



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

650 Addison Avenue West, Suite 110 • Twin Falls, Idaho 83301 • (208) 736-2190
www.deq.idaho.gov

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

June 1, 2018

Michael J. Lidgard
NPDES Permits Unit Manager
EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Re: 401 Water Quality Certification for the City of Burley Wastewater Treatment Plant, NPDES
Permit No. ID0020095

Dear Mr. Lidgard:

The Twin Falls Regional Office of the Department of Environmental Quality (DEQ) has reviewed the above referenced permit for the City of Burley Wastewater Treatment Plant. Section 401 of the Clean Water Act requires that states issue certification for activities that are authorized by a federal permit and may result in the discharge to surface waters. In Idaho DEQ is responsible for reviewing these activities and evaluating whether the activity will comply with Idaho's Water Quality Standards, including any applicable water quality management plans (e.g total maximum daily loads). A federal discharge permit cannot be issued until DEQ has provided certification or waived certification either expressly, or by taking no action.

This letter is to inform you that DEQ is issuing the attached 401 certification subject to the terms and condition contained therein.

If you have any questions or further information, please contact Balthasar Buhidar (208) 736-2190 or balthasar.buhidar@deq.idaho.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Anderson", with a small "for" written below it.

David Anderson
Regional Administrator

DA:KM:sg

Enclosure (1)

cc: John Drabek, EPA Region 10
Loren Moore, DEQ State Office
Mark Cecchini-Beaver, Deputy AG
Kiley Mulholland, DEQ Twin Falls Regional Office



Idaho Department of Environmental Quality Final §401 Water Quality Certification

June 1, 2018

NPDES Permit Number(s): City of Burley Wastewater Treatment Plant, NPDES Permit No. ID0020095

Receiving Water Body: Snake River at River Mile 652.8

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 National Pollutant Discharge Elimination System (NPDES) permits and issue water quality certification decisions.

Based upon its review of the above-referenced permit and associated fact sheet, 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 discharge 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.

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).

Changes in Treatment Capacity and Technology

During the current permit cycle, the City of Burley wastewater treatment plant (WWTP) upgraded the treatment plant from a lagoon-based treatment system to a mechanical treatment process. Completed in August 2007, this upgrade modified the effluent bacteria removal from chlorine treatment to UV disinfection. The technology change for bacteria treatment resulted in the removal of the total residual chlorine effluent limit from the current permit to the proposed.

Pollutants of Concern

The City of Burley WWTP discharges the following pollutants of concern: five-day biological oxygen demand (BOD₅), total suspended solids (TSS), *E. coli*, pH, temperature, ammonia, phosphorus, cadmium, cyanide, lead, mercury, oil and grease (O/G), arsenic, chromium, copper, nickel, and zinc. Effluent limits have been developed for BOD₅, TSS, *E. coli*, pH, total ammonia as nitrogen (October 1-May 31 only), and total phosphorus (TP). Although no effluent limits are proposed for temperature, cadmium, cyanide, lead, mercury, arsenic, chromium, copper, nickel, whole effluent toxicity (WET), and zinc, monitoring is required for these pollutants. EPA has discontinued the monitoring of O/G in the proposed permit as the Snake River is not currently impaired for this pollutant. However, the Idaho water quality standards does have a narrative criterion for floating, submerged, or suspended matter, which the proposed permit reflects as a requirement to visually check for such matter in the effluent. Although detectable amounts of these pollutants of concern are present in the effluent, none of the pollutants currently have a reasonable potential to exceed WQS. Dissolved oxygen (DO) was discontinued because the BOD₅ does not have an effect on DO. New additions to the permit are alkalinity, total hardness, dissolved organic carbon, conductivity, arsenic, chromium, copper, nickel, and zinc, but these are only for reporting purposes.

Receiving Water Body Level of Protection

The City of Burley WWTP discharges to the Snake River within the Lake Walcott Subbasin assessment unit (AU) ID17040209SK001_07 (Snake River – Heyburn/Burley Bridge to Milner Dam). This AU has the following designated beneficial uses: warm water aquatic life and primary contact recreation. 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 2014 Integrated Report, this AU is not fully supporting one or more of its assessed uses. The aquatic life use is not fully supported due to TP. As such, DEQ will provide Tier I protection for the aquatic life use (IDAPA 58.01.02.052.05.c). The contact recreation beneficial use is unassessed. DEQ must provide an appropriate level of protection for the contact recreation using information available at this time (IDAPA 58.01.02.052.05.b). Waters

designated for recreation are not to contain *E. coli* bacteria exceeding water quality standard criteria (IDAPA 58.01.02.251.01). Based on water quality data collected by DEQ, the *E. coli* values are well below the instream instantaneous threshold target of 406 cfu/100 mL; therefore, DEQ will provide Tier II protection, in addition to Tier I, for the primary contact recreation beneficial use (IDAPA 58.01.02.051.01–.02).

Protection and Maintenance of Existing Uses (Tier I Protection)

As noted above, 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. In order to protect and maintain existing and designated 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 existing and designated beneficial uses. The effluent limitations and associated requirements contained in the City of Burley WWTP permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS.

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 wasteload allocations for point source discharges, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharge permits must contain limitations that are consistent with wasteload allocations in the approved TMDL.

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).

The EPA-approved *Lake Walcott TMDL* (2000) establishes wasteload allocations for TP. These wasteload allocations are designed to ensure the Snake River will achieve the water quality necessary to support its existing and designated aquatic life beneficial uses and comply with the applicable numeric and narrative criteria. During the development of the *Lake Walcott TMDL* it was determined that the contact recreational uses were not being impacted by excess nutrients. The effluent limitations and associated requirements contained in the City of Burley WWTP permit are set at levels that comply with the TP wasteload allocation for the facility.

In sum, the effluent limitations and associated requirements contained in the City of Burley WWTP permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS and the TP wasteload allocation for the facility established in the *Lake Walcott TMDL*. Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Snake River 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 contact recreation. As such, the water quality relevant to this use of the Snake 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 contact recreation use of the Snake River (IDAPA 58.01.02.052.05). The pollutants relevant to contact recreation are arsenic, cyanide, *E. coli*, mercury, nickel, TP, and zinc. Effluent limits are established in the proposed and existing permit for *E. coli* and TP. Although effluent limits have not been established for arsenic, cyanide, mercury, nickel, and zinc, these pollutants are required to be monitored and reported (See EPA's Permit, pages 5-12).

For a reissued permit or license, the effect on water quality is determined by looking at the difference in water quality that would result from the activity or discharge as authorized in the current permit and the water quality that would result from the activity or discharge as proposed in the reissued permit or license (IDAPA 58.01.02.052.06.a).

Pollutants with Limits in the Current and Proposed Permit: *E. coli* and TP

For pollutants that are currently limited and will have limits under the reissued permit, the current discharge quality is based on the limits in the current permit or license (IDAPA 58.01.02.052.06.a.i), and the future discharge quality is based on the proposed permit limits (IDAPA 58.01.02.052.06.a.ii). For the City of Burley WWTP permit, this means determining the permit's effect on water quality based upon the limits for *E. coli* and TP in the current and proposed permits. Table 1 provides a comparison of the current permit limits and the proposed or reissued permit limits relevant to contact recreation.

Table 1. Comparison of current and proposed permit limits for pollutants of concern relevant to contact recreation

| Parameters | Units | Proposed Permit | | | 2002 Permit (Current) | | | Change ¹ | | |
|---|------------|------------------|------------------|------------------|------------------------|------|-----|---------------------|-----|-----|
| | | AML ² | AWL ³ | MDL ⁴ | AML | AWL | MDL | AML | AWL | MDL |
| Pollutants with limits in the proposed permit | | | | | | | | | | |
| <i>E. coli</i> | cfu/100 mL | 126 | --- | 406 ⁵ | 126 | --- | 406 | NC | --- | NC |
| TP | lbs/day | 39 | 78.4 | --- | 39 | 78.4 | --- | NC | NC | --- |
| Pollutants with no limits in both the current and proposed permit, but monitoring required | | | | | | | | | | |
| Arsenic | µg/L | 2x/year | | | No monitoring required | | | N | | |
| Cadmium | µg/L | 2x/year | | | 1/month | | | D | | |
| Cyanide | µg/L | 2x/year | | | 1/month | | | D | | |
| Mercury | µg/L | 2x/year | | | 1/month | | | D | | |
| Zinc | µg/L | 2x/year | | | No monitoring required | | | NC | | |

TP = Total Phosphorus

¹ Change defined as: I- more frequent monitoring, D-less frequent monitoring, NC-no change from current permit, N-new in draft permit

² AML is Average Monthly Limit

³ AWL is Average Weekly Limit

⁴ MDL is Maximum Daily Limit

⁵ Instantaneous value

The concentration based effluent limits for *E. coli* and TP in the proposed permit are the same as the previous permit. Therefore, no adverse change in water quality and no degradation will result from the discharge of these pollutants.

Pollutants with No Limits: Arsenic, Cyanide, Mercury, Nickel, and Zinc

There are five pollutants of concern relevant to Tier II protection of contact recreation that currently are not limited and for which the proposed permit also contains no limit: arsenic, cyanide, mercury, nickel, and zinc. For pollutants without effluent limits, a change in water quality is determined by reviewing whether changes in production, treatment, or operation that will increase the discharge of these pollutants are likely (IDAPA 58.01.02.052.06). With respect to arsenic, cyanide, mercury, nickel, and zinc, there is no reason to believe these pollutants will be discharged in qualities greater than those discharged under the current permit. This conclusion is based upon the fact that there have been no changes in the design flow, influent quality, or treatment processes that would likely result in an increased discharge of these pollutants. Because the proposed permit does not allow for any increased water quality impact from these pollutants, DEQ has concluded that the proposed permit should not cause a lowering of water quality from said pollutants. As such, the proposed permit should maintain the existing high water quality in the Snake River.

DEQ concludes that this discharge permit complies with the Tier II provisions of Idaho's WQS (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

Condition #1 – Surface Water Monitoring Report

Per EPA's surface water monitoring report, the permittee must conduct surface water monitoring as specified in Table 3 of the Permit.

Condition #2 – Upstream Monitoring Location

The upstream monitoring location to establish background must be at the Highway 30 Burley / Heyburn Bridge, or latitude 42.545082°N, longitude -113.762266°W. Sampling must be done as near to the thalweg of the Snake River as possible.

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes the following mixing zones that utilize the critical low flow volume and are protective of the most vulnerable designated uses.

Table 4: Authorized Mixing Zones for the Middle Snake River

| Parameters | Mixing Zone |
|-------------------|--------------------|
| Ammonia | 25% |
| Arsenic | 25% |

| | |
|---------|-----|
| Cadmium | 25% |
| Copper | 25% |
| Cyanide | 25% |
| Lead | 25% |
| Zinc | 25% |

For further information about the mixing zones, critical low flow volume, and dilution factors see Part V.C *Water Quality Based Effluent Limits*, Table 8 in the fact sheet.

Pollutant Trading

Pursuant to IDAPA 58.01.02.055.06, DEQ authorizes pollutant trading for TP and TSS. Trading must be conducted in a manner that is consistent with the most recent version of DEQ's *Water Quality Trading Guidance*, available at: <http://www.deq.idaho.gov/media/60179211/water-quality-trading-guidance-1016.pdf>.

Other Conditions

This certification is conditioned upon the requirement that any material modification of the permit or the permitted activities—including without limitation, any modifications of the permit to reflect new or modified TMDLs, wasteload allocations, site-specific criteria, variances, or other new information—shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401.

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 Dr. Balthasar Buhidar, Twin Falls Regional Office, (208) 736-2190, or via email at Balthasar.buhidar@deq.idaho.gov.



David Anderson
Regional Administrator
Twin Falls Regional Office