to the IDEQ proposed Alternatives Measures and an Alternative Measures Plan to address compliance with applicable criteria and allocations. IPC shall implement the plan in accordance with the approved plan terms and schedule, including any modifications made to the plan by IDEQ as a condition of its approval. Unless and until IDEQ approves an Alternative Measures Plan, IPC shall continue to meet conditions set forth in this section VI.A above.

VII. Harmful Algal Blooms (HABs).

- A. **Required Actions:** IPC shall take the following actions, which are further detailed in the conditions set out below, to comply with the applicable criteria (OAR 340-041-0007(10), (12) and (13); IDAPA 58.01.02.200.05 and .06).
1. Within 90 days of issuance of the new FERC license, IPC must submit to the DEQs a HAB monitoring plan. At minimum, the HAB monitoring plan must include:
 - a. Identification of times and locations of high recreational activity.
 - b. A minimum of weekly visual monitoring during periods of high recreation.
 - c. Additional quantitative monitoring (e.g. cell counts, species identification, toxin concentration, or other) if visual monitoring indicates potential HABs or as deemed needed by Oregon Health Authority (“OHA”) or IDEQ .

- d. Submission of visual and quantitative monitoring results to the Oregon Health Authority (OHA) and IDEQ.
 - e. Advisory postings at the sampling locations following issuance of an advisory by OHA or IDEQ.
 - f. Additional visual and quantitative monitoring as needed to provide OHA or IDEQ sufficient data to lift the advisory.
 - g. Monitoring shall follow OHA guidelines (Oregon Health Authority P. H., 2015). IDEQ will work with OHA on review of the monitoring plan.
- 2. After consultation with ODEQ and once approved by IDEQ, IPC shall implement the HAB monitoring plan in accordance with IDEQ's approval.
 - 3. IPC shall review and update the monitoring plans every five years to reflect new versions of OHA or IDEQ guidance documents. Updated monitoring plans shall be submitted to the DEQs for review and approval.
- B. Annual HAB Report.** At the end of each calendar year following the issuance of the new license for the Project, IPC shall provide to the DEQs an Outflow DO Annual Report that includes the following information:
- 1. The results of HAB monitoring accomplished in the year in accordance with the approved Monitoring Plan; and
 - 2. Discussion on the HAB species distribution, abundance and longevity.

VIII. Mercury

- A. Required Actions:** IPC shall take the following actions, which are further detailed in the conditions set out below, to comply with the applicable criteria (OAR 340-041-0007(10) and OAR 340-041-0033(1), (2) and (3); IDAPA 58.01.02.210.01)
- 1. IPC shall continue to assist in funding the United States Geological Survey (USGS) mercury and methylmercury study as described in Section 6.6.2.2.1 of the Application, which includes the development of a predictive model.
 - 2. IPC shall update the DEQs annually on the progress of the mercury and methylmercury studies with USGS.
 - 3. If USGS fails to complete the study, then IPC shall complete the study and develop the predictive model.
- B. Methylmercury Reports.**
- 1. At the end of each calendar year following the issuance of the new license for the Project, IPC shall provide to the DEQs a Methylmercury Annual Report that includes the status of **and** any results from the mercury and methylmercury study released by USGS and ambient water quality monitoring.

2. Within 90 days following completion of the Hells Canyon Complex predictive model, whether by USGS or IPC, IPC shall provide the DEQs with a report identifying the key processes that influence methyl mercury production in the Hells Canyon Complex.
- C. **Methylmercury Plan.** Within 180 days following completion of the Hells Canyon Complex predictive model, whether by USGS or IPC, IPC shall propose to the DEQs a methyl mercury management plan to address the Hells Canyon Complex's role in methyl mercury production. After consultation with ODEQ and once approved by IDEQ, IPC shall implement the methyl mercury management plan in accordance with IDEQ's approval.

IX. Introduction or Reintroduction of Fish Species into Idaho Waters. Idaho does not approve of any action connected with the relicensing of the Project that may result in reintroduction or establishing spawning populations of any fish species in Idaho waters. IPC shall take no action that may result in reintroduction or establishing spawning populations of any fish species in Idaho waters in the absence of consultation with, and the express approval of the State of Idaho, in accordance with Idaho Code sections 67-818(5) and 67-6302 and the Idaho State Water Plan Policy 2B.

X. General Conditions.

- A. **Document Submittal and Review Process.** Except as otherwise provided in this certification, IPC shall follow the submittal and review process set forth in this section with respect to all documents required by this certification to be submitted to IDEQ for approval, and this process shall be followed until the document is approved by the IDEQ or the document review time frame has expired.
1. After IPC submits a document, the IDEQ will (a) notify IPC in writing that the document is approved; (b) notify IPC in writing of any deficiencies in the document; or (c) modify the document and approve the document.
 2. If IDEQ notifies IPC of deficiencies in the document, IPC shall submit a document revised to cure those deficiencies within 30 calendar days of receipt of the notice.
 3. The submittal process shall be repeated until the IDEQ notifies IPC that the document is approved. However, IPC's documents shall meet the requirements of this certification no later than 90 days from the IDEQs notification of deficiencies and IPC's failure to develop a IDEQ approved document within such time frame will be considered a violation of this condition of this certification.
 4. Once documents are approved by the IDEQ, IPC shall submit these documents to FERC with a request that such documents be incorporated into and enforceable as a part of the license.

- B. **Certification Compliance Schedules.** If any event occurs that is beyond the IPC's reasonable control and that causes or may cause a delay or deviation in compliance with schedules contained in this section 401 Certification and the required plans, IPC shall immediately notify the DEQs in writing of the cause of delay or deviation and its anticipated duration; the measures that have been or will be taken to prevent or minimize the delay or deviation; and the timetable by which IPC proposes to carry out such measures. It is IPC's responsibility in the written notification to demonstrate to the DEQ's satisfaction that the delay or deviation has been or will be caused by circumstances beyond the control and despite due diligence of IPC. If IPC so demonstrates, the DEQs shall extend times of performance of related activities under this condition, as appropriate. Circumstances or events beyond IPC's control include, but are not limited to, acts of nature, unforeseen strikes, work stoppages, fires, explosion, riot, sabotage, or war. IPC may also consider other circumstances or events as beyond IPC's control. These other circumstances or events may include, but not be limited to, changes in state statutes; delays in the receipt of necessary approvals for construction design or permits; or delays that the DEQs agree IPC would not have been expected to anticipate. These other circumstances or events will only be considered if they are not due to the actions or inactions of IPC. Increased cost of performance or consultant's failure to provide timely reports may not be considered circumstances beyond IPC's control.
- C. **§ 401 Certification Modification.** IDEQ may modify this Certification to add, delete, or alter Certification conditions as necessary and feasible if:
1. Changes in conditions regarding operation of the Project from those described in the Application will affect or might affect compliance with water quality standards and requirements;
 2. There are changes to water quality standards, the TMDL, applicable federal laws or other appropriate requirements of state law; or
 3. Modifications are otherwise authorized under state law.
- D. **Project Changes.** IPC shall notify the DEQs of any change in ownership, scope, or operation of the Project. IPC shall obtain the DEQs' review and approval before undertaking any change to the Project that might significantly affect water quality, including but not limited to changes to Project structures, construction, operations, and flows.
- E. **Project Repair or Maintenance.** IPC shall obtain the IDEQ's review and approval before undertaking Project repair or maintenance activities that might significantly affect water quality. IDEQ may, at IPC request, approve, after consultation with ODEQ, specified repair and maintenance activities on a periodic or ongoing basis.

- F. **Project Inspection.** IPC shall allow the DEQs such access as necessary to inspect the Project area and Project records required by this Certification at reasonable times as necessary to monitor compliance with § 401 Certification conditions.
- G. **Posting of § 401 Certification.** IPC shall post a copy of these Certification conditions in prominent locations at each of the Project powerhouses.
- H. **Water Quality Standards Compliance.** Notwithstanding the conditions of this Certification, no wastes shall be discharged and no activities shall be conducted which will violate state water quality standards.
- I. **Conflict Between Certification Conditions and Application.** To the extent that there are any conflicts between the terms and conditions in this certification and how activities, obligations, and processes are defined in the Application, the terms and conditions in this certification shall control.
- J. **State DEQ Coordination.** Subject to the requirements of their respective state laws, ODEQ and IDEQ shall use their best efforts to cooperatively administer and oversee implementation of their respective § 401 Certifications, including any adaptive management adjustments thereto.
- K. **Dispute Resolution.** In the event of a dispute between IPC and the DEQs, including without limitation a dispute that arises because IPC receives conflicting decisions from the DEQs, regarding implementation of 401 certifications, including any adaptive management adjustments thereto, IPC shall notify the DEQs within thirty (30) calendar days of its actual knowledge of the act, event, or omission giving rise to the dispute. Within thirty (30) calendar days of that notice, IPC shall convene one meeting or conference call to attempt to resolve the dispute at the level of implementing staff for IPC and the DEQs. If the dispute is not resolved within fifteen (15) calendar days after the first meeting or call, IPC shall convene a second meeting or conference call within forty-five (45) calendar days of the first meeting or call to attempt to resolve the dispute at the level of supervisory staff for IPC and the DEQs. If the dispute is not resolved within fifteen (15) calendar days of the second meeting or call, IPC shall give notice to the DEQs that there remains a dispute among these entities. Within a reasonable time, ODEQ and IDEQ shall give notice to IPC of their resolution of the disputed matter, and IPC shall take actions required by the DEQs in this notice. In the event that ODEQ and IDEQ do not agree on a final resolution, ODEQ and IDEQ reserve their respective authorities under the Clean Water Act and state law to make decisions or require actions on disputed matters.
- L. **Project-Specific Oversight Payment.** IPC shall provide to IDEQ an oversight payment sufficient to cover the costs incurred by the agency in administering this 401 certification. IPC shall provide to IDEQ \$110,000 beginning July 1 of each year following issuance of a FERC License in 2016 dollars adjusted according to the

formula below, made payable to State of Idaho, Department of Environmental Quality.

Adjustment

Fee amounts must be adjusted annually, according to the following formula:

$$AD = D \times (CPI-U)/(CPI-U\text{-November 2016})$$

Where:

AD = Adjusted dollar amount payable to DEQ.

D = Dollar amount pursuant to project specific fee above,

CPI- U = the most current published version of the Consumer Price Index-Urban. The CPI-U is published monthly by the Bureau of Labor Statistics of the U.S. Department of Labor. If that index ceases to be published, any reasonably equivalent index published by the Bureau of Economic Analysis may be substituted by written agreement between DEQ and Idaho Power Company.

Payment Schedule

The oversight payment must be paid pursuant to a written invoice from IDEQ. Except as provided below, oversight payment will be due on July 1 of each year following issuance of a FERC License. Idaho Power Company must pay an initial prorated payment to IDEQ within thirty (30) days of license issuance, for the period from the date of license issuance to the first June 30 which follows license issuance.

Expenditure Summary

IDEQ shall, on a biennial basis, provide Idaho Power Company with a summary of project-specific expenditures.

Duration

The payment obligation shall expire 30 years after the first July 1 following the issuance of the new FERC license, unless IDEQ terminates it earlier because oversight for purposes of § 401 Certification is no longer necessary. One year before the expiration of the payment obligation, or earlier if mutually agreed, IDEQ and IPC shall review the need, if any, to modify, extend, or terminate the payment. IPC will pay any Project-specific payment required after such review, including the payment established as a result of any administrative or judicial review in accordance with state law.

Exhibit A – Proposed Operations

Operating Constraint	Brownlee	Oxbow	Hells Canyon
Maximum reservoir elevation	2,077 feet msl	1,805 feet msl	1,688 feet msl
Minimum reservoir elevation	1,976 feet msl	1,795 feet msl	1,678 feet msl
Flood control requirement	ACOE flood-control rule curve requirements	NA	NA
Daily reservoir level fluctuation	3 feet, except 1 foot during 30-day resident fish spawning period (approximately May 21 through June 21)	5 feet, except 10 feet under atypical conditions ¹ (January 1 through December 31)	5 feet, except 10 feet under atypical conditions (January 1 through December 31)
Reservoir target elevation			
June 7	2,069 ft msl or higher	NA	NA
June 8 through July 5	2,075 ft msl	NA	NA
October 21	Fall Chinook program time period ²	NA	NA
Bypass flow (January 1 - December 31)	NA	100 cfs	NA
Ramp-rate restriction	NA	NA	1 foot per hour, both up and down ³
Daily limit between minimum and maximum flows			
December 12 through May 31	NA	NA	none
June 1 through September 30	NA	NA	10,000 cfs 16,000 cfs ⁴
October 1 to October 20	NA	NA	none
October 21 through December 11	NA	NA	no load following ⁵
Minimum flows			
December 12 through May 31	NA	NA	Dependent on the most critical shallow redd ⁶
June 1 through October 20	NA	NA	6,500 cfs 5,000 cfs ⁷
October 21 through December 11	NA	NA	8,000–13,000 cfs

¹ Atypical conditions are when IPC determines that operation of the Hells Canyon Project, which operation may occur automatically or manually, is needed to 1) protect the performance, integrity, reliability or stability of the Applicant's electrical system or any electrical system with which it is interconnected; 2) compensate for any unscheduled loss of generation; 3) provide generation during severe weather or extreme market conditions; 4) inspect, maintain, repair, replace, or improve the Applicant's electrical system or facilities related to the HCC; 5) prevent injury to people or damage to property; or 6) assist in search-and-rescue activities. The typical operating limit would be 5 ft.

² IPC proposes to operate the HCC in compliance with the fall Chinook plan, and the exact start and end times will vary from year to year. The date specified is for modeling purposes only. The reservoir elevation at the initiation of flows under the plan is a function of flow forecasts.

³ IPC proposed that compliance be measured at Johnson Bar, which is located approximately 18 miles downstream of Hells Canyon Dam.

⁴ A limit of 16,000 cfs is proposed for atypical conditions. See *supra* note 1.

⁵ IPC clarified that under the new license the beginning and ending dates of the fall Chinook program would vary.

⁶ Releases under the fall Chinook plan are reduced such that the most critical shallow redd is still protected under load-following conditions below the HCC. The December 12 date was specified for modeling purposes only, since the actual date that fall Chinook spawning is completed can vary.

⁷ The 5,000-cfs minimum flow is proposed for atypical conditions.

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

DRAFT

Barry N. Burnell
IDEQ Water Quality Division Administrator

Date