



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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C.L. "Butch" Otter, Governor
Curt Fransen, Director

August 19, 2013

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

Subject: Final 401 Certification for the City of Notus Wastewater Treatment Plant; NPDES Permit
No. ID-002101-6

Dear Mr. Lidgard:

On July 22, 2013, EPA provided DEQ with the proposed final draft of the above-referenced permit and requested DEQ provide a final §401 certification of the permit pursuant to section 401 of the Clean Water Act. Upon review of the permit, DEQ prepared and now submits the enclosed final §401 certification for the permit.

If you have questions or need further information please contact Lauri Monnot at (208) 373-0461 or by email at Lauri.Monnot@deq.idaho.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Pete Wagner", is written over the word "Sincerely,".

Pete Wagner
Regional Administrator
Boise Regional Office

Enclosure: DEQ Final 401 Certification for NPDES Permit No. ID-002101-6

C: Miranda Adams, DEQ 401 Program Coordinator
Lance Holloway, DEQ Boise Regional Water Quality Manager



Idaho Department of Environmental Quality Final §401 Water Quality Certification

August 19, 2013

NPDES Permit Number(s): ID-002101-6, City of Notus Wastewater Treatment Facility (WWTF)

Receiving Water Body: Conway Gulch

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, including without limitation, the approval from the owner of a private water conveyance system, if one is required, to use the system in connection with the permitted activities.

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 Notus WWTF discharges the following pollutants of concern: BOD₅, TSS, *E. coli*, pH, ammonia, temperature (heat), and total phosphorus (TP). Effluent limits have been developed for BOD₅, TSS, *E. coli*, pH, ammonia, and TP. No effluent limits are proposed for temperature.

Receiving Water Body Level of Protection

The City of Notus WWTF discharges to Conway Gulch. Conway Gulch is a man-made water body which carries agricultural runoff, groundwater and stormwater drainage from the lands north and east of the wastewater treatment facility. Man-made water bodies, for which uses are not designated in IDAPA 58.01.02, sections 110-160, are to be protected for the uses for which they were developed; in this case agricultural water supply (IDAPA 58.01.02.101.02).

Because no aquatic life or recreational uses are designated for Conway Gulch, DEQ will provide Tier 1 protection only for the Conway Gulch (IDAPA 58.01.02.051.02).

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.

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.

In the absence of a TMDL and depending upon the priority status for development of a TMDL, the WQS stipulate that either there be no further impairment of the designated or existing beneficial uses or that the total load of the impairing pollutant remains constant or decreases (IDAPA 58.01.02.055.04 and 58.01.02.055.05). Conway Gulch discharges to the Boise River assessment unit (AU) 17050114SW001_06. The Boise River, at this location (AU 17050114SW001_06), is impaired for sediment, bacteria, temperature and TP. The EPA-approved *Lower Boise River TMDL* (DEQ 1999) establishes load allocations for sediment and bacteria at the mouth of Conway Gulch and also wasteload allocations for sediment and bacteria for the City of Notus WWTF. These allocations are designed to ensure the Boise 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. The *Snake River Hells Canyon (SR-HC) TMDL* (DEQ 2003) established a load allocation for the Boise River based upon a total phosphorus concentration of 0.07 mg/L at the mouth of the Boise River. The Lower Boise Watershed Council and DEQ (2008) developed the *Lower Boise Implementation Plan Total Phosphorus* (Implementation Plan), which implements the SR-HC TMDL for the Lower Boise watershed and assigns wasteload allocations to the point sources and load allocations to non-point sources in order to meet the target for total phosphorus set in the SR-HC TMDL. Since the SR-HC TMDL has been approved and implemented in the Lower Boise watershed through the Implementation Plan, Notus' discharge must be consistent with the SR-HC TMDL and the Implementation Plan.

The NPDES permit allows the City of Notus to discharge a monthly average of 0.06 lbs/day phosphorus to Conway Gulch, and ultimately the Boise River. The Implementation Plan established a WLA in years 10-15 of implementation to the City of Notus WWTF of 0.66 lbs/day (0.20 Kg/day), as a monthly average. The WLAs in the Implementation Plan allow the 0.07 mg/l TP target to be met at the mouth of the Boise River in Parma, which would also allow the Boise River to meet its beneficial uses. The permit limit is more stringent than the target limit set forth in the Implementation Plan; therefore, DEQ believes the Notus WWTF discharge will not increase TP concentrations in the Boise River.

In sum, the effluent limitations and associated requirements for BOD₅, TSS, *E. coli*, pH and ammonia contained in the City of Notus 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 TMDL*. Therefore, DEQ has determined the permit limits for these pollutants will protect and maintain existing and designated beneficial uses in Conway Gulch in compliance with the Tier 1 provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07). There is no existing TMDL for temperature or TP in the Boise River; therefore, the discharge permit limits must comply with these provisions of Idaho WQS (IDAPA 58.01.02.055.04 and 58.01.02.055.05). DEQ is working with EPA to bring the permit into compliance for temperature and TP with the conditions outlined below.

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

Compliance with IDAPA 58.01.02.055.04 Temperature Impairment

As noted above, IDAPA 58.01.02.055.04 provides that until a TMDL or equivalent process is completed, new or increased discharges of pollutants to a high priority impaired water body may be allowed only if the total load of the pollutant remains constant or decreases within the watershed. Once the TMDL or equivalent process is completed, the discharge must be consistent with the approved document. The Boise River at this location (AU 17050114SW001_06), is impaired by excess water temperature (heat) during the critical time period for cold water aquatic life (June 21-September 21). There is no TMDL for temperature developed for this AU, and the Lower Boise River is high priority water for TMDL development. Therefore, there must be no net increase of temperature in the watershed as a result of the Notus WWTF discharge.

In order to determine compliance with the no net increase requirement, DEQ must look at temperature impacts to the Boise River. In addition, IDAPA 58.01.02.055.04 requires the load of causative pollutants be kept constant, or decrease. For several reasons however, using a heat load is an inappropriate measure to determine compliance with IDAPA 58.01.02.055.04. First, heat is a non-conservative pollutant, and therefore, loading is not as relevant to water quality as it is for other pollutants. Second, there is no “zero load” of heat because a wastewater discharge will always have some heat load to it. This makes it impossible, or at least impractical, to prevent any increase in heat loading from a discharge. For these reasons, DEQ determines compliance with the no net increase requirement by looking at whether the Notus WWTF discharge will increase temperatures in Conway Gulch, and ultimately, the Boise River.

DEQ has a limited data set to determine the impact of the Notus WWTF discharge. For example, there is inadequate flow data regarding the relevant waters, and limited temperature data for the effluent, Conway Gulch and the Boise River. In order to evaluate the impact, instantaneous temperature and flow data collected in Conway Gulch in 2005 and instantaneous temperature data collected from the effluent were used to determine whether the discharge would result in a net increase in water temperature in Conway Gulch. Irrigation season average flow in Conway Gulch was estimated at 17 MGD (32 cfs), and the design flow of the facility is 0.11 MGD. The average flow in Conway Gulch during non-irrigation season was estimated at 5.2 MGD (9.7 cfs). Modeling results for both seasons show the temperature of Conway Gulch would not measurably increase with effluent temperatures as high as 30 degrees Centigrade. In addition, due to lagoon capacity and evaporative loss the WWTF currently only discharges from November through March, which is not during the critical period for cold water aquatic life. Based on the available data, DEQ believes the Notus WWTF discharge will not increase temperatures in Conway Gulch or the Boise River.

To improve the accuracy of the analysis regarding the temperature impacts of the discharge and in order to determine compliance with WQS and other appropriate requirements of state law, DEQ requires, as a condition in the permit, the City to commit to continuous temperature monitoring of the treated effluent and of Conway Gulch, above the discharge point. This monitoring will assist in determining whether temperature effluent limits are required in future

permits. Prior to discharging to Conway Gulch during the critical time period for cold water aquatic life the City of Notus will need to develop, and obtain DEQ approval of, a plan that depicts how the discharge and the receiving water bodies will be monitored to ensure consistency with IDAPA 58.01.02.055.04. As part of this plan, Notus may include implementation measures to offset the amount of heat load, if any, that is in excess of the WQS and the stream temperature in the Boise River. No discharge that raises the instream temperature of Conway Gulch, and ultimately the Boise River, during the critical time period for cold water aquatic life may occur until DEQ has approved the offset measures contained in the plan.

At a minimum, the plan shall:

- (1) Describe a temperature monitoring plan for the effluent and receiving water body that includes, at a minimum, the monitoring described in the preceding paragraph.
- (2) Describe measures the City may implement to ensure the discharge from the facility is consistent with Conway Gulch instream water temperature, including without limitation, any measures the City may implement to ensure that the addition of heat load that is in excess will be offset.
- (3) Include a schedule for the implementation of the monitoring plan and any necessary offset measure(s).
- (4) Identify remediation steps that may be taken if the City identifies their discharge is exceeding temperature requirements for the Boise River.

Once approved by DEQ, the plan shall be implemented according to the schedule in the approved plan. In addition, the City of Notus must send the plan, along with documentation of DEQ's approval of the plan, to EPA.

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes a mixing zone that utilizes 25% of the critical flow volumes of Conway Gulch for ammonia.

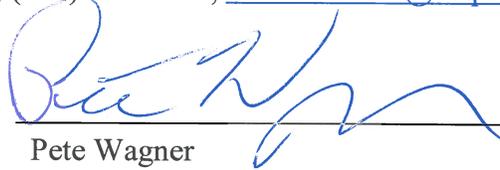
Other Conditions

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 Lauri Monnot, DEQ Boise Regional Office, (208) 373-0461, Lauri.Monnot@deq.idaho.gov.



Pete Wagner

Regional Administrator

Boise Regional Office