Fact Sheet

The U.S. Environmental Protection Agency (EPA)
Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:

City of Burley Wastewater Treatment Plant

Public Comment Start Date: October 31, 2017
Public Comment Expiration Date: November 30, 2017

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The EPA Proposes To Reissue NPDES Permit
The EPA proposes to reissue the NPDES permit for the facility referenced above. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the United States. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the facility.

This Fact Sheet includes:
- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations and other conditions for the facility
- a map and description of the discharge location
- technical material supporting the conditions in the permit

State Certification
Upon the EPA's request, the Idaho Department of Environmental Quality (IDEQ) has provided a draft certification of the permit for this facility under Section 401 of the Clean Water Act. Comments regarding the certification should be directed to:

Regional Administrator
Idaho Department of Environmental Quality
650 Addison Avenue West, Suite 110
Twin Falls, ID 83301

Public Comment
Persons wishing to comment on, or request a Public Hearing for the draft permit for this facility may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to the EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires, and all comments have been considered, the EPA's regional Director for the Office of Water and Watersheds will make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If substantive comments are received, the EPA will address the comments and issue the permit. The permit will become effective no less than 30 days after the issuance date, unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

Documents are Available for Review
The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting the EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday at the address below. The draft permits, fact sheet, and other information can also be found by visiting the Region 10 NPDES website at "http://EPA.gov/r10earth/waterpermits.htm."

US EPA Region 10
Suite 900
1200 Sixth Avenue, OWW-191
Seattle, Washington 98101
(206) 553-0523 or
Toll Free 1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The fact sheet and draft permits are also available at:

EPA Idaho Operations Office
950 W. Bannock Street, Suite 900
Boise, ID 83702
(206) 378-5746

IDEQ Twin Falls Regional Office
650 Addison Avenue West, Suite 110
Twin Falls, ID 83301
(208) 736-2190
Toll-free: (800) 270-1663

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Acronyms

1Q10	1 day, 10 year low flow
7Q10	7 day, 10 year low flow
30B3	Biologically-based design flow intended to ensure an excursion frequency of less than once every three years, for a 30-day average flow.
30Q10	30 day, 10 year low flow
AML	Average Monthly Limit
AWL	Average Weekly Limit
BA	Biological Assessment
BOD_5	Biochemical oxygen demand, five-day
°C	Degrees Celsius
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CSO	Combined Sewer Overflow
CV	Coefficient of Variation
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved oxygen
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
Gpd	Gallons per day
HUC	Hydrologic Unit Code
IC	Inhibition Concentration
ICIS	Integrated Compliance Information System
IDAPA	Idaho Administrative Procedure Act
IDEQ	Idaho Department of Environmental Quality
I/I	Infiltration and Inflow
LA	Load Allocation
lbs/day	Pounds per day
LC	Lethal Concentration

LC_{50}	Concentration at which 50% of test organisms die in a specified time period
LD_{50}	Dose at which 50% of test organisms die in a specified time period
LTA	Long Term Average
mg/L	Milligrams per liter
Ml	Milliliters
ML	Minimum Level
µg/L	Micrograms per liter
mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
N	Nitrogen
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OWW	Office of Water and Watersheds
O&M	Operations and maintenance
POTW	Publicly owned treatment works
QAP	Quality assurance plan
RP	Reasonable Potential
RPM	Reasonable Potential Multiplier
RWC	Receiving Water Concentration
SS	Suspended Solids
SSO	Sanitary Sewer Overflow
s.u.	Standard Units
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
TSS	Total suspended solids
TU_a	Toxic Units, Acute
TU_c	Toxic Units, Chronic

USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
UV	Ultraviolet
WET	Whole Effluent Toxicity
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater treatment plant

I. Background Information

A. General Information

This fact sheet provides information on the draft NPDES permit for the following entity:

Table 1. General Facility Information

NPDES Permit #:	ID0020095
Applicant:	City of Burley Wastewater Treatment Plant
Type of Ownership	Municipal POTW
Physical Address:	340 Highland Avenue Burley, Idaho 83318
Mailing Address:	P.O. Box 1090 Burley, Idaho 83318
Facility Contact:	Mark Mitton City Administrator mmitton@pmt.org 208-878-2224 ext 2027
Outfall Location:	Latitude 42.555896º N Longitude 113.784085º W

B. Permit History

The most recent NPDES permit for the City of Burley Wastewater Treatment Plant (WWTP) was issued on 11/29/2002, became effective on 01/07/2002, and expired on 01/08/2007. An NPDES application for permit issuance was submitted by the permittee on 08/09/2006. The EPA determined that the application was timely and complete. Therefore, pursuant to 40 CFR 122.6, the permit has been administratively extended and remains fully effective and enforceable.

II. Facility Information

A. Treatment Plant Description

Service Area

The City of Burley owns and operates the City of Burley WWTP located in Burley, Idaho. The collection system has no combined sewers. The facility serves a resident population of 10,345. The facility has an approved Industrial Waste Pretreatment Program. There are no major industries discharging to the facility.

Treatment Process

The previous permit permitted the existing lagoon treatment system and the proposed mechanical treatment plant that was to be built. Construction on the new mechanical treatment plant was completed in August 2007 and the previous plant's lagoons were decommissioned. This permit applies to the mechanical treatment plant.

The design flow of the facility is 5 mgd. In 2009 the maximum daily flow of the facility was 1.7 mgd and the annual average daily flow was 1.6 mgd. The treatment process consists of activated sludge, aerobic digesters, tertiary treatment with disk filters, and disinfection using UV. A schematic of the wastewater treatment process and a map showing the location of the treatment facility and discharge are included in Appendix A. Because of a design flow greater than 1.0 mgd, the facility is considered a major facility.

Outfall Description

Outfall 001 discharges to the Middle Snake River approximately 1 mile downstream from the Hwy 30 bridge in Burley, Idaho. The submerged outfall is located 550 ft from shore with a depth of less than 10 ft. The facility discharges via Outfall 001 year-round.

Effluent Characterization

The effluent quality is summarized in Table 1. Data are provided in Appendix B.

Table 1 Effluent Characterization

Parameter	Maximum	Minimum	Notes
Nitrogen, Ammonia	11.2 µg/L	0.01 µg/L	Daily Max
E. coli	326 #/100mL	1 #/100mL	Instantaneous Max
pH	8.02 SU	6.4 SU	Daily Max / Min
Temperature	23.2º C	1.7º C	Weekly
BOD5	19 mg/L	2 mg/L	Weekly Average
TSS	514 mg/L	50 mg/L	Weekly Average
Phosphorus, Total	208 lbs/day	2 lbs/day	Weekly Average

Source: City of Burley WWTP DMRs from August 2011 – July 2016

Compliance History

The EPA reviewed the last five years of effluent monitoring data (2011 – 2016) from the discharge monitoring report (DMR). EPA reviewed the last four years of effluent monitoring data (2012 – 2016) from the DMRs for mercury. The data are presented in Appendix B. A summary of effluent violations is provided in Table 2.

Table 2. Summary of Effluent Violations

Parameter	Limit	Units	Number of Instances
pH	Daily Minimum	SU	1
Nitrogen, Ammonia Total	Daily Maximum	lb/day	1
Nitrogen, Ammonia Total	Daily Maximum	mg/L	4
Nitrogen, Ammonia Total	Monthly Average	mg/L	3

Phosphorus, Total	Weekly Average	lb/day	5
Phosphorus, Total	Monthly Average	lb/day	5

The EPA conducted an inspection of the facility in 2015. The inspection encompassed the wastewater treatment process, records review, operation and maintenance, and the collection system. The inspection did not note any areas of concern. After the inspection a DMR review was completed which found violations. The facility received a Notice of Violation (NOV) in December 2015 for violations from May 2011 – July 2016. These violations are summarized above. It should be noted that the number of violations set forth above does not correlate to the number of violations set forth in the NOV because of how the violations are counted (e.g., a violation of an average weekly limit constitutes 7 days of violations in the NOV).

The Enforcement and Compliance History Online (ECHO) web site for this facility, which contains all up todate information regarding the facility's enforcement history is available online: https://echo.epa.gov/detailed-facility-report?fid=IDL020095

III. Receiving Water

A. Receiving Water

This facility discharges to the Middle Snake River in the City of Burley, Idaho. The outfall is located 1 mile downstream of the Highway 30 Bridge in Burley, Idaho.

B. Designated Beneficial Uses

This facility discharges to the Middle Snake River in the Lake Walcott Subbasin (HUC 17040209), Water Body Unit US-1. At the point of discharge, the Middle Snake River is protected for the following designated uses (IDAPA 58.01.02.130.11.US-1):

- warm water aquatic life
- primary contact recreation

In addition, Water Quality Standards state that all waters of the State of Idaho are protected for industrial and agricultural water supply, wildlife habitats, and aesthetics (IDAPA 58.01.02.100.03.b and c, 100.04 and 100.05).

C. Water Quality

The water quality for the receiving water is summarized in Table 3.

Table 3. Receiving Water Quality Data

Parameter	Units	Percentile	Value	Source
Temperature	°C	95th	20.8	Application
pH	Standard units	5th – 95th	8.1 – 8.8	Application
Hardness	mg/L	5th – 95th	157 – 210	USGS
Ammonia	mg/L	maximum	0.22	Application
Sources: City of Burley Industrial WWTP Permit Application submitted 12/02/2014 & USGS Station 13081500				

D. Water Quality Limited Waters

The State of Idaho's 2012 Integrated Report Section 5 (section 303(d)) lists the Snake River, from the Heyburn/Burley Bridge to the Milner Dam, as impaired for phosphorus.

On June 28, 2000, the EPA approved the IDEQ's Lake Walcott Subbasin Assessment and Total Maximum Daily Load (hereafter referred to as the TMDL). The TMDL included wasteload allocations (WLAs) for phosphorus and sediment for the facility and listed oil and grease as a pollutant of concern. The TMDL did not assign a WLA for oil and grease. As previously noted, the receiving water is only listed as impaired for phosphorus. The sediment TMDL is intended to be protective of the water quality standards and is known as an informational TMDL. EPA does not approve informational TMDLs because the receiving water is not impaired for the pollutant. Therefore the relevant TMDL for permitting purposes is the EPA-approved phosphorus TMDL. The phosphorus WLA for the facility is 39 lbs/day (Monthly Average). As explained in more detail below, the draft permit proposes effluent limits consistent with the assumptions and requirements of the phosphorus WLA.

E. Low Flow Conditions

Critical low flows for the receiving water are summarized in Table 4. Critical Flows in the Middle Snake River.

Table 4. Critical Flows in the Middle Snake River

Flows	Annual Flow (cfs)	Seasonal Low Flows (Oct - May)	Seasonal High Flows (Jun - Sep)
1Q10	343	343	3200
7Q10	338	341	3590
30Q10	-	347	4840
30Q5	405	419	5200
Harmonic Mean	1588	1116	8383
Source: USGS station 13081500 located 18 miles upstream of Burley, ID			

Low flows are defined in Appendix D, Part C.

IV. Effluent Limitations and Monitoring

Table 5 below presents the existing effluent limits and monitoring requirements in the 2002 Permit for the upgraded wastewater treatment plant. At the time of issuance of the previous permit, the permittee did not know if a new wastewater treatment facility would be built or if the (then) current lagoon would be modified. The permittee opted to construct a new facility. Therefore, in comparing the draft permit limits with the previous permit limits, EPA is using those presented for the upgraded wastewater treatment plant.

Table 5. Existing Permit - Effluent Limits and Monitoring Requirements

PARAMETER	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS		
	Average Monthly Limit	Average Weekly Limit	Daily Maximum Limit	Instantaneous Maximum Limit	Sample Location	Sample Frequency	Sample Type
Flow, MGD	---	---	---	---	Effluent	Continuous	Recording
Biochemical Oxygen Demand (BOD_5)	30 mg/l	45 mg/l	---	---	Influent and Effluent	1/week	24-hour composite
	1251 lbs/day	1876.5 lbs/day	---	---			
Total Suspended Solids (TSS)	30 mg/l	45 mg/l	---	---	Influent and Effluent	1/week	24-hour composite
	1251 lbs/day	1876.5 lbs/day	---	---			
Fecal Coliform Bacteria[2]	---	200/100 ml	---	---	Effluent	5/week	grab
E. Coli Bacteria[1,2]	126/100 ml	---	---	406/100 ml	Effluent	5/month	grab
Total Residual Chlorine[3] **June 1 - September 30**	0.5 mg/L	0.75 mg/L	---	---	Effluent	1/day	grab
	20.8 lbs/day	31.3 lbs/day	---	---			
Total Residual Chlorine[2,3] **October 1 - May 31**	0.04 mg/L	---	0.11 mg/L	---	Effluent	1/day	grab
	1.7 lbs/day	---	4.5 lbs/day	---			
Total Ammonia as N[2] **June 1 - September 30**	17.8 mg/L	---	35.6 mg/L	---	Effluent	1/week	24-hour composite
	738.1 lbs/day	---	1484.9 lbs/day	---			
Total Ammonia as N[2] **October 1 - May 31**	1.9 mg/L	---	3.8 mg/L	---	Effluent	1/week	24-hour composite
	79.2 lbs/day	---	158.5 lbs/day	---			
pH, standard Units	see Part II.B.3			---	Effluent	5/week	grab
Total Phosphorus, mg/l	39 lbs/day	78.4 lbs/day	---	---	Effluent	1/week	24-hour composite
Dissolved Oxygen, mg/L	---	---	---	---	Effluent	1/month	grab
Oil and Grease, mg/L	---	---	---	---	Effluent	1/month	grab
Temperature, °C	---	---	---	---	Effluent	1/week	grab
Cadmium,[4] µg/L	--	---	---		Effluent	1/month	24-hour composite

PARAMETER	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS		
	Average Monthly Limit	Average Weekly Limit	Daily Maximum Limit	Instantaneous Maximum Limit	Sample Location	Sample Frequency	Sample Type
Lead[4], µg/L	---	---	---	---	Effluent	1/month	24-hour composite
Mercury[4], µg/L	---	---	---	---	Effluent	1/month	24-hour composite
Cyanide[4] µg/L	---	---	---	---	Effluent	1/month	grab
Whole Effluent Toxicity[5]	—	—	—	—	Effluent	once	24-hour composite

Footnotes:
1. Fecal coliform bacteria must not exceed a geometric mean of 200 organisms per 100 ml based on no more than one week's data and 5 samples. E. coli bacteria must not exceed a geometric mean of 126 organisms per 100 ml based on a minimum of 5 samples taken every 3 to 5 days over a thirty day period.
2. Reporting is required within 24 hours of a maximum daily or instantaneous maximum limit violation. See Part III.G
3. During the months from October through May the average monthly effluent limit for total residual chlorine is not quantifiable using EPA approved analytical methods. EPA will use 0.1 mg/L as the compliance evaluation level for this parameter.
4. Cadmium, and lead must be analyzed as total recoverable, mercury must be analyzed as total, and cyanide must be analyzed as weak acid dissociable.
5. The whole effluent toxicity test must be submitted with the permittee's next permit application, which is due 180 days prior to the expiration date of the permit.

Table 6. Draft Permit - Effluent Limits and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Parameters With Effluent Limits							
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite
	lbs/day	1251	1876.5	--			Calculation[1]
BOD_5 Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[2]
Total Suspended Solids (TSS)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite
	lbs/day	1251	1876.5	--			Calculation[1]
TSS Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[2]
E. coli [3]	CFU/ 100 ml	126	--	406 (instant. max) [4]	Effluent	5/month	Grab
pH[9]	std units	Between 6.5 – 9.0			Effluent	5/week[5]	Grab
Total Ammonia (as N)	mg/L	7.0	--	21.0[4]	Effluent	1/week	24-hour composite

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
October 1 – May 31	lbs/day	292	--	874[4]			Calculation[1]
Total Phosphorus (as P)	lbs/day	39	78.4	--	Effluent	1/week	24-hour composite
Floating, Suspended, or Submerged Matter	--	See Paragraph I. B.2. of this permit				1/month	Visual Observation
		Report Parameters					
Flow	mgd	Report	--	Report	Effluent	continuous	Meter
Temperature	ºC	Report	--	Report	Effluent	1/week	Grab
Alkalinity	mg/L as $CaCO_3$	Report	--	Report	Effluent	Quarterly	24-hour composite
Total Hardness[9]	mg/L as $CaCO_3$	Report	--	Report	Effluent	Quarterly	24-hour composite
Dissolved Organic Carbon[9]	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Conductivity[9]	umhos/ cm	Report	--	Report	Effluent	Quarterly	Meter
Arsenic, Total Recoverable	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Cadmium, Total Recoverable	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Chromium, Total Recoverable	mg/	Report	--	Report	Effluent	Quarterly	24-hour composite
Copper, Total Recoverable[9]	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Lead, Total Recoverable	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Nickel, Total Recoverable	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Zinc, Total Recoverable	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Cyanide	mg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Mercury, Total Recoverable	µg/L	Report	--	Report	Effluent	Quarterly	24-hour composite
Whole Effluent Toxicity (WET)	See Part I.C of this permit				Effluent	1/year[6]	24-hour composite
Effluent Testing for Permit Renewal							
Permit Application Effluent Testing Data[7]	--				Effluent	1/year	--

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Permit Application Expanded Effluent Testing[8]		--			Effluent	1/year	--

Notes
1. Loading (in lbs/day) is calculated by multiplying the concentration (in mg/L) by the corresponding flow (in mgd) for the day of sampling and a conversion factor of 8.34. For more information on calculating, averaging, and reporting loads and concentrations see the *NPDES Self-Monitoring System User Guide* (EPA 833-B-85-100, March 1985).
2. Percent Removal. The monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month using the following equation: (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration x 100. Influent and effluent samples must be taken over approximately the same time period.
3. The average monthly *E. coli* bacteria counts must not exceed a geometric mean of 126/100 ml based on a minimum of five samples taken every 3 - 7 days within a calendar month. See Part VI of this permit for a definition of geometric mean.
4. Reporting is required within 24 hours of a maximum daily limit or instantaneous maximum limit violation. See Paragraph I.B.III and Part III.G of this permit.
5. Samples must be taken on different days.
6. See monitoring described in Paragraph I.C of this permit.
7. Effluent Testing Data - See NPDES Permit Application Form 2A, Part B.6 for the list of pollutants to be included in this testing. The Permittee must use sufficiently sensitive analytical methods in accordance with Part I.B.7 of this permit.
8. Expanded Effluent Testing - See NPDES Permit Application Form 2A, Part D for the list of pollutants to be included in this testing. Testing must be conducted annually during alternating quarters. The expanded effluent testing must occur on the same day as a whole effluent toxicity testing. Quarters are defined as: January 1 to March 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31. The Permittee must use sufficiently sensitive analytical methods in accordance with Part I.B.7 of this permit.
9. Samples for dissolved organic carbon, pH, hardness, conductivity and copper must be collected on the same day.

V. Basis for Effluent Limits

In general, the CWA requires that the effluent limits for a particular pollutant be the more stringent of either technology-based limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards applicable to a waterbody are being met and may be more stringent than technology-based effluent limits.

A. Pollutants of Concern

The EPA identified the pollutants for concern for the discharge. Pollutants of concern for the discharge include those pollutants which:

- Have a technology-based limit
- Have an assigned WLA from a TMDL
- Had an effluent limit in the previous permit
- Are present in the effluent monitoring. Monitoring data are reported in the application and discharge monitoring report and any special studies
- Are expected to be in the discharge based on the nature of the discharge

The wastewater treatment process for this facility includes primary, secondary, and tertiary, treatment, as well as disinfection with UV. Pollutants expected in the discharge from a facility with this type of treatment, include but are not limited to: five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), *E. coli* bacteria, total residual chlorine (TRC), pH, ammonia, temperature, phosphorus, and dissolved oxygen (DO).

Based on this analysis, pollutants of concern are as follows:

- BOD_5
- TSS
- *E. coli* bacteria
- pH
- Temperature
- Ammonia
- Phosphorus
- Cadmium
- Cyanide
- Lead
- Mercury
- Oil & Grease
- Arsenic
- Chromium
- Copper
- Nickel
- Zinc

B. Technology-Based Effluent Limits

Federal Secondary Treatment Effluent Limits

The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level, referred to as "secondary treatment," which POTWs were required to meet by July 1, 1977. The EPA has developed and promulgated "secondary treatment" effluent limitations, which are found in 40 CFR 133.102. These technology-based effluent limits apply to certain municipal WWTPs and identify the minimum level of effluent quality attainable by application of secondary treatment in terms of BOD_5, TSS, and pH. The federally promulgated secondary treatment effluent limits are listed in Table 7. For additional information and background refer to Part 5.1 *Technology Based Effluent Limits for POTWs* in the Permit Writers Manual.

Table 7. Secondary Treatment Effluent Limits

Parameter	30-day average	7-day average
BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
Removal for BOD_5 and TSS (concentration)	85% (minimum)	---
pH	within the limits of 6.0 - 9.0 s.u.	

Source: 40 CFR 133.102

Mass-Based Limits

The federal regulation at 40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, except under certain conditions. The regulation at 40 CFR 122.45(b) requires that effluent limitations for POTWs be calculated based on the design flow of the facility. The mass based limits are expressed in pounds per day and are calculated as follows:

Mass based limit (lb/day) = concentration limit (mg/L) × design flow (mgd) × 8.34[1]

Since the design flow for this facility is 5 mgd, the technology based mass limits for BOD_5 and TSS are calculated as follows:

Average Monthly Limit = 30 mg/L × 5 mgd × 8.34 = 1251 lbs/day

Average Weekly Limit = 45 mg/L × 5 mgd × 8.34 = 1876.5 lbs/day

C. Water Quality-based Effluent Limits

Statutory and Regulatory Basis

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Discharges to State or Tribal waters must also comply with limitations imposed by the State or Tribe as part of its certification of NPDES permits under section 401 of the CWA. 40 CFR 122.44(d)(1) requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State or Tribal water quality standard, including narrative criteria for water quality. Effluent limits must also meet the applicable water quality requirements of affected States other than the State in which the discharge originates, which may include downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA Section 401(a)(2)).

The regulations require the permitting authority to make this evaluation using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met, and must be consistent with any available wasteload allocation for the discharge in an approved TMDL. If there are no approved TMDLs that specify wasteload allocations for this discharge, all of the water quality-based effluent limits are calculated directly from the applicable water quality standards.

Reasonable Potential Analysis and Need for Water Quality Based Effluent Limits

The EPA uses the process described in the *Technical Support Document for Water Quality-based Toxics Control* (*TSD*) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, the EPA compares the maximum projected receiving

[1] 8.34 is a conversion factor with units (lb ×L)/(mg × gallon×10^6)

water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a water quality-based effluent limit must be included in the permit.

In some cases a dilution allowance or mixing zone is permitted. A mixing zone is an area where an effluent discharge undergoes initial dilution and is extended to cover the secondary mixing in the ambient water body. A mixing zone is an allocated impact zone where the water quality standards may be exceeded as long as acutely toxic conditions are prevented (the EPA, 1994).

The Idaho Water Quality Standards at IDAPA 58.01.02.060 provides Idaho's mixing zone policy for point source discharges. In the State 401 Certification, the IDEQ proposes to authorize mixing zones. The proposed mixing zones are summarized in Table 8. The EPA calculated dilution factors for year round and seasonal critical low flow conditions. All dilution factors are calculated with the effluent flow rate set equal to the design flow of 5 mgd.

Table 8. Mixing zones

Parameter	Mixing Zone
Ammonia	25%
Cadmium	25%
Cyanide	25%
Lead	25%
Mercury	0%
Arsenic	25%
Chromium	25%
Copper	25%
Zinc	25%

The reasonable potential analysis and water quality based effluent limit calculations were based on mixing zones shown in Table 8. If IDEQ revises the allowable mixing zone in its final certification of this permit, reasonable potential analysis and water quality based effluent limit calculations will be revised accordingly.

The reasonable potential and water quality based effluent limit for specific parameters are summarized below. The calculations and dilution factors used are provided in Appendix D.

Ammonia

Ammonia criteria are based on a formula which relies on the pH and temperature of the receiving water, because the fraction of ammonia present as the toxic, un-ionized form increases with increasing pH and temperature. Therefore, the criteria become more stringent as pH and temperature increase. The table below details the equations used to determine water quality criteria for ammonia.

Table 9 Ammonia Criteria

Total ammonia nitrogen criteria (mg N/L):
Seasonal Basis - LOW Flow
Based on IDAPA 58.01.02

INPUT	
1. Receiving Water Temperature (deg C):	10.5
2. Receiving Water pH:	8.80
3. Is the receiving water a cold water designated use	No
4. Are non-salmonid early life stages present or abse	Absent
OUTPUT	
Total ammonia nitrogen criteria (mg N/L):	
Acute Criterion (CMC)	**1.84**
Chronic Criterion (CCC)	**0.85**

Acute Criteria Equation: Cold Water $CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$

Acute Criteria Equation: Warm Water $CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$

Chronic Criteria: Cold Water, Early Life Stages Present $CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028(25-T)})$

Chronic Criteria: Cold Water, Early Life Stages Absent $CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet 1.45 \cdot 10^{0.028(25-T)})$

Total ammonia nitrogen criteria (mg N/L):
Seasonal Basis - HIGH Flow
Based on IDAPA 58.01.02

INPUT	
1. Receiving Water Temperature (deg C):	20.9
2. Receiving Water pH:	8.60
3. Is the receiving water a cold water designated use	No
4. Are non-salmonid early life stages present or abse	Absent
OUTPUT	
Total ammonia nitrogen criteria (mg N/L):	
Acute Criterion (CMC)	**2.65**
Chronic Criterion (CCC)	**0.61**

Acute Criteria Equation: Cold Water $CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$

Acute Criteria Equation: Warm Water $CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$

Chronic Criteria: Cold Water, Early Life Stages Present $CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028(25-T)})$

Chronic Criteria: Cold Water, Early Life Stages Absent $CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet 1.45 \cdot 10^{0.028(25-T)})$

A reasonable potential calculation showed that the City of Burley WWTP discharge would have the reasonable potential to cause or contribute to a violation of the water quality criteria for ammonia from October through May. Therefore, the draft permit contains a water quality-based effluent limit for ammonia from October through May. The draft permit requires that the permittee monitor the receiving water for ammonia, pH, and temperature in order to determine the applicable ammonia criteria for the next permit reissuance. See Appendices D and F for reasonable potential and effluent limit calculations for ammonia.

pH

The Idaho water quality standards at IDAPA 58.01.02.250.01.a, require pH values of the river to be within the range of 6.5 to 9.0. Mixing zones are generally not granted for pH, therefore the most stringent water quality criterion must be met before the effluent is discharged to the receiving water. Effluent pH data were compared to the water quality criteria. The pH range of the effluent is well within the State's water quality criterion of 6.5 – 9.0 standard units.

Dissolved Oxygen (DO) and BOD_5

The Idaho state water quality standards require the level of DO in a receiving water to exceed 5 mg/L at all times when the water body is protected for aquatic life use.

The permit includes limits for BOD5. Compliance with BOD5 will be protective of DO in the receiving water.

Phosphorus

The Lake Walcott TMDL assigns a WLA of 39 lbs/day Total Phosphorus for the City of Burley WWTP (TMDL, Table 47c). Federal regulations state that NPDES permits must include effluent limits consistent with the assumptions and requirements of any available WLA in a TMDL for the discharge prepared by the State and approved by the EPA. (*See* 40 CFR 130.7 (40 CFR

122.44(d)(1)(vii)(A)). Therefore, the permit includes an Average Monthly Limit of 39 lbs/day and an Average Weekly Limit of 78.4 lbs/day. See Appendix D for the effluent limit calculations for Total Phosphorus. The total phosphorus limit is unchanged from the previous permit.

E. coli

The previous permit contained a bacteria limit based on fecal coliform. In 2000, Idaho updated its water quality standards, and removed the water quality standard for fecal coliform and added *E. Coli*.

The Idaho water quality standards state that waters of the State of Idaho, that are designated for recreation, are not to contain *E. coli* bacteria in concentrations exceeding 126 organisms per 100 ml based on a minimum of five samples taken every three to seven days over a thirty day period. Therefore, the draft permit contains a monthly geometric mean effluent limit for *E. coli* of 126 organisms per 100 ml (IDAPA 58.01.02.251.01.a.).

The Idaho water quality standards also state that a water sample that exceeds certain "single sample maximum" values indicates a likely exceedance of the geometric mean criterion, although it is not, in and of itself, a violation of water quality standards. For waters designated for primary contact recreation, the "single sample maximum" value is 406 organisms per 100 ml (IDAPA 58.01.02.251.01.b.ii.).

The goal of a water quality-based effluent limit is to ensure a low probability that water quality standards will be exceeded in the receiving water as a result of a discharge, while considering the variability of the pollutant in the effluent. Because a single sample value exceeding 406 organisms per 100 ml indicates a likely exceedance of the geometric mean criterion, the EPA has imposed an instantaneous (single grab sample) maximum effluent limit for *E. coli* of 406 organisms per 100 ml, in addition to a monthly geometric mean limit of 126 organisms per 100 ml, which directly implements the water quality criterion for *E. coli*. This will ensure that the discharge will have a low probability of exceeding water quality standards for *E. coli*.

Regulations at 40 CFR 122.45(d)(2) require that effluent limitations for continuous discharges from POTWs be expressed as average monthly and average weekly limits, unless impracticable. Additionally, the terms "average monthly limit" and "average weekly limit" are defined in 40 CFR 122.2 as being arithmetic (as opposed to geometric) averages. It is impracticable to properly implement a 30-day geometric mean criterion in a permit using monthly and weekly arithmetic average limits. The geometric mean of a given data set is equal to the arithmetic mean of that data set if and only if all of the values in that data set are equal. Otherwise, the geometric mean is always less than the arithmetic mean. In order to ensure that the effluent limits are "derived from and comply with" the geometric mean water quality criterion, as required by 40 CFR 122.44(d)(1)(vii)(A), it is necessary to express the effluent limits as a monthly geometric mean and an instantaneous maximum limit.

Cadmium, Cyanide, Lead, Chromium, Copper, Nickel, and Zinc

The Idaho water quality standards have developed criteria for metals that are protective of aquatic life and human health. The criteria are numeric values that represent contaminant concentrations that are not to be exceeded in the receiving water. These criteria are applicable to the Snake River.

The draft permit requires the permittee to sample for metals in the effluent and the receiving water. These data will be used to determine if the effluent discharged by the facility has the reasonable potential to cause or contribute to a water quality standards violation. Currently, the

facility does not have reasonable potential. See Appendix D for calculations on reasonable potential for metals.

Since some metals criteria are dependent on the hardness of the receiving water, the draft permit also proposed monitoring for hardness in the receiving water. Under the biotic ligand model dissolved organic carbon and conductivity are required in order to evaluate for copper. The draft permit proposes monitoring for dissolved organic carbon and conductivity in the receiving water.

Arsenic

The Idaho state water quality standards at Idaho IDAPA 58.01.02.210 establish arsenic criteria for the protection of human health of 10 µg/L for both consumption of water and fish and water only. These criteria were approved by EPA in 2010 (hereinafter referred to as the 2010 arsenic criteria).

On June 7, 2016 EPA entered into a Consent Decree with Northwest Environmental Advocates (NWEA) addressing EPA's approval of the 2010 arsenic criteria (2016 NWEA CD). The 2016 NWEA CD remands EPA's 2010 approval of the 2010 arsenic criteria. It required EPA to take a new action to approve or disapprove the 2010 arsenic criteria by September 15, 2016. EPA disapproved the 2010 arsenic criteria prior to September 15, 2016.

In conjunction with the 2016 NWEA CD, EPA also entered into a Settlement Agreement with NWEA (NWEA SA). In the NWEA SA, EPA agreed that if EPA disapproves the 2010 arsenic criteria, then between the date of the disapproval and the date a new arsenic water quality criteria is in place for CWA purposes, EPA will use Idaho's 1994 arsenic criteria when interpreting the narrative toxics criteria. These criteria are 6.2 µg/L to protect consumption of organisms only and 0.02 µg/L to protect consumption of water and organisms.

Because the City of Burley WWTP has detectable concentrations of arsenic, EPA evaluated the detected concentrations of arsenic against both the 2010 arsenic criteria and the 1994 criteria for arsenic. Since the Snake River is not designated as a drinking water source, nor is it an existing use, when analyzing reasonable potential using the 1994 criteria, EPA considers 6.2 µg/L to be protective of human health. In either case, the facility did not have reasonable potential to exceed the criteria. See Appendix D for reasonable potential calculations.

Mercury

A reasonable potential calculation showed that the City of Burley WWTP does not have reasonable potential to cause or contribute to a violation of the water quality criteria for mercury. Therefore, the draft permit proposes only effluent monitoring. See Appendix D for reasonable potential calculations for mercury.

Oil and Grease

The 2000 Lake Walcott TMDL listed oil and grease as a pollutant of concern. Federal regulations state that NPDES permits must include effluent limits consistent with the assumptions and requirements of any available WLA in a TMDL for the discharge prepared by the State and approved by the EPA. (*See* 40 CFR 130.7 (40 CFR 122.44(d)(1)(vii)(A)). In EPA's letter dated July 3 2000, EPA only approved the 2000 Lake Walcott TMDL for total phosphorus. Since the Snake River is not impaired for sediment or oil and grease at the time, EPA did not approve this portion of the TMDL.

Idaho does not currently have numeric criteria for oil and grease (*See* IDAPA 58.01.02). In addition, the Snake River is currently not impaired for oil and grease. Therefore, the draft permit removes effluent monitoring for oil and grease.

It should be noted, however, that the draft permit contains the narrative requirement to visually check for "floating, submerged, or suspended matter" consistent with Idaho state water quality standards which require surface waters of the state to be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions that may impair designated beneficial use.

TSS (Sediment)

The 2000 Lake Walcott TMDL included a WLA for sediment. Federal regulations state that NPDES permits must include effluent limits consistent with the assumptions and requirements of any available WLA in a TMDL for the discharge prepared by the State and approved by the EPA. (*See* 40 CFR 130.7 (40 CFR 122.44(d)(1)(vii)(A)). In EPA's letter dated July 3 2000, EPA only approved the 2000 Lake Walcott TMDL for phosphorus. Since the Snake River is not impaired for sediment, EPA did not approve this portion of the TMDL.

Therefore, the draft permit does not contain water quality based effluent limits for sediment. Instead, the draft permit contains technology based effluent limits for TSS (*See* V.B Technology-Based Effluent Limits).

Temperature

The Idaho water quality standards require ambient water temperatures of 33°C with maximum daily average temperature of 29°C for warm waters (*See* IDAPA 58.01.02.250). Currently, this segment of the Snake River is meeting the standard.

No reasonable potential was found to exceed the criteria for temperature (*See* Appendix D). The draft permit includes 1/week effluent temperature monitoring to provide data to re-evalaute reasonable potential for the next permit term.

Residues

The Idaho water quality standards require that surface waters of the State be free from floating, suspended or submerged matter of any kind in concentrations impairing designated beneficial uses. The draft permit contains a narrative limitation prohibiting the discharge of such materials.

D. Antibacksliding

Section 402(o) of the Clean Water Act and federal regulations at 40 CFR §122.44 (l) generally prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit (i.e., anti-backsliding) but provides limited exceptions. For explanation of the antibacksliding exceptions refer to Chapter 7 of the Permit Writers Manual *Final Effluent Limitations and Anti-backsliding*.

Ammonia

The draft permits includes less stringent ammonia limits than those in the previous permit. Table 10 provides a comparison between the previous permit's ammonia limits with the new ammonia limits included in the draft permit. An anti-backsliding analysis was done for ammonia. A WQBEL for ammonia was calculated based on existing data and was calculated to be less stringent than the current existing limits for the low flow months of October 1 – May 31. For the high flow months of June 1 – September 30 no reasonable potential was

found, and therefore EPA proposes to remove the limits during the high flow months. These calculations may be found in Appendix D.

Section 303(d)(4)(B) provides an exception against the prohibition from backsliding from a water quality-based effluent limitation. Specifically, when water quality in the receiving water meets or exceeds applicable water quality standards, a permit can contain less stringent effluent limits than the previous permit if the revision is consistent with the State's approved antidegradation policy. The less stringent limits for ammonia meet this exception because the water quality in the receiving water meets the water-quality standards for ammonia, and because IDEQ found the draft permit conditions met the state of Idaho's antidegradation policy (*See* Appendix E).

The reason for the change in permit limits for ammonia in the draft permit is due to the difference between low-flow conditions used in the previous permit versus the current draft permit. Idaho's water quality standards (WQS) requires that the potential for a discharge to contribute to violations of the water quality criteria be evaluated under critical low-flow conditions. The availability and use of new flow data to estimate critical low-flow conditions (*See* Section III.E Low Flow Conditions) resulted in larger dilution factors used in determining the WLA for the pollutant, resulting in less stringent limitations for October 1 – May 31 and no reasonable potential for June 1 – September 30.

Table 10. Comparison of Ammonia Limits

	Previous Permit Ammonia Limits				**Draft Permit Ammonia Limits**			
	Average Monthly		Maximum Daily		Average Monthly		Maximum Daily	
	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day
October 1 – May 31	1.9	79.2	3.8	158.5	7.0	292	21.0	874
June 1 – September 30	17.8	738.1	35.6	1484.9	--	--	--	--

Fecal Coliform Bacteria

The draft permit proposes to remove the fecal coliform bacteria WQBELs and replace the fecal coliform bacteria limit with an *E. coli* bacteria limit, consistent with the current Idaho WQS criterion for protection of recreational uses.

The new effluent limits were established using the new water quality criteria and the indicator organism currently specified in Idaho's WQS (IDAPA 58.01.02.251). The new *E. coli* limits provide the equivalent or higher level of protection for the beneficial use of primary contact recreation than was provided by the fecal coliform effluent limits in the previous permit.

The change in the pathogenic indicator organism is not viewed as less stringent than the previous permit. Therefore, this change is not subject to the anti-backsliding provisions of the CWA section 402(o)(3) of the CWA.

E. Antidegradation

The proposed issuance of an NPDES permit triggers the need to ensure that the conditions in the permit ensure that Tier I, II, and III of the State's antidegradation policy are met. An anti-degradation analysis was conducted by the IDEQ as part of the State's CWA Section 401 certification (*See* Appendix E). The EPA has reviewed this antidegradation review and finds that it is consistent with the State's 401 certification requirements and the State's antidegradation implementation procedures.

VI. Monitoring Requirements

A. Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality.

The permit also requires the permittee to perform effluent monitoring required by parts B.6 and D of the NPDES Form 2A application, so that these data will be available when the permittee applies for a renewal of its NPDES permit.

The permittee is responsible for conducting the monitoring and for reporting results on DMRs or on the application for renewal, as appropriate, to the EPA.

B. Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples must be used for averaging if they are conducted using the EPA-approved test methods (generally found in 40 CFR 136) or as specified in the permit.

Effluent Monitoring Changes from the Previous Permit

Dissolved oxygen effluent monitoring has been removed. The permit includes monitoring requirements and limits for BOD5, which is protective of DO in the receiving water.

Effluent monitoring for alkalinity, hardness, copper, arsenic, and zinc were added. Alkalinity and hardness are both required in order to evaluate copper using the copper Biotic Ligand Model. Copper, arsenic, and zinc are required to gather additional information for the next permit term. These metals were found in detectable quantities in the permit application. Additional monitoring will assist in determining reasonable potential for the next permit.

C. Surface Water Monitoring

Table 11. Surface Water Monitoring in Draft Permit presents the proposed surface water monitoring requirements for the draft permit. The City of Burley WWTP should continue receiving water monitoring at the established locations. Surface water monitoring results must be submitted with the DMR.

In general, surface water monitoring may be required for pollutants of concern to assess the assimilative capacity of the receiving water for the pollutant. In addition, surface water

monitoring may be required for pollutants for which the water quality criteria are dependent and to collect data for TMDL development if the facility discharges to an impaired water body.

Table 11. Surface Water Monitoring in Draft Permit

Parameter	Units	Frequency	Sample Type
Total Ammonia as N	mg/L	Monthly	Grab
Temperature	ºC	Monthly	Grab
pH	standard units	Monthly	Grab
Dissolved Organic Carbon	mg/L	Quarterly	Grab
Conductivity	Umhos/cm	Quarterly	Grab
Total Hardness as $CaCO_3$	mg/L	Quarterly	Grab
Arsenic, dissolved	µg/L	Quarterly	Grab
Cadmium, dissolved	µg/L	Quarterly	Grab
Chromium, dissolved	µg/L	Quarterly	Grab
Copper, dissolved	µg/L	Quarterly	Grab
Lead, dissolved	µg/L	Quarterly	Grab
Nickel, dissolved	µg/L	Quarterly	Grab
Zinc, dissolved	µg/L	Quarterly	Grab
Cyanide, weak acid dissociable	µg/L	Quarterly	Grab
Mercury, total recoverable	µg/L	Quarterly	Grab
Notes: 1. For quarterly monitoring frequency, quarters are defined as: January 1 to Mach 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31.			

Receiving Water Monitoring Changes from the Previous Permit

Required monitoring for Total Ammonia as N, pH, Temperature, pH, Total Hardness as $CaCO_3$, Oil and Grease, Cyanide weak acid dissociable, Cadmium dissolved, Copper dissolved, Lead dissolved, and Mercury total recoverable are unchanged. Ammonia continues to be a pollutant of concern; pH and temperature are required to calculate ammonia assimilative capacity. Cyanide weak acid dissociable, Cadmium dissolved, Copper dissolved, Lead dissolved, and Mercury total recoverable continue to be pollutants of concern based on detectable levels in the effluent. Total Hardness as $CaCO_3$ is required in order to evaluate assimilative capacity of the metals. Oil & Grease is a pollutant of concern based on the TMDL.

Required monitoring for silver dissolved has been removed since it is no longer a pollutant of concern. The City of Burley WWTP did not have detectable levels of silver dissolved in its effluent, therefore, surface water monitoring is not required to establish assimilative capacity.

New required monitoring has been added for the following parameters: Dissovled Organic Carbon and Conductivity. Dissolved Organic Carbon and Conductivity are parameters are required in order to evaluate copper in the receiving water, including copper criteria under the biotic ligand model.

D. Electronic Submission of Discharge Monitoring Reports

The draft permit requires that the permittee submit DMR data electronically using NetDMR. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application.

The EPA currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: https://netdmr.com. The permittee may use NetDMR after requesting and receiving permission from EPA Region 10.

VII. Sludge (Biosolids) Requirements

The EPA Region 10 separates wastewater and sludge permitting. The EPA has authority under the CWA to issue separate sludge-only permits for the purposes of regulating biosolids. The EPA may issue a sludge-only permit to each facility at a later date, as appropriate.

Until future issuance of a sludge-only permit, sludge management and disposal activities at each facility continue to be subject to the national sewage sludge standards at 40 CFR Part 503 and any requirements of the State's biosolids program. The Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a permit has been issued.

VIII. Other Permit Conditions

A. Operation and Maintenance Plan

The permit requires the City of Burley WWTP to properly operate and maintain all facilities and systems of treatment and control. Proper operation and maintenance is essential to meeting discharge limits, monitoring requirements, and all other permit requirements at all times. The permittee is required to develop and implement an operation and maintenance plan for their facility within 180 days of the effective date of the final permit. The plan must be retained on site and made available to the EPA and the IDEQ upon request.

B. Quality Assurance Plan

The City of Burley WWTP is required to update the Quality Assurance Plan within 180 days of the effective date of the final permit. The Quality Assurance Plan must include of standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting. A single QAP for both the City of Burley WWTP and the City of Burley's Industrial WWTP is acceptable if the QAP covers all standard operating procedures for both facilities. The plan must be retained on site and be made available to the EPA and the IDEQ upon request.

C. Annual Pretreatment Report

The permittee must submit the Annual Pretreatment Report to the pretreatment coordinator no later than March 1st of each calendar year. The annual pretreatment report must describe the permittee's program activities over the previous calendar year (January 1st – December 31st.

D. Local Limits Evaluation

The permittee must submit a local limits evaluation pursuant to 40 CFR 403.5(c)(1) to EPA within 1 year of the effective date of the final permit.

E. Emergency Response and Public Notification Plan

The permittee must develop and implement an overflow emergency response and public notification plan that identifies measures to protect public health from overflows that may endanger health and unanticipated bypasses or upsets that exceed any effluent limitation in the permit. The permittee must submit written notice to EPA and IDEQ that the plan has been developed and implemented within 180 days of the effective date of the final permit.

F. Sanitary Sewer Overflows (SSOs) and Proper Operation and Maintenance of the Collection System

SSOs are not authorized under this permit. The permit contains language to address SSO reporting and public notice and operation and maintenance of the collection system. The permit requires that the permittee identify SSO occurrences and their causes. In addition, the permit establishes reporting, record keeping and third party notification of SSOs. Finally, the permit requires proper operation and maintenance of the collection system.

The following specific permit conditions apply:

Immediate Reporting – The permittee is required to notify the EPA of an SSO within 24 hours of the time the permittee becomes aware of the overflow. (See 40 CFR 122.41(l)(6))

Written Reports – The permittee is required to provide the EPA a written report within five days of the time it became aware of any overflow that is subject to the immediate reporting provision. (See 40 CFR 122.41(l)(6)(i)).

Third Party Notice – The permit requires that the permittee establish a process to notify specified third parties of SSOs that may endanger health due to a likelihood of human exposure; or unanticipated bypass and upset that exceeds any effluent limitation in the permit or that may endanger health due to a likelihood of human exposure. The permittee is required to develop, in consultation with appropriate authorities at the local, county, tribal and/or state level, a plan that describes how, under various overflow (and unanticipated bypass and upset) scenarios, the public, as well as other entities, would be notified of overflows that may endanger health. The plan should identify all overflows that would be reported and to whom, and the specific information that would be reported. The plan should include a description of lines of communication and the identities of responsible officials. (See 40 CFR 122.41(l)(6)).

Record Keeping – The permittee is required to keep records of SSOs. The permittee must retain the reports submitted to the EPA and other appropriate reports that could include work orders associated with investigation of system problems related to a SSO, that describes the

steps taken or planned to reduce, eliminate, and prevent reoccurrence of the SSO. (See 40 CFR 122.41(j)).

Proper Operation and Maintenance – The permit requires proper operation and maintenance of the collection system. (See 40 CFR 122.41(d) and (e)). SSOs may be indicative of improper operation and maintenance of the collection system. The permittee may consider the development and implementation of a capacity, management, operation and maintenance (CMOM) program.

The permittee may refer to the Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (EPA 305-B-05-002). This guide identifies some of the criteria used by the EPA inspectors to evaluate a collection system's management, operation and maintenance program activities. Owners/operators can review their own systems against the checklist (Chapter 3) to reduce the occurrence of sewer overflows and improve or maintain compliance.

G. Environmental Justice

As part of the permit development process, the EPA Region 10 conducted a screening analysis to determine whether this permit action could affect overburdened communities. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. The EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

The City of Burley WWTP is located within or near a Census block group that is potentially overburdened because of major direct dischargers to water (99th percentile), Risk Management Plan (RMP) facilities (89th percentile), and lead paint indicator (82nd percentile). In order to ensure that individuals near the facility are able to participate meaningfully in the permit process, the EPA is conducting the following enhanced outreach activities: in addition to the standard newspaper Public Notice and Public Notice posting on the EPA web site, the EPA coordinated with the City of Burley Weekly Mailer to send an announcement directly to members of the surrounding community.

Regardless of whether a the City of Burley WWTP is located near a potentially overburdened community, the EPA encourages permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see https://www.federalregister.gov/articles/2013/05/09/2013-10945/epa-activities-to-promote-environmental-justice-in-the-permit-application-process#p-104). Examples of promising practices include: thinking ahead about community's characteristics and the effects of the permit on the community, engaging the right community leaders, providing progress or status reports, inviting members of the community for tours of the facility, providing informational materials translated into different languages, setting up a hotline for community members to voice concerns or request information, follow up, etc.

For more information, please visit http://www.epa.gov/compliance/ej/plan-ej/ and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*,

H. Design Criteria

The permit includes design criteria requirements. This provision requires the permittee to compare influent flow and loading to the facility's design flow and loading and prepare a facility plan for maintaining compliance with NPDES permit effluent limits when the flow or loading exceeds 85% of the design criteria values for three consecutive months.

I. Standard Permit Provisions

Sections III, IV and V of the draft permit contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

J. Pollutant Trading

Under Idaho's Water Quality Trading Guidance, trading provisions must be incorporated into a NPDES permit prior to engaging in any trading activity to meet the NPDES permit limits.

At this time, the permittee has not provided a trading plan, nor is there a watershed trading framework detailing how trades would be conducted for this facility. Therefore, the permit does not allow for pollutant trading.

If the permittee is interested in pursuing pollutant trading, the permit includes conditions which the permittee must take in order for the EPA to modify the permit to allow for trading activity to occur. First, as required by Idaho's Water Quality Trading Guidance, the permittee must develop and submit a trading plan to IDEQ for approval. The trading plan may incorporate details from an approved watershed trading framework, if applicable. Second, the approved trading plan's monitoring and reporting requirements must be incorporated into the permit through a permit modification or reissuance process.

The trading plan may only address pollutants which are eligible for trading. Trading cannot be authorized for technology-based effluent limitations (TBELs) except where specifically authorized by effluent guidelines.

The 401 Certification that IDEQ has provided for this permit included a pre-emptive authorization for trading TSS. Since the TSS limits included in this permit are TBELs determined by secondary treatment standards for POTWs, trading cannot be authorized for TSS. Therefore, if the permittee decides to pursue trading, the EPA could only consider modifying the permit to take into consideration trading for TP.

IX. Other Legal Requirements

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. The endangered species that may be located within the vicinity of the

discharge include the Snake River Physa. The EPA has determined that issuance of this permit will have no effect on the the Snake River Physa.

According to the *Biological Assessment for Bureau of Reclamation Operations and Maintenance in the Snake River Basin above Brownlee Resevoir on Snake River Physa Snail, April 2015* (hereafter referred to as the Reclamation BA), the portion of the Snake River between I-84 Bridge and Milner Dam is unsuitable habitat for the Snake River Physa (*See* Reclamation BA pg 5). This stretch of the Snake River includes the City of Burley WWTP's outfall.

The study *Taxonomic identity of the endangered Snake River physa, Physa natricina (Pulmonata: Physidae) combining traditional and molecular techniques, Gates et. al 2012* (hereafter referred to as Gates et. al 2012) found zero sightings of the Snake River Physa between the I-84 bridge and Milner Dam, reaffirming the Reclamation BA's findings.

This assessment concurs with the City of Burley Industrial Wastewater Treatment Plant NPDES Permit #ID0000663. The fact sheet for this permit, written in 2006, found the discharge would have no effect on the Snake River Physa. The City of Burley Industrial WWTP outfall is located approximately 2000 ft upstream from the City of Burley WWTP outfall.

Therefore, the EPA has determined that the Snake River Physa is not located near City of Burley WWTP's outfall location and therefore this permit will have no effect on the Snake River Physa. This is supported due to lack of suitable habitat and zero sightings (between I-84 bridge and Milner Dam) in recent surveys for the Snake River Physa.

B. Essential Fish Habitat

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires the EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH).

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EPA has determined that issuance of this permit will have no effect on any EFH species in the vicinity of the discharge. The EPA has provided NOAA Fisheries with copies of the draft permit and fact sheet during the public notice period. Any comments received from NOAA Fisheries regarding EFH will be considered prior to reissuance of this permit.

C. State Certification

Section 401 of the CWA requires the EPA to seek State certification before issuing a final permit. As a result of the certification, the State may require more stringent permit conditions or additional monitoring requirements to ensure that the permit complies with water quality standards, or treatment standards established pursuant to any State law or regulation. A copy of the draft 401 certification is provided in Appendix E.

D. Permit Expiration

The permit will expire five years from the effective date.

X. References

EPA, 1991. *Technical Support Document for Water Quality-based Toxics Control.* US Environmental Protection Agency, Office of Water, EPA/505/2-90-001.

EPA, 2007. *EPA Model Pretreatment Ordinance*, Office of Wastewater Management/Permits Division, January 2007.

EPA, 2007. *Water Quality Trading Toolkit for Permit Writers.* Environmental Protection Agency, Office of Wastewater Management, EPA 833-R-07-004.

EPA, 2010. *NPDES Permit Writers' Manual.* Environmental Protection Agency, Office of Wastewater Management, EPA-833-K-10-001.

EPA, 2011. *Introduction to the National Pretreatment Program*. Office of Wastewater Management, EPA 833-B-11-011, June 2011.

Gates et al. 2012. *Taxonomic identity of the endangered Snake River physa, Physa natricina (Pulmonta: Physidae) combining traditional and molecular techniques.* Conservation Genetics 14:159-169, December 2012.

IDEQ, 2000. *The Lake Walcott Subbasin Assessment, Total Maximum Daily Load, and Implementation Plan*. Idaho Department of Environmental Quality, 2000.

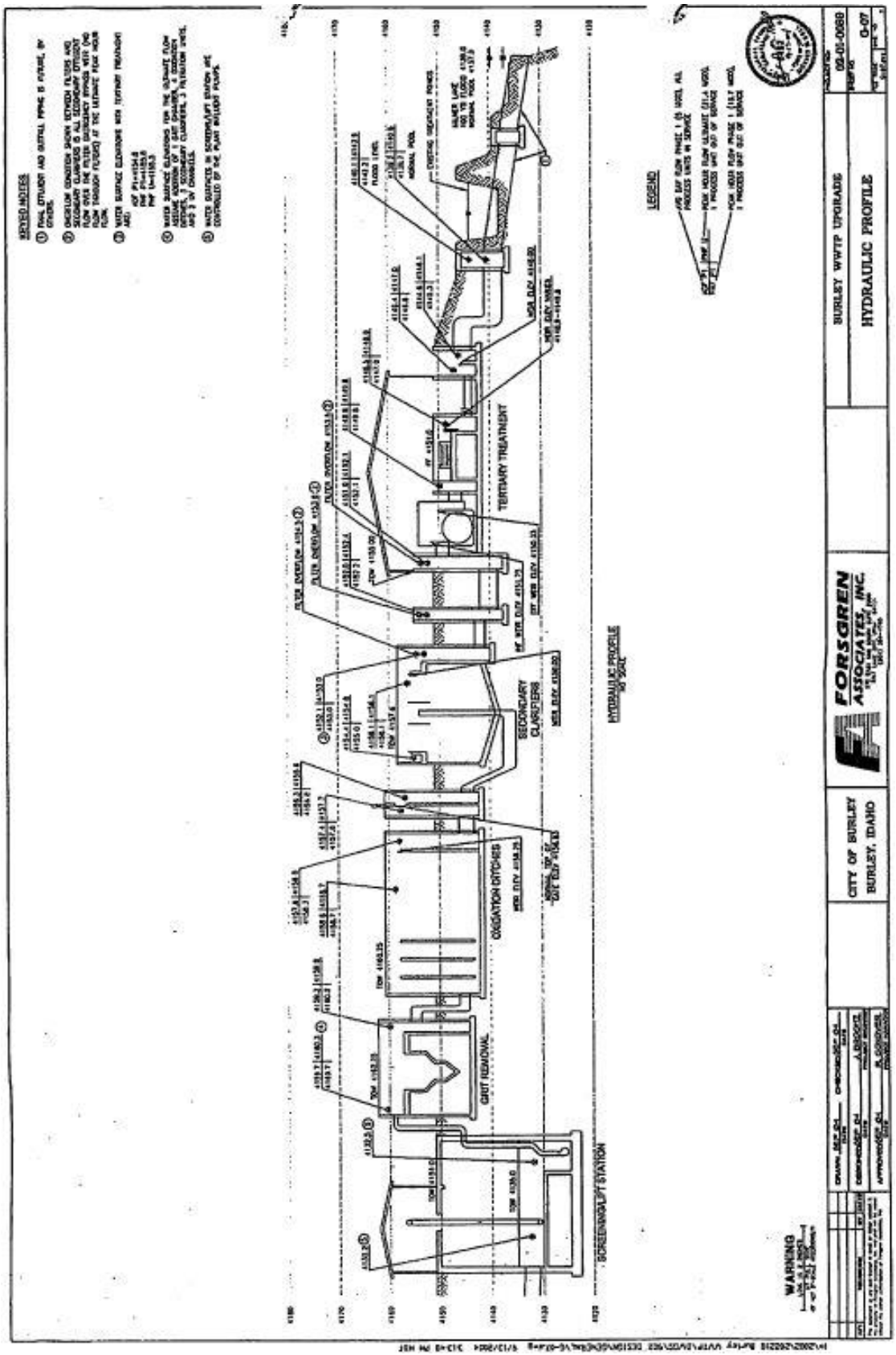
IDEQ, 2014. *Idaho's 2012 Integrated Report.* Idaho Department of Environmental Quality, January 2014.

IDEQ, 2016. *Water Quality Trading Guidance.* Idaho Department of Environmental Quality, October 2016.

Reclamation, 2015. *Biological Assessment for Bureau of Reclamatino Operations and Maintenance in the Snake River Basin above Brownlee Resevoir on Snake River Physa Snail (Haitia [Physa] natricina).* Bureau of Reclamation, April 2015.

Water Pollution Control Federation. Subcommittee on Chlorination of Wastewater. *Chlorination of Wastewater.* Water Pollution Control Federation. Washington, D.C. 1976.

Appendix A. Facility Information


REVISED NOTES
LEGEND
TERTIARY TREATMENT
SECONDARY CLARIFIERS
OXIDATION DITCHES
GRIT REMOVAL
SCREENING/LIFT STATION
HYDRAULIC PROFILE
NO SCALE
CITY OF BURLEY
BURLEY, IDAHO
FORSGREN ASSOCIATES, INC.
BURLEY WWTP UPGRADE
HYDRAULIC PROFILE
09-03-0068
0-07

Appendix B. Water Quality Data

A. Treatment Plant Effluent Data

	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross
	DAILY MN	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX	INST MAX	MAXIMUM	MAXIMUM	MINIMUM	MINIMUM	MO AVG	MO AVG	MO AVG
	Oxygen, dissolved [DO]	Cadmium, total recoverable	Cyanide, weak acid, dissociable	Lead, total recoverable	Mercury, total [as Hg]	Nitrogen, ammonia total [as N]	Nitrogen, ammonia total [as N]	Oil and grease	E. coli, MTEC-MF	pH	Temperature, water deg. centigrade	pH	Temperature, water deg. centigrade	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Flow, in conduit or thru treatment plant
Row Labels	mg/L	ug/L	ug/L	ug/L	ug/L	lb/d	mg/L	mg/L	#/100mL	SU	deg C	SU	deg C	lb/d	mg/L	MGD
8/31/2011	4.64	0.1	0.005	2	0.01	2	0.114	5	1	7.6	21.7	7.09	19.3	24	1.48	2.052
9/30/2011	3.68	0.1	0.005	1	0.01	3.9	0.189	5	2	7.46	21.5	7.05	19.8	63	2.85	2.585
10/31/2011	4.91	0.1	0.005	1	0.005	23.04	1.16	5	2	7.74	21.3	7	15.9	55	2.6	2.566
11/30/2011	3.3	0.1	0.005	1	0.01	21	0.989	5	3.1	7.77	20.4	7.04	12.7	104	5.36	2.275
12/31/2011	4.8	0.1	0.005	1	0.01	124	6.79	5	3.1	7.63	18.7	7.19	11.6	86	4.5	2.287
1/31/2012	3.97	0.1	0.005	1	0.01	169	11.2	5	1	8.02	17.9	7.19	14.5	78	5	2.015
2/29/2012	4.36	1	0.005	1	0.01	10	0.734	5	1	7.6	18.7	7.38	14.3	51	2.91	2.023
3/31/2012	4.67	1	0.005	1	0.005	74	4.74	5	2	7.49	20	7.18	15.5	69	4.34	2.014
4/30/2012	4.86	0.01	0.005	1	0.001	21	1.35	5	1	7.57	19.5	7.21	15.8	68	3.77	2.082
5/31/2012	5.69	0.1	0.005	1	0.001	119	8.17	5	4.1	7.54	21.1	6.96	16.1	102	7	1.923
6/30/2012	4.57	0.1	0.005	1	0.005	2	0.151	5	3	7.76	19.9	7.13	16.7	32	2.43	1.588
7/31/2012	3.85	0.01	0.005	1	0.0013	1.29	0.084	5	95.9	7.63	23.2	7.18	20.2	38	2.38	1.86
8/31/2012	3.48	0.1	0.005	1	0.0011	1.74	0.12	5	8.6	7.53	22.7	7.08	21	24	1.5	1.904
9/30/2012	3.69	0.1	0.005	1	0.0007	8	0.491	5	210	7.56	21.9	6.95	19.9	45	2.75	2.026
10/31/2012	4.24	0.1	0.005	1	0.0041	9	0.42	5	261	7.5	20.3	7.04	16.9	39	2.46	1.758
11/30/2012	3.53	0.1	0.005	1	0.004	13	0.992	5	2	7.56	19.8	6.64	16.7	28	2	1.715
12/31/2012	3.47	0.01	0.005	1	0.0014	11	0.751	5	1.2	7.61	18.7	7.02	13.9	29	1.9	1.72
1/31/2013	4.81	0.1	0.005	1	0.002	4	0.259	5	114	7.73	18.1	6.82	14	51	3.58	1.75
2/28/2013	3.38	0.1	0.005	1	0.0041	3	0.184	5	82	7.64	17.2	6.96	14.3	72	5	1.775
3/31/2013	4.22	0.1	0.005	1	0.0007	3	0.2	5	10	7.7	18	7.3	14	41	3	1.72
4/30/2013	8.71	0.1	0.005	1	0.0025	17	1.29	5	3	7.6	19.6	6.5	15.3	31	2	1.593
5/31/2013	4.79	0.1	0.006	1	0.001	10	0.73	5	4.1	7.7	19.6	6.9	16.4	37	2.5	1.67
6/30/2013	4.1	0.1	0.005	1	0.0008	22	1.3	5	10	7.6	21.6	6.7	18.4	40	2	1.96
7/31/2013																
8/31/2013	3.97	0.1	0.005	1	0.0009	34	2.13	5	1	7.7	22.5	6.7	20.9	31	2	1.749
9/30/2013	3.7	0.1	0.000005	1	0.0024	0.9	0.055	5	1	7.6	22	7.1	17.2	28	2	1.834
10/31/2013	5.1	0.1	5	1	0.0006	5.7	0.43	5	2	7.5	19.8	7.2	18.4	25	2	1.65
11/30/2013	4.8	0.1	5	1	0.0006	9.8	0.77	5	4	7.8	20.3	7.2	15.9	24	2	1.52
12/31/2013	5.3	0.01	5	1	0.0016	15	1.1	5	5	7.9	19.7	6.7	13.8	40	3	1.58
1/31/2014	5.4	0.2	5	2	0.002	13	0.935	5	2	7.6	17	6.7	9	38	3	1.505
2/28/2014	5	0.3	5	1	0.0009	0.14	0.01	5	4	7.8	17	6.6	13	41	3	1.62
3/31/2014	5.1	0.3	5	1	0.0009	19	0.92	5	2.7	7.9	20	7.1	17	46	3	1.84
4/30/2014	5	0.1	5	1	0.0009	34	2.08	5	19	8	20	6.4	16	45	3	1.78
5/31/2014	6	0.1	5	1	0.0009	28	1.71	5	1	7.7	19.5	7.2	15.6	40	3	1.585
6/30/2014	5.3	0.1	5	1	0.0006	2.6	0.154	5	27	7.7	20	7.1	19	28	2	1.699
7/31/2014	3	0.1	5	1	0.0007	0.9	0.05	5	2	7.8	22	7.2	20	29	2	1.764
8/31/2014	3.7	0.5	5	1	0.0007	53	3.18	5	2	7.8	22	7.2	21	29	2	1.759
9/30/2014	4	0.1	5	1	0.0012	4.33	0.271	5	5	7.7	22	6.5	20	29	2	1.754
10/31/2014	4.5	0.1	5	1	0.0012	0.15	0.01	5	1	7.7	20	7	19	27	2	1.62
11/30/2014	5.9	0.3	5	1	0.0008	1.55	0.09	5	1	7.9	19	6.7	17	27	2	1.623
12/31/2014	4.8	0.1	5	1	0.0007	1.1	0.08	5	2	7.8	19	6.9	13	27	2	1.602
1/31/2015	5.4	5	5	0.5	0.0008	1.5	0.16	5	1	7.6	21	6.8	17	39	3	1.632
2/28/2015	4.9	0.5	5	5	0.0012	2	0.135	5	1	7.5	19	7	17	42	3	1.654
3/31/2015	5.3	0.5	0.5	5	0.0017	0.8	0.056	5	1	7.7	19	7	17	42	3	1.6
4/30/2015	5.2	0.5	5	5	0.0014	13.8	1.15	5	260.3	7.6	20	7.2	18	56	4	1.53
5/31/2015	5.3	0.5	8	5	0.0017	12.1	0.843	5	2	7.6	20	7	18	61	4	1.708
6/30/2015	6.5	0.5	5	5	0.0014	2	0.151	5	2	7.5	22	7.4	20	51	4	1.66
7/31/2015	4.5	0.1	5	1	0.0008	4.5	0.26	5	204	7.6	23	7.2	20	68	4	1.852
8/31/2015	5.1	0.5	5	5	0.0008	4	0.303	5	1	7.5	2.108	7.1	1.713	54	4	2.368
9/30/2015	5.1	0.1	5	1	0.001	7.2	0.426	5	3.1	7.6	21	6.9	20	66	4	1.766
10/31/2015	5.8	0.1	5	1	0.0011	0.2	0.01	5	2	7.6	20	7	19	41	3	1.74
11/30/2015	5	0.1	5	1	0.0009	0.2	0.01	5	2	7.5	20	7.1	17	42	3	1.667
12/31/2015	6.6	0.1	5	1	0.0005	15.9	1.23	5	1	7.5	17	7	16	42	3	1.604
1/31/2016	6.53	0.1	5	1	0.0006	0.2	0.01	5	1	7.6	16	7.1	14	44	3	1.662
2/29/2016	5.4	5	5	15	0.0006	2	0.151	5	1	7.8	17	6.9	14	67	5	1.607
3/31/2016	5.37	0.1	5	1	0.0008	22.4	1.72	5	167.4	7.6	18	7.2	16	58	4	1.627
4/30/2016	5.3	0.1	5	1	0.0013	0.2	0.01	5	79.4	7.6	18	7.2	16	40	3	1.763
5/31/2016	8	0.1	5	1	0.0007	0.2	0.01	5	326	7.5	19	7	17	34	3	1.662
6/30/2016	7.6	0.1	5	1	0.001	4	0.27	5	79.8	7.5	22	7	19	33	2	1.759
7/31/2016	6.3	0.1	5	1	0.0007	0.2	0.01	5	35.9	7.6	21	7	20	30	2	1.939
Average	4.940508475	0.349830508	2.857983136	1.669491525	0.002327119	16.75491525	1.072847458	5	35.21525424	7.651525424	19.63233898	7.001864407	16.53750847	45.27118644	3.005254237	1.799067797
Minimum	3	0.01	0.000005	0.5	0.0005	0.14	0.01	5	1	7.46	2.108	6.4	1.713	24	1.48	1.505
Maximum	8.71	5	8	15	0.01	169	11.2	5	326	8.02	23.2	7.4	21	104	7	2.585
Count	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Std Dev	1.124994136	0.902486014	2.56748442	2.148797116	0.002842524	31.60199494	2.01870537	0	75.10983639	0.131212036	2.869003075	0.217766678	3.250125628	18.56937645	1.089267954	0.239597138
CV	0.227708168	2.579780757	0.898355343	1.28709675	1.221477817	1.886132783	1.881633177	0	2.132877868	0.017148481	0.14613659	0.031101242	0.19653055	0.41018091	0.362454511	0.133178493
95th Percentile	6.7	1	5	5	0.01	78.5	4.945	5	215.03	7.9	22.52	7.219	20.27	78.8	5	2.2951
5th Percentile	3.461	0.01	0.005	1	0.0006	0.2	0.01	5	1	7.5	17	6.59	12.59	24.9	1.99	1.575

Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross	Percent Removal	Percent Removal	Raw Sewage Influent	Raw Sewage Influent	See Comments	See Comments	See Comments	See Comments
MO AVG	MO AVG	MO AVG	MO GEO	WKLY AVG	WKLY AVG	WKLY AVG	WKLY AVG	WKLY AVG	WKLY AVG	MN % RMV	MN % RMV	MO AVG	MO AVG	MO AVG	MO AVG	WKLY AVG	WKLY AVG
Nitrogen, ammonia total [as N]	Nitrogen, ammonia total [as N]	Phosphorus, total [as P]	E. coli, MTEC-MF	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Chlorine, total residual	Chlorine, total residual	Fecal coliform, MPN, EC med, 44.5 C	Phosphorus, total [as P]	BOD, 5-day, percent removal	Solids, suspended percent removal	BOD, 5-day, 20 deg. C	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended
lb/d	mg/L	lb/d	#/100mL	lb/d	mg/L	lb/d	mg/L	#/100mL	lb/d	%	%	mg/L	mg/L	lb/d	mg/L	lb/d	mg/L
1	0.078	10	1	33	2			27	13.5	99	96	141.75	135.2	75	4.3	124	7
2.08	0.105	168	1.15	91	4			43.6	180	97	98	112.2	483.5	156	7.5	167	9
5.96	0.285	103	1.189	66	3.35			2.4	154	98	96	134.5	236	159	7.5	200	9
6	0.296	5	1.208	247	13			13.8	7	98	98	367	1343	187	9.6	514	27
46	2.46	6	1.254	103	6.06			1	9	99	97	705	248	125	7	188	12
45	3.07	4	1	115	5.4			5.5	7	99	97	592	262	101	7	138	9
6	0.371	4	1	76	4			3.4	5	99	98	681	414	104	6.1	137	8
30	1.847	6	1.32	105	5.7			58.2	10	99	98	703.3	265.5	94	5.75	147	8
11	0.65	14	1	83	5			11	22	99	96	517	244	162	8.5	295	13
28	1.91	45	1.326	278	19			16.4	78	98	95	489	326	159	11	234	18
1	0.096	29	1.2	40	3			36	72	98.7	97	189.5	173	58	4.4	81	6
0.9	0.057	5	4.304	66	4			9	7	99	96	247.5	247.5	95	6	172	11
0.87	0.05	8	2.0291	36	2			5.6	18	99	97	362.2	193.2	59	4	89	5
4	0.237	36	2.9137	60	3.91			4.8	78	99	97	351	333	132	7.8	281	16
2.18	0.106	4	3.0432	58	4.5			1.9698	5	99	98	287	165	91	5.2	332	19
5	0.36	3	1.149	40	3			1.366	4	99	97	300	166	65	5	88	6
3.5	0.232	2	1.149	33	2.17			1.186	3	99	98	394	331	34	2.25	75	5
2	0.128	4	2.579	75	5			1.1686	6	99	94	248	182	144	9.7	204	14
2	0.128	7	2.414	110	7.65			2.168	10	99	95	445	275	169	12	286	20
2	0.1	6	2	45	3			3	12	99	96	345	210	112	8	179	13
7	0.54	4	1.2	45	2.85			1.8	5	99	98	268	183	52	3.8	93	6
3	0.22	18	1.75	77	5.5			5.3	67	99	97	348	255	114	8	188	12
8	0.46	16	2	44	3			6.8	32	99	91	286	215	210	13	349	24
8	0.05	25	1	57	4			2	102	99	98	203	205	59	4	113	7
0.3	0.017	7	1	34	2			1.3	10	99	91	145	115	109	7	202	13
2.3	0.17	2.6	1.2	32	3			17	3.2	99	89	257	115	52	4	73	5
3.8	0.3	2.8	1.3	29	2			1	9.9	99	96	191	140	34	3	70	5
4.4	0.34	3.4	3	63	5			2	5.3	98	90	221	119	105	8	197	15
6	0.436	2	1.319	56	4			2	3	98	87	217	128	75	6	173	13
0.04	0.003	2.4	1.19	55	4			1	3.2	98	87	292	532	95	7	171	11
5	0.23	4	1.49	62	3			2	7	99	96	574	358	107	7	308	15
11	0.74	6.2	5.225	91	4			4	14.5	99	98	548	353	59	4	179	11
0.7	0.363	4.5	1	81	5			4.4	8.6	98	95	202	140	6	4	97	6
0.99	0.065	3	4.02	35	2			11	4	99	94	210	116	43	3	59	4
0.3	0.02	3	1.12	51	3			7	4	98	97	189	93	44	3	78	5
8	0.665	6	1.32	66	4			2	17	97	95	170	7.6	44	3	50	3
1.74	0.119	3.8	1.3	51	3			2	5.6	98	98	194	146	29	2	68	4
0.1	0.007	4.9	1	56	3			1.26	10.2	99	96	200	131	41	3	78	5
0.54	0.04	49	1	35	2			1.3	208	99	96	162	202	54	4	80	6
0.27	0.02	7.6	1.148	42	3			1	19.8	99	97	392	230	40	3	57	4
1.3	0.094	3	1	56	3			1	3	99	98.4	770	717	54	4	89	6
1.7	0.011	4	1	46	3			1.2	6	98.8	95	339	214	78	5	191	9
0.4	0.025	3	1	45	3			2	3	99	97	317	237	85	6	104	7
4.5	0.36	5	6.7	84	7			13	8	99	97	405	256	66	5	120	10
5	0.355	7	1.15	76	5			3	6	98	95	416	168	86	6	122	8
0.6	0.045	5	1.148	65	5			2	7	99	97	346	221	95	7	109	8
2.2	0.141	55	5.728	104	6			2	110	99	95	1039	1237	115	8	180	12
2.3	0.169	26	1	65	5			1	50	99	99	613	688	44	3	65	5
3.9	0.241	27	1.254	69	5			7	36	98	96	345	246	101	7	152	9
0.1	0.01	4	1.134	47	3			1	8	99	95	359	248	142	19	420	27
0.1	0.01	4	1.1487	51	3			1	4	99	98	297	324	56	4	93	7
4.1	0.26	6	1	52	4			1	19	98	98	228	304	85	7	116	9
0.2	0.01	2	1	60	4			1.5	2	99	98	336	374	52	4	110	6
1	0.055	3	1	93	6			2	4	97	95	269	204	85	6	133	9
4.6	0.352	3	16.5	94	7			46	3	99	98	326	240	78	6	107	8
0.1	0.01	2	2.75	53	4			16	3	99	89	346	210	87	6	114	8
0.1	0.01	2	15.3	41	3			196	3	98	90	184	107	80	6	130	10
2	0.103	4	6.62	44	3			10	13	99	99	176	204	52	3	152	10
0.1	0.01	10	2.71	32	2			1.7	20	99	98	246	251	41	3	57	4
5.258813559	0.332915254	13.88474576	2.321232203	67.77966102	4.306610169	#DIV/0!	#DIV/0!	10.73082034	26.23389831	98.66949153	95.71864407	343.0161017	279.0932203	87.03389831	5.989830508	155.559322	9.847457627
0.04	0.003	2	1	29	2	0	0	1	2	97	87	112.2	7.6	6	2	50	3
46	3.07	168	16.5	278	19	0	0	196	208	99	99	1039	1343	210	19	514	27
59	59	59	59	59	59	0	0	59	59	59	59	59	59	59	59	59	59
9.372243518	0.584355769	26.57891187	2.916613048	42.99481436	2.657038545	#DIV/0!	#DIV/0!	27.24486232	44.00933526	0.567588437	2.906857207	181.7609584	229.8456483	43.30523824	2.949865275	93.47436882	5.441898627
1.782197336	1.755268832	1.914252686	1.256493445	0.634332095	0.616967508	#DIV/0!	#DIV/0!	2.53893565	1.677575126	0.005752421	0.030368767	0.529890455	0.823544363	0.497567489	0.492478923	0.600892107	0.552619654
28.2	1.8533	49.6	6.628	110.5	7.065	#NUM!	#NUM!	43.84	114.4	99	98.04	703.47	690.9	162.7	11.1	333.7	20.4
0.1	0.01	2	1	32.9	2	#NUM!	#NUM!	1	3	97.9	89	144.675	114.2	34	3	58.8	4

B. Receiving Water Data

Receiving Water Data from City of Burley Industrial WWTP Permit Application 12/2/2013

	Upstream Temperature	Upstream pH	Upstream Total Ammonia as N	Upstream Alkalinity	Downstream Temperature	Downstream pH	Downstream Total Ammonia as N
	deg C	SU	mg/L	mg/L	deg C	SU	mg/L
3/3/2010		8.39	0.006	60		8.24	0.004
9/8/2010	17.4	8.69	0.218	50	17	8.81	0.198
4/11/2011	7.3	8.69	0.064	40	8.9	8.68	0.061
9/14/2011	20.9	8.3	0.0311	30	20.7	8.3	0.15
4/9/2012	10.7	8.85	0.079	50	9.9	8.82	0.076
9/11/2012	18.7	8.09	0.0475	40	19.5	8.02	0.0419
4/30/2013		8.5	0.01	50		7.9	0.01
9/19/2013	20.7	8.19	0	10	20.7	8.23	0
		Amnia 90th =	0.1207				
Average	15.95	8.4625	0.05695	41.25	16.11666667	8.375	0.0676125
Minimum	7.3	8.09	0	10	8.9	7.9	0
Maximum	20.9	8.85	0.218	60	20.7	8.82	0.198
Count	6	8	8	8	6	8	8
Std Dev	5.641187818	0.267194418	0.070986961	15.52647509	5.38457674	0.353916859	0.072211009
CV	0.353679487	0.031573934	1.246478676	0.376399396	0.334099901	0.042258729	1.068012705
95th Perce	20.85	8.794	0.1207	56.5	20.7	8.8165	0.1812
5th Percer	8.15	8.125	0.0021	17	9.15	7.942	0.0014

	Temp Winter		Temp Summer
3/3/2010			
		9/8/2010	17.4
4/11/2011	7.3		
		9/14/2011	20.9
4/9/2012	10.7		
		9/11/2012	18.7
4/30/2013			
		9/19/2013	20.7
95th Perce	10.53	95th Percentil	20.87
5th Percer	7.47	5th Percentile	17.595

	pH Winter		pH Summer
3/3/2010	8.39		
		9/8/2010	8.69
4/11/2011	8.69		
		9/14/2011	8.3
4/9/2012	8.85		
		9/11/2012	8.09
4/30/2013	8.5		
		9/19/2013	8.19
95th Percentil	8.826	95th Percentil	8.6315
5th Percentile	8.4065	5th Percentile	8.105

Appendix C. Reasonable Potential and Water Quality-Based Effluent Limit Formulae

A. Reasonable Potential Analysis

The EPA uses the process described in the *Technical Support Document for Water Quality-based Toxics Control* (EPA, 1991) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, the EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a water quality-based effluent limit must be included in the permit.

Mass Balance

For discharges to flowing water bodies, the maximum projected receiving water concentration is determined using the following mass balance equation:

$$C_d Q_d = C_e Q_e + C_u Q_u \qquad \text{Equation 1}$$

where,

- C_d = Receiving water concentration downstream of the effluent discharge (that is, the concentration at the edge of the mixing zone)
- C_e = Maximum projected effluent concentration
- C_u = 95th percentile measured receiving water upstream concentration
- Q_d = Receiving water flow rate downstream of the effluent discharge = Q_e+Q_u
- Q_e = Effluent flow rate (set equal to the design flow of the WWTP)
- Q_u = Receiving water low flow rate upstream of the discharge (1Q10, 7Q10 or 30B3)

When the mass balance equation is solved for C_d, it becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times Q_u}{Q_e + Q_u} \qquad \text{Equation 2}$$

The above form of the equation is based on the assumption that the discharge is rapidly and completely mixed with 100% of the receiving stream.

If the mixing zone is based on less than complete mixing with the receiving water, the equation becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times (Q_u \times \%MZ)}{Q_e + (Q_u \times \%MZ)} \qquad \text{Equation 3}$$

Where:

% MZ = the percentage of the receiving water flow available for mixing.

If a mixing zone is not allowed, dilution is not considered when projecting the receiving water concentration and,

$$C_d = C_e \qquad \text{Equation 4}$$

A dilution factor (D) can be introduced to describe the allowable mixing. Where the dilution factor is expressed as:

$$D = \frac{Q_e + Q_u \times \%MZ}{Q_e} \qquad \text{Equation 5}$$

After the dilution factor simplification, the mass balance equation becomes:

$$C_d = \frac{C_e - C_u}{D} + C_u \qquad \text{Equation 6}$$

If the criterion is expressed as dissolved metal, the effluent concentrations are measured in total recoverable metal and must be converted to dissolved metal as follows:

$$C_d = \frac{CF \times C_e - C_u}{D} + C_u \qquad \text{Equation 7}$$

Where C_e is expressed as total recoverable metal, C_u and C_d are expressed as dissolved metal, and CF is a conversion factor used to convert between dissolved and total recoverable metal.

The above equations for C_d are the forms of the mass balance equation which were used to determine reasonable potential and calculate wasteload allocations.

Maximum Projected Effluent Concentration

When determining the projected receiving water concentration downstream of the effluent discharge, the EPA's Technical Support Document for Water Quality-based Toxics Controls (TSD, 1991) recommends using the maximum projected effluent concentration (Ce) in the mass balance calculation (see equation 3, page C-5). To determine the maximum projected effluent concentration (Ce) the EPA has developed a statistical approach to better characterize the effects of effluent variability. The approach combines knowledge of effluent variability as estimated by a coefficient of variation (CV) with the uncertainty due to a limited number of data to project an estimated maximum concentration for the effluent. Once the CV for each pollutant parameter has been calculated, the reasonable potential multiplier (RPM) used to derive the maximum projected effluent concentration (Ce) can be calculated using the following equations:

First, the percentile represented by the highest reported concentration is calculated.

$$p_n = (1 - \text{confidence level})^{1/n} \qquad \text{Equation 8}$$

where,

p_n = the percentile represented by the highest reported concentration
n = the number of samples
confidence level = 99% = 0.99

and

$$RPM = \frac{C_{99}}{C_{P_n}} = \frac{e^{Z_{99} \times \sigma - 0.5 \times \sigma^2}}{e^{Z_{P_n} \times \sigma - 0.5 \times \sigma^2}} \qquad \text{Equation 9}$$

Where,

σ^2 = $\ln(CV^2 + 1)$
Z_{99} = 2.326 (z-score for the 99th percentile)
Z_{Pn} = z-score for the P_n percentile (inverse of the normal cumulative distribution function at a given percentile)
CV = coefficient of variation (standard deviation ÷ mean)

The maximum projected effluent concentration is determined by simply multiplying the maximum reported effluent concentration by the RPM:

$$C_e = (RPM)(MRC) \qquad \text{Equation 10}$$

where MRC = Maximum Reported Concentration

Maximum Projected Effluent Concentration at the Edge of the Mixing Zone

Once the maximum projected effluent concentration is calculated, the maximum projected effluent concentration at the edge of the acute and chronic mixing zones is calculated using the mass balance equations presented previously.

Reasonable Potential

The discharge has reasonable potential to cause or contribute to an exceedance of water quality criteria if the maximum projected concentration of the pollutant at the edge of the mixing zone exceeds the most stringent criterion for that pollutant.

B. WQBEL Calculations

Calculate the Wasteload Allocations (WLAs)

Wasteload allocations (WLAs) are calculated using the same mass balance equations used to calculate the concentration of the pollutant at the edge of the mixing zone in the reasonable potential analysis. To calculate the wasteload allocations, C_d is set equal to the acute or chronic criterion and the equation is solved for C_e. The calculated C_e is the acute or chronic WLA. Equation 6 is rearranged to solve for the WLA, becoming:

$$C_e = WLA = D \times (C_d - C_u) + C_u \qquad \text{Equation 11}$$

Idaho's water quality criteria for some metals are expressed as the dissolved fraction, but the Federal regulation at 40 CFR 122.45(c) requires that effluent limits be expressed as total recoverable metal. Therefore, the EPA must calculate a wasteload allocation in total recoverable metal that will be protective of the dissolved criterion. This is accomplished by dividing the WLA expressed as dissolved by the criteria translator, as shown in equation __. As discussed in Appendix ___, the criteria translator (CT) is equal to the conversion factor, because site-specific translators are not available for this discharge.

$$C_e = WLA = \frac{D \times (C_d - C_u) + C_u}{CT} \qquad \text{Equation 12}$$

The next step is to compute the "long term average" concentrations which will be protective of the WLAs. This is done using the following equations from the EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD):

$$LTA_a = WLA_a \times e^{(0.5\sigma^2 - z\,\sigma)} \qquad \text{Equation 13}$$

$$LTA_c = WLA_c \times e^{(0.5\sigma_4^2 - z\sigma_4)} \qquad \text{Equation 14}$$

where,

σ^2 = $\ln(CV^2 + 1)$
Z_{99} = 2.326 (z-score for the 99th percentile probability basis)
CV = coefficient of variation (standard deviation ÷ mean)
σ_4^2 = $\ln(CV^2/4 + 1)$

For ammonia, because the chronic criterion is based on a 30-day averaging period, the Chronic Long Term Average (LTAc) is calculated as follows:

$$LTA_c = WLA_c \times e^{(0.5\sigma_{30}^2 - z\sigma_{30})} \qquad \text{Equation 15}$$

where,

σ_{30}^2 = $\ln(CV^2/30 + 1)$

The LTAs are compared and the more stringent is used to develop the daily maximum and monthly average permit limits as shown below.

Derive the maximum daily and average monthly effluent limits

Using the TSD equations, the MDL and AML effluent limits are calculated as follows:

$$MDL = LTA \times e^{(z_m\sigma - 0.5\sigma^2)} \qquad \text{Equation 16}$$

$$AML = LTA \times e^{(z_a\sigma_n - 0.5\sigma_n^2)} \qquad \text{Equation 17}$$

where σ, and σ² are defined as they are for the LTA equations above, and,

σ_n^2 = $\ln(CV^2/n + 1$

z_a = 1.645 (z-score for the 95th percentile probability basis)

z_m = 2.326 (z-score for the 99th percentile probability basis)

n = number of sampling events required per month. With the exception of ammonia, if the AML is based on the LTA_c, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 4. For ammonia, In the case of ammonia, if the AML is based on the LTA_c, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 30.

C. Critical Low Flow Conditions

The low flow conditions of a water body are used to determine water quality-based effluent limits. In general, Idaho's water quality standards require criteria be evaluated at the following low flow receiving water conditions (*See* IDAPA 58.01.02.210.03) as defined below:

Acute aquatic life	1Q10 or 1B3
Chronic aquatic life	7Q10 or 4B3
Non-carcinogenic human health criteria	30Q5
Carcinogenic human health criteria	harmonic mean flow
Ammonia	30B3 or 30Q10

1. The 1Q10 represents the lowest one day flow with an average recurrence frequency of once in 10 years.
2. The 1B3 is biologically based and indicates an allowable exceedence of once every 3 years.
3. The 7Q10 represents lowest average 7 consecutive day flow with an average recurrence frequency of once in 10 years.
4. The 4B3 is biologically based and indicates an allowable exceedance for 4 consecutive days once every 3 years.
5. The 30Q5 represents the lowest average 30 consecutive day flow with an average recurrence frequency of once in 5 years.
6. The 30Q10 represents the lowest average 30 consecutive day flow with an average recurrence frequency of once in 10 years.
7. The harmonic mean is a long-term mean flow value calculated by dividing the number of daily flow measurements by the sum of the reciprocals of the flows.

Appendix D. Reasonable Potential and Water Quality-Based Effluent Limit Calculations

Reasonable Potential Analysis (RPA) and Water Quality Effluent Limit (WQBEL) Calculations

Facility Name	City of Burley Wastewater Treatment Plant
Facility Flow (mgd)	5.00
Facility Flow (cfs)	7.74

Critical River Flows (IDAPA 58.01.02 03. b)		Annual Crit. Flows	Seasonal Low Flow	Seasonal High Flow	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows	Annual Crit. Flows
Aquatic Life - Acute Criteria - Criterion Max. Concentration (CMC)	**1Q10**	343	343	3200	343.0	343.0	343.0	343.0	343.0	343.0	343.0	343.0	343.0
Aquatic Life - Chronic Criteria - Criterion Continuous Concentration (CCC)	**7Q10 or 4B3**	338	341	3590	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0
Ammonia	**30B3/30Q10** (seasonal)		347	4840	--	--	--	--	--	--	--	--	--
Human Health - Non-Carcinogen	**30Q5**	405	419	5200	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
Human Health - carcinogen	**Harmonic Mean Flow**	1588	1116	8383	1,588.0	1,588.0	1,588.0	1,588.0	1,588.0	1,588.0	1,588.0	1,588.0	1,588.0

Receiving Water Data		Notes:	Annual Crit. Flows	Seasonal Low Flow	Seasonal High Flow
Hardness, as mg/L $CaCO_3$	= 157 mg/L	5th % at critical flows			
Temperature, °C	Temperature, °C	95th percentile	20.7	10.53	20.87
pH, S.U.	pH, S.U.	95th percentile	8.8	8.8	8.6

Pollutants of Concern			AMMONIA, warm water, fish early life stages absent	AMMONIA, warm water, fish early life stages absent	AMMONIA, warm water, fish early life stages absent	CADMIUM	CYANIDE (as WAD) - SEE Toxic BiOp	LEAD - SEE Toxic BiOp	MERCURY - SEE Toxic BiOp	ARSENIC (dissolved) - SEE Toxic BiOp	CHROMIUM (HEX)	COPPER - SEE Toxic BiOp	NICKEL - SEE Toxic BiOp	ZINC - SEE Toxic BiOp
Effluent Data	**Number of Samples in Data Set (n)**			40	19	59	59	59	48	3	3	3	3	3
	Coefficient of Variation (CV) = Std. Dev./Mean (default CV = 0.6)			1.75	0.6	2.58	0.9	1.29	0.69	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, µg/L (Max. or 95th Percentile) - (C_e)			6,859	2,235	1	5	5	0.0041	3	2	5	9	42.3
	Calculated 50th % Effluent Conc. (when n>10), Human Health Only					0.1	5	1	0.0012					
Receiving Water Data	**90th Percentile Conc., µg/L - (C_u)**			120.7	120.7	0	0	0	0	0	0	0	0	0
	Geometric Mean, µg/L, Human Health Criteria Only					0	0	0	0	0	0	0	0	0
Applicable Water Quality Criteria	Aquatic Life Criteria, µg/L	Acute	--	1,844.748	2,650.946	1.809	22.	105.151	2.1	340.	16.	26.028	685.797	171.728
	Aquatic Life Criteria, µg/L	Chronic	--	854.891	610.744	.74	5.2	4.098	.012	150.	11.	16.689	76.171	173.133
	Human Health Water and Organism, µg/L		--	--	--	Narrative	140.	Narrative	--	6.2	Narrative	--	610.	7,400.
	Human Health, Organism Only, µg/L		--	--	--	Narrative	140.	Narrative	--		Narrative	--	4,600.	26,000.
	Metals Criteria Translator, decimal (or default use Conversion Factor)	Acute				.925	--	.725	--	--	.982	.96	.998	.978
		Chronic				.89	--	.725	--	--	.962	.96	.997	.986
	Carcinogen (Y/N), Human Health Criteria Only		--	--	--	N	N	N	N	Y	N	N	N	N
Percent River Flow Default Value = 25%	**Aquatic Life - Acute**	**1Q10**	--	25%	25%	25%	25%	25%	0%	25%	25%	25%	25%	25%
	Aquatic Life - Chronic	7Q10 or 4B3	--	--	--	25%	25%	25%	0%	25%	25%	25%	25%	25%
	Ammonia	30B3 or 30Q10	--	25%	25%	25%	25%	25%	0%	25%	25%	25%	25%	25%
	Human Health - Non-Carcinogen	30Q5	--	--	--	25%	25%	25%	0%	25%	25%	25%	25%	25%
	Human Health - carcinogen	Harmonic Mean	--	--	--	25%	25%	25%	0%	25%	25%	25%	25%	25%
Calculated Dilution Factors (DF) (or enter Modeled DFs)	Aquatic Life - Acute	1Q10	--	12.1	104.4	12.1	12.1	12.1	1.0	12.1	12.1	12.1	12.1	12.1
	Aquatic Life - Chronic	7Q10 or 4B3	--	--	--	11.9	11.9	11.9	1.0	11.9	11.9	11.9	11.9	11.9
	Ammonia	30B3 or 30Q10	--	12.2	157.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Human Health - Non-Carcinogen	30Q5	--	--	--	14.1	14.1	14.1	1.0	14.1	14.1	14.1	14.1	14.1
	Human Health - carcinogen	Harmonic Mean	--	--	--	52.3	52.3	52.3	1.0	52.3	52.3	52.3	52.3	52.3

Aquatic Life Reasonable Potential Analysis

σ	$\sigma^2=\ln(CV^2+1)$		--	1.184	0.555	1.427	0.770	0.990	0.624	0.555	0.555	0.555	0.555	0.555
P_n	=(1-confidence level)$^{1/n}$, where confidence level =	**99%**	--	0.891	0.785	0.925	0.925	0.925	0.909	0.215	0.215	0.215	0.215	0.215
Multiplier (TSD p. 57)	$=\exp(z\sigma-0.5\sigma^2)/\exp[\text{normsinv}(P_n)\sigma-0.5\sigma^2]$, where	**99%**	--	3.6	2.3	3.5	2.0	2.4	1.9	5.6	5.6	5.6	5.6	5.6
Statistically projected critical discharge concentration (C_e)			--	25023.43	5243.92	3.55	9.90	12.04	0.01	16.87	11.24	28.11	50.60	237.83
Predicted max. conc.(ug/L) at Edge-of-Mixing Zone		Acute	--	2181.17	169.76	0.27	0.00	0.72	0.00	0.00	0.91	2.23	4.18	19.25
(note: for metals, concentration as dissolved using conversion factor as translator)		Chronic	--	2159.36	153.24	0.26	0.83	0.73	0.01	1.41	0.91	2.26	4.23	19.67
Reasonable Potential to exceed Aquatic Life Criteria			--	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Aquatic Life Effluent Limit Calculations

Number of Compliance Samples Expected per month (n)				4	4	4	4	4	4	4	4	4	4	4
n used to calculate AML (if chronic is limiting then use min=4 or for ammonia min=30)			--	4	--	--	--	--	--	--	--	--	--	--
LTA Coeff. Var. (CV), decimal	(Use CV of data set or default = 0.6)		--	1.750	--	--	--	--	--	--	--	--	--	--
Permit Limit Coeff. Var. (CV), decimal	(Use CV from data set or default = 0.6)		--	1.750	--	--	--	--	--	--	--	--	--	--
Acute WLA, ug/L	C_d = (Acute Criteria x MZ_a) - C_u x (MZ_a-1)	Acute	--	20,957.5	--	--	--	--	--	--	--	--	--	--
Chronic WLA, ug/L	C_d = (Chronic Criteria x MZ_c) - C_u x (MZ_c-1)	Chronic	--	9,089.0	--	--	--	--	--	--	--	--	--	--
Long Term Ave (LTA), ug/L	WLAc x $\exp(0.5\sigma^2-z\sigma)$, Acute	**99%**	--	2,688.7	--	--	--	--	--	--	--	--	--	--
(99th % occurrence prob.)	WLAa x $\exp(0.5\sigma^2-z\sigma)$; ammonia n=30, Chronic	**99%**	--	4,619.9	--	--	--	--	--	--	--	--	--	--
Limiting LTA, ug/L	used as basis for limits calculation		--	2,688.7	--	--	--	--	--	--	--	--	--	--
Applicable Metals Criteria Translator (metals limits as total recoverable)			--	--	--	--	--	--	--	--	--	--	--	--
Average Monthly Limit (AML), ug/L , where % occurrence prob =		**95%**	--	**6,994**	--	--	--	--	--	--	--	--	--	--
Maximum Daily Limit (MDL), ug/L , where % occurrence prob =		**99%**	--	**20,958**	--	--	--	--	--	--	--	--	--	--
Average Monthly Limit (AML), mg/L			--	**7.0**	--	--	--	--	--	--	--	--	--	--
Maximum Daily Limit (MDL), mg/L			--	**21.0**	--	--	--	--	--	--	--	--	--	--
Average Monthly Limit (AML), lb/day			--	**292**	--	--	--	--	--	--	--	--	--	--
Maximum Daily Limit (MDL), lb/day			--	**874**	--	--	--	--	--	--	--	--	--	--

Human Health Reasonable Potential Analysis

σ	$\sigma^2=\ln(CV^2+1)$		1.427	0.770	0.990	0.624	0.555	0.555	0.555	0.555	0.555
P_n	=(1-confidence level)$^{1/n}$ where confidence level =	**95%**	0.950	0.950	0.950	0.939	0.368	0.368	0.368	0.368	0.368
Multiplier	$=\exp(2.326\sigma-0.5\sigma^2)/\exp[\text{invnorm}(P_N)\sigma-0.5\sigma^2]$, prob. =	**50%**	0.095	0.281	0.195	0.380	1.205	1.205	1.205	1.205	1.205
Dilution Factor (for Human Health Criteria)			14.1	14.1	14.1	1.0	52.3	14.1	14.1	14.1	14.1
Max Conc. at edge of Chronic Zone, ug/L (C_d)			0.007	0.355	0.071	0.001	0.069	0.171	0.428	0.770	3.617
Reasonable Potential to exceed HH Water & Organism			**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Reasonable Potential to exceed HH Organism Only			**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Human Health, Water + Organism, Effluent Limit Calculations

Number of Compliance Samples Expected per month (n)		4	4	4	4	4	4	4	4	4	4
Average Monthly Effluent Limit, ug/L	equals wasteload allocation	--	--	--	--	--	--	--	--	--	--
Maximum Daily Effluent Limit, ug/L	TSD Multiplier, Table 5-3, using 99th and 95th %	--	--	--	--	--	--	--	--	--	--
Average Monthly Limit (AML), lb/day		--	--	--	--	--	--	--	--	--	--
Maximum Daily Limit (MDL), lb/day		--	--	--	--	--	--	--	--	--	--

Human Health, Organism Only, Effluent Limit Calculations

Number of Compliance Samples Expected per month (n)		4	4	4	4	4	4	4	4	4	4
Average Monthly Effluent Limit, ug/L	equals wasteload allocation	--	--	--	--	--	--	--	--	--	--
Maximum Daily Effluent Limit, ug/L	TSD Multiplier, Table 5-3, using 99th and 95th %	--	--	--	--	--	--	--	--	--	--
Average Monthly Limit (AML), lb/day		--	--	--	--	--	--	--	--	--	--
Maximum Daily Limit (MDL), lb/day		--	--	--	--	--	--	--	--	--	--

References: Idaho Water Quality Standards http://adminrules.idaho.gov/rules/current/58/0102.pdf
Technical Support Document for Water Quality-based Toxics Control, US EPA, March 1991, EPA/505/2-90-0 http://www.epa.gov/npdes/pubs/owm0264.pdf

Total Phosphorus

The TMDL assigned the City of Burley WWTP a wasteload allocation (WLA) of 39 lbs/day TP. As stated previously, federal regulations at 40 CFR 122.44(d)(vii)(B) require EPA to incorporate effluent limits based on WLAs from the State's TMDL into NPDES permits.

In translating the WLA into permit limits, EPA followed the procedures in the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001, March 1991, TSD).

Because compliance with permit limits is determined on a weekly and monthly basis (40 CFR 122.45(d)(2)) it is necessary to set permit limits that meet a given WLA for every month. The recommended approach for setting water quality based effluent limits is as follows:

- Set the Average Monthly Limit (AML) equal to the WLA of 39 lbs/day
- Calculate the Average Weekly Limit (AWL) using the AML

The AWL is calculated below. n = 4 with weekly sampling for TP. CV = 0.6, the default CF set by the Technical Support Document for Water Quality-Based Toxics Control (*TSD*). The formula for calculating an AWL is as follows (see the *TSD* page 106):

Multiplier to Calculate Average Weekly Limit (AWL) from Average Monthly Limit

Number of Samples per Month Set (n)			4
Number of Samples per Week Set (n/4)			1
Coefficient of Variation (CV) = Std. Dev./Mean			0.6
σ = std deviation	$\sigma^2=\ln(CV^2+1)$		0.555
Average Monthly Limit (AML),	$\exp(z\sigma_n-0.5z\sigma_n^2)$; where % probability basis =	95%	1.55
Average Weekly Limit (AWL),	$\exp(z\sigma_{n/4}-0.5z\sigma_{n/4}^2)$; where % probability basis =	99%	3.12
Ratio AWL/AML			**2.01**

Adapted from TSD Page 106, where n=
(default AWL/AML Multiplier = 1.5)

Calculation:	**AML**	**x**	**Multiplier**	**=**	**AWL**
AWL = AML x Multiplier	39	x	2.01	=	78.3

Temperature

IDAPA 58.01.02.250.04.a requires receiving waters classified as Warm Water to meet a temperature standard of 33.0 ºC or less with a maximum daily average temperature of 29.0 ºC. The City of Burley WWTP receiving water is protected for Warm Water aquatic life (see III.B Designated Beneficial Uses).

IDAPA 58.01.02.401.c allows for a maximum of 0.3 ºC rise in receiving water temperature. Reasonable Potential calculations (below) show a projected rise in 0.0 ºC in receiving water temperature.

	Warm Water Critera	
INPUT		Data Source
Chronic Dilution Factor at Mixing Zone Boundary	338.0	High River Flow
Ambient Temperature (T) (Upstream Background)	20.9 °C	95th Percentile based on permittee or USGS data
Effluent Temperature	22.5 °C	95th Percentile of **monthly daily max effluent** based on daily max per DMR data
Aquatic Life Temperature WQ Criterion in Fresh Water	29.0 °C	Lowest daily max criteria
OUTPUT		
Temperature at Chronic Mixing Zone Boundary:	20.9 °C	Mass balance
Incremental Temperature Increase or decrease:	0.0 °C	WQS 401.c - allow for maximum of 0.3ºC rise in receiving water temperature.

Mercury

EPA reviewed the last five years of effluent monitoring data (2011 – 2016) from the DMRs for mercury and found that data submitted from August 2011 – June 2012 was not tested at a MDL (method detection limit) low enough to quantify mercury levels in the effluent. All mercury samples submitted during this time period were less than the MDL, or "non-detects."

EPA has several options in assessing reasonable potential for a pollutant which has multiple non-detects present: EPA can set the value equal to the MDL (most conservative), set the value equal to zero (least conservative), set the value equal to half the MDL, perform a delta log-normal distribution analysis for the non-detects, or use the most recent data. In this case EPA determined that the data submitted from July 2012 – July 2016 at a lower MDL provided a sufficient number of samples (n = 48) to assess reasonable potential.

The City of Burley WWTP noted that the mercury sample reported in the May 2013 DMR was incorrect, and provided a copy of the lab report with the correct value. The lab reported value was used to determine reasonable potential for mercury.

Appendix E. CWA 401 State Certification

Idaho Department of Environmental Quality

Draft §401 Water Quality Certification

September 8, 2017

NPDES Permit Number(s): City of Burley Wastewater Treatment Plant, NPDES Permit No. ID0020095

Receiving Water Body: Snake River at River Mile 652.8

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).

Changes in Treatment Capacity and Technology

During the current permit cycle, the City of Burley wastewater treatment plant (WWTP) upgraded the treatment plant from a lagoon-based treatment system to a mechanical treatment process. Completed in August 2007, this upgrade modified the effluent bacteria removal from chlorine treatment to UV disinfection. The technology change for bacteria treatment resulted in the removal of the total residual chlorine effluent limit from the current permit to the proposed.

Pollutants of Concern

The City of Burley WWTP discharges the following pollutants of concern: five-day biological oxygen demand (BOD_5), total suspended solids (TSS), *E. coli*, pH, temperature, ammonia, phosphorus, cadmium, cyanide, lead, mercury, oil and grease (O/G), arsenic, chromium, copper, nickel, and zinc. Effluent limits have been developed for BOD_5, TSS, *E. coli*, pH, total ammonia as nitrogen (October 1-May 31 only), and total phosphorus (TP). Although no effluent limits are proposed for arsenic, cadmium, chromium, copper, cyanide, lead, mercury, nickel, temperature, whole effluent toxicity (WET), and zinc, monitoring is required for these pollutants. EPA has discontinued the monitoring of O/G in the proposed permit. However, the Idaho water quality standards does have a narrative criterion for floating, submerged, or suspended matter, which the proposed permit reflects as a requirement to visually check for such matter in the effluent. Although detectable amounts of these pollutants of concern are present in the effluent, none of the pollutants currently have a reasonable potential to exceed WQS.

Receiving Water Body Level of Protection

The City of Burley WWTP discharges to the Snake River within the Lake Walcott Subbasin assessment unit (AU) ID17040209SK001_07 (Snake River – Heyburn/Burley Bridge to Milner Dam). This AU has the following designated beneficial uses: warm 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 AU is not fully supporting one or more of its assessed uses. The aquatic life use is not fully supported due to TP. As such, DEQ will provide Tier I protection for the aquatic life use (IDAPA 58.01.02.052.05.c). The contact recreation beneficial use is unassessed. DEQ must provide an appropriate level of protection for the contact recreation using information available at this time (IDAPA 58.01.02.052.05.b). Based on water quality data collected by DEQ, the *E. coli* values are well below the instream instantaneous threshold target of 406 cfu/100 mL; therefore, DEQ will provide Tier II protection, in addition to Tier I, for the primary contact recreation beneficial use (IDAPA 58.01.02.051.01–.02).

Protection and Maintenance of Existing Uses (Tier I Protection)

As noted above, 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 uses and the level of water quality necessary to protect existing 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 Burley WWTP 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 *Lake Walcott TMDL* (2000) establishes wasteload allocations for TP. These wasteload allocations are designed to ensure the Snake 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. During the development of the Lake Walcott TMDL it was determined that the contact recreational uses were not being impacted by excess nutrients. The effluent limitations and associated requirements contained in the City of Burley WWTP permit are set at levels that comply with the TP wasteload allocation for the facility.

In sum, the effluent limitations and associated requirements contained in the City of Burley WWTP permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS and the TP wasteload allocation for the facility established in the *Lake Walcott TMDL*. Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Snake 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 Snake River is considered high quality for contact recreation. As such, the water quality relevant to this use of the Snake 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 contact recreation use of the Snake River (IDAPA 58.01.02.052.05). The pollutants relevant to contact recreation are arsenic, cyanide, *E. coli*, mercury, nickel, TP, and zinc. Effluent limits are established in the proposed and existing permit for *E. coli* and TP. Although effluent limits have not be established for arsenic, cyanide,

mercury, nickel, and zinc, these pollutants are required to be monitored and reported (See EPA's Permit, pages 5-12).

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: *E. coli* and TP

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 Burley WWTP permit, this means determining the permit's effect on water quality based upon the limits for *E. coli* and TP in the current and proposed permits. Table 1 provides a comparison of the current permit limits and the proposed or reissued permit limits relevant to contact recreation.

Table 1. Comparison of current and proposed permit limits for pollutants of concern relevant to contact recreation

Parameters	Units	Proposed Permit			2002 Permit (Current)			Change[1]		
		AML[2]	AWL[3]	MDL[4]	AML	AWL	MDL	AML	AWL	MDL
Pollutants with limits in the proposed permit										
E. coli	cfu/100 mL	126	---	406[5]	126	---	406	NC	---	NC
TP	lbs/day	39	78.4	---	39	78.4	---	NC	NC	---
Pollutants with no limits in both the current and proposed permit, but monitoring required										
Arsenic	µg/L	1/quarterly			No monitoring required			N		
Cadmium	mg/L	1/quarterly			1/ month			I		
Cyanide	mg/L	1/monthly			1/quarterly			D		
Mercury	mg/kg	1/monthly			1/quarterly			D		
Nickel	µg/kg	1/quarterly			No monitoring required			N		
Zinc	mg/L	1/quarterly			No monitoring required			N		

TP = Total Phosphorus

[1] Change defined as: I- more frequent monitoring, D-less frequent monitoring, NC-no change from current permit, N-new in draft permit

[2]AML is Average Monthly Limit

[3]AWL is Average Weekly Limit

[4]MDL is Maximum Daily Limit

[5]Instantaneous value

The concentration based effluent limits for *E. coli* and TP in the proposed permit are the same as the previous permit. Therefore, no adverse change in water quality and no degradation will result from the discharge of these pollutants.

Pollutants with No Limits: Arsenic, Cyanide, Mercury, Nickel, and Zinc

There are five pollutants of concern relevant to Tier II protection of contact recreation that currently are not limited and for which the proposed permit also contains no limit: arsenic, cyanide, mercury, nickel, and zinc. For pollutants without effluent limits, 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 58.01.02.052.04.a.ii). With

respect to arsenic, cyanide, mercury, nickel, and zinc, there is no reason to believe these pollutants will be discharged in qualities 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. 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 from said pollutants. As such, the proposed permit should maintain the existing high water quality in the Snake River.

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

Condition #1 – Surface Water Monitoring Report

Per EPA's surface water monitoring report, the permittee must conduct surface water monitoring as specified in Table 3 of the Permit.

Condition #2 – Upstream Monitoring Location

The upstream monitoring location to establish background should be at the Highway 30 Burley / Heyburn Bridge, or latitude 42.545082°N, longitude -113.762266°W. Sampling should be done as near to the thalweg of the Snake River as possible.

Mixing Zones

Pursuant to IDAPA 58.01.02.060, DEQ authorizes the following mixing zones that utilize the critical low flow volume and are protective of the most vulnerable designated uses.

Table 4: Authorized Mixing Zones for the Middle Snake River

Parameters	Mixing Zone
Ammonia	25%
Arsenic	25%
Cadmium	25%
Chromium	25%
Copper	25%
Cyanide	25%
Lead	25%
Zinc	25%

For further information about the mixing zones, critical low flow volume, and dilution factors see Part V.C *Water Quality Based Effluent Limits*, Table 8 in the fact sheet.

Pollutant Trading

Pursuant to IDAPA 58.01.02.055.06, DEQ authorizes pollutant trading for TP and TSS. Trading must be conducted in a manner that is consistent with the most recent version of DEQ's *Water Quality Trading Guidance*, available at: http://www.deq.idaho.gov/media/60179211/water-quality-trading-guidance-1016.pdf.

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 Dr. Balthasar Buhidar, Twin Falls Regional Office, (208) 736-2190, or via email at Balthasar.buhidar@deq.idaho.gov.

"DRAFT"

David Anderson
Regional Administrator
Twin Falls Regional Office