STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

September 28, 2012

Mr. Michael J. Lidgard, Manager
NPDES Permit Unit
US EPA, Region 10
1200 Sixth Avenue
Seattle, WA 98101

RE: Draft 401 Water Quality Certification and Antidegradation Review for the City of Boise West Boise Wastewater Treatment Facility NPDES Permit No. ID-002398-1

Dear Mr. Lidgard:

The State of Idaho Department of Environmental Quality (DEQ) received a preliminary draft NPDES permit on September 14th, 2012 regarding the City of Boise wastewater treatment facility discharge into the Boise River and Dixie Slough.

Upon assessment of the proposed permit and completion of an antidegradation review, DEQ submits the enclosed §401 certification and antidegradation review for the draft permit.

If you have any questions or need further information please contact Lauri Monnot at 373-0550 or by email at Lauri.Monnot@deq.idaho.gov.

Sincerely,

Pete Wagner
Regional Administrator
DEQ Boise Regional Office

pc: Barry Burnell, Water Quality Division Administrator
John Drabek, EPA Region 10, Seattle
Miranda Adams, DEQ 401 Program Coordinator

Idaho Department of Environmental Quality

Draft §401 Water Quality Certification

September 28, 2012

NPDES Permit Number(s): ID-002398-1, West Boise Wastewater Treatment Facility, City of Boise

Receiving Water Body: Boise River, Dixie Slough

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 West Boise Wastewater Treatment Facility (West Boise WWTF) discharges the following pollutants of concern: biological oxygen demand (BOD), total suspended solids (TSS), *E. coli*, pH, ammonia, mercury, arsenic, cadmium, chromium III and IV, lead, nickel, selenium, silver, cyanide, total phosphorus (TP), copper, zinc and temperature. Surface water monitoring requirements are included in the permit for all pollutants of concern listed above and additional parameters listed in Table 5 of the permit. Effluent limits have been developed for BOD, TSS, *E. coli*, pH, ammonia, mercury, TP, and temperature. The Dixie Drain Treatment Facility (Dixie Drain Facility) monitoring requirements also include recoverable aluminum and flocculent usage; see Table 7A of the permit.

Receiving Water Body Level of Protection

The West Boise WWTF discharges to the Boise River assessment unit (AU) ID17050114SW005_06. This AU has the following designated beneficial uses: cold water aquatic life; primary contact recreation; salmonid spawning, agricultural water supply, industrial water supply; wildlife habitat; and aesthetics. There is no available information indicating the presence of any existing beneficial uses aside from those that are already designated.

The cold water aquatic life use in the Boise River AU is not fully supported due to excess sedimentation, temperature, habitat alteration and flow alterations (2010 Integrated Report). The primary contact recreation beneficial use is not fully supported due to bacteria. As such, DEQ will provide Tier 1 protection only for the aquatic life and recreation beneficial uses (IDAPA 58.01.02.051.01; 58.01.02.052.01).

The permittee may meet the final effluent limits for TP through a combination of removal of TP at the West Boise WWTF and from the Dixie Slough at the Dixie Drain Treatment Facility (Dixie Drain Facility) as described in section I.B.6. The Dixie Drain Facility discharges to the Dixie Slough AU ID17050114SW001_02. This AU has the following designated beneficial uses: cold water aquatic life; primary contact recreation; agricultural water supply, industrial water supply; wildlife habitat; and aesthetics. There is no available information indicating the presence of any existing beneficial uses aside from those that are already designated.

The cold water aquatic life use in the Dixie Slough is not fully supported due to excess temperature (2010 Integrated Report). The primary contact recreation beneficial use had not been assessed for the 2010 Integrated Report cycle. However, *E. coli* data collected in 2011 to

calculate a geometric mean indicate that recreational uses are not fully supported. As such, DEQ will provide Tier 1 protection only for the aquatic life use 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 West Boise 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.

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). The Dixie Drain Facility discharges to Dixie Slough 0.25 miles upstream from its confluence with the Boise River. Both water bodies are impaired for temperature and the Boise River is impaired for TP. There is no existing TMDL for temperature or TP, therefore discharge permits must comply with these provisions of Idaho WQS.

The EPA-approved *Lower Boise TMDL* (1999) establishes wasteload allocations for TSS and bacteria. These wasteload allocations are designed to ensure the Dixie Slough will achieve the water quality necessary to support its existing and designated beneficial uses and comply with the applicable numeric and narrative criteria. The effluent limitations and associated requirements contained in the West Boise WWTF permit are set at levels that comply with these wasteload allocations.

In sum, the effluent limitations and associated requirements contained in the West Boise 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 TMDL*. Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Dixie Slough in compliance with 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

Surface Water Monitoring Requirements

In order to determine the effect of the West Boise WWTF effluent with regard to WQS 58.01.02.250.02.b, upstream and downstream water temperature should be collected continuously at no less than hourly intervals. Determining compliance with Idaho WQS requires more than a single instantaneous recorded measurement once each week. The City of Boise is presently collecting continuous water temperature data at several locations and this requirement is included in EPA's Final Permit, on page 21, Table 7. In order to determine the effect of the Dixie Drain WWTF effluent on temperature in Dixie Slough, continuous water temperature and flow should be collected from upstream of the facility in Dixie Slough and in the Dixie Drain Facility effluent at no less than hourly intervals.

Compliance with IDAPA 58.01.02.055.04 Temperature Impairment

The Dixie Drain Facility is a diversion of a portion of the flow of Dixie Slough through wetlands with a return to the slough and then a discharge to the Boise River. The Dixie Drain Facility may result in a new or increased temperature discharge to the Lower Boise River watershed. 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 Lower Boise River (AU 17050114SW001_06) and first and second order tributaries (AU 17050114SW001_02), including the Dixie Slough are 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 these AUs, and the Lower Boise River and Dixie slough are high priority for TMDL development. Therefore, there must be no net increase of temperature in the watershed as a result of the Dixie Drain Facility discharge. In order to determine compliance with the no net increase requirement, DEQ must look at temperature impacts to the Dixie Slough and the Lower Boise River, which are the impaired waters. IDAPA 58.01.02.055.04 requires the load of causative pollutants be kept constant. 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 very non-conservative pollutant, and therefore loading is not as relevant to water quality as it is for other pollutants. Second, there is really no zero load of heat because a 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 for temperature by looking at whether the discharge will increase temperatures in the Dixie Slough and the Lower Boise River.

DEQ has very little temperature data relevant to determining the impact of the Dixie Drain Facility discharge. For example, DEQ has very limited data regarding the temperature of Dixie Slough and no direct data regarding the temperature of the constructed wetland effluent. DEQ also has inadequate flow data for a mixing zone analysis in Dixie Slough and no flow data for the planned constructed wetland. For all these reasons, at the present time, DEQ does not have

sufficient data to determine whether the Dixie Drain Facility discharge will increase temperatures in Dixie Slough, and thus, the Boise River. However, since the proposed constructed wetland and Dixie Slough are both in contact with shallow groundwater our expectation is that there will not be an increase in water temperature.

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, that the City determine whether the discharge will cause an increase in temperature. The City shall also conduct continuous monitoring of the temperature of treated effluent, the Dixie Slough and the Boise River. Prior to discharge to Dixie Slough, the City of Boise shall develop and obtain DEQ approval of a Dixie Drain Temperature Monitoring Plan that depicts how the discharge and the receiving water body will be analyzed and monitored to ensure consistency with IDAPA 58.01.02.055.04. If the City's analysis or monitoring shows an increase in temperature prior to the development of a temperature TMDL for these AUs, then the City shall develop and obtain DEQ approval of a Dixie Drain Temperature Remediation Plan that describes how the City shall ensure compliance with IDAPA 58.01.02.055.04, and if necessary, the temperature criteria in the WQS. Milestones are specified in the Compliance Schedule section of this certification.

Alternative Limitations

The following subsection(s) discuss how the permit can be made less stringent and still comply with Idaho WQS.

Mercury Limits

The final modified permit contains effluent limits for mercury in Table 2, mercury effluent monitoring requirements in Table 4, and surface water monitoring requirements in Table 7. As explained below, DEQ's methylmercury fish tissue criteria is more stringent and more protective of aquatic life than the mercury water column criteria used by EPA to set the effluent limits and sampling requirements. Therefore, the mercury effluent limits and sampling requirements should be removed. Instead, both aquatic life and human health will be protected by the fish tissue sampling and mercury minimization plan set forth below and in Section I.G of the permit.

Statement on relative stringency, and thus protectiveness, of Idaho's fish tissue criterion

Based on concurrent fish tissue and water column sampling of mercury from major rivers in Idaho (Essig 2009), fish tissue methylmercury levels at Idaho's criterion is associated with a water column Hg level much less than 12 ng/L. Specifically, regressing water total Hg on fish tissue with the 55 paired data from Essig's report, and using upper 99th percent confidence limits on both slope and intercept from that regression, shows a fish tissue methylmercury level of 0.3 mg/Kg corresponds to a water column total mercury level of 2.6 ng/L. In other words, there is only a 1% probability of water total mercury being > 2.6 ng/L when methylmercury levels in fish tissue from that water meets Idaho's tissue criterion.

This correlated level of water column total mercury of 2.6 ng/L is almost 100 times lower (more stringent) than the lowest estimated chronic toxicity value of 250 ng/L in EPA's 1995 aquatic

life criteria updates. It is more than four times lower than the outdated chronic aquatic life criterion of 12 ng/L based on back calculation from the FDA action level for mercury in fish of 1.0 mg/Kg. Thus, DEQ has high confidence in concluding that Idaho's human health fish tissue criterion is the more stringent criterion: that human health is a more sensitive use than aquatic life with respect to mercury; and, that meeting Idaho's fish tissue criterion will be protective of aquatic life uses.

Fish Tissue Sampling

Objective: The objective of the Methylmercury Fish Tissue Monitoring program is to collect reliable methylmercury fish tissue data, within a specific geographic area, to determine if fish tissue concentrations of methylmercury are compliant with Idaho's methylmercury fish tissue criterion of 0.3 mg/kg. The monitoring program may also be used to advise the public on safe levels of fish consumption.

Applicability: The permittee may satisfy the requirements of the Methylmercury Fish Tissue Monitoring Program by arranging to participate in a cooperative effort with other entities which have NPDES permitted discharges to the Lower Boise River or tributaries to the Lower Boise River.

Requirements: The permittee must develop and submit a Methylmercury Fish Tissue Monitoring Plan to EPA and DEQ for review and approval within one year of the effective date of the permit. At a minimum the plan must include the following elements:

- Identify all participants (e.g., City of Boise, other municipalities or industries) funding the monitoring program. The monitoring plan must be updated each time a municipality or industrial facility joins the cooperative monitoring program, and the City of Boise must provide notice to EPA and DEQ each time a new entity becomes part of the cooperative monitoring program. Written notice must be provided to EPA and DEQ within 30 days of a new participant joining the program.
- Monitoring stations where fish tissue samples will be collected. One monitoring station must be located in each of the following areas:
    - Upstream of River Mile 50 in the Lower Boise River,
    - An area downstream of both of the City of Boise outfalls and near the middle of the Lower Boise River.
    - Near the mouth of the Boise River,
    - Snake River upstream of the confluence of the Boise and Snake Rivers,
    - Snake River downstream of the confluence of the Boise and Snake Rivers, and
    - Within the Brownlee Reservoir.
- Identify the name and address of organization collecting and analyzing fish tissue samples. The organization must have experience or training in the collection and analysis of methylmercury fish tissue samples.
- Develop a sampling plan that specifies sample target species, sample number and size, timing of sample collection, and all essential fish collection, handling, and shipping information for field sampling teams collecting fish. The plan should include a project description, detailed standard operating procedures (SOPs) for fish collection, and instructions for completing field forms and labels and for shipping fish samples.

Protocols should be consistent with Chapter 4 of *Implementation Guidance for the Idaho Mercury Water Quality Criteria* (Idaho Department of Environmental Quality, 2005).

- Identify all protocols related to sample preparation methods and analytical methods to be used on samples.
- Identify data quality goals for all sample collection and handling activities and describe the Quality Assurance/Quality Control (QA/QC) techniques employed by field teams to support those goals.

Sample Frequency: Initial sampling must occur within two years of the effective date of the permit. Following the initial sampling event, monitoring must occur at least once every two years from five of six sample locations, and yearly at the sixth location. After three sampling cycles, five of six sample locations may be sampled once every five years, depending on results of the first three cycles.

Additional Sampling: At each sample location where fish are collected a surface water sample must be collected and analyzed for total mercury using an analytical method which achieves a Minimum Level of 0.0005 µg/L.

Reporting Requirements: The permittee must submit a report which lists the participants financing the monitoring program; the name, address and phone number of the entity collecting and analyzing samples; sample locations; target species used; sample size; time samples were collected; analytical methods used; results, and any other information relevant to the monitoring program. The permittee must submit the report to EPA, DEQ and Idaho Fish Consumption Advisory Program by March 31 of the year following the sampling event.

Revision to the Methylmercury Monitoring Plan: Any revisions to the Methylmercury Monitoring Plan must be approved in writing by DEQ and EPA.

Mercury Minimization Plan

1. The permittee must develop and implement a mercury minimization plan that identifies potential sources of mercury and the measures to reduce or eliminate mercury loading. The mercury minimization plan should include the following:
    a. A Program Plan which includes the City's commitments for:
        i. Identification of potential sources of mercury that contribute to discharge levels;
        ii. Reasonable, cost-effective activities to reduce or eliminate mercury loadings from identified sources;
        iii. Tracking mercury source reduction implementation and mercury source monitoring;
        iv. Quarterly monitoring of POTW influent and effluent; and
        v. Resources and staffing.
    b. Implementation of cost-effective control measures for direct and indirect contributors; and

c. An annual status report submitted to the US EPA and DEQ, which includes:
   i. A list of potential mercury sources;
   ii. A summary of actions taken to reduce or eliminate mercury discharges to progress toward meeting water quality standards;
   iii. Mercury source reduction implementation, source monitoring results, influent and effluent, and results for the previous year; and
   iv. Proposed adjustments to the Program Plan based on findings from the previous year.

2. The permittee must submit written notice to EPA and DEQ that the mercury minimization plan has been developed and implemented within 90 days of the effective date of this permit. Any existing emergency response and public notification plan may be modified for compliance with this section.

Temperature Permit Limits

Summer thermal effluent limits may be made less stringent by application of Idaho's WQS allowing a cumulative 0.3°C increase in temperature from all sources when natural conditions are warmer than numeric criteria (IDAPA 58.01.02.200.09). Based on the City of Boise's Chapter 7 analysis of temperature, it appears to DEQ this may be the case during a portion of the warmer months of the year in the Boise River. The City's modeling of natural temperatures needs to be updated and agreed upon by DEQ and EPA before natural conditions and their appropriate time of application could become the basis for alternate thermal effluent limits. The interim effluent limits for temperature are intended to be consistent with Idaho WQS.

Biosolids

The permit prohibits the use of the wastewater interceptor pipeline to transport biosolids. However, in order to accomplish the interim and final effluent reductions necessary to achieve permit compliance with TP and temperature limits, the Lander Street WWTF is anticipated to generate solids that exceed capacity. In order to properly manage this excess, it is necessary to use the South Boise Interceptor (SBI) pipeline to transport up to 88,000 gpd of biosolids to the West Boise WWTF for proper treatment. This temporary modification of waste treatment is necessary to allow for timely completion of plant modifications planned for Lander Street and West Boise WWTF's. At no time will permit limits at the West Boise WWTF be exceeded as a result of this process. This process modification is authorized from March 1, 2012 through the term of this permit.

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. West Boise WWTF cannot immediately achieve compliance with the effluent limits for total phosphorus and temperature; 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.

1. **Total Phosphorus:** The permittee must comply with the following Compliance Schedule requirements for Total Phosphorus.
   A. The following limitations (Table 1) must be achieved by the dates cited.

TABLE 1: TP Effluent Limits and Compliance Dates

Date	Effluent Limit
May 1, 2012 through September 30, 2013	Interim Limit not to exceed 5.8 mg/L, seasonal average
May 1, 2012 through September 30, 2014	Interim Limit not to exceed 5.8 mg/L, seasonal average
May 1, 2012 through September 30, 2015	Interim Limit not to exceed 5.8 mg/L, seasonal average
May 1, 2016 through September 30, 2016	Interim Limit not to exceed 600 µg/L, seasonal average
May 1, 2017 through September 30, 2017 and May 1 through September 30 every year thereafter until the final limit is achieved	Interim Limit not to exceed 500 µg/L, seasonal average
10 years from effective date of permit	See Final Permit Part I.B3, Table 2

B. The permittee must complete the tasks and reports described below:
   i. No later than April 26, 2013 the permittee must complete construction of the Struvite Production Facility. The permittee must submit a letter to EPA and DEQ stating when construction is complete.
   ii. No later than April 26, 2013 the permittee must complete UV Disinfection improvements, install and commence operation of an influent flow meter. The permittee must submit a letter to DEQ and EPA stating when construction is complete and when it is operational.
   iii. No later than April 30, 2016 the Enhanced Biological Nutrient Removal Modifications must be complete and operational. These modifications include the following:
      - Modifications to chemical addition facility
      - South plant primary clarifier mechanism replacements and modifications
      - South plant secondary clarifier mechanisms and weirs
      - New primary sludge fermentation tank
      - New phosphate release tank
      - Four new rotary drum thickeners
      - Piping interconnects for return activated sludge, mixed liquor, primary influent, and primary effluent
      - Modifications of the aeration basins in both the North and South plants to Enhanced Biological Phosphorus Removal process.

iv. The permittee must submit by April 30, 2016 a written notice to DEQ and EPA stating that the applicable modifications are constructed and operational.

v. Evaluate options available to achieve the final effluent limitation, including, but not limited to, treatment plant upgrades, seasonal re-use of effluent, effluent trading projects, and the decommissioning the Lander Street WWTF and consolidating all operations at the West Boise WWTF.

C. Starting in 2013 and continuing through 2017 the permittee must submit a Report of Progress to DEQ and EPA detailing the evaluation of each available option. Reports must be submitted by December 31 of each year.

i. No later than December 31, 2018 the permittee must decide on the final option that will be used to achieve the final effluent limits. At this time, the permittee must provide, to DEQ and EPA, a preliminary schedule of design upgrades and a preliminary construction schedule that will be used to achieve compliance with the final limits.

Thereafter, by December 31 of each year, the permittee must provide a Report of Progress to DEQ and EPA which details the progress made toward achieving the final effluent limitation, and the series of actions that will be taken in the coming year.

ii. No later than 10 years from the effective date of the permit, the permittee must be in compliance with the final effluent limit. The permittee must notify DEQ and EPA in writing when the final effluent limit is achieved.

2. **Temperature:** The permittee must comply with the following Compliance Schedule requirements for Temperature.

A. The following interim Maximum Daily Average and final limitations must be achieved by the dates cited.

i. Interim Limits[1]:

January – March:	17.2 ° C
April – June:	22.1 ° C
July – September:	24.1 ° C
October –December:	22.4 ° C

ii. The final effluent limits listed in the permit Part I. B. or limits based on Idaho WQS natural background provision (IDAPA 58.01.02.200.09) must be achieved no later than 10 years after the effective date of the permit.

B. The permittee must complete the tasks and reports described below:

[1] Interim Temperature limits were developed based on the last nine years of operational and climatic conditions and the assumption that conditions during the Schedule of Compliance would be consistent with observed conditions during the last decade. These limits are not applicable if the Boise Airport Temperature for the annual, seasonal, or monthly period observed and reported by NOAA (http://www.wrh.noaa.gov/boi/climo.php) establishes a new high temperature record.

i. No later than December 31, 2017 complete an alternatives evaluation of methods the City may use to achieve the final effluent limits. The evaluation should consider facility improvements, re-use of effluent, and possible trading mechanisms such as offsite mitigation, including wetland and habitat restoration. Starting in 2013 and continuing through 2017 the permittee must submit a Report of Progress to EPA and DEQ detailing the evaluation of each available option. The Reports must be submitted by December 31 of each year.

ii. If the City determines to pursue limits based on the natural background provision in the WQS, the City must, no later than December 31, 2017, complete and submit an updated natural conditions model for temperature that is reviewed and approved by EPA and DEQ.

iii. No later than December 31, 2018 provide a preliminary schedule of design upgrades and a preliminary construction schedule that will be used to achieve compliance with the final limits. By December 31 of each year thereafter the permittee must provide a Report of Progress to DEQ and EPA which details the progress made toward achieving the final effluent limitation, and the series of actions that will be taken in the coming year.

iv. No later than 10 years from the effective date of the permit, the permittee must be in compliance with the final effluent limits for temperature. The permittee must notify DEQ and EPA in writing when the final effluent limit is achieved.

3. **Dixie Drain Facility**: The permittee must comply with the following compliance schedule:

TABLE 2: Compliance Schedule Tasks and Dates

Task No.	Completion Date	Task/Activity
1	December 1, 2012	Initiate project design Deliverable: The permittee must provide EPA and DEQ a written Progress Report.
2	December 1, 2013	Complete Preliminary Design Report Deliverable: The permittee must provide EPA and DEQ with written notice that the preliminary design report is completed.
3	June 1, 2014	Obtain necessary permits Deliverable: The permittee must provide EPA and DEQ with written notice all necessary permits are received.
4	August 1 2014	Initiate project construction Deliverable: The permittee must notify EPA and DEQ in writing on the beginning of construction.
5	September 1, 2015	Achieve substantial completion of construction. Deliverable: The permittee must notify EPA and DEQ in writing on achievement of substantial completion.
6	May 1, 2016	Begin Operation Deliverable: The permittee must notify EPA and DEQ in writing on beginning of operation and completion of the Operation and Maintenance Manual for the Dixie Drain Facility.
7	May 1, 2016	Interim Total Phosphorus Removal The Dixie Drain Facility must achieve a minimum average monthly TP removal of 25 lbs/day.

A. Prior to discharge to Dixie Slough, the City shall develop and get DEQ approval of a Dixie Drain Temperature Monitoring Plan to determine whether this discharge will cause an increase in the temperature of the Dixie Slough and the Boise River.

   At a minimum, the plan shall:

   i. Describe how the City will determine whether the discharge causes an increase in temperature in the Dixie Slough and the Boise River, and

   ii. Include a continuous temperature monitoring plan for treated effluent from the Dixie Drain Facility, the Dixie Slough and the Boise River, and

   iii. Include a schedule for the implementation of the plan, including a schedule for the submittal of a Temperature Analysis Report that describes the results of the City's analysis of whether the Dixie Drain Facility will cause an increase in temperature, and

   iv. Within 15 months of Dixie Drain Facility operation the City shall submit to DEQ a Temperature Monitoring Report for the first year.

B. If the analysis and/or temperature monitoring data confirm an increase in temperature for Dixie Slough or the Boise River and there is still no temperature TMDL developed for the relevant AUs, then the City shall within 3 months of delivery of the Temperature Analysis Report or Temperature Monitoring Report (whichever provides sufficient information to determine whether there is or will be a temperature increase) submit and get DEQ approval of a Dixie Drain Temperature Remediation Plan that:

   i. Describes the measures the City will implement to ensure that the discharge from the Dixie Drain Facility project is consistent with IDAPA 58.01.02.055.04, including without limitation, any measures the City will implement to ensure that the addition of heat load that is in excess will be offset, and

   ii. Includes a schedule for implementation.

Once approved by DEQ, the Dixie Drain Temperature Monitoring Plan and the Dixie Drain Remediation Plan shall be implemented according to the schedules in the approved plans. In addition, the City must send the plans along with documentation of DEQ's approval of the plans, and the Report regarding the results of the City's analysis of temperature impacts, to EPA.

In the event a temperature TMDL for the Lower Boise and Dixie Slough AUs is developed by DEQ and approved by EPA, the Dixie Drain Facility discharge shall be consistent with the approved TMDL.

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes the following mixing zones:

- 25% mixing zone for zinc (October through April);
- 10% mixing zone for zinc (May through September);
- 25% mixing zone for ammonia and whole effluent toxicity (year round);
- 10% mixing zone for copper (year round);
- 50% of the critical flow volumes of the Boise River for water temperature (November through March); and
- 25% mixing zone for water temperature (April 1 through July 15), and the month of October.

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, Watershed Coordinator, 208-373-0550 or Lauri.Monnot@deq.idaho.gov.

DRAFT

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