



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

October 24, 2016

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

Subject: Final 401 Water Quality Certification for the City of Parma Wastewater
Treatment Facility, ID-0021776

Dear Mr. Lidgard:

The Boise Regional Office of the Department of Environmental Quality (DEQ) has reviewed the above-referenced proposed final permit for the Parma Wastewater Treatment Facility (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 draft certification.

Sincerely,

A handwritten signature in blue ink that reads "Aaron Scheff".

Aaron Scheff
Regional Administrator
Boise Regional Office

c: Susan Poulsom

ec: Nicole Deinarowicz, DEQ State Office
TRIM 2016AKF147



Idaho Department of Environmental Quality Final §401 Water Quality Certification

October 24, 2016

NPDES Permit Number(s): ID-0021776, City of Parma Wastewater Treatment Facility (WWTF)

Receiving Water Body: Sand Hollow Creek

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 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 City of Parma WWTF discharges the following pollutants of concern: five day biochemical oxygen demand (BOD₅), total suspended solids (TSS), total phosphorus (TP), *E. coli*, pH, ammonia, nitrate + nitrite, total Kjeldahl nitrogen (TKN), total dissolved solids (TDS), and total residual chlorine (TRC). Effluent limits have been developed for BOD₅, TSS, TP, *E. coli*, pH, and TRC. No effluent limits are proposed for ammonia, nitrate + nitrite, TKN, or TDS; however monitoring requirements are included in the permit so that reasonable potential to exceed WQS can be determined for future permits.

Receiving Water Body Level of Protection

The City of Parma WWTF discharges to the Sand Hollow Creek within the Lower Boise Subbasin assessment unit (AU) ID17050114SW017_03 (Sand Hollow Creek – I-84 to Sharp Road). This AU has the following designated beneficial use: secondary contact recreation. Sand Hollow Creek is undesignated for aquatic life, however, DEQ presumes undesignated waters in the state, that are not man-made waters, will support cold water aquatic life beneficial uses; therefore, undesignated waters are protected for these uses (IDAPA 58.01.02.101.01.a). 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).

The cold water aquatic life use in Sand Hollow Creek AU) ID17050114SW017_03 is not fully supported due to excess sedimentation/siltation. The secondary contact recreation beneficial use is not fully supported due to excess *E. coli*, bacteria. As such, DEQ will provide Tier 1 protection only for the aquatic life and recreation beneficial uses (IDAPA 58.01.02.051.02; 58.01.02.051.01).

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. In order to protect and maintain designated and existing 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 designated beneficial uses. The effluent limitations and associated requirements contained in the City of Parma 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).

Sand Hollow Creek (AU 17050114SW017_06), downstream approximately 2.5 miles from the City of Parma WWTF, is listed for cause unknown (nutrients suspected) and flows into the Hells Canyon Segment of the Snake River, which is also impaired due to excess nutrients. The *Snake River Hells Canyon* (SR-HC) TMDL (DEQ 2003) established load allocations for all of the tributaries, including Sand Hollow Creek, which are based upon a TP concentration of 0.07 mg/L at the mouths of these tributaries.

The proposed final permit includes a TP effluent limit based on the design flow of the facility; this limit is consistent with the load allocation assigned to all tributaries to the Snake River in the SR-HC TMDL. The effluent limitations in the permit will result in a decrease of TP in Sand Hollow Creek and also the Snake River Hells Canyon.

Sand Hollow Creek (AU 17050114SW017_03), is impaired for sediment and *E. coli*. The City of Parma WWTF discharge meets performance based limits for sediment (TSS) in its current permit and has similar requirements in the proposed final permit. The *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum* was completed to address the sediment and bacteria impairments in Sand Hollow Creek. The City of Parma was identified as a point source in the TMDL. However, since they presently meet their wasteload allocations for TSS and *E. coli*, no further reductions were necessary.

The *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum E. coli* wasteload allocations are based on a bacteria concentration of 126 cfu/100 mL, collected as a 5-sample geometric mean over 30 days; which is consistent with current permit limits. Sediment wasteload allocations are based on 20 mg/L, less 2.5 mg/L for natural background (TMDL section 5.4.6), and are expressed as 4-month averages. This TMDL is concentration based, so the WLAs are based on the design flow:

$$E. coli \text{ WLA (in } 10^9 \text{ cfu/day)} = Q \times 4.76$$

$$\text{Sediment WLA (in kg/day)} = Q \times 66.2$$

Where Q is the design flow of the facility in million gallons per day (mgd).

The coefficients are simply a collection of conversion constants:

$$E. coli: 126 \text{ cfu}/100 \text{ mL} \times \frac{3.785 \text{ L/gal} \times 10^6 \text{ gal/million gal}}{0.1 \text{ L}/100 \text{ mL} \times 10^9} = 4.76 \times 10^9 \text{ cfu/day/mgd}$$

$$\text{Sediment: } \frac{(20-2.5) \text{ mg}}{\text{L}} \times \frac{3.785 \text{ L/gal} \times 10^6 \text{ gal/million gal}}{10^6 \text{ mg/kg}} = 66.2 \text{ kg/day/mgd}$$

If the design flow were to increase in the future, then the WLAs would correspondingly increase. The present design flows and WLA are shown in the *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum* Table 26. To ensure consistency with this TMDL, DEQ expects this and future permits to contain a 4-month average effluent limit of 17.5 mg/L TSS with an associated load based on the permitted design flow of the facility and *E. coli* average monthly effluent limits of 126 cfu/100ml and maximum daily limits of 576 cfu/100 mL.

The *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum* and EPA-approved *SR-HC* TMDL establishes wasteload allocations for sediment, bacteria, and total phosphorus. These wasteload allocations are designed to ensure the Sand Hollow Creek will achieve the water quality necessary to support its existing and designated aquatic life and recreational beneficial uses and comply with the applicable numeric and narrative criteria. The effluent limitations and associated requirements contained in the City of Parma WWTF permit are set at levels that comply with these wasteload allocations.

In sum, the effluent limitations and associated requirements contained in the City of Parma 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 *Lower Boise River Sediment and Bacteria Addendum* and *Snake River Hells Canyon TMDL*. Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Sand Hollow Creek in compliance with the Tier 1 provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

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

Compliance Schedule

Pursuant to IDAPA 58.01.02.400.03, DEQ may authorize compliance schedules for water quality-based effluent limits issued in a permit for the first time. City of Parma WWTF cannot immediately achieve compliance with the effluent limits for TRC and TP; therefore, DEQ authorizes a compliance schedule and interim requirements as set forth below. This compliance schedule provides the permittee a reasonable amount of time to achieve the final effluent limits as specified in the permit. At the same time, the schedule ensures that compliance with the final effluent limits is accomplished as soon as possible.

While the schedules of compliance are in effect, the City of Parma WWTF must meet the following interim requirements:

- 1) The City of Parma WWTF must comply with the interim effluent limitations (Table 1) and monitoring requirements in Part I.B. of the Permit.
- 2) Until compliance with the final effluent limitations are achieved, the City of Parma WWTF must complete the tasks listed below in Table 1 and 2, as required under the schedules of compliance.

- 3) In addition, the City of Parma must submit an annual progress report outlining progress made towards reaching the final compliance dates for the effluent limitations. The annual progress report based on data gathered through December 31st must be submitted to the EPA and DEQ annually by February 15th of the subsequent year. The first report through December 31, 2016 is due on February 15, 2017 and annually thereafter, until compliance with effluent limitations is achieved. See also the Permit Part III.K., “Compliance Schedules.” At a minimum, the annual progress report must include:
- i) An assessment of the previous year’s TP and TRC effluent data and comparison to the final effluent limitations in the permit.
 - ii) A description of progress made towards meeting the final effluent limitations, including the applicable deliverables required under in Table 1 and 2. Include any exceedances of interim permit limits or anticipated challenges for compliance within the next year. This may include a technological explanation and/or a request to modify the permit.
 - iii) A description of actions and milestones targeted for the upcoming year towards meeting the final effluent limitations.
- 4) The permittee must comply with the Interim Effluent Limits, Compliance Tasks and Compliance Dates in Table 1 and Table 2:

Table 1. Tasks Required Under the Schedule of Compliance for Total Residual Chlorine (TRC).

Task No.	Completion Date	Task Activity
1	Effective Date of the Permit (EDP) + 1 year	<p>Engineering Facility Plan</p> <p>The permittee must complete a study that identifies both short and long term steps necessary to reduce TRC and meet the final effluent limits.</p> <p>Deliverable:</p> <p>Provide a preliminary engineering study to DEQ for review and necessary approval and submit a copy of the approved study to EPA within 1 year of the EDP.</p>
2	EDP + 2 Years	<p>Financing and Engineering Design</p> <p>The permittee must complete final engineering design and secure funding to complete facility improvements.</p> <p>Deliverables:</p> <p>The permittee will secure funding to complete facility improvements necessary to achieve final TRC limits within 2 years of the EDP.</p> <p>The permittee must receive DEQ approval of the final design and provide written notification of this to the EPA within 2 years of the EDP.</p>
3	EDP + 3 Years	<p>Construction, Commissioning and Achieve Compliance with TRC limits</p> <p>Deliverables:</p> <p>The permittee must submit construction completion report to EPA and DEQ within 3 years of the EDP.</p> <p>The permittee must achieve compliance with the final effluent limitations and provide written verification to the EPA and DEQ that the final water quality-based eluent limit can be reliably met within 3 years of the EDP.</p>

Table 2. Tasks Required Under the Schedule of Compliance for Total Phosphorus

Task No.	Completion Date	Task Activity
1	EDP + 2 years	<p>Engineering Facility Plan</p> <p>The Permittee must develop a facility plan that evaluates the alternatives that would allow the facility to meet the final water quality-based effluent limitations for phosphorus, including but not limited to treatment plant upgrades, seasonal re-use, and pollutant trading projects.</p> <p>Deliverable: The permittee will provide EPA with written notice that the facility Planning Study has been submitted to DEQ.</p>
2	EDP + 2 Years	<p>Select Alternative</p> <p>The permittee must select an alternative to come into compliance with the total phosphorus limit.</p> <p>Deliverable: The permittee will provide DEQ and EPA with written notice of the selected alternative(s).</p>
3	EDP + 5 Years	<p>Evaluate and Obtain Financing</p> <p>The Permittee must acquire funds to complete facility upgrades and/or the alternative mitigation plan necessary to comply with the final effluent limitations for ammonia and TP by the end of this compliance schedule.</p> <p>Deliverables:</p> <p>Permittee must provide written notice to DEQ and EPA that the funding to finance any necessary facility upgrades or alternative mitigation plan is in place within 5 years of the EDP.</p>
4	EDP + 6 Years	<p>Preliminary Design</p> <p>City must complete the preliminary design of any planned facility upgrades and/or a preliminary plan and schedule for an alternative phosphorus mitigation approach, which will address the City's total phosphorus effluent limit.</p> <p>Deliverable: The permittee will provide EPA with written notice that the preliminary design and/or mitigation plan has been submitted and approved by DEQ.</p>
5	EDP + 6 Years	<p>Complete Final Design</p> <p>City must complete and receive DEQ approval of the final design of any facility upgrades necessary to address the final effluent total phosphorus limits.</p> <p>Deliverable:</p> <p>The permittee will submit the final design to DEQ for approval and provide EPA with written notice that the final design documents are completed.</p>
6	EDP + 8 Years	<p>Complete Construction</p> <p>Deliverable: The permittee will provide DEQ and EPA with written notice that the construction is completed.</p>
7	EDP + 9 Years and 11 months	<p>Process Optimization and Achieve Final Effluent Limitation</p> <p>Commission new facility equipment/process over one season to optimize the process and ensure consistent achievement of final effluent limits.</p> <p>Deliverable: The permittee must achieve compliance with the final effluent limitations and provide DEQ and EPA with written notice of compliance with final effluent limitations.</p>

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes a mixing zone that utilizes 25% of the critical flow volumes of Sand Hollow Creek for chlorine (TRC) and ammonia.

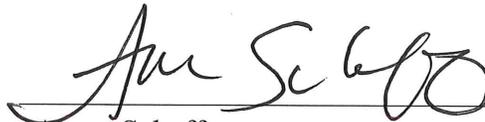
Other Conditions

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

