STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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C.L. "Butch" Otter, Governor
John H. Tippets, Director

March 11, 2016

Jeff Conner
Idaho Power Company
1221 W Idaho Street
Boise, ID 83702

RE: Reference No. NWW-2014-00446
Bayha Island Enhancement Research Project

Dear Mr. Conner,

The Department of Environmental Quality (DEQ) has considered water quality certification for construction related to the referenced project. DEQ is issuing the attached 401 Water Quality Certification subject to the terms and conditions contained therein.

This certification shall remain in effect until December 30, 2017, at which time construction must be completed.

If you have any questions or further information to present, please contact Julia Achabal at (208) 373-0321 or Julia.Achabal@deq.idaho.gov.

Sincerely,

Aaron Scheff
Regional Administrator
Boise Regional Office

JRA/jh

ec: Greg Martinez, COE Boise
Nicole Deinarowicz, DEQ State Office
TRIM 2016AKF8

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Idaho Department of Environmental Quality

Final §401 Water Quality Certification

March 11, 2016

404 Permit Application Number: NWW-2014-00446 Bayha Island Research Project

Applicant/Authorized Agent: Idaho Power Company

Project Location: 2 miles downstream from the Walters Ferry bridge. T01S, R02W, Section 06, NW¼, NW¼ near latitude 43.369899°, longitude -116.626241° in Owyhee County, Idaho.

Receiving Water Body: Snake River

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 (DEQ) has authority to review activities receiving Section 404 dredge and fill permits and issue water quality certification decisions.

Based upon its review of the joint application for permit, received on January 19, 2016, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the activity 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), 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.

This certification shall remain in effect until December 30, 2017, at which time construction must be completed.

Project Description

The proposed research project on the Snake River is designed to increase depth and velocity, reduce surface area, and increase riparian shading for the purposes of reducing summer water temperature and improving habitat conditions for native species. The river bed will be excavated, and excavated material will be used to enlarge the Bayha and Wright Islands. The islands will include habitat and structural diversity as well as create a significant amount of additional floodplain acreage that will receive sufficient moisture to host a composition of plant species typically associated with wetland habitats. Although the project is proposing to fill 1.35 acres of

the existing 2.7 acres of wetlands, there will be an overall increase of wetlands within the project area of 9.7 acres when the project is complete.

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

The primary pollutant of concern for this project is sediment. Idaho Power Company's sampling, however, shows other pollutants present in small amounts in the sediments that will be dredged. Except for sulfides discussed below, none of these pollutants are at levels that suggest a risk to aquatic life when the dredged sediment is redeposited. As part of the Section 401 Water Quality Certification, DEQ is requiring the applicant comply with various conditions to protect water quality and to meet Idaho WQS, including the water quality criteria applicable to sediment. Potential high sulfide material exists in the fine grained material in the top 18 inches of the existing river bed between Bayha Island and the south river bank of the Snake River. This material is to be excavated and placed as bulk fill in the bottom of the fill area and shall be covered with additional clean fill to prevent direct contact with surface water upon project completion.

Receiving Water Body Level of Protection

This project is located on the Snake River within the Middle Snake-Succor Subbasin assessment unit (AU) 17050103SW006_07b (Snake River – Swan Falls to Marsing (RM425)). This AU has

been designated for cold water aquatic life, primary contact recreation and domestic water supply beneficial uses. In addition to these uses, all waters of the state are protected for agricultural and industrial water supply, wildlife habitat, and aesthetics (IDAPA 58.01.02.100).

According to DEQ's 2012 Integrated Report, this AU is not fully supporting the aquatic life beneficial use. Causes of impairment include temperature and phosphorus. The contact recreation beneficial use is fully supported. As such, DEQ will provide Tier 1 protection (IDAPA 58.01.02.051.01) for the aquatic life use and Tier 2 protection (IDAPA 58.01.02.051.02) in addition to Tier 1 for the contact recreation use (IDAPA 58.01.02.052.05.c).

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. The numeric and narrative criteria in the WQS are set at levels that ensure protection of designated beneficial uses.

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. Once a TMDL is developed, discharges of causative pollutants shall be consistent with the allocations in the TMDL (IDAPA 58.01.02.055.05). Prior to the development of the TMDL, the WQS require the application of the antidegradation policy and implementation provisions to maintain and protect uses (IDAPA 58.01.02.055.04).

As part of the Federal Energy Regulatory Commission (FERC) relicensing effort for the Hells Canyon Complex (HCC), Idaho Power Company is exploring the restoration potential of the main stem Snake River habitats between CJ Strike Reservoir and Brownlee Reservoir. The pilot project at Bayha Island is designed to address temperature conditions in the Snake River and ultimately in the HCC, and is the basis for meeting temperature mitigation requirements necessary for 401 Certification of the HCC.

The Bayha Island Enhancement and Research Project is designed to reduce thermal gain by deepening the channel and narrowing surface area, decreasing the area and conditions suitable for macrophyte development, and creating habitat conditions suitable for cold-water aquatic life.

During the construction phase, the applicant will implement, install, maintain, monitor, and adaptively manage best management practices (BMPs) directed toward reducing erosion and minimizing turbidity levels in receiving water bodies downstream of the project. In addition, permanent erosion and sediment controls will be implemented, which will minimize or prevent future sediment contributions from the project area. Dams will span the upstream and downstream ends of the side channel between Bayha Island and the Snake River's southwest bank, isolating the channel from flowing water. Floating silt curtains will be installed around the perimeter of the disturbed area to trap turbid water within the work zone. Excavation and fill will be accomplished using long arm excavators working primarily from dry surfaces. Reintroduction of water into the work area will be done in a controlled manner. Flow rates will be managed at velocities (approximately 3 feet/second) to minimize turbidity.

Approximately 2400 linear feet of channel will be dredged and approximately 51,200 cubic yards of river bed material would be removed from the river. Of this total, approximately 47,800 cubic yards would be re-deposited in the river around Bayha Island increasing the island size by 9.47 acres, enlarging Wright Island by 1.12 acres and filling along the southwest bank opposite of Bayha Island 0.94 acres. The remaining 3400 cubic yards of excavated material is expected to be un-suitable for re-deposition (silts, organic material, clay) back into the river and would be disposed of at an upland location. Potential high sulfide material exists in the fine-grained material in the top 18 inches of the existing river bed between Bayha Island and the south river bank. This material has been found suitable for use in the island building project, so long as they are adequately covered by other clean bulk fill material and not in contact with open water. Other chemicals present in the sediments are at levels that pose no risk to aquatic life or recreational users and, therefore, do not prevent the redeposition of the sediment.

Excavated and imported material is proposed to be placed on the northeast side of Bayha Island. This work area to the north will not be isolated from active flow due to prohibitive depth and velocity conditions. A small kicker cofferdam, made of bulk bags, would be installed at the upstream end of Bayha Island to direct flows away from the live water fill area creating an eddy hydraulic. This will keep turbidity as localized as possible. The bulk bags will be moved downstream as necessary to maintain an eddy hydraulic condition as in-water fill progresses. Work on this side will be limited to durations and conditions that maintain compliance with state water quality standards.

Vegetation will be planted on newly created floodplain surfaces to resemble reference conditions of nearby islands. Temporary construction impacts will be restored at each project site. All disturbed areas will be graded, replanted and reseeded.

As long as the project is conducted in accordance with the provisions of the project plans, Section 404 Permit, and conditions of this certification, then there is reasonable assurance the project will comply with the state's numeric and narrative criteria. These criteria are set at levels that protect and maintain designated and existing beneficial uses. In addition, the project will be consistent with the *Mid-Snake River/Succor Creek Subbasin Assessment and Total Maximum Daily Load, 2004.* This project will not result in any additional sediment or nutrient load to the Snake River. In addition, the temperature in the system is expected to improve as a result of deepening and narrowing the river channel, and by adding stream shade through riparian plantings.

There is no available information indicating the presence of any existing beneficial uses aside from those that are already designated and discussed above; therefore, the permit ensures that the level of water quality necessary to protect both designated and existing uses is maintained and protected in compliance with the Tier 1 provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

High-Quality Waters (Tier 2 Protection)

The Snake River is considered high quality for primary contact recreation. As such, the water quality relevant to this use must be maintained and protected, unless a lowering of water quality is deemed necessary to accommodate important social or economic development.

To determine whether degradation will occur, DEQ must evaluate how the permit issuance will affect water quality for each pollutant that is relevant to primary contact recreation uses of the Snake River (IDAPA 58.01.02.052.06). The primary pollutant of concern is sediment. Sediment, however, is not relevant to recreational uses. The sediment to be dredged and redeposited contains other chemicals that are relevant to recreation uses; other chemicals for which there are human health criteria. This includes antimony, arsenic, mercury, nickel and zinc. The sample results of the sediment were evaluated using the Sediment Evaluation Framework, which is an inter-agency guidance document intended to assist regulatory agencies making decisions regarding, among other things, the in-water redeposition of dredged material. Screening levels for chemicals of concern have been developed which are designed to predict levels of chemicals in dredged material that are protective of benthic and aquatic organisms. The levels of antimony, arsenic, mercury, nickel and zinc are all well below the freshwater screening levels. Moreover, DEQ has no information to suggest that the dredge and redeposition of the sediment will cause an increase in any of these chemicals in the Snake River that would affect recreational users of the River. Therefore, DEQ concludes that the project will not result in degradation as it relates to recreation uses. The provisions in the 404 Permit, coupled with the conditions of this certification, ensure that degradation the Snake River will not occur. Therefore, DEQ concludes that this project complies with the Tier 2 provisions of Idaho's WQS (IDAPA 58.01.02.051.02; 58.01.02.052.06 and 58.01.02.052.08).

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

General Conditions

1. This certification is conditioned upon the requirement that any modification (e.g., change in BMPs, work windows, etc.) of the permitted activity shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401. Such modifications may not be implemented until DEQ has determined whether additional certification is necessary.
2. DEQ reserves the right to modify, amend, or revoke this certification if DEQ determines that, due to changes in relevant circumstances—including without limitation, changes in project activities, the characteristics of the receiving water bodies, or state WQS—there is no longer reasonable assurance of compliance with WQS or other appropriate requirements of state law.
3. If ownership of the project changes, the certification holder shall notify DEQ, in writing, upon transferring this ownership or responsibility for compliance with these conditions to another person or party. The new owner/operator shall request, in writing, the transfer of this water quality certification to his/her name.
4. A copy of this certification must be kept on the job site and readily available for review by any contractor working on the project and any federal, state, or local government personnel.
5. Project areas shall be clearly identified in the field prior to initiating land-disturbing activities to ensure avoidance of impacts to waters of the state beyond project footprints.

6. The applicant shall provide access to the project site and all mitigation sites upon request by DEQ personnel for site inspections, monitoring, and/or to ensure that conditions of this certification are being met.
7. The applicant is responsible for all work done by contractors and must ensure the contractors are informed of and follow all the conditions described in this certification and the Section 404 Permit.
8. If this project disturbs more than 1 acre and there is potential for discharge of stormwater to waters of the state, coverage under the EPA Stormwater Construction General Permit *must* be obtained. More information can be found at http://yosemite.epa.gov/R10/WATER.NSF/NPDES+Permits/Region+10+CGP+resources.

Fill Material

1. Fill material shall be free of organic and easily suspendable fine material. The fill material to be placed shall include clean earth fill, sand, and stone only. Some native river bed material was found to be high in sulfide sediments, but will be suitable for fill material as long as they are adequately covered by 3 to 5 feet of other clean bulk fill material as shown in the drawings.
2. Fill material shall not be placed in a location or in a manner that impairs surface or subsurface water flow into or out of any wetland area.
3. Placement of fill material in existing vegetated wetlands shall be minimized to the greatest extent possible.
4. All temporary fills shall be removed in their entirety on or before construction completion.
5. Excavated or staged fill material must be placed so it is isolated from the water edge or wetlands and not placed where it could re-enter waters of the state uncontrolled.

Erosion and Sediment Control

1. BMPs for sediment and erosion control suitable to prevent exceedances of state WQS shall be selected and installed before starting construction at the site. One resource that may be used in evaluating appropriate BMPs is DEQ's *Catalog of Stormwater Best Management Practices for Idaho Cities and Counties*, available online at http://www.deq.idaho.gov/media/494058-entire.pdf. Other resources may also be used for selecting appropriate BMPs.
2. One of the first construction activities shall be placing permanent and/or temporary erosion and sediment control measures around the perimeter of the project or initial work areas to protect the project water resources.
3. Permanent erosion and sediment control measures shall be installed in a manner that will provide long-term sediment and erosion control to prevent excess sediment from entering waters of the state.
4. Permanent erosion and sediment control measures shall be installed at the earliest practicable time consistent with good construction practices and shall be maintained as necessary throughout project operation.

5. Structural fill or bank protection shall consist of materials that are placed and maintained to withstand predictable high flows in the waters of the state.
6. A BMP inspection and maintenance plan must be developed and implemented. At a minimum, BMPs must be inspected and maintained daily during project implementation.
7. BMP effectiveness shall be monitored during project implementation. BMPs shall be replaced or augmented if they are not effective.
8. All construction debris shall be properly disposed of so it cannot enter waters of the state or cause water quality degradation.
9. Disturbed areas suitable for vegetation shall be seeded or revegetated to prevent subsequent soil erosion.
10. Maximum fill slopes shall be such that material is structurally stable once placed and does not slough into the stream channel during construction, during periods prior to revegetation, or after vegetation is established.
11. To the extent reasonable and cost-effective, the activity submitted for certification shall be designed to minimize subsequent maintenance.

Turbidity

1. Sediment resulting from this activity must be mitigated to prevent violations of the turbidity standard as stipulated under the Idaho WQS (IDAPA 58.01.02). *Any violation of this standard must be reported to the DEQ regional office immediately.*
2. Turbidity shall not exceed background turbidity by 50 nephelometric turbidity units (NTU) instantaneously or more than 25 NTU for more than 10 consecutive days. Turbidity monitoring must be conducted each day during project implementation when project activities may result in turbidity increase about background levels.
3. Visual observation is acceptable to determine whether BMPs are functioning properly. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability, then the permittee must modify the activity or implement additional BMPs (this may also include modifying existing BMPs).
4. Containment measures such as silt curtains, geotextile fabrics, and silt fences must be implemented and properly maintained to minimize instream sediment suspension and resulting turbidity.

In-water Work

1. Work in open water is to be kept at a minimum. Equipment shall work from an upland site, where possible, to minimize disturbance of waters of the state. Where work in open water is performed, appropriate measures must be taken to ensure disturbance to the waters of the state is minimized. **Compliance with the turbidity standard is paramount. Please note that your proposed repetitive work process would result in exceeding the standard and is not an acceptable turbidity management practice.**

2. Fording of the channel is not permitted. Temporary bridges or other structures shall be built if crossings are necessary.
   a. Temporary crossings must be perpendicular to channels and located in areas with the least impact. The temporary crossings must be supplemented with clean gravel or treated with other mitigation methods at least as effective in reducing impacts. Temporary crossings must be removed as soon as possible after the project is completed or the crossing is no longer needed.
3. Heavy equipment working in wetlands (where wetlands are not to be removed) shall be placed on mats or suitably designed pads to prevent damage to the wetlands.
4. Work in waters of the state shall be restricted to areas specified in the application.
5. To minimize sediment transport, stream channel or stream bank stabilization must be completed prior to returning water to a dewatered segment.

Vegetation Protection and Restoration

1. Disturbance of existing wetlands and native vegetation, not identified in the application for removal, shall be kept to a minimum.
2. To the maximum extent practical, staging areas and access points should be placed in open, upland areas.
3. Fencing and other barriers should be used to mark the construction areas.
4. Where possible, alternative equipment should be used (e.g., spider hoe or crane).
5. If authorized work results in unavoidable vegetative disturbance, riparian and wetland vegetation shall be successfully reestablished to function for water quality benefit at pre-project levels or improved at the completion of authorized work.

Dredge Material Management

1. Upland disposal of dredged material must be done in a manner that prevents the material from re-entering waters of the state.

Management of Hazardous or Deleterious Materials

1. Petroleum products and hazardous, toxic, and/or deleterious materials shall not be stored, disposed of, or accumulated adjacent to or in the immediate vicinity of waters of the state. Adequate measures and controls must be in place to ensure that those materials will not enter waters of the state as a result of high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third-party activities.
2. Vegetable-based hydraulic fluid should be used on equipment operating in or directly adjacent to the channel.
3. Daily inspections of all fluid systems on equipment to be used in or near waters of the state shall be done to ensure no leaks or potential leaks exist prior to equipment use. A log book of these inspections shall be kept on site and provided to DEQ upon request.
4. Equipment and machinery must be removed from the vicinity of the waters of the state prior to refueling, repair, and/or maintenance.

5. Equipment and machinery shall be steam cleaned of oils and grease in an upland location or staging area with appropriate wastewater controls and treatment prior to entering a water of the state. Any wastewater or wash water must not be allowed to enter a water of the state.
6. Emergency spill procedures shall be in place and may include a spill response kit (e.g., oil absorbent booms or other equipment).
7. In the event of an unauthorized release of hazardous material or petroleum product, the responsible persons in charge must:
   a. Make every reasonable effort to stop a continuing spill.
   b. Make every reasonable effort to contain spilled material in such a manner that it will not reach surface or ground waters of the state.
   c. Collect, remove, and dispose of the spilled material in a manner approved by DEQ.
   d. Call 911 if the spill cannot be immediately stopped or contained.
   e. Immediately notify the appropriate DEQ Regional Office of the spill during normal working hours. If the spill occurs after normal working hours, and is immediately stopped and contained, notification must be made to the Idaho State Communications Center at 1-800-632-8000. If the released amount meets federal reporting criteria, notification must be made to the National Response Center at 1-800-424-8802.

Right to Appeal Final Certification

The final Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the "Rules of Administrative Procedure before the Board of Environmental Quality" (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Julia Achabal at (208) 373-0321 or julia.achabal@deq.idaho.gov.

Aaron Scheff
Regional Administrator
Boise Regional Office