



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, Idaho 83706 • (208) 373-0550
www.deq.idaho.gov

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

April 18, 2018

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

Subject: Final 401 Water Quality Certification for the City of Horseshoe Bend Wastewater Treatment Facility (WWTF), ID-0021024

Dear Mr. Lidgard:

The Boise Regional Office of the Department of Environmental Quality (DEQ) has reviewed the above-referenced proposed draft permit for the City of Horseshoe Bend WWTF. Section 401 of the Clean Water Act requires that states issue certifications for activities which are authorized by a federal permit and which 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 expressively, or by taking no action.

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

Please contact me directly at (208) 373-0420 or via email at Aaron.Scheff@deq.idaho.gov to discuss any questions or concerns regarding the content of this certification.

Sincerely,

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

Aaron Scheff
Regional Administrator
Boise Regional Office

c: Lisa Kusnierz

ec: Loren Moore, DEQ State Office



Idaho Department of Environmental Quality Final §401 Water Quality Certification

April 18, 2018

NPDES Permit Number(s): ID-0021024, City of Horseshoe Bend Wastewater Treatment Facility (WWTF)

Receiving Water Body: Payette 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 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).

Pollutants of Concern

The City of Horseshoe Bend WWTF discharges the following pollutants of concern: five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), pH, ammonia, *E. coli* bacteria, thermal load (temperature), total phosphorus (TP), and total nitrogen (TN). Effluent limits have been developed for BOD₅, TSS, *E. coli*, pH, TP, and floating/suspended or submerged matter. No effluent limits are proposed for ammonia, temperature, and TN.

Receiving Water Body Level of Protection

The City of Horseshoe Bend WWTF discharges to the Payette River within the Payette Subbasin assessment unit (AU) 17050122SW003_06 (Payette River-NF/SF Confluence to Black Canyon Reservoir). This AU has the following designated beneficial uses: Salmonid Spawning, Cold 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 receiving water body AU is fully supporting its assessed uses (IDAPA 58.01.02.052.05.a). As such, DEQ will provide Tier II protection in addition to Tier I for this water body (IDAPA 58.01.02.051.02; 58.01.02.051.01).

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 and designated uses and the level of water quality necessary to protect existing and designated 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 Horseshoe Bend WWTF 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 *Snake River-Hells Canyon TMDL* (2004) established a wasteload allocation at the mouth of the Payette River for nutrients. Although Horseshoe Bend WWTF does not discharge to an impaired waterbody with an approved TMDL, as mentioned above, the mouth of the Payette River received a TP load allocation of 469 kg/day (based on meeting a water quality target of 0.07 mg/L from May-September). No WLAs were established for point sources on the Payette River as part of the TMDL. However, effluent limitations for TP and an associated Nutrient Reduction Study required in the City of Horseshoe Bend WWTF permit are set at levels to limit or reduce TP inputs into the Payette, and thus ultimately the Snake River.

In sum, the effluent limitations and associated requirements contained in the City of Horseshoe Bend WWTF permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS and the wasteload allocations established in the *Snake River-Hells Canyon TMDL*. Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Payette 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 Payette River is considered high quality for Salmonid Spawning, Cold Water Aquatic Life, and Primary Contact Recreation. As such, the water quality relevant to Salmonid Spawning, Cold Water Aquatic Life, and Primary Contact Recreation uses of the Payette 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 Salmonid Spawning, Cold Water Aquatic Life, and Primary Contact Recreation uses of the Payette River (IDAPA 58.01.02.052.05). These include the following: BOD₅, TSS, pH, ammonia, *E. coli*, thermal load (temperature), TP, and TN. Effluent limits are set in the proposed and existing permit for all these pollutants except ammonia, temperature, and TN.

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). For a new permit or license, the effect on water quality is determined by reviewing the difference between the existing receiving water quality and the water quality that would result from the activity or discharge as proposed in the new permit or license (IDAPA 58.01.02.052.06.a).

Pollutants with Limits in the Current and Proposed Permit

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 Horseshoe Bend WWTF permit, this means determining the permit's effect on water quality based upon the limits for BOD₅, TSS, *E. coli*,

and pH in the current and proposed permits. Table 1 provides a summary of the current permit limits and the proposed or reissued permit limits.

Table 1. Comparison of current and proposed permit limits for pollutants of concern relevant to uses receiving Tier II protection.

Pollutant	Units	Current Permit			Proposed Permit			Change ^a
		Average Monthly Limit	Average Weekly Limit	Single Sample Limit	Average Monthly Limit	Average Weekly Limit	Single Sample Limit	
Pollutants with limits in both the current and proposed permit								
pH	standard units	6.5–9.0 all times			6.5–9.0 all times			NC
<i>E. coli</i>	no./100 mL	126		406	126		406	NC
Pollutants with new limits in the proposed permit								
BOD ₅	mg/L	30	45	—	30	45	—	DL
	lb/day	50	75	—	44	66	—	
	% removal	85%	—	—	85%	—	—	
TSS	mg/L	30	45	—	30	45	—	DL
	lb/day	50	75	—	44	66	—	
	% removal	85%	—	—	85%	—	—	
TP	lb/day (May–Sept)	—	—	Report	9.8	—	—	DL
Pollutants with no limits in both the current and proposed permit								
Total Ammonia	mg/L	—	—	Report	—	—	Report	NC
Temperature	°C	—	—	—	—	—	—	NC
TN	lb/day	—	—	—	—	—	—	NC

^a NC = no change, DL = decrease in limit.

The proposed permit limits for other pollutants of concern that have limits in Table 1, pH, *E. coli*, BOD₅, and TSS are the same as, or more stringent than, those in the current permit (“NC” or “DL” in change column). Therefore, no adverse change in water quality and no degradation will result from the discharge of these pollutants.

New Permit Limits for Pollutants Currently Discharged

When new limits are proposed in a reissued permit for pollutants in the existing discharge, the effect on water quality is based upon the current discharge quality and the proposed discharge quality resulting from the new limits. Current discharge quality for pollutants that are not currently limited is based upon available discharge quality data (IDAPA 58.01.02.052.06.a.i). Future discharge quality is based upon proposed permit limits (IDAPA 58.01.02.052.06.a.ii).

The proposed permit for City of Horseshoe Bend WWTF includes a new limit for TP (Table 1). This limit was included in the permit to be consistent with the wasteload allocation at the mouth of the Payette River in the approved *Snake River-Hells Canyon TMDL* (2004). The TP limit in the proposed permit reflects a maintenance or improvement in water quality from current conditions. Therefore, no adverse change in water quality and no degradation will occur with respect to TP.

Pollutants with No Limits

There are three pollutants of concern (TN, temperature, and ammonia) relevant to Tier II protection of aquatic life that currently are not limited, and for which the proposed permit also contains no limit (Table 1). For such pollutants, 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.a.ii). With respect to TN, temperature, and ammonia, there is no reason to believe these pollutants will be discharged in quantities greater than those discharged under the current permit. This conclusion is based upon information included within the fact sheet that there has been slight decreases in the design flow, and no changes in the 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 for the pollutants with no limit. As such, the proposed permit should maintain the existing high water quality in Payette River.

In sum, 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

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes a mixing zone that utilizes 2% of the critical low flow volumes of Payette River for ammonia.

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 Kati Carberry, DEQ Boise Regional Office at 208.373.0434 or Kati.Carberry@deq.idaho.gov.



Aaron Scheff

Regional Administrator

Boise Regional Office