



Idaho Department of Environmental Quality Final §401 Water Quality Certification

July 31, 2012

404 Permit Application Number: FERC No. 14154 / Little Wood River Ranch No. 2 Hydropower Project / NWW-2009-365-I02 [NWP-39]

Applicant/Authorized Agent: Nicholas Josten / GeoSense

Project Location: Sections 25, 26, 27, and 28, Township 05 South, Range 16 East, Boise Meridian, Lincoln County

Receiving Water Body: Little Wood 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.

DEQ has reviewed the facts and the figures presented in the public notice and joint application for permit for the above-referenced activity. DEQ has also reviewed and considered other material and information related to the proposed activity, including but not limited to the following: (1) the USACE's authorization letter of May 10, 2012; (2) the Joint Application for Permits dated January 16, 2012, inclusive of Attachment A, Attachment B; (3) the Operational Compliance Monitoring Plan of February 5, 2008; (4) the Environmental Features Design Plan of February 5, 2008; (5) the Riparian Habitat Improvement Plan of February 8, 2008; and (6) the Environmental Monitoring Plan of February 5, 2008.

Based upon its review and consideration of the information listed above, DEQ certifies that if the permittee(s) comply with the terms and conditions imposed by the above-referenced 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 does not constitute certification of the operation of this project. DEQ reserves the right to include additional or different conditions in its certification of the FERC license for the project.

Project Description

This project (referenced in this document as LWR No. 2 Project) will discharge concrete and rock below the ordinary high water mark of the Little Wood River associated with the construction of a new water diversion structure to withdraw water into a new hydroelectric project in Lincoln County, near Shoshone, Idaho. The project will span the Little Wood River (similar to Little Wood River No. 1 Hydropower Project, which is downstream from this project) and will consist of the following:

1. A coffer dam will be built to direct flow to the north bank of the Little Wood River. The cofferdam will be constructed from local fine-grained soils from the immediate work area.
2. A rock rubble embankment on the north side of the channel. The rock source will be from the powerhouse excavation site; and will be transported to the diversion area by truck.
3. Concrete encased slide gates on the south side which would guide water into a feeder canal for conveyance of the power generating facility.
4. A 3,900 foot intake feeder canal.
5. A 1,200 square foot powerhouse. The powerhouse intake will be constructed by excavating a foundation on-site, building forms and pouring concrete.
6. A 1,600 foot tailrace and discharges back to the Little Wood River.
7. A 2.2 mile transmission line. Power poles will be placed in pre-drilled holes.

The diversion structure is the only project element that will require filling of waters or wetlands of the United States.

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 58.01.02.052.05).
- 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; 58.01.02.052.06).
- 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; 58.01.02.052.07).

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). 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.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. The project also has the potential to effect water temperature, and therefore, temperature is also a pollutant of concern.

Receiving Water Body Level of Protection

The LWR No. 2 Project is located within the Little Wood Subbasin assessment unit (AU) ID17040221SK001_05a (Richfield to mouth). This AU has the following designated beneficial uses: cold water aquatic life and primary contact recreation. There is no available information indicating the presence of any existing beneficial uses aside from those that are already designated.

The cold water aquatic life use in this Little Wood River AU is impaired due to sediment as total suspended solids (TSS). The primary contact recreation beneficial use is full support; the *Little Wood River TMDL* indicates that *Escherichia coli* is meeting WQS. As such, DEQ will provide Tier 1 protection only for the aquatic life use and Tier 2 protection, in addition to Tier 1, for the recreation beneficial use (Idaho Code § 39-3603(2)(b)).

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 (cold water aquatic life) 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. The AU ID17040221SK001_05a is listed in the EPA-approved *Little Wood River TMDL* and provides critical information regarding the impairments.

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. Additionally, the project will include revegetation via a representative seed mix. Because excess sediment is a critical pollutant in the Little Wood River, the tailrace and feeder canals are designed for low flow velocity to promote maximum trapping of TSS (much like the LWR No. 1 Project). The deposited sediment will be removed as necessary and will be disposed in an upland area. For these reasons DEQ believes

there is a reasonable assurance the project will comply with the water quality criteria relevant to sediment.

In addition, DEQ has determined the project will not increase water temperatures in the Little Wood River (See September 24, 2009 temperature analysis). Therefore, DEQ believes there is reasonable assurance the project will comply with the water quality temperature criteria.

The project is also consistent with the Little Wood River TMDL.

In sum, 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. Therefore, the project will maintain and protect designated and existing beneficial uses in compliance with IDAPA 58.01.02.051.01 and 58.01.02.052.07.

High-Quality Waters (Tier 2 Protection)

The Little Wood River is considered high quality for primary contact recreation. As such, the water quality relevant to primary contact recreation uses of the Little Wood River 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 Little Wood River (IDAPA 58.01.02.052.04). The pollutants of concern are sediment and temperature. Sediment and temperature are not relevant to recreational uses. Therefore, this project will not result in a lowering of water quality with respect to any pollutant relevant to the Tier 2 protection for this water body. As such, the project complies with IDAPA 58.01.02.051.02 and IDAPA 58.01.02.052.06.

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 US 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 US, 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.
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. Top elevations of bank stabilization shall be such that adequate freeboard is provided to protect from erosion at 100-year design flood elevation.
6. 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.
7. A BMP inspection and maintenance plan must be developed and implemented. At a minimum, BMPs must be inspected and maintained daily during project implementation.
8. BMP effectiveness shall be monitored during project implementation. BMPs shall be replaced or augmented if they are not effective.
9. All construction debris shall be properly disposed of so it cannot enter waters of the state or cause water quality degradation.
10. Disturbed areas suitable for vegetation shall be seeded or revegetated to prevent subsequent soil erosion.
11. 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.
12. To the extent reasonable and cost-effective, the activity submitted for certification shall be designed to minimize subsequent maintenance.
13. 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

1. Sediment resulting from this activity must be mitigated to prevent violations of the turbidity standard as stipulated under the Idaho WQS (IDAPA 58.01.02.250.02.e). Any violation of this standard must be reported to the DEQ regional office immediately.
2. All practical BMPs on disturbed banks and within the waters of the state must be implemented to minimize turbidity during in-water work.
3. Containment measures such as silt curtains, geotextile fabrics, and silt fences must be implemented and properly maintained to minimize in-stream sediment suspension and resulting turbidity.
4. Turbidity monitoring must be conducted, recorded, and reported as described below. Monitoring must occur each day during project implementation. A properly and regularly calibrated turbidimeter is required.

A sample must be taken every hour at a relatively undisturbed area approximately 100 feet 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 every hour approximately 100 feet 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.

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, or 25 NTU for 10 or more consecutive days, then the project is causing an exceedance of the WQS. If an exceedance occurs, or there is evidence that an exceedance may be occurring (i.e. a plume is observed), the applicant 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).

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

In-water Work

1. 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 US. If this is not practicable, appropriate measures must be taken to ensure disturbance to the waters of the US is minimized.
2. Construction affecting the bed or banks shall take place only during periods of low flow.
3. 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.
4. Heavy equipment working in wetlands shall be placed on mats or suitably designed pads to prevent damage to the wetlands.
5. Activities in spawning areas must be avoided to the maximum extent practicable.
6. Work in waters of the state shall be restricted to areas specified in the application.
7. Measures shall be taken to prevent wet concrete from entering into waters of the state when placed in forms and/or from truck washing.
8. Activities that include constructing and maintaining intake structures must include adequate fish screening devices to prevent fish entrainment or capture.

9. Stranded fish found in dewatered segments should be moved to a location (preferably downstream) with water.
10. To minimize sediment transport, stream channel or stream bank stabilization must be completed prior to returning water to a dewatered segment.

Pollutants/Toxics

1. The use of chemicals such as soil stabilizers, dust palliatives, sterilants, growth inhibitors, fertilizers, and deicing salts during construction and operation should be limited to the best estimate of optimum application rates. All reasonable measures shall be taken to avoid excess application and introduction of chemicals into waters of the state.

Vegetation Protection and Restoration

1. Disturbance of existing wetlands and native vegetation 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 if this fluid is available.
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. Any spill less than 25 gallons must be cleaned up within 24 hours of the release but does not require reporting to DEQ. If the spill is less than 25 gallons and is not cleaned up within 24 hours, then it becomes a reportable quantity.
8. Any spill greater than or equal to 25 gallons must be cleaned up within 24 hours of the release and reported to DEQ by calling 1-800-632-8000 (Idaho State Communications Center). Any spill equal to or greater than 25 gallons is reportable immediately.
9. Any release that causes sheen (of any size) in waters of the state must be reported immediately to the National Response Center at 1-800-424-8802 and the Idaho State Communication Center (1-800-632-8000).

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 regarding the actions taken in this certification should be directed to Dr. Balthasar Buhidar, Twin Falls Regional Office, at (208) 736-2190 or email Balthasar.buhidar@deq.idaho.gov.



Bill Allred

Regional Administrator

Twin Falls Regional Office