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 Genesee Wastewater Treatment Plant
NPDES Permit Number ID0020125

Public Comment Start Date: January 9, 2017
Public Comment Expiration Date: February 8, 2017

Technical Contact: Ashley Grompe
206-553-1284
800-424-4372, ext. 1284 (within Alaska, Idaho, Oregon and Washington)
grompe.ashley@epa.gov

The EPA Proposes To Reissue NPDES Permit
The EPA proposes to reissue the NPDES permit to the City of Genesee. The draft permit places conditions on the discharge of pollutants from the City of Genesee wastewater treatment plant to Cow Creek. 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 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:

IDEQ Lewiston Regional Office
1118 "F" St.
Lewiston, ID 83501
(208) 799-4370

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."

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OWW-191
Suite 900
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:

Idaho Department of Environmental Quality
Lewiston Regional Office
1118 "F" St.
Lewiston, ID 83501

List of Tables

List of Figures

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
BE	Biological Evaluation
BOD_5	Biochemical oxygen demand, five-day
BMP	Best Management Practices
°C	Degrees Celsius
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CV	Coefficient of Variation
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved oxygen
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
gpd	Gallons per day
HUC	Hydrologic Unit Code
ICIS	Integrated Compliance Information System
IDEQ	Idaho Department of Environmental Quality
I/I	Infiltration and Inflow
kg/day	Kilograms per day
LA	Load Allocation
lbs/day	Pounds per day

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
NOI	Notice of Intent
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
SBA	Subbasin Assessment
SS	Suspended Solids
SSO	Sanitary Sewer Overflow
s.u.	Standard Units
TMDL	Total Maximum Daily Load
TRC	Total Residual Chlorine
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
TSS	Total suspended solids
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WAC	Washington Administrative Code
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater treatment plant

I. Applicant

A. General Information

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

NPDES Permit #	ID0020125
Applicant	City of Genesee City of Genesee Wastewater Treatment Facility
Type of Ownership	Municipal
Receiving Water	Cow Creek
Physical Address:	140 East Walnut Genesee, Idaho 83832
Mailing Address:	P.O. Box 38 Genesee, Idaho 83832
Facility Contact:	Dustin Brinkly Wastewater Treatment Plant Operator Dustin@cityofgenesee.com
Facility Outfall Location	Latitude 46.540747 Longitude -116.938961

B. Permit History

The most recent NPDES permit for the City of Genesee was issued on February 14, 2005 and became effective on April 1, 2005. An NPDES application for permit issuance was submitted by the permittee on December 1, 2009, which was at least 180 days before the expiration date of the current permit. 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 Genesee owns and operates the City of Genesee Wastewater Treatment Plant (Genesee WWTP or Genesee) located in Genesee, Idaho. The collection system has no combined sewers. The facility serves a resident population of 990. There are no major industries discharging to the facility.

Treatment Process

Genesee's treatment process consists of a single-cell, facultative lagoon, chlorine disinfection, and dechlorination. During the growing season (typically June – October) all of Genesee's effluent is land applied through their Idaho Department of Environmental Quality (IDEQ) Municipal Wastewater Reuse Permit (M21802). The existing NPDES permit issued in 2005 allows discharge to surface water year round although historically, the facility generally discharges to surface water between November and May. A map showing the location of the treatment facility and discharge is included in Appendix A.

Design Flow

The existing (2005) permit limits were based on a design flow of 0.15 mgd for the facility, which this permit carries forward.

The facility design flow is used for assessing reasonable potential, developing water quality based effluent limits, and calculating mass-based limits.

Outfall Description

The Genesee WWTP effluent discharges to Cow Creek through outfall 001, located at latitude 46° 32' 26" and longitude 116° 56' 30". The outfall is a screened pipe located near the northeast corner of the lagoon and after the chlorine contact basin.

B. Background Information

The EPA reviewed the last five years of effluent monitoring data (2011-2016) from the discharge monitoring report (DMR). The data are presented in Appendix C and summarized below.

Compliance History

A review of the facility's DMR for the past five years indicates that the facility has had trouble meeting the effluent limits for BOD_5, TSS, and in some instances, E. *coli*, TRC, and pH.

A summary of effluent violations is provided in Table 1.

Table 1: City of Genesee Effluent Limit Violations (2011 – 2016)

Parameter	Limit	Units	Number of Instances
BOD_5	Monthly Average	mg/L	16
BOD_5	Monthly Average	lb/day	15
TSS	Monthly Average	mg/L	8
TSS	Monthly Average	lb/day	9
BOD_5	Percent Removal	Percent	20
TSS	Percent Removal	Percent	9
E. *coli* bacteria	Monthly Geomean	Count/100 mL	1
E. *coli* bacteria	Instantaneous Max	Count/100 mL	4
Chlorine, Total Residual	Monthly Average	mg/L	5
Chlorine, Total Residual	Monthly Average	lb/day	0
Chlorine, Total Residual	Daily Max	mg/L	6
Chlorine, Total Residual	Daily Max	lb/day	1
pH	Instantaneous Max	SU	3
pH	Instantaneous Min	SU	1

The EPA issued a compliance order to the City of Genesee on December 30, 2013, and settled upon a monetary penalty for NPDES permit violations that occurred between December, 2008 and May, 2013. The City of Genesee has since continued progress on a number of treatment system upgrades including a pump station for the reclamation and

reapplication of land-applied flow, in-lagoon biological sludge treatment, and infiltration and inflow studies.

IDEQ conducted a site visit and inspection of the facility on July 8, 2015. The inspection encompassed the wastewater treatment process, records review, operation and maintenance, and the collection system. Overall, the results of the inspection were satisfactory and resulted in compliance reporting recommendations.

III. Receiving Water

A. Location

The facility discharges to Cow Creek in the City of Genesee, Idaho. Cow Creek flows into Union Flat Creek and eventually into the Palouse River, which is a tributary to the Snake River. Cow Creek flows into Union Flat Creek as it enters Washington State near Uniontown.

B. Designated Beneficial Uses

Cow Creek is located in the Palouse River Subbasin (HUC 17060108), and designated as Water Body Unit C-1 (IDAPA 58.01.02.120.01). At the point of discharge, Cow Creek is protected for the following designated uses:

- cold water communities (aquatic life)
- secondary 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).

Downstream Waterbodies

In addition to protecting the immediate receiving waters, the CWA requires the attainment and maintenance of downstream WQS (See 40 CFR 131.10(b)). Therefore, the permit conditions must protect any downstream waterbodies that are potentially impacted by the WWTP discharge.

Cow Creek flows into Union Flat Creek in Washington, approximately 5.7 miles downstream from the facility, and then flows for approximately 72 miles before draining into the Palouse River.

Union Flat Creek does not have designated uses assigned by the Washington Administrative Code (WAC) 173-201A-602. Section VI(1) of the WAC 173-201-600 states that all surface waters of the state not named in Table 602 are to be protected for the following designated uses:

- Salmonid spawning, rearing, and migration;
- primary contact recreation;
- domestic, industrial, and agricultural water supply;
- stock watering;

- wildlife habitat;
- harvesting;
- commerce and navigation; boating;
- and aesthetic values.

In addition, Union Flat Creek is listed as a Category 4A impaired waterbody for temperature by Washington's 2012 303(d) Integrated Report (2015), which was approved by EPA on July 22, 2016.

EPA is required to evaluate the impact of Genesee's discharge on downstream state waters. The discharge must meet applicable water quality requirements of all affected States including those of downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA Section 401(a)(2)).

The Cow Creek watershed (identification number 17060108CL001), as described in the Idaho water quality standards, includes Thorn Creek, Cow Creek, and Union Flat Creek. IDEQ prepared two reports applicable to this permit, Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load (Nutrient TMDL), dated December 2005, and Cow Creek Temperature Total Maximum Daily Loads (Temperature TMDL), dated December 2013. These reports included a watershed characterization, pollutant source inventories, and a summary of past and present pollution control efforts for the Cow Creek Watershed. The TMDL assessments designate Idaho water quality standards as being protective of the Cow Creek watershed and downstream waterbodies, as well as Washington State water quality standards.

Idaho water quality criteria are, in general, protective of beneficial uses established by Washington. For the parameters of concern, Idaho criteria are as stringent as the Washington criteria, with the following exceptions: Washington's water quality standard for pH is more stringent, its designation of salmonid spawning as a beneficial use of the river requires more stringent dissolved oxygen and temperature criteria, and turbidity requirements are added. In addition, the Washington primary contact designation for Union Flat Creek requires a fecal coliform limit of 100 colonies/mL in place of Idaho's e. *coli* requirements. With respect to the differences noted above, EPA determined the dilution that occurs before the effluent reaches Union Flat Creek is sufficient to ensure that the effluent will not affect attainment of the Washington WQS. EPA therefore evaluated and determined that compliance with IDEQ water quality standards will not violate water quality requirements for Union Flat Creek in Washington and will be protective of existing uses and the level of water quality necessary to maintain those uses. Accordingly, EPA applied Idaho WQS to develop the proposed effluent limits for the Genesee WWTP .

C. Water Quality

The EPA reviews receiving water quality data when assessing the need for and developing water quality based effluent limits. In determining assimilative capacity of the receiving water, the EPA must account for the amount of the pollutant already present in the receiving water. In situations where some of the pollutant is actually present in the upstream waters, an assumption of "zero background" concentration overestimates the available assimilative

capacity of the receiving water and could result in limits that are not protective of applicable water quality standards.

Table 2 summarizes the receiving water data used to evaluate the need for and develop water quality based effluent limits. The City of Genesee collected receiving water data in Cow Creek between May of 2006 and November of 2009. The 11 sampling events were conducted at an upstream monitoring station established per previous permit requirements. EPA supplemented the data with monitoring data collected in the report, *Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load (Nutrient TMDL),* dated December, 2005. This is further discussed in Section V.C and shown in Appendix D.

Table 2: Receiving Water Quality Data

Parameter	Units	Percentile	Value	Source
Temperature	°C	95th	19.2	City of Genesee, Cow Creek monitoring station and CC-2 and CC-3 monitoring locations
pH	Standard units	95th	8.6	
Ammonia as N	mg/L	90th	9.1	
Total Phosphorous	mg/L	95th	0.6	

D. Water Quality Limited Waters

Section 303(d) of the CWA requires states to develop a Total Maximum Daily Load (TMDL) for water bodies determined to be water quality limited segments. A TMDL is a detailed analysis of the water body to determine its assimilative capacity. The assimilative capacity is the loading of a pollutant that a water body can assimilate without causing or contributing to a violation of water quality standards. Once the assimilative capacity of the water body has been determined, the TMDL will allocate that capacity among point and non-point pollutant sources, taking into account natural background levels and a margin of safety. Allocations for non-point sources are known as "load allocations" (LAs). The allocations for point sources, known as "waste load allocations" (WLAs), are implemented through effluent limitations in NPDES permits. Effluent limitations for point sources must be consistent with applicable TMDL allocations (40 CFR 122.44(d)(vii)).

To date, two TMDLs have been finalized to address nutrient and temperature impairments in Cow Creek.

Nutrients

The State of Idaho's 2012 Integrated Report Section 5 (section 303(d)) lists Cow Creek, from its source to the Washington/Idaho border, as impaired for nutrients. IDEQ prepared a TMDL with a WLA applicable to this permit, in the report, *Nutrient TMDL*, dated December, 2005. EPA approved the *Nutrient TMDL* on February 13, 2006. The *Nutrient TMDL* "provides a waste load allocation for total phosphorus of 0.60 kg/d during the seasonal critical low flow period of June through September" (pg xv).

The draft permit includes limits consistent with the WLA (See IV.B). Calculations for determining the Average Monthly Limit (AML) and Average Weekly Limit (AWL) for the total phosphorous WLA are included in Appendix D.

Temperature

IDEQ prepared a TMDL assessment for temperature, *Cow Creek Temperature Total Maximum Daily Loads* (*Temperature TMDL),* dated December, 2013. The *Temperature TMDL* included a WLA for the Genesee WWTP that is identical to Idaho's numeric temperature criteria for cold water aquatic life of 22 °C or less daily maximum temperature with a maximum daily average of no greater than 19 °C. EPA approved the *Temperature TMDL* on April 30, 2014.

The draft permit includes limits that are consistent with the WLA for temperature. In addition, the permit requires the City of Genesee WWTP to conduct continuous temperature monitoring for effluent discharges to Cow Creek (see Table 3).

Low Flow Conditions

The Technical Support Document for Water Quality-Based Toxics Control (hereafter referred to as the TSD) (EPA, 1991) and the Idaho Water Quality Standards (WQS) recommend the flow conditions for use in calculating water quality-based effluent limits (WQBELs) using steady-state modeling. The TSD and the Idaho WQS state that WQBELs intended to protect aquatic life uses should be based on the lowest seven-day average flow rate expected to occur once every ten years (7Q10) for chronic criteria and the lowest one-day average flow rate expected to occur once every ten years (1Q10) for acute criteria. 30Q10 represents the lowest average 30 consecutive day flow with an average recurrence frequency of once in 10 years.

There are no flow stations located along Cow Creek, therefore data for flow conditions is limited. IDEQ conducted flow monitoring in Cow Creek during 2002 and collected monthly flow measurements between April and September at four stations along Cow Creek (IDEQ, 2005). These measurements indicate that portions of Cow Creek are periodically dry during the critical summer months between June and September (IDEQ, 2005 and IDEQ, 2014; pages 24 and 11, respectively). With consideration to year-round facility discharge, the critical flow level for the receiving water, Cow Creek, will be dry conditions or 0 cubic feet per second (cfs).

IV. Effluent Limitations and Monitoring

A. Proposed Effluent Limitations

The following summarizes the proposed effluent limits that are in the draft permit.

Narrative Limitations to Implement Idaho's Narrative Criteria for Floating, Suspended or Submerged Matter

> The permittee must not discharge floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses.

Numeric Limitations

Table 3 below presents the proposed effluent limits for BOD_5, TSS, pH, *E. coli*, TRC, total phosphorous, temperature and total ammonia as N (ammonia).

Table 3: Proposed 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/month	24-hour composite
	lbs/day	38	56	--	Effluent		Calculation[1]
BOD_5 Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[2]
Total Suspended Solids (TSS)	mg/L	45	65	--	Influent and Effluent	1/month	24-hour composite
	lbs/day	56	81	--	Effluent		Calculation[1]
TSS Percent Removal	%	65 (minimum)	--	--	--	1/month	Calculation[2]
E. coli	#/100 ml	126[3]	--	576 (instant. max) [4]	Effluent	5/month	Grab
pH	std units	Between 6.5 – 9.0			Effluent	5/week[5]	Grab
TRC[6]	mg/L	0.007	--	0.018[4]	Effluent	1/week	Effluent
	lbs/day	0.01	--	0.02			Calculation[1]
Total Ammonia (as N)[7]	mg/L	0.6	--	1.7[4]	Effluent	1/week	Grab
	lbs/day	0.8	--	2.1			Calculation[1]
Total Ammonia (as N) Interim Limit[7]	mg/L	15	--	26[4]	Effluent	1/week	Grab
	lbs/day	19	--	33			Calculation[1]
Total Phosphorus (as P) June 1 – Sept 30	lbs/day	2.0	4.1	--	Effluent	1/week	Calculation[1]
		Seasonal Average Limit 0.6 kg/d					Calculation[8]
Temperature[9]	ºC	--		22 Instantaneous Maximum and 19 Maximum Daily Average[10]	Effluent	Continuous	Grab
Floating, Suspended, or Submerged Matter	--	See Paragraph I.B.4 of the permit				1/month	Visual Observation
Report Parameters							
Flow	mgd	Report	--	Report	Effluent	continuous	Meter

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
NPDES Application Form 2A (Part B.6) Effluent Testing Data[11]	--	--	--	--	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 the 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.5 and Part III.G of the permit.
5. Samples must be taken on different days.
6. The average monthly and maximum daily concentration limits for chlorine are not quantifiable using EPA approved test methods. The permittee will be in compliance with the average monthly and maximum daily effluent limits for chlorine provided the total chlorine residual level is at or below the compliance evaluation level of 0.05 mg/L, with an average monthly and maximum daily loading at or below 0.06 lbs/day (See Appendix A of the Permit).
7. These effluent limits are subject to a compliance schedule. See Section II.C of the Permit.
8. See Paragraph I.B.2 of the permit regarding average seasonal limit calculations.
9. Temperature shall be measured using continuous measuring and recording devices such as probes or thermistors set at a minimum of one hour sampling intervals.
10. See Section I.B.3 of the permit for calculating maximum daily average.
11. 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 Appendix A of the Permit.

B. Changes in Limits from the Existing Permit

Effluent limits and monitoring frequencies for certain parameters have been changed, relative to the previous permit. Table 4, below, summarizes the changes to monitoring frequency and effluent limits from the existing permit.

Table 4: Changes in Permit Effluent Limits and Monitoring Frequencies

Parameter	Existing Permit		Draft Permit		Reason for Change
	Effluent Limits	Monitoring Frequency	Effluent Limits	Monitoring Frequency	
Temperature	Report	Once per month starting in January 2006 and lasting for one year	Instantaneous Maximum = 22 °C Maximum Daily Average = 19 °C	Continuous	Added due to Cow Creek temperature TMDL.

Parameter	Existing Permit		Draft Permit		Reason for Change
	Effluent Limits	Monitoring Frequency	Effluent Limits	Monitoring Frequency	
Total Ammonia as N	Report	Once per month starting in January 2006 and lasting for one year	Interim Limits: AML = 15 mg/L MDL = 26 mg/L Final Limits: AML = 0.6 mg/L MDL = 1.7 mg/L	1/week	Added due to reasonable potential to exceed Idaho WQS for ammonia for Cold Water Aquatics classification.
Total Phosphorus	Report	Once per month starting in January 2006 and lasting for one year	AML = 2.0 lbs/day AWL = 4.1 lbs/day	1/week	Added due to the City of Genesee-specific WLA for total phosphorous in Cow Creek

Notes

AML = Average Monthly Limit
AWL = Average Weekly Limit
MDL = Maximum Daily Limit
TMDL = Total Maximum Daily Load
WLA = Waste Load Allocation
WQS = Water Quality Standards

V. Basis for Effluent Limitations

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. The basis for the effluent limits proposed in the draft permit is provided in Appendix D**.**

A. Pollutants of Concern

In order to determine pollutants of concern for further analysis, EPA evaluated the application form, additional discharge data, and the nature of the discharge. The wastewater treatment process for this facility includes both primary and secondary treatment, as well as disinfection with chlorination. Pollutants typical of a sewage treatment plant treating with chlorine include five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), pH, E. *coli* bacteria, total residual chlorine (TRC), ammonia, temperature, and phosphorus. Based on this analysis, pollutants of concern are as follows:

- BOD_5
- TSS
- pH
- E. *coli* bacteria
- TRC
- Ammonia
- Temperature
- Phosphorus

Concentrations of pollutants in the discharge were reported in the NPDES application and in DMRs and were used in determining reasonable potential for some parameters (see Appendix D).

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 5. For additional information and background refer to Part 5.1 *Technology Based Effluent Limits for POTWs* in the Permit Writers Manual.

Table 5: 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		

Equivalent to Secondary Treatment Effluent Limits

EPA has additionally established effluent limitations (40 CFR 133.105) that are considered "equivalent to secondary treatment" which apply to facilities meeting certain conditions established under 40 CFR 133.101(g). Three criterion are used to determine if a facility is eligible for the equivalent treatment limits. The federally promulgated equivalent to secondary treatment effluent limits are listed below in Table 6.

Table 6: Equivalent to Secondary Treatment Effluent Limits

Parameter	30-day average	7-day average
BOD_5	45 mg/L	65 mg/L
TSS	45 mg/L	65 mg/L
Removal for BOD_5 and TSS (concentration)	65% (minimum)	---
Source: 40 CFR 133.105		

The existing (2005) permit for the City of Genesee has equivalent to secondary treatment effluent limits for TSS. Using recent DMR data, EPA reevaluated treatment limits for the City of Genesee in reference to the 40 CFR 133.101(g) criteria below:

- Criterion #1—Consistently Exceeds Secondary Treatment Standards: The first criterion that must be satisfied to qualify for the equivalent to secondary standards is demonstrating that the BOD5 and TSS effluent concentrations consistently achievable through proper operation and maintenance of the treatment works exceed the secondary treatment standards set forth in §§ 133.102(a) and (b). The regulations at § 133.101(f) define "effluent concentrations consistently achievable through proper operation and maintenance" as
    - (f)(1): For a given pollutant parameter, the 95th percentile value for the 30-day average effluent quality achieved by a treatment works in a period of at least 2 years, excluding values attributable to upsets, bypasses, operational errors, or other unusual conditions, and
    - (f)(2): A 7-day average value equal to 1.5 times the value derived under paragraph (f)(1).
- Criterion #2—Principal Treatment Process: The second criterion that a facility must meet to be eligible for equivalent to secondary standards is that its principal treatment process must be a trickling filter or waste stabilization pond (i.e., the largest percentage of BOD_5 and TSS removal is from a trickling filter or waste stabilization pond system).
- Criterion #3—Provides Significant Biological Treatment: The third criterion for applying equivalent to secondary standards is that the treatment works provides significant biological treatment of municipal wastewater. The regulations at § 133.101(k) define significant biological treatment as using an aerobic or anaerobic biological treatment process in a treatment works to consistently achieve a 30-day average of at least 65 percent removal of BOD5.

EPA determined that the City of Genesee continues to qualify for equivalent to the secondary treatment standards for TSS (See Appendix E for determination). BOD_5 effluent limits were not considered in the equivalency evaluation due to anti-backsliding requirements (see Section V.D).

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:

$$\textit{Mass based limit (lb/day)} = \textit{concentration limit (mg/L)} \times \textit{design flow (mgd)} \times 8.34^{[1]}$$

Chlorine

The Numeric Criteria for Toxics Substances (IDAPA 58.01.02.210.01) establish an acute criterion of 0.019 mg/L, and a chronic criterion of 0.011 mg/L for the protection of aquatic life. Reasonable potential calculations show that the discharge from the facility would have the reasonable potential to cause or contribute to a violation of the water quality criteria for chlorine in Cow Creek. Therefore, EPA must include WQBELs in the permit to protect the water body.

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

See Appendix D for reasonable potential and effluent limit calculations for TRC. Since the facility is subject to anti-backsliding requirements, the limits for TRC are consistent with the current permit (see Section V.D).

The calculated Average Monthly Limit (AML) and Maximum Daily limit (MDL) for the facility are below the Minimum Level (ML) for chlorine of 50 µg/L. When limits are below the ML, the Permittee is in compliance with the limit, provided the concentration of the parameter in the effluent is equal to or below the ML (See Appendix A of the Permit).

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 by July 1, 1977. The permittee must also comply with any additional requirements incorporated into this permit as a result of the certification process under 401 of the CWA. Federal regulations at 40 CFR 122.4(d) prohibit the issuance of an NPDES permit that does not ensure compliance with the water quality standards of all affected States. The NPDES regulation (40 CFR 122.44(d)(1)) implementing Section 301(b)(1)(C) of the CWA 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, and that the level of water quality to be achieved by limits on point sources is derived from and complies with all applicable WQS.

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 WLA.

Reasonable Potential Analysis

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 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.

Summary - Water Quality-based Effluent Limits

The water quality based effluent limits in the draft permit are summarized below.

<u>pH</u>

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. Between 2006 and 2016, a total of 112 samples were collected at the facility.

The data ranged from 6.4 – 10.3 standard units, with a total of four violations. The facility will be required to comply with the pH standards established by IDAPA 58.01.02.250.01.a.

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 secondary contact recreation, the "single sample maximum" value is 576 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 576 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 576 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.

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 Genesee WWTP collected 11 samples for temperature and pH analysis upstream of the facility in Cow Creek from May, 2006 to November, 2009. The EPA calculated the 95th percentile of the temperature and pH data for the ammonia criteria, which were 17.4 °C and 7.75 SU, respectively.

In consideration of peak temperatures and the critical low flow season, EPA recognized that only three of the 11 samples were collected by the facility during the critical low flow season. To ensure that sufficient temperature and pH data was available to determine viable ammonia limits, sampling data from two upstream locations, CC-2 and CC-3, collected in the *Nutrient TMDL* were included in calculations. A summary of the data used for ammonia calculations is included in Appendix D.

The 95th percentile of the combined temperature and pH data were calculated to be 19.2 °C and 8.6 SU, respectively. This higher pH value for the receiving water is closer to the average, maximum, lagoon effluent pH (8.4), which would be representative of the receiving water in dry conditions without assimilative capacity. These values were used to calculate the ammonia criteria, shown below in Table 7.

Table 7: Water Quality Criteria for Ammonia

	Acute Criterion	Chronic Criterion
Equations:	$\frac{0.275}{1+10^{7.204-8.6}}+\frac{39}{1+10^{8.6-7.204}}$	$\left(\frac{0.0577}{1+10^{7.688-8.6}}+\frac{2.487}{1+10^{8.6-7.688}}\right)\times \mathrm{MIN}\left(2.85, 1.45\times 10^{0.028\times(25-17.4)}\right)$
Results	1,771 µg/L	680 µg/L

A reasonable potential analysis indicated that City of Genesee discharge would have the reasonable potential to cause or contribute to a violation of the water quality criteria for ammonia. Therefore, the draft permit contains water quality-based effluent limits for ammonia. The Permitee is also required to monitor the receiving water for ammonia, pH, and temperature.

In addition, EPA considered seasonal ammonia limits for the facility on behalf of the temperature variability between the summer and winter seasons in Genesee, Idaho. After evaluating the low and high flow seasonal inputs, EPA found that establishing seasonal limits to account for temperature variability would have little effect on final limits due to year-round, high pH values in the receiving water. See Appendix D for annual and seasonal-based reasonable potential and effluent limit calculations for ammonia.

Phosphorus

The permit includes water quality-based effluent limits consistent with the WLA for total phosphorous. A WLA of 0.60 kg/day or 1.3 lbs/day of phosphorous for the City of Genesee applies during the critical low flow period of June 1 through September 30. EPA interpreted the seasonal average WLA as monthly and weekly average limits per the TSD and EPA permitting guidance. The calculations are included in Appendix D.

Dissolved Oxygen

Idaho water quality standards establish a minimum level of 6 mg/L DO (IDAPA 58.01.02.250). Natural decomposition of organic material in wastewater effluent impacts dissolved oxygen in the receiving water at distances far downstream of the outfall. The BOD5 of an effluent sample indicates the amount of biodegradable material in the wastewater and estimates the magnitude of oxygen consumption the wastewater will generate in the receiving water. Nutrients such as ammonia and phosphorus cause excessive plant and algae growth and decay which can also significantly affect the amount of dissolved oxygen available.

The technology-based limits for BOD5 and WQBEL's for ammonia should ensure that the discharge does not cause or contribute to a violation of dissolved oxygen criteria in the receiving waters.

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. Anti-backsliding Provisions

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.

The previous permit for the Genesee WWTP had the following limits for TRC, which are being carried forward in the draft permit: Average Monthly Limits of 0.007 mg/L and 0.01 lbs/day, and Maximum Daily Limits of 0.018 mg/L and 0.02 lbs/day.

No existing limits from the previous permit have changed.

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 part B.6 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.

C. Surface Water Monitoring

Table 8 presents the proposed surface water monitoring requirements for the draft permit. Surface water monitoring results must be submitted to EPA in an annual report. A copy of the results must also be submitted to IDEQ.

Table 8: Surface Water Monitoring Requirements

Parameter	Units	Sample Location	Sample Frequency	Sample Type
Flow	cfs	Upstream	Quarterly	grab
Temperature	°C	Upstream	Quarterly	grab
pH	SU	Upstream	Quarterly	grab
Total Phosphorous	mg/L	Upstream	Quarterly	grab
Total Ammonia as N	mg/L	Upstream	Quarterly	grab
Footnote: 1. Quarterly monitoring frequency: Quarters are defined as follows: January 1 to Mach 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31.				

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 a 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. Compliance Schedules

Compliance schedules are authorized by federal NPDES regulations at 400 CFR 122.47 and Idaho WQS at IDAPA 58.01.02.400.03. Compliance schedules allow a discharger to phase in, over time, compliance with water quality-based effluent limitations when limitations are in the permit for the first time. Federal regulations at 40 CFR 122.47 provide that the schedules require compliance with effluent limitations as soon as possible and that, when the compliance schedule is longer than one year, the schedule shall set forth interim requirements

and the dates for their achievement. The time between the interim dates shall generally not exceed one year, and when the time necessary to complete any interim requirement is more than one year, the schedule shall require reports on progress toward completion of these interim requirements. In order to grant a compliance schedule the permitting authority must make a reasonable finding that the discharger cannot immediately comply with the water quality-based effluent limit upon the effective date of the permit and that a compliance schedule is appropriate (see 40 CFR 122.47 (a)). The proposed permit contains new water quality-based effluent limitations for ammonia and phosphorous.

Ammonia

Effluent data indicate that the permittee cannot comply with the proposed water quality-based effluent limits for ammonia immediately upon the effective date of the permit. The proposed average monthly limit for ammonia is 0.6 mg/L and the measured, effluent concentrations have been between 5.01 mg/L and 15.5 mg/L, historically. Accordingly, EPA has determined that it is appropriate to provide the permittee an eight year compliance schedule. Additional requirements set forth by the compliance schedule are listed in Section II.C of the Permit.

Justification

The water quality-based effluent limit for ammonia is significantly less than the facility's reported discharge levels. An eight year compliance schedule is proposed, which will allow the facility to optimize and plan facility upgrades, if necessary, in order to come into compliance with the final effluent limitations.

Because the compliance schedule is longer than one year, EPA has established an interim limit. An interim limit is designed to hold the facility to its current discharge levels so that currently achievable conditions in the receiving waterbody are maintained to prevent further water quality degradation during the compliance schedule period. Interim ammonia loading limits of 15 mg/L for an Average Monthly Limit and 26 mg/L for a Maximum Daily Effluent Limit have been added to the Effluent Limits Requirements. This is based on 95th percentile ammonia loading in Genesee's effluent from January through June of 2006. Calculations for the performance-based interim limit are included in Appendix D.

Phosphorous

EPA has determined that the Genesee can comply with the seasonal average limits of 1.3 lbs/day for phosphorous immediately upon the effective date of the permit, provided that Genesee continues to land apply treated effluent during the critical low flow period. No schedule of compliance was granted for total phosphorous.

B. Quality Assurance Plan

In order to ensure compliance with the federal regulation at 40 CFR 122.41(e) for proper operation and maintenance, the draft permit requires the permittee to develop procedures to ensure that the monitoring data submitted is accurate and to explain data anomalies if they occur. The City of Genesee is required to update the Quality Assurance Plan (QAP) within 180 days of the effective date of the final permit. The QAP must include a description of standard operating procedures the permittee must follow for collecting, handling, storing and

shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and be made available to the EPA and the IDEQ upon request.

C. Operation and Maintenance Plan

The permit requires the City of Genesee 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.

D. Sanitary Sewer Overflows and Proper Operation and Maintenance of the Collection System

Sanitary Sewer Overflows (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.

E. 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 Genesee is not located within or near a Census block group that is potentially overburdened. The draft permit does not include any additional conditions to address environmental justice.

Regardless of whether a 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.

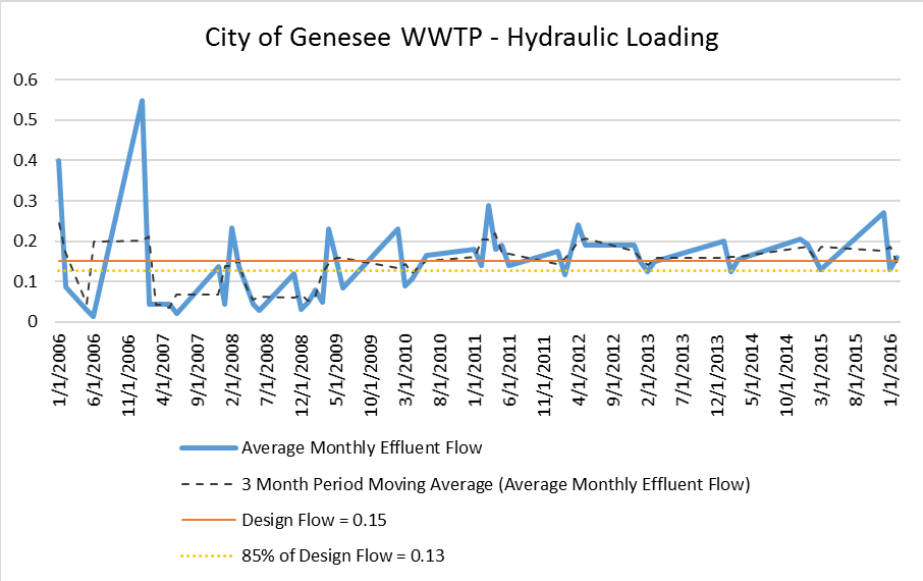
For more information, please visit http://www.epa.gov/compliance/ej/plan-ej/ and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

F. Design Criteria

The draft permit includes a facility planning requirement for maintaining design capacity (see Section II.D in the permit). 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 annual average flow or loading exceeds 85% of the design criteria values for a consecutive three months of data.

Influent flow data was not available from the facility; therefore, effluent flow was analyzed to approximate hydraulic loading. Figure 1 illustrates the hydraulic loading approximated by measurements taken at the effluent for the facility between 2006 and 2016. The figure indicates that the facility consistently discharges above or near its design capacity.

Figure 1: City of Genesee WWTP Approximate Hydraulic Loading



From the effective date of the permit, the permitee must develop a facility plan one year after exceeding the design flow or loading for three consecutive months. The plan must include the permittee's strategy for continuing to maintain compliance with effluent limits and must be made available to the EPA, IDEQ or authorized representative upon request.

G. Pretreatment Requirements

Idaho does not have an approved state pretreatment program per 40 CFR 403.10, thus, EPA is the Approval Authority for Idaho POTWs. Since the City of Genesee does not have an approved POTW pretreatment program per 40 CFR 403.8, the EPA is also the Control Authority of industrial users that might introduce pollutants into Cow Creek.

The General Pretreatment regulations apply to all nondomestic sources introducing pollutants into a POTW (*See* 40 CFR 403.5(b), specific prohibitions forbid eight categories of pollutant discharges). Sources of indirect discharges are more commonly referred to as Industrial Users (IUs). All IUs, regardless of whether they are subject to any other national, state, or local pretreatment requirements, are subject to the general and specific prohibitions identified in 40 CFR 403.5(a) and (b), respectively. General prohibitions forbid the introduction of any pollutant(s) to a POTW that cause pass through or interference. For additional information and background on Pretreatment Requirements see 40 CFR 122.44(j)(1) of the NPDES regulations and 40 CFR Part 403.8(f)(2) of the general pretreatment regulations.

Special Condition II.E. of the permit prevents the Permittee from authorizing discharges which may violate the national specific prohibitions of the General Pretreatment Program.

Although not a permit requirement, the Permittee may wish to consider developing the legal authority enforceable in Federal, State or local courts which authorizes or enables the POTW to apply and to enforce the requirement of sections 307 (b) and (c) and 402(b)(8) of the Clean Water Act, as described in 40 CFR 403.8(f)(1). Where the POTW is a municipality, legal authority is typically through a sewer use ordinance, which is usually part of the city or county code. The EPA has a Model Pretreatment Ordinance for use by municipalities

operating POTWs that are required to develop pretreatment programs to regulate industrial discharges to their systems (EPA, 2007). The model ordinance should also be useful for communities with POTWs that are not required to implement a pretreatment program in drafting local ordinances to control nondomestic dischargers within their jurisdictions.

H. 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.

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. A review of the threatened and endangered species located in Genesee, Idaho, designated by the USFWS (as of 10/18/16), included the following species; Spalding's Catchfly (flowering plant), MacFarlane's four-o'clock (flowering plant), Water howellia (flowering plant), Yellow-billed Cuckoo (bird), and 16 migratory birds.

EPA finds that this permitting action will have no effect on any threatened or endangered species located in the vicinity of Cow Creek in Genesee, Idaho. https://ecos.fws.gov/ipac/

There are no federally listed, endangered, or threatened species within the vicinity of the discharge under NOAA Fisheries jurisdiction.

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).

According to information obtained from the NOAA Fisheries website (as of 10/18/16), there is no designated EFH in the vicinity of the City of Genesee WWTP discharge. http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html

The Palouse River Subbasin (HUC 17060108) is additionally not listed as a Pacific Salmon freshwater EFH according to Amendment 14 to the Pacific Coast Salmon Plan (Pacific Fishery Management Council, 1999).

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. IDEQ has provided a draft 401 certification of the permit for this facility which is included in Appendix F.

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

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

Ecology. *Water Quality Standards for Surface Waters of the State of Washington Chapter 173-201A WAC.* Amended May 9, 2011.

IDAPA 58.01.02. *Idaho water quality standards and wastewater treatment requirements.*

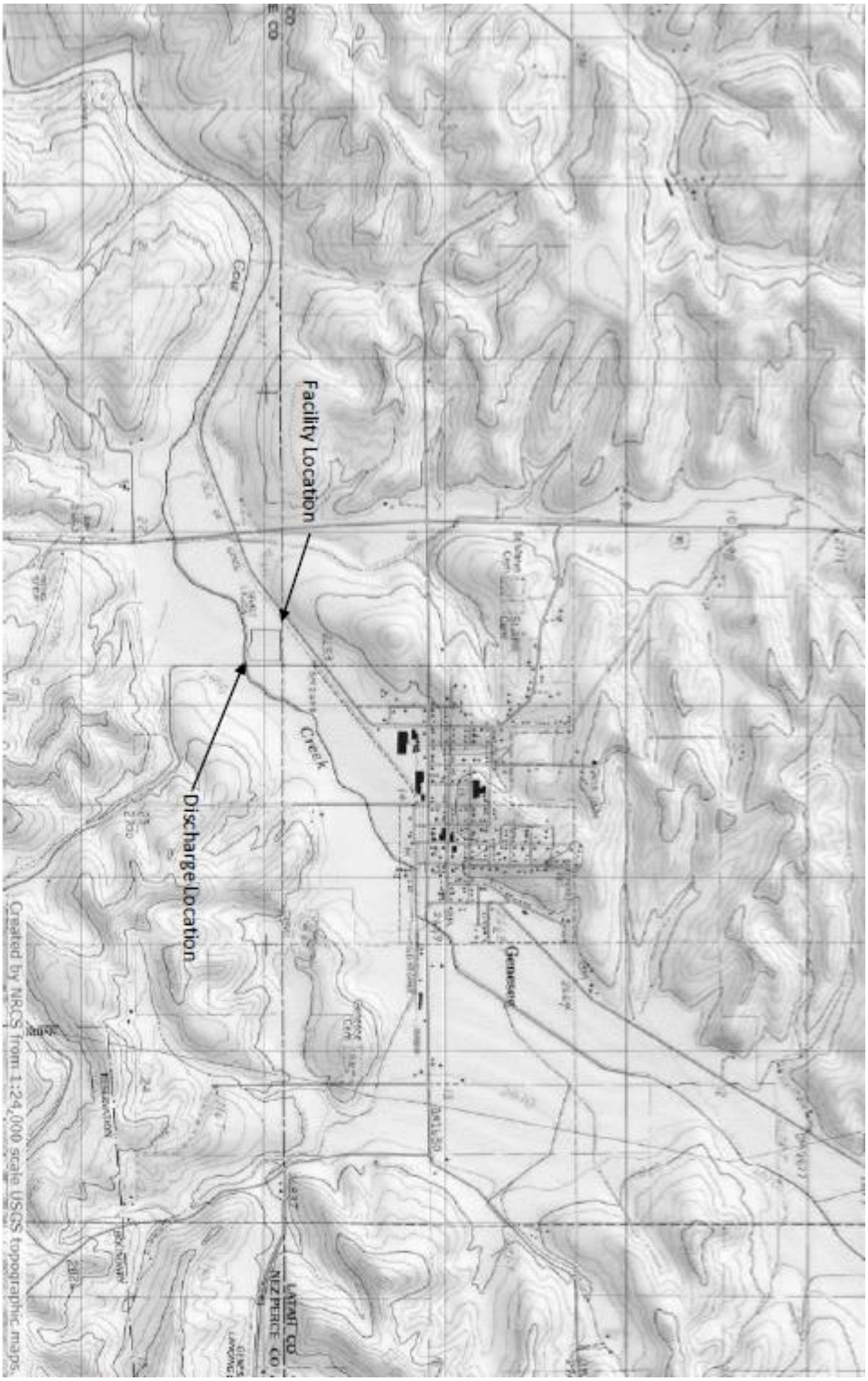
IDEQ. 2005. *Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load*. December, 2005.

IDEQ. 2013. *Cow Creek Temperature Total Maximum Daily Loads*. December, 2013.

Pacific Fishery Management Council. 1999. *Identification and Description of Essential Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon, Amendment 14 to the Pacific Coast Salmon Plan.* August, 1999.

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

Appendix A: Facility Information



Reference: Idaho County Parcel Map. Idaho.gov. Accessed 05/03/16. <https://www.accessidaho.org/gis/data/map>.

Appendix B: Water Quality-Based Effluent Limit Formula

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.

Dilution Factor and Mixing Zone

The following formula is used to calculate a dilution factor based on the allowed mixing zone.

$$D = \frac{Q_e + Q_u \times \%MZ}{Q_e}$$

Where:

D	=	Dilution Factor
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, 30B3, etc)
%MZ	=	Percent Mixing Zone

A mixing zone was not used in permit calculations for the City of Genesee.

Dilution factors for the facility are calculated based on critical low flow conditions. With respect to the absence of flow during the critical summer months, a dilution factor of 1.0 has been generated for to the City of Genesee. The Idaho Water Quality Standards at IDAPA 58.01.02.060 provides Idaho's mixing zone policy for point source discharges.

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 C: Discharge Monitoring Report Summary and Effluent Data 2011-2016

	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	Percent Removal	Effluent Gross	Percent Removal	Effluent Gross	Percent Removal	Effluent Gross
	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	E. coli, MTEC-MF	E. coli, MTEC-MF	Flow, in conduit or thru treatment plant	Flow, in conduit or thru treatment plant	pH	pH	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	BOD, 5-day, percent removal	Solids, suspended percent removal	Total Residual Chlorine	Total Residual Chlorine	Total Residual Chlorine	Total Residual Chlorine
	MO AVG	MO AVG	AVG WKLY	AVG WKLY	GEO MEAN	INST MAX	DAILY MX	MO AVG	INST MAX	INST MIN	MO AVG	MO AVG	AVG WKLY	AVG WKLY	MN % RMV	MN % RMV	MO AVG	MO AVG	DAILY MAX	DAILY MAX
	lb/d	mg/L	lb/d	mg/L	#/100mL	#/100mL	MGD	MGD	SU	SU	lb/d	mg/L	lb/d	mg/L	%	%	lb/d	mg/L	lb/d	mg/L
02/28/2011	35	30	35	30	23	240	0.14	0.14	7.8	6.8	25	22	25	22	65	78	0.03	0.60	0.03	0.60
03/31/2011	70	29	70	29	714	2419	0.29	0.29	7.8	6.9	84	35	84	35	28	64	0.04	0.50	0.04	0.50
04/30/2011	52	35	52	35	14	260	0.18	0.18	7.9	7.1	56	37	55.5	37	41	62	0.03	0.77	0.03	0.77
05/31/2011	49	31	49	31	12	50	0.19	0.19	8.5	7.6	135	90	135	90	54	-40	0.02	0.42	0.02	0.42
06/30/2011	36	32	36	32	19	1986	0.14	0.14	8.6	7.5	49	41	49	41	57	50	0.01	0.21	0.01	0.21
07/31/2011																				
08/31/2011																				
09/30/2011																				
10/31/2011																				
11/30/2011																				
12/31/2011																				
01/31/2012	29	20	29	20	1.6	2.0	0.2	0.15	8	6.4	9.9	7	10	7	87	97	0.08	0.07	0.33	0.20
02/29/2012	28	28	24	28	2.0	2.0	0.13	0.11	7.8	6.9	8.3	10	8	10	61	92	0.01	0.01	0.07	0.08
03/31/2012	24	24	20	24	4.6	130	0.22	0.13	7.6	6.8	18	22	18	22	70	78	0.01	0.013	0.07	0.08
04/30/2012	47	27	47	27	4.8	49	0.26	0.22	8.4	7.5	56	32	56	32	-9.0	67	0.02	0.01	0.05	0.03
05/31/2012	68	39	68	39	3.5	33	0.22	0.16	7.9	7.4	114	65	114	65	-50	-66	0.01	0.0063	0.02	0.02
06/30/2012																				
07/31/2012																				
08/31/2012																				
09/30/2012																				
10/31/2012																				
11/30/2012																				
12/31/2012	75	60	75	60	45	278	0.22	0.16	7.4	6.5	90	72	90	72	67	62	0.03	0.016	0.06	0.04
01/31/2013	54	46	54	46	51	134	0.18	0.12	8.1	6.8	69	59	69	59	51	60	0.03	0.03	0.06	0.10
02/28/2013	68	68	57	68	6.1	23	0.14	0.11	9.0	7.4	58	70	58	70	46	54	0.02	0.025	0.04	0.05
03/31/2013	107	76	107	76	110	540	0.18	0.12	10.0	8.9	130	92	130	92	22	12	0.02	0.021	0.06	0.06
04/30/2013																				
05/31/2013																				
06/30/2013																				
07/31/2013																				
08/31/2013																				
09/30/2013																				
10/31/2013																				
11/30/2013																				
12/31/2013																				
01/31/2014	47	37	47	37	6.6	240	0.26	0.14	8.6	7.7	36	29	36	29	87	93	0.02	0.01	0.07	0.08
02/28/2014	29	27	29	27	2.4	4.5	0.14	0.11	8.5	7.6	30	28	30	28	83	93	0.03	0.02	0.10	0.09
03/31/2014	41	37	41	37	70	350	0.17	0.14	10.3	8.5	69	64	69	64	73	81	0.05	0.04	0.10	0.09
04/30/2014																				
05/31/2014																				
06/30/2014																				
07/31/2014																				
08/31/2014																				
09/30/2014																				
10/31/2014																				
11/30/2014																				
12/31/2014	26	24	26	24	7.0	33	0.23	0.18	8.2	6.7	54	36	54	36	88	87	0.02	0.007	0.06	0.04
01/31/2015	40	40	40	40	9.3	33	0.23	0.16	8.2	7.1	29	29	29	29	77	88	0.06	0.04	0.08	0.09
02/28/2015	48	41	48	41	48	140	0.19	0.13	8.9	6.9	61	52	61	52	50	77	0.05	0.05	0.09	0.10
03/31/2015	39	39	39	39	115	540	0.14	0.12	9.8	8.8	43	43	43	43	53	73	0.06	0.061	0.10	0.09
04/30/2015																				
05/31/2015																				
06/30/2015																				
07/31/2015																				
08/31/2015																				
09/30/2015																				
10/31/2015																				
11/30/2015																				
12/31/2015	91	44	91	44	11	1600	0.34	0.20	8.3	7.5	50	24	50	24	78	90	0.06	0.0327	0.10	0.07
01/31/2016	38	33	38	33	6.6	920	0.15	0.11	8.3	7.9	11	9	10.51	9	90	98	0.02	0.024	0.05	0.07
02/29/2016	29.6	25	29.6	25	1.8	1.8	0.17	0.15	9.0	7.6	19	16	18.7	16	71	86	0.03	0.02	0.10	0.07
Average	49	37	48	37	54	417	0.20	0.15	8.4	7.4	54	41	54	41	56	64	0.03	0.13	0.07	0.16
Minimum	23.9	20.3	19.9	20.3	1.58	1.8	0.13	0.105	7.4	6.4	8.34	7.0	8.34	7	-50	-66	0.008	0.0063	0.01	0.02
Maximum	107	76.1	107	76.1	714	2419	0.34	0.29	10.3	8.89	135	92	135	92	90	98	0.082	0.77	0.33	0.77
Count	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Std Dev	21	14	22	14	144	661	0.1	0.0	0.7	0.7	36	24	36	24	33	41	0.0	0.2	0.1	0.2
CV	0.44	0.37	0.45	0.37	2.7	1.6	0.27	0.28	0.09	0.09	0.66	0.60	0.66	0.60	0.59	0.64	0.60	1.7	0.86	1.2
95th Percen	89	67	89	67	114	1928	0.29	0.22	9.9	8.7	128	87	128	87	88	96	0.06	0.59	0.10	0.59
5th Percenti	26	24	24	24	1.8	2.0	0.14	0.11	7.6	6.5	10	9.2	10	9	-4.4	-32	0.01	0.01	0.02	0.03

Appendix D: Reasonable Potential Calculations

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. This following section discusses how the maximum projected receiving water concentration is determined

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

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

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:

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

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.

Results of Reasonable Potential Calculations

It was determined that both chlorine and ammonia have reasonable potential to cause or contribute to an exceedance of water quality criteria at the edge of the mixing zone. The results of the calculations are presented in Table E-1 of this appendix.

Part A of this appendix explains the process the EPA has used to determine if the discharge authorized in the draft permit has the reasonable potential to cause or contribute to a violation of Idaho's federally approved water quality standards. Part B demonstrates how the water quality-based effluent limits (WQBELs) in the draft permit were calculated.

B. WQBEL Calculations

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

Facility Name	City of Genesee
Facility Flow (mgd)	0.15
Facility Flow (cfs)	0.23

Critical River Flows	(IDAPA 58.01.02 03. b)	Permit Limit Annual Crit. Flows	Seasonal Evaluation June - Oct Seasonal Low Flow	Seasonal Evaluation Nov - May Seasonal High Flow	Permit Limit Annual Crit. Flows
Aquatic Life - Acute Criteria - Criterion Max. Concentration (CMC)	**1Q10**	0	0	0.07	0
Aquatic Life - Chronic Criteria - Criterion Continuous Concentration (CCC)	**7Q10 or 4B3**	0	0	0.10	0
Ammonia	**30B3/30Q10** (seasonal)	0	0	0.03	0
Human Health - Non-Carcinogen	**30Q5**	0	0	0.03	0
Human Health - carcinogen	**Harmonic Mean Flow**	0	0	1.27	0

Receiving Water Data		Notes:	Annual Crit. Flows	Seasonal Low Flow	Seasonal High Flow	Annual Crit. Flows
Hardness, as mg/L $CaCO_3$	*** Enter Hardness on WQ Criteria tab ***	5th % at critical flows				
Temperature, °C	Temperature, °C	95th percentile	19.2	19.5	12.2	19.2
pH, S.U.	pH, S.U.	95th percentile	8.6	8.1	8.7	8.6

Pollutants of Concern			AMMONIA, default: cold water, fish early life stages present	AMMONIA, default: cold water, fish early life stages present	AMMONIA, default: cold water, fish early life stages present	CHLORINE (Total Residual)
Effluent Data	**Number of Samples in Data Set (n)**		6	6	6	24
	Coefficient of Variation (CV) = Std. Dev./Mean (default CV = 0.6)		0.6	0.6	0.6	1.2
	Effluent Concentration, µg/L (Max. or 95th Percentile) - (C_e)		14,825	14,825	14,825	585
	Calculated 50th % Effluent Conc. (when n>10), Human Health Only					
Receiving Water Data	**90th Percentile Conc., µg/L - (C_u)**		9,100	4,100	11,130	0
	Geometric Mean, µg/L, Human Health Criteria Only					
Applicable Water Quality Criteria	Aquatic Life Criteria, µg/L	Acute	1,770.834	4,640.615	1,472.698	19.
	Aquatic Life Criteria, µg/L	Chronic	680.173	1,521.093	778.222	11.
	Human Health Water and Organism, µg/L		--	--	--	--
	Human Health, Organism Only, µg/L		--	--	--	--
Percent River Flow Default Value = **0%**	**Aquatic Life - Acute**	**1Q10**	0%	0%	0%	0%
	Aquatic Life - Chronic	7Q10 or 4B3	--	--	--	0%
	Ammonia	30B3 or 30Q10	0%	0%	0%	0%
	Human Health - Non-Carcinogen	30Q5	--	--	--	0%
	Human Health - carcinogen	Harmonic Mean	--	--	--	0%
Calculated Dilution Factors (DF) (or enter Modeled DFs)	Aquatic Life - Acute	1Q10	1.0	1.0	1.0	1.0
	Aquatic Life - Chronic	7Q10 or 4B3	--	--	--	1.0
	Ammonia	30B3 or 30Q10	1.0	1.0	1.0	1.0
	Human Health - Non-Carcinogen	30Q5	--	--	--	1.0
	Human Health - carcinogen	Harmonic Mean	--	--	--	1.0
Aquatic Life Reasonable Potential Analysis						
σ	$\sigma^2=\ln(CV^2+1)$		0.555	0.555	0.555	0.944
P_n	$=(1\text{-confidence level})^{1/n}$, where confidence level =	**99%**	0.464	0.464	0.464	0.825
Multiplier (TSD p. 57)	$=\exp(z\sigma-0.5\sigma^2)/\exp[\text{normsinv}(P_n)-0.5\sigma^2]$, where	**99%**	3.8	3.8	3.8	3.7
Statistically projected critical discharge concentration (C_e)			56610.25	56610.25	56610.25	2174.57
Predicted max. conc.(ug/L) at Edge-of-Mixing Zone		Acute	56610.25	56610.25	56610.25	2174.57
(note: for metals, concentration as dissolved using conversion factor as translator)		Chronic	56610.25	56610.25	56610.25	2174.57
Reasonable Potential to exceed Aquatic Life Criteria			**YES**	***YES***	***YES***	**YES**
Aquatic Life Effluent Limit Calculations						
Number of Compliance Samples Expected per month (n)			4	4	4	4
n used to calculate AML (if chronic is limiting then use min=4 or for ammonia min=30)			30	30	30	4
LTA Coeff. Var. (CV), decimal	(Use CV of data set or default = 0.6)		0.600	0.600	0.600	1.200
Permit Limit Coeff. Var. (CV), decimal	(Use CV from data set or default = 0.6)		0.600	0.600	0.600	1.200
Acute WLA, ug/L	$C_d = (\text{Acute Criteria} \times MZ_a) - C_u \times (MZ_a\text{-}1)$	Acute	1,770.8	4,640.6	1,472.7	19.0
Chronic WLA, ug/L	$C_d = (\text{Chronic Criteria} \times MZ_c) - C_u \times (MZ_c\text{-}1)$	Chronic	680.2	1,521.1	778.2	11.0
Long Term Ave (LTA), ug/L	WLAc x $\exp(0.5\sigma^2\text{-}z\sigma)$, Acute	**99%**	568.5	1,489.7	472.8	3.3
(99th % occurrence prob.)	WLAa x $\exp(0.5\sigma^2\text{-}z\sigma)$; ammonia n=30, Chronic	**99%**	530.7	1,186.9	607.2	3.5
Limiting LTA, ug/L	used as basis for limits calculation		530.7	1,186.9	472.8	3.3
Average Monthly Limit (AML), ug/L ,	where % occurrence prob =	**95%**	**631**	***1,412***	***562***	**7**
Maximum Daily Limit (MDL), ug/L ,	where % occurrence prob =	**99%**	**1,653**	***3,697***	***1,473***	**19**
Average Monthly Limit (AML), mg/L			**0.6**	***1.4***	***0.6***	**0.007**
Maximum Daily Limit (MDL), mg/L			**1.7**	***3.7***	***1.5***	**0.019**
Average Monthly Limit (AML), lb/day			**0.8**	***1.8***	***0.7***	**0.01**
Maximum Daily Limit (MDL), lb/day			**2.1**	***4.6***	***1.8***	**0.02**

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/505/2-90-001

Total Phosphorous WLA Calculations

The State of Idaho developed the Cow Creek Subbasin Assessment and TMDL for total phosphorous (IDEQ, 2005). The TMDL established a wasteload allocation for total phosphorus (TP) of 0.60 kg/day. This wasteload allocation is based on meeting in-stream TP targets during the critical growing season. NPDES permit limits based on the waste load allocations should be expressed in the permit in a manner consistence with these averaging periods.

Effluent limits in NPDES permits for POTWs that discharge continuously must be expressed as average monthly limits (AMLs) and average weekly limits (AWLs) (40 CFR 122.45(d)(2)).

The formulas for calculating the AML and AWL for the Genesee WWTP is as follows (see the Technical Support Document for Water Quality-based Toxics Control at Table 5-2, pages 100-106).

(1) Calculating the LTA from the WLA

The WLA for the City of Genesee is interpreted as a seasonal average value applicable during the critical low flow period of June through September. Once a WLA is converted to an average seasonal value, it is approximately equivalent to the LTA WLA, for the purpose of effluent limit calculations. The WLA assigned to the facility is 1.3 lbs/day (0.60 kg/day x 2.2 lb/kg = 1.3 lb/day). The number of samples per month, n, is 4 with weekly sampling. CV = 0.6 (a default value for < 10 effluent samples).

(2) Calculating the AML from the LTA

Multiplier to Calculate Permit Limits from LTA

Number of Samples per Month (n)			**4**
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**

Calculation:	**LTA, Limiting**	**x**	**Multiplier**	**=**	**Limit**
AML = LTA, limiting x Multiplier	1.3	x	1.55	=	2.018

The AML for TP is 2.0 lbs/day. Because the facility is a municipal WWTP, limit must be expressed also as an AWL which is calculated below.

(3) Calculating the AWL from the AML

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**

Calculation:	**AML**	**x**	**Multiplier**	**= AWL**
AWL = AML x Multiplier	2.018	x	2.01	= 4.05

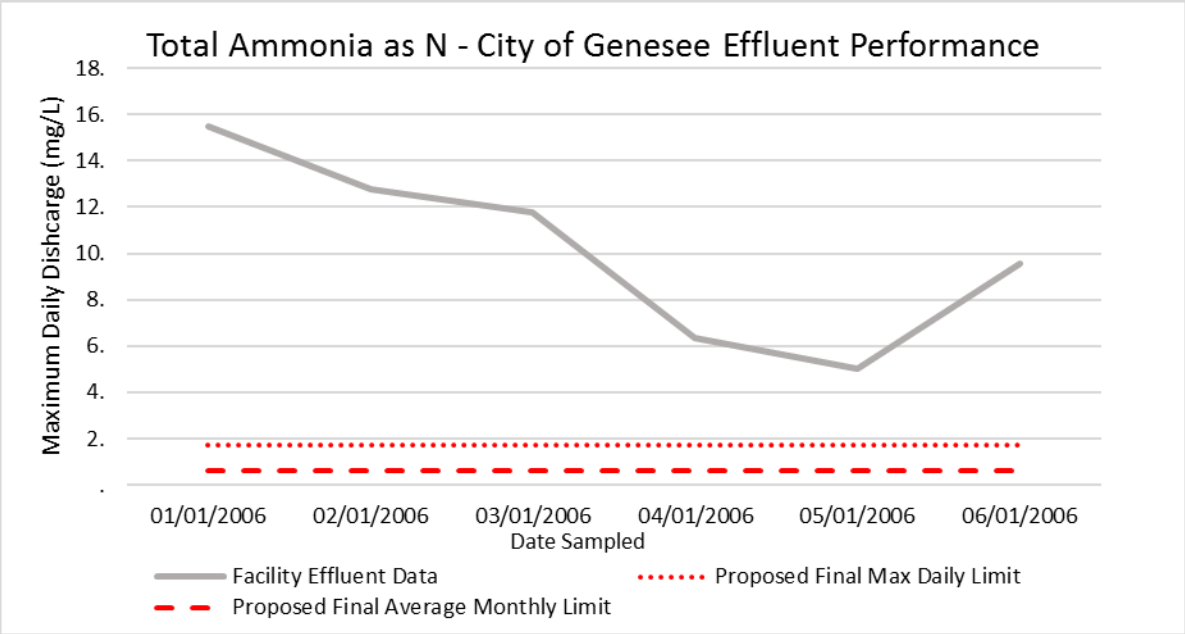
The AWL for TP is 4.1 lbs/day.

Total Ammonia as N Interim Limit Calculations

Pending a draft Clean Water Act Section 401 certification by IDEQ, EPA has proposed to allow an eight year compliance schedule for Total Ammonia as N (ammonia). The proposed compliance schedule ends on ***insert date 8 years after Permit issuance***. The permit includes interim requirements and the dates for their achievement, in compliance with 40 CFR 122.47. The draft permit also proposes interim effluent limits for ammonia. The interim effluent limits apply during the term of the compliance schedule and represent the level of ammonia control currently achieved at the facility.

The EPA conducted a performance evaluation for ammonia based on facility effluent data sampled during 2006. A comparison of the effluent concentrations at the facility and the proposed final MDL for ammonia is illustrated in Chart E-1. Effluent data indicate that the permittee cannot comply with the proposed water quality-based effluent limits for ammonia immediately and a compliance schedule is necessary.

Chart E-1: City of Genesee Ammonia Effluent Performance



2006 Ammonia Effluent Sampling Data from City of Genesee:

Nitrogen, an	Effluent Gro	DAILY MX		15500.	µg/L
Nitrogen, an	Effluent Gro	DAILY MX		12800.	µg/L
Nitrogen, an	Effluent Gro	DAILY MX		11800.	µg/L
Nitrogen, an	Effluent Gro	DAILY MX		6370.	µg/L
Nitrogen, an	Effluent Gro	DAILY MX	=	5010.	µg/L
Nitrogen, an	Effluent Gro	DAILY MX	=	9570.	µg/L
			Average	10175.	
			Minimum	5010.	
			Maximum	15500.	
			Count	6	
			Std Dev	3985.176	
			CV	0.391664	
			95th Percentile	14825	
			5th Percentile	5350	

Performance-based Calculations:

Date	Pollutant (µg/L)	ln(Pollutant conc)
01/31/2006	15500.	9.649
02/28/2006	12800.	9.457
03/31/2006	11800.	9.376
04/30/2006	6370.	8.759
05/31/2006	5010.	8.519
06/30/2006	9570.	9.166

Performance-based Effluent Limits

INPUT		
LogNormal Transformed Mean:	9.1544	
LogNormal Transformed Variance:	0.1889	
Number of Samples per month for compliance monitoring:	4	
Autocorrelation factor (n_e) (use 0 if unknown):	0	
OUTPUT		
E(X) =	10393.0879	
V(X) =	22462780.353	
VARn	0.0507	
MEANn=	9.2236	
VAR(Xn)=	5615695.088	lb/day
Maximum Daily Effluent Limit:	**25989.7**	**45.52**
Average Monthly Effluent Limit:	**14674.9**	**25.70**
	14674.86792	14291.31968

Receiving Water Monitoring Data

Annual Upstream Monitoring Data (Receiving Water Data)

Location*	Date	Temperature (Celcius)	pH (SU)	Total Phosphorous as P (mg/L)	Total Ammonia as N (mg/L)
CC-2	4/11/2002	8.2	7.6	0.15	12
	5/2/2002	12.0	8.8	0.09	9.1
	5/23/2002	10.9	8.2	0.12	5.1
	6/13/2002	18.5	8.0	0.21	2.6
	7/1/2002	17.2	7.8	0.20	2.8
	7/26/2002	19.0	8.2	0.25	2.7
	8/15/2002	16.5	7.4	0.40	3.9
	9/9/2002	15.1	7.6	--	--
CC-3	4/11/2002	7.7	8.1	0.10	12
	5/2/2002	12.1	8.7	0.06	9.1
	5/23/2002	11.0	8.2	0.08	5.5
	6/13/2002	18.4	8.0	0.10	2.8
	7/1/2002	17.1	7.6	0.21	2.9
	7/26/2002	19.3	7.6	0.15	4.1
	8/15/2002	16.5	7.7	0.24	6.6
	9/9/2002	13.6	7.6	--	--
City of Genesee Upstream Monitoring Station	5/26/06	12.4	7.8	0.2	0.1
	6/21/06	15.1	7.6	0.1	0.01
	11/13/06	4.7	7.7	0.5	0.2
	3/21/07	6.8	7.6	0.1	0.1
	7/5/07	19.7	7.6	0.1	0.1
	11/15/07	2.7	6.8	0.6	1.1
	4/23/08	8.8	7.2	0.0	0.01
	11/24/08	2.0	7.6	0.4	0.01
	4/16/09	8.0	7.7	0.1	0.01
	7/17/09	14.1	6.2	1.5	0.1
	11/17/09	5.6	7.6	0.2	0.01
Data Statistics (**bold** used in Ammonia RPA calcs)	Average	12.3	7.7	0.3	3.3
	Minimum	2.0	6.2	0.0	0.0
	Maximum	19.7	8.8	1.5	12
	Count	27	27	25	25
	Std Dev	5.3	0.5	0.3	3.8
	CV	0.4	0.1	1.2	1.2
	95th Percentile	**19.2**	**8.6**	0.6	11
	90th Percentile				**9.1**

Notes:
*CC-2 and CC-3 sampled as part of Cow Creek Subbasin Assessment and TMDL study (IDEQ, 2005. See Appendix B, page 71. Also see, *Figure 3. Cow Creek Monitoring Sites CC5-CC1*, for locations)
0.01 = minimum detection level for ammonia used where samples were reported as ND (non-detect)

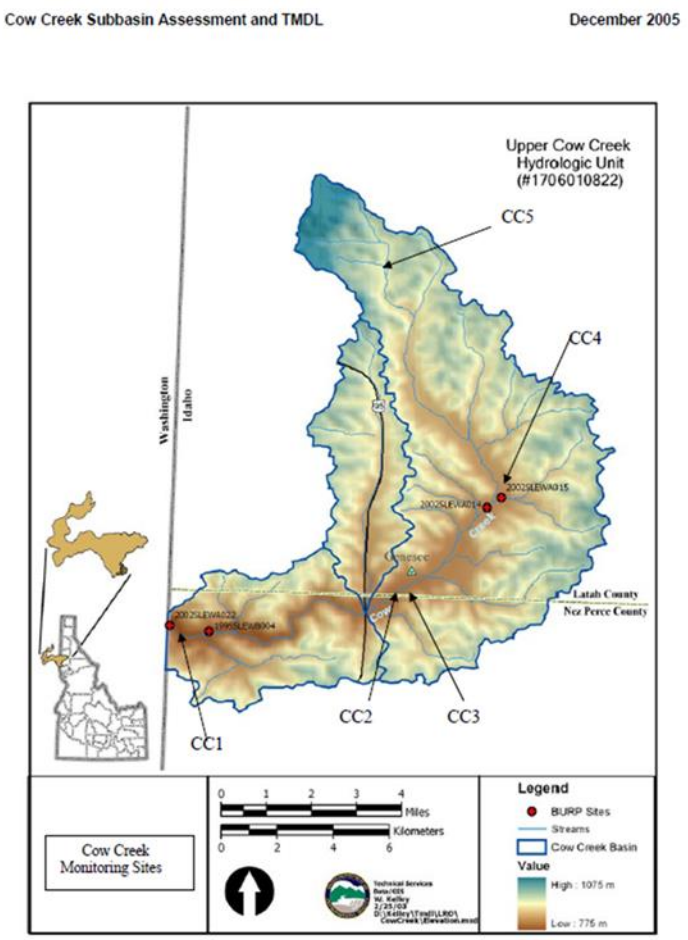


Figure 3. Cow Creek Monitoring Sites CC5 – CC1

The Cow Creek Subbasin Assessment and TMDL study (also referenced as *Nutrient TMDL* in this report) can be accessed at: http://www.deq.idaho.gov/water-quality/surface-water/tmdls/table-of-sbas-tmdls/palouse-river-subbasin/

Appendix E: Basis for Equivalent to Secondary Treatment Limits

City of Genesee Data Evaluation for Treatment Equivalent to Secondary Limits:

EPA conducted a DMR review of TSS effluent concentrations. The average monthly TSS effluent concentrations reported by the City of Genesee were reviewed for a two year period (2014-2016) in accordance with Criterion #1, shown below.

Criterion #1 Analysis for TSS:

DMR Reporting Period	Average 95th Percentile (mg/L)	30 Day Average Limit (mg/L)	Percentage Exceeding Limit
1/2014-1/2015	58.4	30	195%
2/2015-2/2016	50.2	30	167%

The data above indicate that the City of Genesee consistently exceeds the secondary treatment standards set forth in §§ 133.102(a) and (b). No upsets, bypasses, operational errors, or other unusual conditions were reported by the facility during the period analyzed.

The City of Genesee complies with Criterion #2 as the treatment lagoon qualifies as a waste stabilization pond.

With respect to Criterion #3, DMR values for 30-day average BOD_5 removal rates were considered for the 2014-2016, two-year period. The facility treatment works include a facultative lagoon which utilizes aerobic and anaerobic biological treatment to consistently achieve a 30-day average of at least 65 percent removal of BOD_5. The City of Genesee was calculated to have a 30-day average BOD_5 removal rate of 75% within the two years analyzed.

The City of Genesee satisfies the requirements of Criterion 1 through 3, and has continued eligibility for equivalent to the secondary treatment standards for TSS effluent removal.

Appendix F: Antidegradation Review

Idaho Department of Environmental Quality

Draft §401 Water Quality Certification

December 28, 2016

NPDES Permit Number(s): City of Genesee Wastewater Treatment Plant Permit #ID0020125

Receiving Water Body: Cow Creek

Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (DEQ) has authority to review National Pollutant Discharge Elimination System (NPDES) permits and issue water quality certification decisions.

Following 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, 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). 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 applies a water body by water body approach to implement Idaho's antidegradation policy. Any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

Pollutants of Concern

The City of Genesee Wastewater Treatment Plant discharges the following pollutants of concern: biochemical oxygen demand (BOD_5), TSS, pH, *E. coli* bacteria, total residual chlorine (TRC), ammonia, temperature, and phosphorus. Effluent limits have been developed for biochemical oxygen demand (BOD_5), TSS, pH, *E. coli* bacteria, total residual chlorine (TRC), ammonia, temperature, and phosphorus.

Receiving Water Body Level of Protection

The City of Genesee Wastewater Treatment Plant discharges to Cow Creek within the Palouse Subbasin assessment unit (AU) ID17060108CL001_03 (Cow Creek – source to Idaho/Washington border). This AU has the following designated beneficial uses: cold water aquatic life and secondary 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).

DEQ's 2012 Integrated Report lists the cold water aquatic life use in the receiving water body AU as not fully supported due to temperature and nutrient impairment. The secondary contact recreation use is fully supported. Therefore, DEQ will provide Tier I protection only for the aquatic life use and Tier II protection, in addition to Tier I, for the recreational beneficial use (IDAPA 58.01.02.051.02; 58.01.02.051.01).

Protection and Maintenance of Existing Uses (Tier I Protection)

A Tier I review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that designated and existing uses and the level of water quality necessary to protect designated and existing uses shall be maintained and protected. In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with narrative and numeric criteria of the Idaho WQS, as well as other provisions of the WQS such as Section 055, which addresses water quality limited waters. The numeric and narrative criteria in the WQS are set at levels that ensure protection of designated and existing beneficial uses. The effluent limitations and associated requirements contained in the City of Genesee Wastewater Treatment Plant 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 that are set at levels designed to help restore the water body to a condition that

supports designated and existing 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 Idaho's antidegradation policy and implementation provisions to maintain and protect uses (IDAPA 58.01.02.055.04). The EPA-approved *Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load* (2005) and *Cow Creek Temperature Total Maximum Daily Loads* (2013) establish wasteload allocations for temperature and phosphorous. These wasteload allocations are designed to ensure Cow Creek will achieve water quality to support its designated and existing aquatic life beneficial uses and comply with numeric and narrative criteria. The effluent limitations and associated requirements contained in the City of Genesee Wastewater Treatment Plant permit are set at levels that comply with these wasteload allocations. Table 1 provides a summary of the current permit limits and the proposed or reissued permit limits, with the exception of E. *coli* which is captured in Table 2.

Table 1. Comparison of current and proposed permit limits for pollutants of concern.

Pollutant	Units	Current Permit			Proposed Permit			Change[a]
		Average Monthly Limit	Average Weekly Limit	Single Sample Limit	Average Monthly Limit	Average Weekly Limit	Single Sample Limit	
Pollutants with limits in both the current and proposed permit								
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	—	30	45	—	D
	lb/day	38	56	—	8	11	—	
	% removal	—	—	—	85%	—	—	
Total Suspended Solids (TSS)	mg/L	45	65	—	30	45	—	D
	lb/day	56	81	—	8	11	—	
	% removal	—	—	—	65%	—	—	
Total Residual Chlorine	mg/L	0.007	—	0.018	0.007	—	0.018	NC
	lb/day	0.01	—	0.02	0.01	—	0.02	
Pollutants with new limits in the proposed permit								
pH	standard units	—			6.5–9.0 all times			New
Total Phosphorus	lb/day (June–Sept)	—	—	—	2.0	4.1	—	New, TMDL
Temperature	°C	—	—	—	—	—	22°C instantaneous maximum and 19°C maximum daily average	New, TMDL
Total Ammonia (as N)	mg/L	—	—	—	0.6	—	1.7	New
	lb/day	—	—	—	0.8	—	2.1	
Total Ammonia (as N) Interim Limit	mg/L	—	—	—	15	—	26	New
	lb/day	—	—	—	19	—	33	

[a] NC = no change; D = decrease

The effluent limitations and associated requirements contained in the City of Genesee Wastewater Treatment Plant permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS and the wasteload allocations established in the *Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load* (2005) and *Cow Creek Temperature Total Maximum Daily Loads* (2013). Therefore, DEQ has determined the permit will protect and maintain designated and existing beneficial uses 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)

Cow Creek is considered high quality for recreation beneficial use. Water quality relevant to the recreation beneficial use of Cow Creek must be maintained and protected, unless a lowering of water quality is deemed necessary to accommodate important social or economic development.

To determine whether degradation will occur, DEQ must evaluate how the permit issuance will affect water quality for the pollutants that are relevant to the recreation beneficial use of Cow Creek (IDAPA 58.01.02.052.05). These include *E. coli* and TP. Effluent limits are set in the proposed and existing permit for *E. coli* bacteria and TP.

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 water quality from the activity or discharge as proposed in the reissued permit or license (IDAPA 58.01.02.052.06.a). For a new permit or license, the effect on water quality is determined by reviewing the difference between the existing receiving water quality and water quality from the activity or discharge as proposed in the new permit or license (IDAPA 58.01.02.052.06.a).

Pollutants with Limits in the Current and Proposed Permit – *E. coli*

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 Genesee Wastewater Treatment Plant permit, this means determining the permit's effect on water quality based upon the limits for *E. coli* in the current and proposed permits. Table 2 provides a summary of the current permit limits and the proposed or reissued permit limits that pertain only to Tier II protection (secondary contact recreation).

Table 2. Comparison of current and proposed permit limits for pollutants of concern relevant to uses receiving Tier II protection.

Pollutant	Units	Current Permit			Proposed Permit			Change[a]
		Average Monthly Limit	Average Weekly Limit	Single Sample Limit	Average Monthly Limit	Average Weekly Limit	Single Sample Limit	
Pollutants with limits in both the current and proposed permit								
E. coli bacteria	#/100 mL	126	—	576	126	—	576	NC

[a] NC = no change

The proposed permit limits for *E. coli* in Table 2 are the same as those in the current permit ("NC" in change column). Therefore, no adverse change in water quality and no degradation will result from the discharge of these pollutants.

New Permit Limits for Pollutants Currently Discharged-TP

When new limits are proposed in a reissued permit for pollutants in the existing discharge, the effect on water quality is based upon the current discharge quality and the proposed discharge quality resulting from the new limits. Current discharge quality for pollutants that are not currently limited is based upon available discharge quality data (IDAPA 58.01.02.052.06.a.i). Future discharge quality is based upon proposed permit limits (IDAPA 58.01.02.052.06.a.ii).

The proposed permit for City of Genesee Wastewater Treatment Plant includes new limits for total phosphorus (Table 1). These limits were included in the permit to be consistent with the wasteload allocations in the approved *Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load* (2005) and Idaho Water Quality Standards (WQS) (IDAPA 58.01.02). The total phosphorus limits in the proposed permit reflect a maintenance or improvement in water quality from current conditions. Therefore, no adverse change in water quality and no degradation will occur with respect to this pollutant.

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

Compliance Schedule

Pursuant to IDAPA 58.01.02.400.03, DEQ may authorize compliance schedules for water quality–based effluent limits issued in a permit for the first time. The City of Genesee Wastewater Treatment Plant cannot immediately achieve compliance with the effluent limits for ammonia; therefore, DEQ authorizes a compliance schedule. This compliance schedule provides the permittee an interim ammonia limit and a reasonable amount of time to achieve the final effluent limits as specified in the permit, while still ensuring compliance as soon as possible. The permittee must achieve compliance with the ammonia limitations of Part I.B, Table 1 in the permit, *Effluent Limitations and Monitoring Requirements*, within eight years from the effective date of the permit.

Other Conditions

This certification is conditioned upon the requirement that any material modification of the permit or the permitted activities—including without limitation, any modifications of the permit to reflect new or modified TMDLs, wasteload allocations, site-specific criteria, variances, or other new information—shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401.

Right to Appeal Final Certification

The final Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the "Rules of Administrative Procedure before the Board of Environmental Quality" (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Sujata Connell, Lewiston Regional Office at 208-799-4370 or Sujata.Connell@deq.idaho.gov.

DRAFT

John Cardwell
Regional Administrator
Lewiston Regional Office