



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, ID 83706 • (208) 373-0550

Brad Little, Governor
John H. Tippetts, Director

November 12, 2019

Jeff Conner
Idaho Power Company
1221 W. Idaho St.
Boise, Idaho 83702

Re: Reference No. NWW-2019-00196 – Idaho Power Company, Rippee Island, Snake River

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.

If you have any questions or further information to present please contact Kati Carberry at 208-373-0434, or via email at kati.carberry@deq.idaho.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron Scheff".

Aaron Scheff
Regional Administrator
Boise Regional Office

KC:tg

ec: William Schrader, COE, Boise
Loren Moore, DEQ State Office
CM #: 2019AKF106



Idaho Department of Environmental Quality Final §401 Water Quality Certification

November 8, 2019

404 Permit Application Number: NWW-2019-00196 – Idaho Power Company, Rippee Island, Snake River

Individual Permit

Applicant/Authorized Agent: Idaho Power Company

Project Location: latitude 43.395° N, longitude -116.675° W, on the Snake River at River Mile 436 in Canyon and Owyhee Counties, approximately 7.5 miles west of the City of Melba, 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 September 30, 2019, and the Ware Island, Bernard Landing, and Rippee Island, Snake River, Idaho, Sediment Characterization Report, dated April 18, 2019, and subsequent Suitability Determination Memorandum, dated July 29, 2019, 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.

Project Description

The proposed project on the Snake River is designed to reduce the width and increase the depth of the channel along Rippee Island, as well as another adjacent unnamed island. Construction activities will mainly consist of dredging portions of the river channel adjacent to Rippee Island and placing that material on the exterior portions of Rippee Island, adjacent island and into the floodplain of the Snake River. These changes are intended to lower water temperature and improve water quality. The project will construct new floodplain and evaluate the effectiveness

of various floodplain restoration methods including vegetation, wood placement, and swale construction. The project is also expected to reduce macrophyte growth within the deepened channel. The project will be stabilized with native vegetation and processed gravels, which will improve riparian shade and provide habitat for aquatic and terrestrial species.

An additional water quality improvement activity will be to stabilize three irrigation return ditches to stop headcutting and eliminate soil erosion from the drain areas. Existing infrastructure will be removed. The areas will be regraded. Energy dissipating riprap standard riprap will be added and all disturbed areas will be reseeded.

There will be impacts to approximately 2.4 acres of existing wetlands, however the project will create approximately 16.5 acres of new wetland habitat below the ordinary high water mark. No additional mitigation is necessary.

Antidegradation Review

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

- Tier I 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 I review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier II 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 III 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 I protection for that use, unless specific circumstances warranting Tier II 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 pollutants of concern for this project are sediment and temperature. Additionally, sediment sampling and analysis in the project area revealed elevated levels of nickel at the Rippee Island site. The dredged material and post dredge surface are not suitable for unconfined, aquatic exposure. To address these elevated levels, any post dredged surface and dredge material reused as fill for island expansion and floodplain reconstruction will be capped with imported

gravels to ensure confinement and protection of water quality standards. 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.

Receiving Water Body Level of Protection

This project is located on 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 2016 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 I protection (IDAPA 58.01.02.051.01) for the aquatic life use and Tier II protection (IDAPA 58.01.02.051.02) in addition to Tier I for the contact recreation use (IDAPA 58.01.02.052.05c.)

Protection and Maintenance of Existing Uses (Tier I Protection)

A Tier I 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 existing and 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 implementing the Snake River Stewardship Program to improve water quality and offset temperature requirements necessary for 401 Water Quality Certification of the HCC. This Rippee Island project is the second instream project that will demonstrate thermal benefits gained by channel deepening with added floodplain expansion. Together these demonstration projects are the foundation for meeting temperature mitigation requirements of the relicensing effort. The project will be stabilized with native vegetation and clean gravels which will improve habitat for native aquatic and terrestrial species.

The Rippee Island Research Project is designed to improve water quality by reducing thermal gain through channel deepening and narrowing the surface area. These efforts will sequentially decrease the area and conditions suitable for macrophyte development and create 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. Cofferdams will be installed upstream and downstream of the north or river right side channel project area to isolate and dewater the construction area allowing work to be performed in dry conditions. Dewatering will be pumped and treated using areas isolated behind silt curtains, settling ponds or other methods to ensure suspended sediments are captured prior to discharge. Fish salvage will be coordinated by Idaho Power Company. Bulk bags and silt curtains will keep flow from entering the work area between the islands and at the upstream end of Rippee Island. On the southwest side of Rippee Island, the work area cannot be isolated from active flow due to channel depth and water velocity. A small kicker cofferdam, made of bulk bags will be placed to create an eddy effect and silt curtains will be used to draw suspended sediments toward the channel edge to reduce turbidity from the placement fill. Monitoring will be used to further ensure compliance with water quality standards. The reintroduction of water into the work area will be managed at velocities that will minimize turbidity.

Floodplain enhancement will be done by excavating ridges and swales upon bulk fill. Bulk fill will be compacted to engineering specification and capped with clean gravels. Logs and native brush will be partially buried within in the treatment area to provide soil stability and roughness during high flows. These floodplain enhancements will improve the groundwater/surface water exchange buffering stream temperatures and provide shade and habitat for aquatic and terrestrial species. All disturbed areas within the project area will be revegetated with a mix of willow, dogwood, skunkbrush, golden currant and wood rose and reseeded.

Three irrigation drains will be repaired during the construction project to eliminate sediment transport from headcutting. Two drains are within the dewatered project area. During the construction period, any irrigation return water will be captured and treated before being released back to the river. The third drain is upstream of the isolated work area. Work will either be conducted in dry conditions or isolated behind silt curtains and dewatered to minimize suspended sediments and turbid discharge.

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* (DEQ 2004). This project directly targets improvements to both temperature and sediment load reductions identified in the TMDL. The project will not result in any increase to sediment or nutrient load to the Snake River. Specifically, temperature in the system is expected to improve as a result of deepening and narrowing the river channel, and by expanding floodplain and increasing 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 existing and designated uses is maintained and

protected in compliance with the Tier I provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

High-Quality Waters (Tier II 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 pollutants for concern for this project are sediment and temperature. While sediment is not relevant to the recreational use, some sediment dredged, exposed and redeposited were found to contain concentrations of nickel that may result in minor adverse effects to benthic communities. High background nickel concentrations have been measured in rocks and soils in the Snake River Watershed upstream and adjacent to the project site which explain the elevated concentrations. The Rippee Island project will manage for the high concentration of nickel both during construction in the short term and in the final design surface in the long term by capping isolating bulk fill and exposed surfaces with clean gravels sourced from an adjacent upland area. DEQ has no information to suggest that the dredge and redeposited sediment will cause an increase of nickel in the Snake River that would affect recreational uses of the river. Therefore, DEQ concludes that this 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 to the Snake River will not occur. As such, DEQ concludes that this project complies with the Tier II 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 <https://www.epa.gov/npdes-permits/stormwater-discharges-construction-activities-region-10>.

Fill Material

9. Fill material subject to suspension shall be free of easily suspended fine material. The fill material to be placed shall be clean material only.
10. 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.
11. Placement of fill material in existing vegetated wetlands shall be minimized to the greatest extent possible.
12. All temporary fills shall be removed in their entirety on or before construction completion.
13. 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

14. 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.
15. 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.

16. 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.
17. 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.
18. Top elevations of bank stabilization shall be such that adequate freeboard is provided to protect from erosion at 100-year design flood elevation.
19. 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.
20. A BMP inspection and maintenance plan must be developed and implemented. At a minimum, BMPs must be inspected and maintained daily during project implementation.
21. BMP effectiveness shall be monitored during project implementation. BMPs shall be replaced or augmented if they are not effective.
22. All construction debris shall be properly disposed of so it cannot enter waters of the state or cause water quality degradation.
23. Disturbed areas suitable for vegetation shall be seeded or revegetated to prevent subsequent soil erosion.
24. 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.
25. To the extent reasonable and cost-effective, the activity submitted for certification shall be designed to minimize subsequent maintenance.
26. Sediment from disturbed areas or able to be tracked by vehicles onto pavement must not be allowed to leave the site in amounts that would reasonably be expected to enter waters of the state. Placement of clean aggregate at all construction entrances or exits and other BMPs such as truck or wheel washes, if needed, must be used when earth-moving equipment will be leaving the site and traveling on paved surfaces.

Turbidity

27. 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.*
28. All practical BMPs on disturbed banks and within the waters of the state must be implemented to minimize turbidity. 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).
29. 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.

30. Turbidity monitoring must be conducted, recorded, and reported. Monitoring must occur each day during project implementation when project activities may result in turbidity increases above background levels. *A properly and regularly calibrated turbidimeter is required.*

A sample must be taken up-current from in-water disturbance or discharge to establish background turbidity levels for each monitoring event. Background turbidity, location, date, and time must be recorded prior to monitoring down-current.

Monitoring must occur down-current from the in-water disturbance or point of discharge and within any visible plume. The turbidity, location, date, and time must be recorded for each sample or observation.

Results from the compliance point sampling must be compared to the background levels sampled during each monitoring event. If the downstream turbidity exceeds upstream turbidity by 50 nephelometric turbidity units (NTU) or more, the project is causing an exceedance of the WQS. If an exceedance occurs, the permittee must inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability, then the applicant must modify the activity (this may include modifying existing BMPs). **A stop/start work process to manage turbidity alone is not permissible.**

Copies of daily logs for turbidity monitoring must be available to DEQ upon request. The log must include background measurements (in NTUs) or observations; compliance point measurements or observations; comparison of background and compliance point monitoring as a numeric value (in NTUs) or in narrative form; and location, time, and date for each sampling event. The report must describe all exceedances and subsequent actions taken and the effectiveness of the action including subsequent monitoring.

In-water Work

31. Work in open water is to be kept at a minimum and only when necessary. Equipment shall work from an upland site to minimize disturbance of waters of the state. If this is not practicable, appropriate measures must be taken to ensure disturbance to the waters of the state is minimized. Construction affecting the bed or banks shall take place only during periods of low flow.
32. 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.
33. Heavy equipment working in wetlands shall be placed on mats or suitably designed pads to prevent damage to the wetlands.
34. Activities in spawning areas must be avoided to the maximum extent practicable.
35. Work in waters of the state shall be restricted to areas specified in the application.

36. Measures shall be taken to prevent wet concrete from entering into waters of the state when placed in forms and/or from truck washing.
37. Activities that include constructing and maintaining intake structures must include adequate fish screening devices to prevent fish entrainment or capture.
38. Stranded fish found in dewatered segments should be moved to a location (preferably downstream) with water.
39. 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

40. Disturbance of existing wetlands and native vegetation shall be kept to a minimum.
41. To the maximum extent practical, staging areas and access points should be placed in open, upland areas.
42. Fencing and other barriers should be used to mark the construction areas.
43. Where possible, alternative equipment should be used (e.g., spider hoe or crane).
44. 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

45. 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

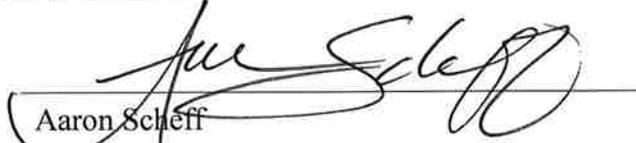
46. Petroleum products and hazardous, toxic, and/or deleterious materials shall not be stored, disposed of, or accumulated adjacent to or in the immediate vicinity of waters of the state. Adequate measures and controls must be in place to ensure that those materials will not enter waters of the state as a result of high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third-party activities.
47. Vegetable-based hydraulic fluid should be used on equipment operating in or directly adjacent to the channel if this fluid is available.
48. 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.
49. Equipment and machinery must be removed from the vicinity of the waters of the state prior to refueling, repair, and/or maintenance.
50. 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.

51. Emergency spill procedures shall be in place and may include a spill response kit (e.g., oil absorbent booms or other equipment).
52. In accordance with IDAPA 58.01.02.850, in the event of an unauthorized release of hazardous material to state waters or to land such that there is a likelihood that it will enter state waters, the responsible persons in charge must
 - a. Make every reasonable effort to abate and 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. Call 911 if immediate assistance is required to control, contain, or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office during normal working hours or Idaho State Communications Center after normal working hours (1-800-632-8000). If the spilled volume is above federal reportable quantities, contact the National Response Center (1-800-424-8802).
 - Boise Regional Office: 208-373-0550 / 888-800-3480
 - d. Collect, remove, and dispose of the spilled material in a manner approved by DEQ.

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 Kati Carberry at 208-373-0434 or kati.carberry@deq.idaho.gov.



Aaron Scheff
Regional Administrator
Boise Regional Office