



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

May 31, 2018

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 Elk River Wastewater Treatment Facility,
Permit #ID0020362

Dear Mr. Lidgard:

The Lewiston Regional Office of the Department of Environmental Quality (DEQ) has reviewed the above-referenced permit for the City of Elk River Wastewater Treatment Facility. Section 401 of the Clean Water Act requires that states issue certifications for activities which are authorized by a federal permit and may result in the discharge to surface waters. In Idaho, the 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 conditions contained therein.

Please contact me directly at 208-799-4370 to discuss any questions or concerns regarding the content of this certification.

Sincerely,

A handwritten signature in blue ink that reads "John Cardwell".

John Cardwell
Regional Administrator
Lewiston Regional Office

c: Kai Shum, EPA Region 10
Loren Moore, DEQ State Office



Idaho Department of Environmental Quality Final §401 Water Quality Certification

May 31, 2018

NPDES Permit Number(s): City of Elk River Wastewater Treatment Facility,
Permit #ID0020362

Receiving Water Body: Elk Creek – source to Elk Creek Reservoir

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 Elk River Wastewater Treatment Facility (WWTF) discharges the following pollutants of concern: five-day biochemical oxygen demand (BOD₅), dissolved oxygen (DO), total suspended solids (TSS), *E. coli* bacteria, total residual chlorine (TRC), pH, ammonia, phosphorus, and floating, suspended, or submerged matter (residues). Effluent limits have been developed for BOD₅, TSS, *E. coli*, TRC, pH, and residues. No effluent limits are proposed for DO, ammonia, and phosphorus.

Receiving Water Body Level of Protection

The City of Elk River WWTF discharges to Elk Creek within the Lower North Fork Clearwater Subbasin assessment unit (AU) ID17060308CL030_03 (source to Elk Creek Reservoir). This AU has the following designated beneficial uses: cold water aquatic life, salmonid spawning, primary contact recreation, and domestic water supply. 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. 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 Elk River WWTF permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS.

High-Quality Waters (Tier II Protection)

Elk Creek is considered high quality for cold water aquatic life, salmonid spawning, and primary contact recreation. There is no public water supply intake relevant to the domestic water supply beneficial use near the point of discharge (IDAPA 58.01.02.252.b.i). As such, the water quality

relevant to cold water aquatic life, salmonid spawning, and primary contact recreation uses of Elk Creek 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 cold water aquatic life, salmonid spawning, and primary contact recreation uses of Elk Creek (IDAPA 58.01.02.052.05). These include the following: five-day biochemical oxygen demand (BOD₅), dissolved oxygen (DO), total suspended solids (TSS), *E. coli* bacteria, total residual chlorine (TRC), pH, ammonia, phosphorus, temperature, and floating, suspended, or submerged matter (residues). Effluent limits are set in the proposed and existing permit for all these pollutants except DO, ammonia, temperature, and phosphorus.

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

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 Elk River WWTF permit, this means determining the permit's effect on water quality based upon the limits for BOD₅, TSS, *E. coli*, TRC, pH, and residues 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								
Biochemical Oxygen Demand (BOD ₅)	mg/L	30	45	—	30	45	—	NC
	lb/day	20	30	—	20	30	—	
	% removal	85%	—	—	85%	—	—	
TSS	mg/L	30	45	—	30	45	—	NC
	lb/day	20	30	—	20	30	—	
	% removal	85%	—	—	85%	—	—	
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
Floating, Suspended, or Submerged Matter	--	See Paragraph I.A.3 of the permit			See Paragraph I.B.2 of the permit			NC
Total Residual Chlorine (final)	mg/L	0.01	—	0.02	0.09	—	0.21	I
	lb/day	0.01	—	0.01	0.06	—	0.14	
Pollutants with no limits in both the current and proposed permit								
Total Ammonia as N	mg/L	—	—	Report	—	—	Report	NC
Total Phosphorus as P	mg/L	—	—	Report	—	—	Report	NC
Temperature	°C	—	—	Report	—	—	Report	NC

^aNC = no change, I = increase

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

TRC has been given a higher limit than in the current permit (“I” in the change column). At the time that the current permit was issued, EPA did not have information to determine low flows in the waterbody and assumed zero flow when calculating the TRC effluent limit. For this permit, EPA relied on USGS Stream Stats Version 3.0 to determine that low flows are more than zero and used the updated low flow values to calculate the water quality based TRC effluent limit, resulting in an increase. Reasonable potential analysis of TRC conducted for the permit shows that the new limit is protective of the stream because it meets Idaho water quality standards and that the proposed increase in the TRC effluent limit reflects improved flow assumptions and therefore should not result in a change to the baseline water quality after allowing for mixing under critical conditions. In addition, DEQ’s antidegradation analysis is consistent with the state antidegradation policy as it ensures that the new limit will maintain and protect water quality in the receiving water, identifies the receiving water as a Tier II waterbody, and evaluates the effect of increased TRC limits on the waterbody. DEQ has determined that this discharge will not result in degradation to the receiving water; therefore, an assimilative capacity analysis is not required.

Pollutants with No Limits

The pollutants of concern with no limits relevant to Tier II protection of recreation and cold water aquatic life uses that currently are not limited and for which the proposed permit also

contains no limits are DO, ammonia, and phosphorus (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 DO, ammonia, and phosphorus, 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 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. Additionally, the technology based effluent limit for BOD₅ ensures that the DO criteria will be met. A reasonable potential calculation showed that the facility discharge would not have a reasonable potential to cause a violation of the water quality criteria for ammonia from November to June. There are also weekly monitoring requirements for ammonia and phosphorous. 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 these pollutants with no limit. As such, the proposed permit should maintain the existing high water quality in Elk Creek.

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 25% of the critical flow volumes of Elk Creek for total residual chlorine and a mixing zone that utilizes 6% of the critical flow volumes of Elk Creek for ammonia. For further information about the mixing zones, critical low flow volume, and dilution factors see *Appendix D. Reasonable Potential and Water Quality-Based Effluent Limit Calculations* in the EPA fact sheet.

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 Sujata Connell, Lewiston Regional Office at 208-799-4370 or via email at Sujata.Connell@deq.idaho.gov.



John Cardwell
Regional Administrator
Lewiston Regional Office