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 Kendrick Wastewater Treatment Plant
NPDES Permit No. ID0024554

Public Comment Start Date: May 16, 2018
Public Comment Expiration Date: June 15, 2018

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

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

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

DEQ Lewiston Regional Office
1118 F St.
Lewiston, Idaho 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."

US EPA Region 10
Suite 155
1200 Sixth Avenue, OWW-191
Seattle, Washington 98101
(206) 553-0523 or
Toll Free 1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The fact sheet and draft permits are also available at:

DEQ Lewiston Regional Office
1118 F St.
Lewiston, Idaho 83501
(208) 799-4370

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Acronyms

1Q10	1 day, 10 year low flow
4B3	Biologically based design flow and indicates an allowable exceedance for 4 consecutive days once every 3 years.
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
BE	Biological Evaluation
BOD_5	Biochemical oxygen demand, five-day
BOD_{5u}	Biochemical oxygen demand, ultimate
°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
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
HUC	Hydrologic Unit Code
ICIS	Integrated Compliance Information System
IDEQ	Idaho Department of Environmental Quality
I/I	Infiltration and Inflow
LA	Load Allocation
lbs/day	Pounds per day
LTA	Long Term Average
mg/L	Milligrams per liter
ML	Minimum Level

µg/L	Micrograms per liter
mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
MPN	Most Probable Number
N	Nitrogen
NEPA	National Environmental Policy Act
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
RPM	Reasonable Potential Multiplier
RWC	Receiving Water Concentration
SIC	Standard Industrial Classification
SS	Suspended Solids
SSO	Sanitary Sewer Overflow
s.u.	Standard Units
TKN	Total Kjeldahl Nitrogen
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
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater treatment plant

I. Background Information

A. General Information

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

Table 1. General Facility Information

NPDES Permit #:	ID0024554
Applicant:	City of Kendrick Wastewater Treatment Facility
Type of Ownership:	Municipal – Publicly Owned Treatment Works (POTW)
Physical Address:	¼ mile south of City of Kendrick on State Highway 3
Mailing Address:	P.O. Box 195 Kendrick, ID 83537
Facility Contact:	Rob Clemenhagen Public Works Supervisor (208) 289-5157
Facility Location:	Latitude: 46.60559 Longitude: -116.6691
Receiving Water:	Potlatch River
Facility Outfall:	Latitude: 46.6054027778 Longitude: -116.6689666667

B. Permit History

The most recent NPDES permit for the City of Kendrick (City) was issued on February 14, 2005, became effective on April 1, 2005, and expired on March 31, 2010. An NPDES application for permit issuance was submitted by the permittee on September 14, 2009. The EPA determined that the application was timely and complete. Therefore, pursuant to 40 CFR 122.6, the permit has been administratively extended and remains fully effective and enforceable.

II. Idaho NPDES Authorization

In 2014, the Idaho Legislature revised the Idaho Code to direct the Idaho Department of Environmental Quality (IDEQ) to seek authorization from the EPA to administer the NPDES permit program for the State of Idaho. On August 31, 2016, IDEQ submitted a program package pursuant to CWA Section 402(b) and 40 CFR 123.21.

IDEQ is seeking authorization for a phased NPDES permit program that would begin July 1, 2018. Assuming that IDEQ's request for authorization is approved, IDEQ would obtain permitting for POTWs on July 1, 2018. At that point in time, all documentation required by the permit would be sent to IDEQ rather than to the EPA and any decision under the permit

stated to be made by the EPA or jointly between the EPA and IDEQ will be made solely by IDEQ. Permittees will be notified by IDEQ when this transition occurs.

III. Facility Information

A. Treatment Plant Description

Service Area

The City of Kendrick owns and operates the City of Kendrick Wastewater Treatment Plant (WWTP) located in Kendrick, Idaho. The collection system has no combined sewers. The facility serves a resident population of 369. There are no major industries discharging to the facility and the facility does not have a pretreatment program.

Treatment Process

The treatment process consists of an aerated three cell lagoon system, disinfection using Sodium Hyperchlorite, and dechlorination. Floating surface aerators are equipped to the first lagoon. A chlorine contact basin is used after settling occurs in the second and third cells. A map showing the location of the treatment facility and discharge are included in Appendix A. Because the design flow is less than 1 mgd, the facility is considered a minor facility.

The City began facility upgrades in June 2016 and completing them in September 2016. The upgrades including complete replacement of the lagoons. These upgrades did not impact the design flow of the facility.

The existing permit is based on a facility design flow of 0.08 mgd. The 2009 application again stated that the design flow of the facility is 0.08 mgd. During development of the draft permit, the EPA had discussions with the City on the design flow . The 0.08 mgd represents the average day design flow. The average day maximum month design flow of the facility is 0.128 mgd. The reported actual flows from the facility is 0.054 mgd (average monthly flow). The EPA will use the average day maximum month flow of 0.128 mgd to develop effluent limititations because this represents the worst case scenario.

Outfall Description

The Kendrick WWTP effluent discharges onto a floodplain approximately 900 feet from the Potlatch River year round. Effluent flows over the floodplain into the Potlatch River.

Effluent Characterization

To characterize the effluent, the EPA evaluated the facility's application form, discharge monitoring report (DMR) data, and additional data provided by the City. The effluent quality is summarized in Table 2. Data are provided in Appendix B.

Table 2. Effluent Characterization

Parameter	Units	Maximum	Minimum
Biochemical Oxygen Demand (BOD_5)	mg/L	85.2	2
Total Suspended Solids (TSS)	mg/L	91.7	3
E. coli bacteria	#/100 mL	2419.6	1

Parameter	Units	Maximum	Minimum
Total Residual Chlorine (TRC)	mg/L	0.1	0
pH	s.u.	9.87	1.9
Total Ammonia (as N)	mg/L	20.2	1.07
Flow Rate	mgd	0.59	0.017
Temperature	°C	30	3.9
Dissolved Oxygen	mg/L	9.94	1.25
Total Phosphorus (as P)	mg/L	3.48	1.31

Compliance History

A summary of effluent violations in the last ten years is provided in Table 3. *Summary of Effluent Violations*. The City has had some difficulty meeting BOD_5, pH, TSS, TRC, *E. coli* limits and in particular BOD_5 percent removal requirements. High rates of infiltration and inflow (I/I) have contributed to percent removal violations and the City has developed a plan to reduce I/I.

The EPA entered into a consent agreement and final order with the City to resolve the alleged NPDES permit violations that occurred between April 2005 and March 2009. The City has continued progress on treatment system upgrades, including sludge removal and the replacement of leaky lagoon liners.

The EPA sent the City a notice of violation on August 2016 identifying 309 effluent violations occurring between June 2011 and July 2016.

Additional compliance information for this facility, including compliance with other environmental statutes, is available on Enforcement and Compliance History Online (ECHO). The ECHO web address for this facility is: https://echo.epa.gov/detailed-facility-report?fid=110010027050.

Table 3. Summary of Effluent Violations

Parameter	Limit	Units	Number of Instances
BOD, 5-day, 20 deg. C	Monthly Average	mg/L	10
BOD, 5-day, 20 deg. C	Monthly Average	lb/day	4
BOD, 5-day, 20 deg. C	Weekly Average	mg/L	4
BOD, 5-day, 20 deg. C	Weekly Average	lb/day	2
pH	Instantaneous Max	SU	2
pH	Instantaneous Min	SU	3
Solids, total suspended	Monthly Average	mg/L	14
Solids, total suspended	Monthly Average	lb/day	3
Solids, total suspended	Weekly Average	mg/L	7
Solids, total suspended	Weekly Average	lb/day	2
Chlorine, total residual	Daily Max	mg/L	4
Chlorine, total residual	Daily Max	lb/day	3
Chlorine, total residual	Monthly Average	mg/L	0
Chlorine, total residual	Monthly Average	lb/day	1

Parameter	Limit	Units	Number of Instances
E. coli bacteria	Instantaneous Max	Count/100 mL	7
E. coli bacteria	Monthly Geomean	Count/100 mL	0
BOD, 5-day, percent removal	Min Percent Removal	Percent	23
Solids, suspended percent removal	Min Percent Removal	Percent	8
ECHO accessed 11/6/2017. Data are from 01/01/2007 – 11/6/2017			

IDEQ conducted an inspection of the facility in September 2017. The inspection encompassed the wastewater treatment process, records review, facility inspection, and sampling processes. In the Inspection Report dated September 19, 2017 IDEQ observed the following areas of concern: minimum monitoring requirements, the QAP, approved monitoring methods, and effluent limit noncompliance.

IV. Receiving Water

In drafting permit conditions, the EPA must analyze the effect of the facility's discharge on the receiving water. The details of that analysis are provided later in this Fact Sheet. This section summarizes characteristics of the receiving water that impact that analysis.

A. Receiving Water

This facility discharges to the Potlatch River in Latah County, Idaho. The outfall is located downstream (southwest) of the City. The Potlatch River enters the Nez Perce Reservation approximately 6 miles downstream of the City and 7 miles before its confluence with the Clearwater. The Clearwater ultimately flows West out of the Nez Perce Reservation and becomes a tributary to the Snake River at Lewiston, Idaho.

B. Designated Beneficial Uses

This facility discharges to the Potlatch River in the Lower Clearwater River Subbasin (HUC 17060306) Water Body Unit C-44 (IDAPA 58.01.02.120.08). At the point of discharge, the Potlatch River is protected for the following designated uses:

- cold water aquatic life
- salmonid spawning
- primary contact recreation
- domestic water supply

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

C. Water Quality

The water quality for the receiving water is summarized in Table 4.

Table 4. Receiving Water Quality Data

Parameter	Units	Percentile	Value	Source
Temperature	°C	95th	22.6	Kendrick, PTR-3, PTR-1, USGS 13341570
pH	Standard units	5th – 95th	7.04-8.97	Kendrick, PTF-3, PTR-1
Ammonia (as N)	mg/L	maximum	0.364	Kendrick
Nitrate + Nitrite	mg/L	95th	2.712	PTR-1, PTR-3
DO	mg/L	5th	8.8	Kendrick, PTR-3
Total P	mg/L	95th	0.106	Kendrick, PTR-3

Sources:
Kendrick: City of Kendrick Surface Water Monitoring Data, upstream of facility, June 2006 – December 2009.
PTR-1: IDEQ Potlatch River Subbasin Assessment and TMDLs September 2008, mouth of the Potlatch River, July 2000 – March 2002.
PTR-3: IDEQ Potlatch River Subbasin Assessment and TMDLs September 2008, Potlatch River at the Kendrick Bridge, December 2001 – December 2002.
USGS 13341570: United States Geological Survey, Potlatch River below Little Potlatch Creek near Spalding, March 2010 – April 2011.

D. Water Quality Limited Waters

Any waterbody for which the water quality does not, and/or is not expected to meet applicable water quality standards is designated as a "water quality limited segment."

Section 303(d) of the Clean Water Act (CWA) requires states to develop a Total Maximum Daily Load (TMDL) management plan 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 while maintaining compliance with 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 "wasteload 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)).

The State of Idaho's 2014 Integrated Report Section 5 (section 303(d)) lists the Potlatch River, from Big Bear Creek to the mouth, as Category 4a for Sediment and Temperature and not supporting of Cold Water Aquatic Life nor Salmonid Spawning Beneficial Uses.

In September 2008 IDEQ published the *Potlatch River Subbasin Assessment and TMDLs* (*2008 TMDL*). The *2008 TMDL* addressed impairments on Idaho's 2002 Integrated Report. The *2008 TMDL* established WLAs for *E. Coli* bacteria, total suspended solids (TSS), and Temperature. The *2008 TMDL* gave WLAs for *E. coli* equivalent to the existing permit limits and Idaho water quality standards of 406 cfu/100 mL, Instantaneous Maximum, and 126 cfu/100 mL, Monthly Geometric Mean. The City was given WLAs of 48.1 lbs/day maximum daily and 27.0 lbs/day monthly average for TSS.

The monthly data regarding temperature was considered insufficient to determine a temperature WLA for the City based on designated uses. IDEQ recommended that additional stream flow and temperature data be collected. After data collection WLAs could be applied in accordance with the period of time when numeric criteria for Salmonid Spawning and Cold Water Aquatic Life are exceeded. In the interim, IDEQ used a mass balance approach using average monthly flow and temperature to illustrate allowable effluent discharge temperatures that would not raise the upstream receiving water temperature by more than 0.3 °C, and meet the Idaho Water Quality Standards. These temperature WLAs are found in Table 17.

The *2008 TMDL* recommended moving Temperature and Sediment to category 4a and removing Oil and Grease, Nutrients, Pesticides, Bacteria, NH_3, Organics, and Dissolved Oxygen from the list of impairments for the Potlatch River. In February 2009, EPA approved the IDEQ's *2008 TMDL*.

In August 2017, IDEQ issued the *Draft Potlatch River Watershed Assessment and Total Maximum Daily Loads 2017 Temperature TMDL* for public review and comment. IDEQ has provided the EPA with a revised draft of this TMDL, dated January 2018 (hereinafter referred to as the *January 2018 Draft TMDL*) with temperature WLAs found in Table 18. Since IDEQ has proposed to revise the temperature TMDL for the Potlatch River, the draft permit proposes two options for temperature effluent limits. One set of limits are based on the *2008 TMDL* (option 1, Table 10) and the other set of limits is based on the *January 2018 Draft TMDL* (option 2, Table 11).

If the revised TMDL is finalized and approved before the EPA issues a final permit for the City, the final permit will include effluent limits consistent with the WLAs in the final revised TMDL. The EPA expects that these WLA will be similar to the WLAs proposed in the *January 2018 Draft TMDL*. If the revised TMDL is not finalized before the EPA issues a final permit, the final permit will include effluent limits consistent with the WLAs in the *2008 TMDL*.

E. Low Flow Conditions

The Technical Support Document for Water Quality-Based Toxics Control (EPA, 1991) and the Idaho Water Quality Standards recommend the flow conditions for use in calculating water quality-based effluent limits (WQBELs) using steady-state modeling.

Critical low flows for the receiving water are summarized in Table 5. *Critical Flows in Receiving Water*. Low flows are defined in Appendix C, Part C. Flows were determined using EPA's DFLOW tool and stream data from 2003-2016. Two stream gauges were considered when determining the critical low flows. USGS 13341500, upstream of the City, has data from 1945-1960. USGS 13341570, downstream of the City, has more current data from 2003-2018. The downstream data was utilized as the data are more representative of current river conditions within the Potlatch River.

Table 5. Critical Flows in Receiving Water

Flows	Annual Flow (cfs)	Seasonal Flows (June 1 - October 31)	Seasonal Flows (November 1 - May 31)
1Q10	0.16	0.16	12.70

Flows	Annual Flow (cfs)	Seasonal Flows (June 1 - October 31)	Seasonal Flows (November 1 - May 31)
7Q10	0.21	0.21	14.90
4B3	1.35	--	--
30B3	2.66	--	--
30Q10	0.51	0.51	29.10
Source: USGS station 13341570 Potlatch River Below Little Potlatch Creek Near Spalding located downstream of the City of Kendrick 2003-2016. All flow values are measured in cfs.			

Table 6. Critical Flows Used in Effluent Limit Analysis

Parameter	Acute	Chronic
Ammonia	1Q10 (Seasonal)	30Q10 (Seasonal)
TRC	1Q10	4B3

V. Effluent Limitations and Monitoring

Table 7, below, presents the existing effluent limits and monitoring requirements in the Existing Permit. Table 8, below, presents the proposed effluent limits and monitoring requirements in the draft permit. Table 9, below, summarizes the changes in effluent limits and monitoring requirements between the existing and draft permits.

Table 7. Existing Effluent Limits and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Flow	mgd	---	---	---	Effluent	5/week	Measure
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	---	Influent and Effluent	1/month	Grab
	lbs/day	20	30				
BOD_5 Percent Removal	%	85 (minimum)	---	---	---	1/month	Calculation
Total Suspended Solids (TSS)	mg/L	45	65	---	Influent and Effluent	1/month	Grab
	lbs/day	30	43	---			
TSS Percent Removal	%	65 (minimum)	---	---	---	1/month	Calculation
E. coli Bacteria	CFU/100 mL	126	---	406 (instantaneous max)	Effluent	5/month	Grab
Total Residual Chlorine	mg/L	0.007	---	0.018	Effluent	1/week	Grab
	lbs/day	0.005	---	0.012			
pH	std units	Between 6.5 – 9.0			Effluent	1/week	Grab

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Temperature	°C	---	---	---	Effluent	1/month	Grab
Total Phosphorus as P	mg/L	---	---	---	Effluent	1/month	Grab
Total Ammonia as N	mg/L	---	---	---	Effluent	1/month	Grab
Dissolved Oxygen	mg/L	---	---	---	Effluent	1/month	Grab
Floating, Suspended, or Submerged Matter	---	There shall be no discharge of floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.					

Table 8. 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	2/month	Grab
	lbs/day	20	30	--			Calculation
BOD_5 Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation
Total Suspended Solids (TSS)	mg/L	45	65	--	Influent and Effluent	2/month	Grab
	lbs/day	27	43	48.1			Calculation
TSS Percent Removal	%	65 (minimum)	--	--	--	1/month	Calculation
E. coli	CFU/ 100 ml	126	--	406 (instant. max)	Effluent	5/month	Grab
Total Residual Chlorine	mg/L	0.007	--	0.018	Effluent	1/week	Grab
	lbs/day	0.005	--	0.012			Calculation
pH	std units	Between 6.5 – 9.0			Effluent	1/week	Grab
Total Ammonia (as N) June 1 – October 31	mg /L	0.15	--	0.4	Effluent	1/week	Grab
	lbs/day	0.16	--	0.42			Calculation
Total Ammonia (as N) November 1 – May 31	mg /L	12.1	--	24.3	Effluent	1/week	Grab
	lbs/day	12.9	--	25.9			Calculation
Ammonia (as N) Interim Limits	mg/L	26.3	--	57.7	Effluent	2/month	Grab
	lbs/day	28.1	--	61.6			Calculation

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Temperature Interim Limits	ºC	See Table 10 *and* Table 11.			Effluent	1/week	Grab
Temperature Final Limits	ºC	See Table 10 *and* Table 11.			Effluent	Continuous	Recordings
Floating, Suspended, or Submerged Matter	--	See Paragraph I.B.2 of the permit				1/month	Visual Observation
Report Parameters							
Dissolved Oxygen	mg/L	Report Minimum and Average			Effluent	1/month	Grab
Total Phosphorus	mg/L	Report	--	--	Effluent	1/quarter	Grab
Nitrate + Nitrite	mg/L	Report	--	Report	Effluent	1/quarter	Grab
Flow	mgd	Report	--	Report	Effluent	5/week	Measurement
Effluent Testing for Permit Renewal							
Permit Application Effluent Testing Data		--			Effluent	1/year	--

Table 9. Changes in Permit Effluent Limits and Monitoring Requirements

Parameter	Existing Permit		Draft Permit	
	Effluent Limits	Monitoring Frequency	Effluent Limits	Monitoring Frequency
BOD_5	--	1/month	--	2/month
TSS	AML = 30 lbs/day MDL = No Limit	1/month	AML = 27 lbs/day MDL = 48.1 lbs/day	2/month
TRC	**Compliance Limit** 0.1 mg/L 0.07 lbs/day	--	**Compliance Limit** 0.05 mg/L 0.053 lbs/day	--
Total Ammonia (as N)	No Limits	1/month for one year	**Interim Limits** AML = 26.3 mg/L, 28.1 lbs/day MDL = 57.7 mg/L, 61.6 lbs/day **Final Limits Jun 1 – Oct 31** AML = 0.15 mg/L, 0.16 lbs/day MDL = 0.4 mg/L, 0.42 lbs/day **Final Limits Nov 1 – May 31** AML = 12.1 mg/L, 12.9 lbs/day MDL = 24.3 mg/L, 25.9 lbs/day	**Interim** 2/month **Final** 1/week
Temperature	No Limits	1/month for one year	See Table 10 and Table 11 below.	**Interim** 1/month **Final** Continuous
DO	--	1/month for one year	--	1/month
Total Phosphorus	--	1/month for one year	--	1/quarter

Nitrate + Nitrite	--	--	--	1/quarter
Permit Application Effluent Testing Data	--	No Monitoring	--	1/year
AML = Average Monthly Limit, AWL = Average Weekly Limit, MDL = Maximum Daily Limit				

Table 10. Effluent Temperature Limits based on the 2008 TMDL (Option 1)

Maximum Daily Temperature Limit (°C)			
Month	**Maximum Daily Effluent Flow[1] (mgd)**		
	≤ 0.064	**> 0.064 - 0.08**	**> 0.08**
July	32.1	29.6	25.7
August	23.8	22.9	21.6
September	27.6	26.0	23.4
October	37.3	33.8	28.3

Notes:
1. The applicable flow tier for a given month is determined by the maximum daily effluent flow observed during that month.

Table 11. Effluent Temperature Limits based on the January 2018 Draft TMDL (Option 2)

April 1 – July 15 (Spawning and Incubation)					
Stream Flow[1] (cfs)	**WWTP Flow[1] (mgd)**				
	≤ 0.0064	**> 0.0064 – 0.045**	**> 0.045 – 0.097**	**> 0.097 – 0.15**	**> 0.15**
< 2	16.8	10.4	9.8	9.6	9.6
2 - < 5	24.3	11.4	10.3	10.0	9.8
5 - < 10	46.8	14.7	11.8	10.9	10.6
10 - < 25	84.3	20.0	14.3	12.6	11.8
25 - < 50	—	36.1	21.8	17.5	15.6
50 - < 100	—	62.9	34.3	25.6	21.8
≥ 100	—	—	59.3	41.9	34.3
July 16 – September 30 (Cold Water Aquatic Life)					
Stream Flow[1] (cfs)	**WWTP Flow[1] (mgd)**				
	≤ 0.0064	**> 0.0064 – 0.045**	**> 0.045 – 0.097**	**> 0.097 – 0.15**	**> 0.15**
< 2	26.8	20.4	19.8	19.6	19.6
2 - < 5	34.3	21.4	20.3	20.0	19.8
5 - < 10	56.8	24.7	21.8	20.9	20.6
10 - < 25	94.3	30.0	24.3	22.6	21.8
25 - < 50	—	46.1	31.8	27.5	25.6
50 - < 100	—	72.9	44.3	35.6	31.8
≥ 100	—	—	69.3	51.9	44.3

Notes:
1. River flow must be determined using data from USGS station number 13341570. The applicable temperature limit is determined daily, based on the mean river flow and the mean effluent flow for that day.

A. Basis for Effluent Limits

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

B. Pollutants of Concern

Pollutants of concern are those that either have technology-based limits or may need water quality-based limits. The EPA identifies pollutants of concern for the discharge based on those which:

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

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

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

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

C. 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 12.

Table 12. 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

Parameter	30-day average	7-day average
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

The 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 criteria are used to determine if a facility is eligible for the equivalent limits. The federally promulgated equivalent to secondary treatment effluent limits are listed below in

Table 13. 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 permit for the City has equivalent to secondary treatment effluent limits for TSS and TSS percent removal. Using DMR data, the EPA re-evaluated treatment limits for the City 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 BOD_5 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 95^{th} 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 – Provide 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 BOD_5.

The EPA determined that the City continues to meet the three criteria for treatment equivalent to secondary for TSS and TSS percent removal (See Appendix G for the determination).

Mass-Based Limits

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

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

Since the design flow for this facility is 0.128 mgd, the technology based mass limits for BOD_5 and TSS are calculated as follows:

Average Monthly Limit = 30 mg/L × 0.128 mgd × 8.34 = 32 lbs/day

Average Weekly Limit = 45 mg/L × 0.128 mgd × 8.34 = 48 lbs/day

Chlorine

Chlorine is often used to disinfect municipal wastewater prior to discharge. The City uses chlorine disinfection. A 0.5 mg/L average monthly limit for chlorine is derived from standard operating practices. The Water Pollution Control Federation's *Chlorination of Wastewater* (1976) states that a properly designed and maintained wastewater treatment plant can achieve adequate disinfection if a 0.5 mg/L chlorine residual is maintained after 15 minutes of contact time. Therefore, a wastewater treatment plant that provides adequate chlorine contact time can meet a 0.5 mg/L total residual chlorine limit on a monthly average basis. In addition to average monthly limits (AMLs), NPDES regulations require effluent limits for POTWs to be expressed as average weekly limits (AWLs) unless impracticable. For technology-based effluent limits, the AWL is calculated to be 1.5 times the AML, consistent with the "secondary treatment" limits for BOD_5 and TSS. This results in an AWL for chlorine of 0.75 mg/L.

Since the federal regulations at 40 CFR 122.45 (b) and (f) require limitations for POTWs to be expressed as mass based limits using the design flow of the facility, mass based limits for chlorine are calculated as follows:

Monthly average Limit= 0.5 mg/L x 0.128 mgd x 8.34 = 0.53 lbs/day

Weekly average Limit = 0.75 mg/L x 0.128 mgd x 8.34 = 0.80 lbs/day

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

The EPA has determined that water quality-based effluent limits, which are more stringent than the above-described technology-based effluent limits, are necessary for chlorine. See Appendix D for reasonable potential and effluent limit calculations for TRC.

D. Water Quality-Based Effluent Limits

Statutory and Regulatory Basis

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Discharges to State or Tribal waters must also comply with limitations imposed by the State or Tribe as part of its certification of NPDES permits under section 401 of the CWA. 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. Effluent limits must also meet the applicable water quality requirements of affected States other than the State in which the discharge originates, which may include downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA Section 401(a)(2)).

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

Reasonable Potential Analysis and Need for Water Quality-Based Effluent Limits

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

In some cases, a dilution allowance or mixing zone is permitted. A mixing zone is a limited area or volume of water where initial dilution of a discharge takes place and within which certain water quality criteria may be exceeded (EPA, 2014). While the criteria may be exceeded within the mixing zone, the use and size of the mixing zone must be limited such that the waterbody as a whole will not be impaired, all designated uses are maintained and acutely toxic conditions are prevented.

The Idaho Water Quality Standards at IDAPA 58.01.02.060 provides Idaho's mixing zone policy for point source discharges. In the State 401 Certification, the IDEQ proposes to authorize mixing zones. The proposed mixing zones are summarized in Table 14. The EPA also calculated dilution factors for year round and seasonal critical low flow conditions. All

dilution factors are calculated with the effluent flow rate set equal to the design flow of 0.128 mgd.

Table 14. Mixing zones

Season	Criteria Type	Critical Low Flow (cfs)	Mixing Zone (% of Critical Low Flow)	Dilution Factor
Annual	Acute Aquatic Life	0.16	25	1.2
	Chronic Aquatic Life (except ammonia)	1.35	25	2.7
Season June 1 – October 31	Acute Aquatic Life	0.16	25	1.2
	Chronic Aquatic Life (ammonia)	0.51	25	1.6
Season November 1 – May 31	Acute Aquatic Life	12.7	25	17.0
	Chronic Aquatic Life (ammonia)	29.1	25	37.7

The reasonable potential analysis and water quality-based effluent limit calculations were based on mixing zones shown in Table 14. If IDEQ revises the allowable mixing zone in its final certification of this permit, reasonable potential analysis and water quality-based effluent limit calculations will be revised accordingly.

The equations used to conduct the reasonable potential analysis and calculate the water quality-based effluent limits are provided in Appendix C.

Reasonable Potential and Water Quality-Based Effluent Limits

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

Ammonia

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

Table 15. Ammonia Criteria

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

INPUT	
1. Receiving Water Temperature (deg C):	24.7
2. Receiving Water pH:	9.04
3. Is the receiving water a cold water designated use?	Yes
4. Are non-salmonid early life stages present or absent?	Present
OUTPUT	
Total ammonia nitrogen criteria (mg N/L):	
Acute Criterion (CMC)	**0.83**
Chronic Criterion (CCC)	**0.24**

Acute Criteria Equation: Cold Water

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

Acute Criteria Equation: Warm Water

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Chronic Criteria: Cold Water, Early Life Stages Present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028(25-T)})$$

Chronic Criteria: Cold Water, Early Life Stages Absent

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet 1.45 \cdot 10^{0.028(25-T)})$$

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

INPUT	
1. Receiving Water Temperature (deg C):	15.3
2. Receiving Water pH:	8.60
3. Is the receiving water a cold water designated use?	Yes
4. Are non-salmonid early life stages present or absent?	Present
OUTPUT	
Total ammonia nitrogen criteria (mg N/L):	
Acute Criterion (CMC)	**1.77**
Chronic Criterion (CCC)	**0.88**

Acute Criteria Equation: Cold Water

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

Acute Criteria Equation: Warm Water

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Chronic Criteria: Cold Water, Early Life Stages Present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028(25-T)})$$

Chronic Criteria: Cold Water, Early Life Stages Absent

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet 1.45 \cdot 10^{0.028(25-T)})$$

A reasonable potential calculation showed that the City's 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 seasonal water quality-based effluent limits for ammonia from the periods of June 1 to October 31 and November 1 to May 31. The draft permit requires that the permittee monitor the receiving water for ammonia, pH and temperature in order to determine the applicable ammonia criteria for the next permit reissuance. See Appendix D and Appendix E for reasonable potential and effluent limit calculations for ammonia.

pH

The Idaho water quality standards at IDAPA 58.01.02.250.01.a, require pH values of the river to be within the range of 6.5 to 9.0. Mixing zones are generally not granted for pH, therefore the most stringent water quality criterion must be met before the effluent is discharged to the receiving water. Effluent pH data were compared to the water quality criteria. The City exceeded the maximum pH limit of 9.0 on two separate occasions between September 2012 to August 2017 and never exceeded the minimum limit of 6.5. A reasonable potential calculation showed, however, that the City's discharge would not have the reasonable potential to cause or contribute to a violation of the water quality criteria for pH. See Appendix F for reasonable potential calculations for pH.

Dissolved Oxygen (DO) and BOD_5

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 outside of the regulated mixing zone. The BOD_5 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 BOD_5 and WQBEL's for ammonia will ensure that the discharge does not cause or contribute to a violation of dissolved oxygen criteria in the receiving water. The City will continue to sample for DO in the effluent and surface water of the Potlatch River to assess DO impacts on water quality.

Phosphorus

The Potlatch River is not listed as impaired for nutrients. The facility will continue to sample for TP in the effluent and surface water of the Potlatch River.

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. A mixing zone is not appropriate for bacteria for waters designated for contact recreation. Therefore, the draft permit contains a monthly geometric mean effluent limit for *E. coli* of 126 organisms per 100 ml (IDAPA 58.01.02.251.01.a.).

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

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

The *2008 TMDL* assigns a WLA for the City for *E. coli*. The *2008 TMDL* was approved by EPA in 2009. The NPDES regulations state that effluent limits must be consistent with the assumptions and requirements of any EPA-approved WLA in a TMDL. (*See* 40 CFR 122.44(d)(1)(vii)(A)). The WLA for the City is equivalent to Idaho's Water Quality Standards for *E. coli* as described above (See Table 25 of the 2008 TMDL). Therefore, the permit includes limits equivalent to the WLA and Water Quality Standard of 126 cfu/100mL monthly geometric mean and 406 cfu/100mL instantaneous maximum.

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.

Chlorine

The Idaho state water quality standards at IDAPA 58.01.02.210 establish an acute criterion of 19 µg /L, and a chronic criterion of 11 µg/L for the protection of aquatic life. A reasonable potential calculation showed 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. Therefore, the draft permit contains a water quality-based effluent limit that is more stringent than the technology-based effluent limit for chlorine. The effluent limit calculations were found to be less stringent than current permit limits for TRC. However, due to anti-backsliding requirements, the current permit concentration and mass based limits are held as the draft permit limits. See Appendix D for reasonable potential and effluent limit calculations for TRC.

The minimum level (ML) for TRC in the current permit is 100 µg/L, however, the more recently approved ML is 50 µg/L. The compliance evaluation limit has been updated in the draft permit to reflect the current 50 µg/L ML.

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.

TSS

The *2008 TMDL* assigns a WLA for the City for TSS of 27.0 lbs/day monthly average and 48.1 lbs/day maximum daily (See Table 40 of the TMDL). The *2008 TMDL* was approved by EPA in 2009. The NPDES regulations state that effluent limits must be consistent with the assumptions and requirements of any EPA-approved WLA in a TMDL. (*See* 40 CFR 122.44(d)(1)(vii)(A)). Therefore, the permit includes monthly average and maximum daily TSS limits consistent with the WLA in the *2008 TMDL*.

Average weekly mass limits for TSS based on the facility's design flow and a TBEL of 65 mg/L would give an allowable limit of 151.8 lbs/day, however, due to anti-backsliding requirements the current average weekly mass limit of 43 lbs/day will remain.

Temperature

In its draft Clean Water Act Section 401 certification of this permit, Idaho DEQ has specified effluent limits for temperature which are consistent with the WLAs in the January 2018 draft TMDL. The EPA must include permit requirements specified in a State certification of an NPDES permit (40 CFR 124.55(a)(2). Therefore, the draft permit includes the temperature

limits found in Table 11. Effluent Temperature Limits based on the January 2018 Draft TMDL (Option 2).

The following discussion is incuded to show the EPA's proposed temperature effluent limits that were in place before receiving the effluent limits found in the draft Clean Water Act Section 401 certification from IDEQ.

Federal regulations state that effluent limits in an NPDES permit must be "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7."

The *2008 TMDL* includes temperature wasteload allocations for the City of Kendrick and has been finalized by IDEQ and approved by the EPA. The WLAs are found in Table 17, below.

IDEQ is in the process of revising the temperature component of the *Potlatch River Subbasin Assessment and TMDLs*. In August 2017, IDEQ issued the draft *Potlatch River Watershed Assessment and Total Maximum Daily Loads: 2017 Temperature TMDL* for public comment. IDEQ has provided the EPA with a revised draft of this TMDL (*January 2018 Draft TMDL*). The WLAs found in the *2018 TMDL* are found in Table 18, below.

Since IDEQ has proposed to revise the temperature TMDL for the Potlatch River, the draft permit proposes two options for temperature effluent limits. One set of limits are based on the *2008 TMDL* (Option 1,Table 10), and the other set of limits are based on the *January 2018 Draft TMDL* (Option 2, Table 11).

If the revised TMDL is finalized and approved before the EPA issues a final permit for the City of Kendrick, the final permit will include effluent limits consistent with the WLAs in the final revised TMDL. The EPA expects that these WLAs will be similar to the WLAs proposed in the *January 2018 Draft TMDL*. If the revised TMDL is not finalized before the EPA issues a final permit, the final permit will include effluent limits consistent with the WLAs in the *2008 TMDL*.

The *2008 TMDL* provides a table of "Allowable effluent temperatures for Kendrick and Juliaetta WWTPs" at Table 46, which is reproduced below.

Table 16. "Allowable Effluent Temperatures" from Table 46 of 2008 TMDL

Month	Mean Stream Flow (cfs)	Allowable Effluent Temperature (°C) at Effluent Flow of		
		0.1 cfs	0.124 cfs	0.2 cfs
January	612	478.3	389.5	248.8
February	789	611.1	496.5	315.2
March	965	743.1	603.0	381.2
April	580	454.3	370.1	236.8
May	390	311.8	255.2	165.6
June	122	110.8	93.1	65.1

Month	Mean Stream Flow (cfs)	Allowable Effluent Temperature (°C) at Effluent Flow of		
		0.1 cfs	0.124 cfs	0.2 cfs
July	17	32.1	29.6	25.7
August	6	23.8	22.9	21.6
September	11	27.6	26.0	23.4
October	24	37.3	33.8	28.3
November	114	104.8	88.3	62.0
December	311	252.5	207.4	135.9

The EPA has proposed effluent limits consistent with these wasteload allocations in Table 10 of this fact sheet. Not every temperature value listed in Table 46 of the *2008 TMDL* is proposed as an effluent limit in the draft permit. The *2008 TMDL* states, on Page 105, that "facility wasteload allocations should be applied in accordance within the period of time when numeric criteria for Salmonid Spawning and Cold Water Aquatic Life are exceeded as shown in Figure 28" Figure 28 of the TMDL shows that salmonid spawning criteria are exceeded from roughly May through October. Thus, no temperature limits are proposed from November – April. In addition, due to relatively high river flows which result in "allowable effluent temperatures" much warmer than typical POTW effluent, the EPA determined that the facility does not have the reasonable potential to cause or contribute to excursions above water quality standards for temperature in May or June, so temperature limits are proposed based on the *2008 TMDL* only for July – October. Also, in Table 10, the effluent flow tier values have been converted from cfs to mgd, since this is the unit in which the permittee is required to report effluent flow. The effluent limits proposed in Table 11are consistent with the wasteload allocations in Tables 11 and 15 of the *January 2018 Draft TMDL*, which are reproduced below.

Table 17. "Allowable Maximum Effluent Temperatures" from Table 11 of January 2018 Draft TMDL for Spawning and Incubation

Table 11. Juliaetta and Kendrick WWTPs allowable maximum effluent temperature (°C) which would increase receiving water temperature by 0.3 °C when the receiving water meets the salmonid spawning temperature criteria (9 °C).

Potlatch River flow below WWTP outfall (cfs)	WWTP Effluent Discharge (cfs)				
	0.01	0.07	0.15	0.23	0.3
	Effluent Temperature (°C)				
1	16.8	10.4	9.8	9.6	9.6
2	24.3	11.4	10.3	10.0	9.8
5	46.8	14.7	11.8	10.9	10.6
10	84.3	20.0	14.3	12.6	11.8
25	196.8	36.1	21.8	17.5	15.6
50	384.3	62.9	34.3	25.6	21.8
100	759.3	116.4	59.3	41.9	34.3

Table 18. "Allowable Maximum Effluent Temperatures" from Table 15 of January 2018 Draft TMDL for Cold Water Aquatic Life

Table 15. Juliaetta and Kendrick WWTPs allowable maximum effluent temperature (°C) which would increase receiving water temperature by 0.3 °C when the receiving water meets the cold water aquatic life temperature criteria (19 °C).

Potlatch River flow below WWTP outfall (cfs)	WWTP Effluent Discharge (cfs)				
	0.01	0.07	0.15	0.23	0.3
	Effluent Temperature (°C)				
1	26.8	20.4	19.8	19.6	19.6
2	34.3	21.4	20.3	20.0	19.8
5	56.8	24.7	21.8	20.9	20.6
10	94.3	30.0	24.3	22.6	21.8
25	206.8	46.1	31.8	27.5	25.6
50	394.3	72.9	44.3	35.6	31.8
100	769.3	126.4	69.3	51.9	44.3

Similar to the proposed effluent limits based on the *2008 TMDL*, not every temperature value listed in Tables 11 and 15 of the *January 2018 Draft TMDL* is proposed as an effluent limit in the draft permit. The EPA proposes to only include effluent limits below the boiling point of water (100°C). Similar to Table 10, the effluent flow tier values in Table 11 have been converted from cfs to mgd.

E. Antibacksliding

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

An anti-backsliding analysis was done for the mass-based limits for TSS, BOD_5 and TRC. Between June 2016 – September 2017 the City conducted a lagoon improvement project. The project replaced the old system with new lagoons, but did not increase the design flow of the facility. The design flow of a facility is considered in developing the allowable effluent mass limits. The existing mass-based limits were based on average annual design flow of 0.08 mgd. The maximum monthly design flow is 0.128 mgd. The facility has always been meeting the existing mass-based limits based on 0.08 mgd. In consideration of the prohibition on backsliding, the EPA is retaining the existing mass-based limits for TSS, BOD_5 and TRC.

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.

Table 19. Effluent Monitoring Changes from the Previous Permit

Parameter	Existing Monitoring Requirement	Draft Permit Monitoring Requirement	Reason for Change
BOD_5	1/month	2/month	Determine compliance and performance
TSS	1/month	2/month	Determine compliance and performance
Ammonia	1/month for 1 year	2/month interim 1/week final	Reasonable potential to exceed standards
Temperature	1/month for 1 year	1/month interim Continuous final	Determine compliance with new limit
DO	1/month for 1 year	1/month	Future reasonable potential analysis
Phosphorus	1/month for 1 year	1/quarter	No impairments to receiving water
Nitrate + Nitrite	No monitoring	1/quarter	Future reasonable potential analysis
Permit Application Effluent Testing Data	No monitoring	1/year	Standard permit condition

$\underline{BOD_5}$

Because there have been violations of effluent limits for BOD_5, EPA proposes to increase the monitoring frequency for BOD_5 from once per month to twice per month. This will allow the EPA to better determine compliance with the BOD_5 limit and evaluate the performance of the WWTP.

<u>TSS</u>

Because there have been violations of effluent limits for TSS, and because the average monthly mass limit for TSS is now water quality-based, the EPA proposes to increase the monitoring frequency for TSS from once per month to twice per month. This will allow the EPA to better determine compliance with the TSS limits and evaluate the performance of the WWTP.

Ammonia

A reasonable potential analysis showed that the City has reasonable potential to cause or contribute to an exceedance of water quality in the Potlatch River. The EPA proposes to increase the monitoring frequency of ammonia from 1/month for 1 year to 2/month for the interim limits and 1/week for the final limits. This will allow the EPA to better determine compliance with the ammonia limits.

Temperature

The EPA proposes to require continuous effluent monitoring for temperature, to monitor compliance with the proposed effluent limits for temperature. The permit requires continuous temperature monitoring to being within 1 year of the effective date of the final permit. For the first year, the draft permit proposes to require temperature monitoring once per week. The previous permit requires weekly effluent monitoring for pH and chlorine using a grab sample, and the EPA proposes to continue this monitoring in the reissued permit. Thus, weekly temperature monitoring will not be burdensome, since the permittee can simply measure the temperature of the same grab samples used for pH and chlorine sampling.

Dissolved Oxygen

The EPA proposes to increase DO monitoring to 1/month throughout the permit term. These data will be used to determine if the facility's discharge could impair the receiving water's designated use of cold water aquatic life. IDEQ sets a minimum DO concentration of 6 mg/L for this designated use (IDAPA 58.01.02.250.02.a). The minimum effluent DO concentration reported by the permittee was 1.25 mg/L.

Phosphorus

Because uses of the receiving water are not impaired by nutrients, the EPA proposes to change the monitoring frequency to quarterly.

Nitrate + Nitrite

The EPA proposes to require Nitrate + Nitrite quarterly monitoring. These data will be used to determine if the facility's discharge could impair the receiving water's designated use of domestic water supply. The EPA's recommended criterion for nitrate, for the consumption of water and organisms, is 10 mg/L, and, in oxygenated natural water systems, nitrite is rapidly oxidized to nitrate (EPA 1986).

C. Surface Water Monitoring

In general, surface water monitoring may be required for pollutants of concern to assess the assimilative capacity of the receiving water for the pollutant. In addition, surface water monitoring may be required for pollutants for which the water quality criteria are dependent and to collect data for TMDL development if the facility discharges to an impaired water body. Table 20 presents the proposed surface water monitoring requirements for the draft permit. Surface water monitoring results must be submitted with the DMR.

The facility has reasonable potential to exceed ammonia aquatic life criteria. Therefore, surface water monitoring will be required for ammonia, and its dependent parameters; temperature and pH. The Idaho water quality criteria for ammonia become more stringent as temperature and pH values increase.

Table 20. Surface Water Monitoring in Draft Permit

Parameter	Units	Frequency	Sample Type	Sample Location
Flow	cfs	1/quarter	Grab	Upstream
Dissolved Oxygen	mg/L	1/quarter	Grab	Upstream
Total Phosphorus	mg/L	1/quarter	Grab	Upstream
Total Ammonia as N	mg/L	1/quarter	Grab	Upstream
Nitrate + Nitrite	mg/L	1/quarter	Grab	Upstream
Temperature	°C	Continuous	Recording	Upstream
pH	standard units	1/quarter	Grab	Upstream
For quarterly monitoring frequency, quarters are defined as: January 1 to March 31; April 1 to June 30; July 1 to September 30; and, October 1 to December 31.				

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.epa.gov. The permittee may use NetDMR after requesting and receiving permission from EPA Region 10.

VII. Sludge (Biosolids) Requirements

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

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

VIII. Other Permit Conditions

A. Compliance Schedules

Compliance schedules are authorized by federal NPDES regulations at 40 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. The State of Idaho's compliance schedule authorizing provision does not reserve the authority to authorize a compliance schedule exclusively for the State.

Additionally, the federal regulations at 40 CFR 122.47 require that the compliance schedules require compliance with effluent limits 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 WQBELs upon the effective date of the permit and that a compliance schedule is appropriate (see 40 CFR 122.47(a)).

The EPA has found that a five year compliance schedule is appropriate for ammonia because the City cannot immediately comply with the new effluent on the effective date of the permit. Since the compliance schedule is longer than one year, interim dates for the submission of reports of progress have been established and are detailed in the permit. The City's previous permit required effluent monitoring for ammonia once per month in the calendar year 2006. Effluent data for temperature are summarized in Table 21.

Interim limits will be used until the final ammonia effluent limits are met or the end of the compliance schedule is reached. Interim limits are performance based using a lognormal distribution. Observed effluent data distributions are generally lognormally distributed. The performance based effluent limit calculations can be found in Appendix E.

The City's previous permit required effluent monitoring for ammonia and temperature once per month in the calendar year 2006. Effluent data for these constituents are summarized in Table 21. The EPA has determined that the permittee cannot comply with the following proposed effluent temperature limits based on the *January 2018 Draft TMDL* which area less than 19.2 °C. Therefore, the draft permit proposes a compliance schedule for those limits.

Table 21. Effluent Data 2006

Date	Ammonia (mg/L)	Temperature (°C)
1/31/2006	9.81	5
2/28/2006	9.55	5.8
3/31/2006	1.07	10.6
4/30/2006	3.06	10.2
5/31/2006	5.38	16
6/30/2006	8.57	19.2
10/31/2006	9.85	3.9
11/30/2006	16.4	30
12/31/2006	20.2	28

The EPA has determined that the permittee cannot comply with the following proposed effluent temperature limits based on the January 2018 Draft TMDL and draft Clean Water Act 401 Water Quality Certification which are less than 19.2 °C. Therefore, the draft permit proposes a compliance schedule for those limits.

The proposed compliance schedule allows a total of 13 years to achieve compliance with the new water quality-based effluent lmiits for temperature. This schedule is 2 years shorter than the schedule of compliance established for new water quality-based effluent limits for temperature in the City of Nampa's NPDES permit (ID0022063).

The proposed compliance schedule allows 3 years for the City to evaluate alternatives that may be used to achieve the final temperature effluent limits. The EPA believes this is appropriate in this case because it is beneficial to explore options other than "end-of-pipe" treatment (e.g., refrigerating the effluent). Some of the other alternatives that the City is required to consider, such as wastewater re-use or habitat restoration, may have additional benefits beyond reducing temperature. The City may wish to pursue multiple options if the entire required reduction in temperature cannot be achieved using a single strategy.

Following the alternatives evaluation, the proposed schedule allows 5 additional years to complete the preliminary design of any planned facility upgrades and/or preliminary plan and schedule for an alternative temperature mitigation approach. The alternative(s) selected for achieving compliance with temperature limits may be complex and costly, so the EPA has allowed 5 years for this work.

Following the preliminary design and/or plan, the proposed schedule allows 1 yeear for the complete and request IDEQ approval of the final design and/or plan.

Following IDEQ approval of the final design and/or plan, the schedule allows 2 years for construction of WWTP upgrades and/or implementation or the alternative temperature mitigation plan.

Following construction and/or implementation, the schedule allows 1 additionsl year to achieve compliance.

B. Quality Assurance Plan

The City is required to update the Quality Assurance Plan within 180 days of the effective date of the final permit. The Quality Assurance Plan must include 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 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 (SSOs) and Proper Operation and Maintenance of the Collection System

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

permit establishes reporting, record keeping and third party notification of SSOs. Finally, the permit requires proper operation and maintenance of the collection system.

The following specific permit conditions apply:

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

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

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

Record Keeping – The permittee is required to keep records of SSOs. The permittee must retain the reports submitted to the EPA and other appropriate reports that could include work orders associated with investigation of system problems related to a SSO, that describes the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the SSO (See 40 CFR 122.41(j)).

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

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

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 WWTP 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.

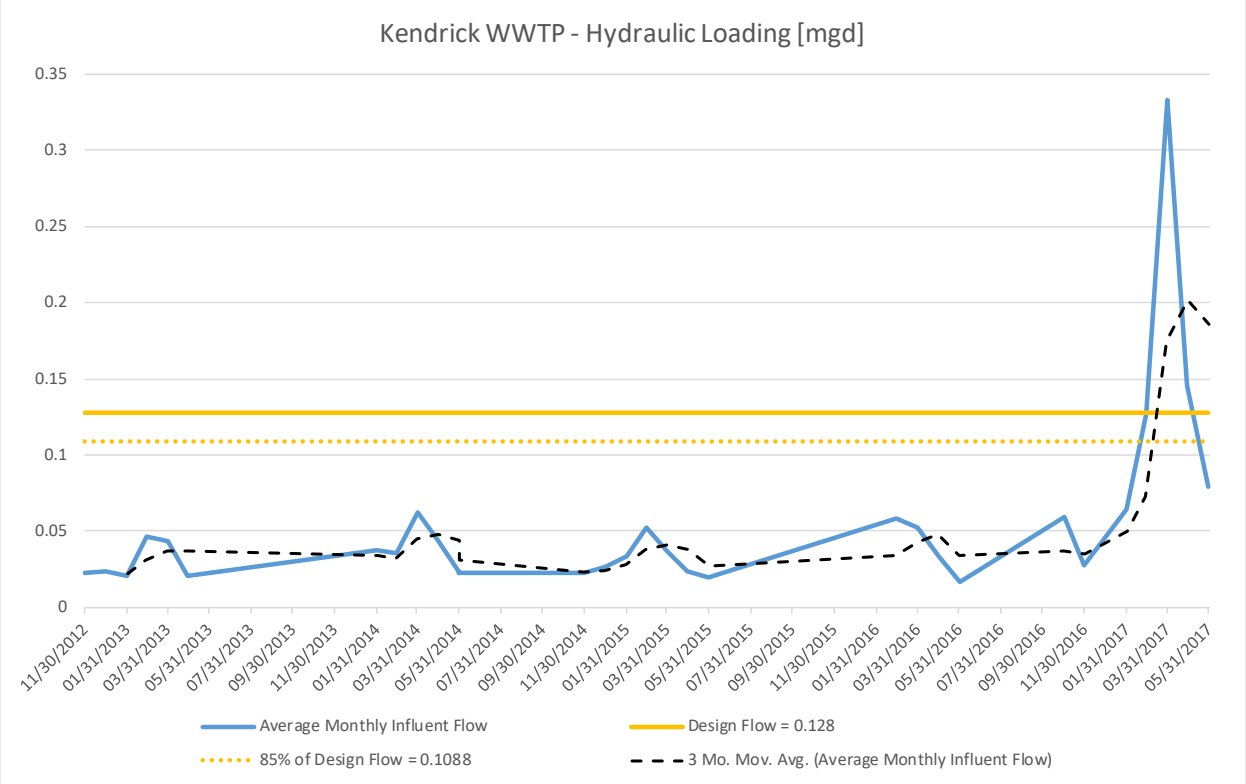
Regardless of whether a WWTP is located near a potentially overburdened community, the EPA encourages permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see https://www.federalregister.gov/d/2013-10945). 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 https://www.epa.gov/environmentaljustice and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

F. Design Criteria

The permit includes design criteria requirements. This provision requires the permittee to compare influent flow and loading to the facility's design flow and loading and prepare a facility plan for maintaining compliance with NPDES permit effluent limits when the flow or loading exceeds 85% of the design criteria values for three consecutive months. For the City, the trigger for developing a facility plan is 0.11 (rounded up from 0.1088) mgd average monthly flow for three consecutive months.

The figure below illustrates the hydraulic loading approximated by measurements taken at the influent of the facility between 2012 and 2017. The figure shows that the facility generally discharges below its design flow. The facility began discharging above its design flow during the lagoon improvement project from June 2016-September 2017 during which not all lagoons were operational at all times.



G. Pretreatment Requirements

Idaho does not have an approved state pretreatment program per 40 CFR 403.10, thus, the EPA is the Approval Authority for Idaho POTWs. Since the City 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 the City of Kendrick WWTP.

Special Condition II.E of the permit reminds the Permittee that it cannot authorize 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 Latah and Nez Perce Counties, Idaho, designated by the USFWS (as 12/18/2017), included the following threatened species;

- Spalding's Catchfly
- Bull Trout

The EPA has determined that the discharge will have no effect on threatened or endangered species located in the vicinity of the Potlatch River in Kendrick, Idaho. https://ecos.fws.gov/ipac (See Appendix H).

B. Essential Fish Habitat

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

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

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

C. State Certification

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

D. Antidegradation

The IDEQ has completed an antidegradation review which is included in the draft 401 certification for this permit. (*See* Appendix J) The EPA has reviewed this antidegradation analysis and finds that it is consistent with the State's water quality standards and the State's antidegradation implementation procedures. Comments on the 401 certification including the

antidegradation review can be submitted to the IDEQ as set forth below (see State Certification on Page 61 of this Fact Sheet).

E. 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. https://www3.epa.gov/npdes/pubs/owm0264.pdf

EPA. 2010. *NPDES Permit Writers' Manual.* Environmental Protection Agency, Office of Wastewater Management, EPA-833-K-10-001. September 2010. https://www3.epa.gov/npdes/pubs/pwm_2010.pdf

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EPA. 2014. Water Quality Standards Handbook Chapter 5: General Policies. Environmental Protection Agency. Office of Water. EPA 820-B-14-004. September 2014. https://www.epa.gov/sites/production/files/2014-09/documents/handbook-chapter5.pdf

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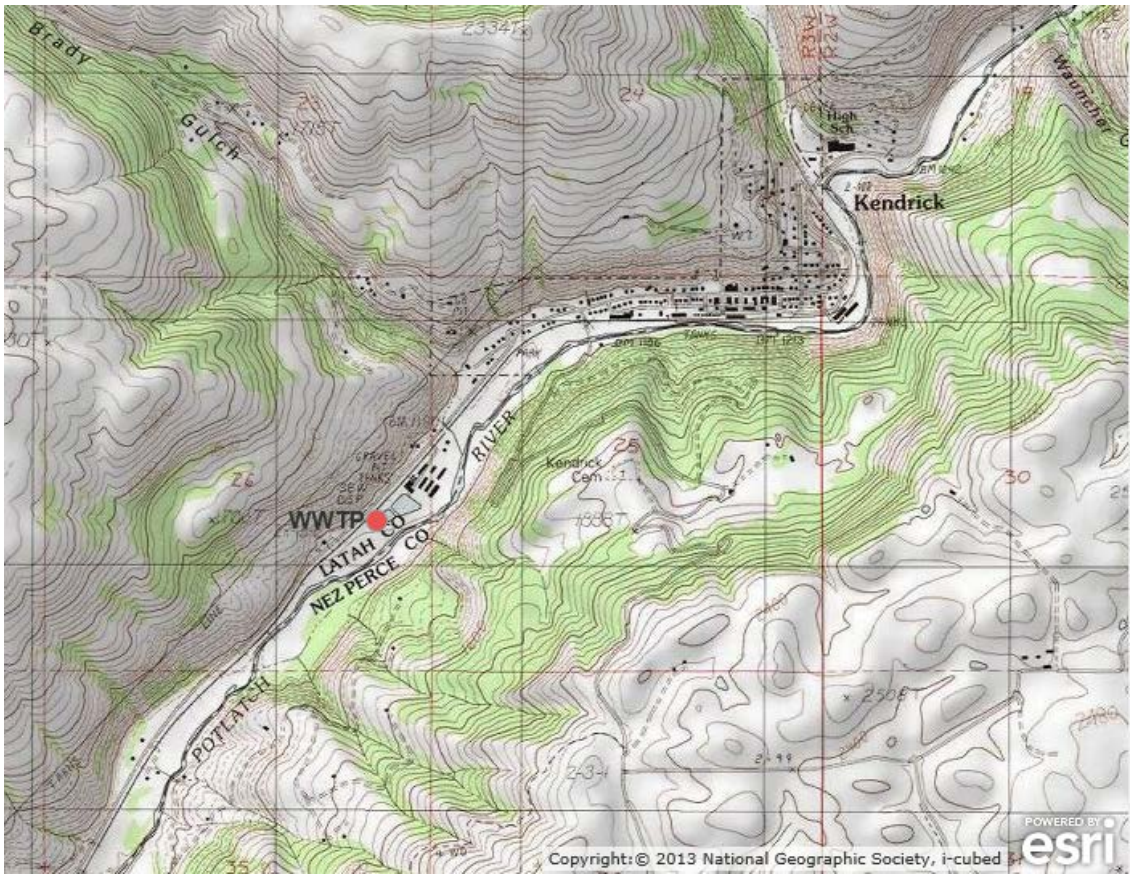
IDEQ. 2008. *Potlatch River Subbasin Assessment and TMDLs*. September 2008. https://www.deq.idaho.gov/media/464337-potlatch_river_entire.pdf

Latah Soil and Water Conservation District. 2007. *Potlatch River Watershed Management Plan*. October 2007. Prepared by Resource Planning Unlimited, Inc. http://www.latahsoil.org/sitebuildercontent/sitebuilderfiles/PotlatchRiverManagementPlanCompleteOct2007.pdf

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

EPA GeoPlatform using the 2013 National Geographic Society, i-cubed base layer. Coordinates provided by the City of Kendrick in 2009 application.

Appendix B. Water Quality Data

A. Treatment Plant Effluent Data

	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Percent Removal	Effluent	Effluent	Effluent	Effluent	Percent Removal	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
	Flow, in conduit or thru treatment plant	Flow, in conduit or thru treatment plant	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	BOD, 5-day, percent removal	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, total suspended	Solids, suspended percent removal	pH	pH	Chlorine, total residual	Chlorine, total residual	Chlorine, total residual	Chlorine, total residual	E. coli	E. coli
	DAILY MX	MO AVG	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MN % RMV	MO AVG	MO AVG	WKLY AVG	WKLY AVG	MN % RMV	INST MAX	INST MIN	DAILY MX	DAILY MX	MO AVG	MO AVG	INST MAX	MO GEOMN
	MGD	MGD	lb/d	mg/L	lb/d	mg/L	%	lb/d	mg/L	lb/d	mg/L	%	SU	SU	lb/d	mg/L	lb/d	mg/L	#/100mL	#/100mL
9/30/2012																				
10/31/2012																				
11/30/2012	0.043	0.023	1.75	9.21	3.32	9.21	96.38	5.11	27	9.72	27	90.9	8.2	7.3	0.036	0.1	0.018	0.1	1	1
12/31/2012	0.036	0.024	1.25	6.11	0.93	6.11	96.4	5.98	29	4.46	29	83.1	8.1	7.7	0.03	0.1	0.02	0.1		
1/31/2013	0.054	0.021	2.55	14.1	2.54	14.1	94.7	3.26	18	3.24	18	91.7	8.1	7.3	0.045	0.1	0.018	0.1	14.6	2
2/28/2013	0.061	0.047	7.74	19.5	7.02	19.5	92.44	11.9	30	10.8	30	84.6	8.4	7.3	0.05	0.1	0.03	0.1	31.8	2
3/31/2013	0.054	0.044	7.7	20.7	9.32	20.7	84.1	14.9	40	18	40	88.2	8.71	8.3	0.04	0.1	0.03	0.1	133.4	21
4/30/2013	0.03	0.021	3.11	17.4	3.44	17.4	83.4	5.18	29	5.74	29	84.7	8.5	7.1	0.025	0.1	0.017	0.1	3	3
5/31/2013	0.03	0.024	3.6	17.6	3.17	17.6	90.6	15.57	76	13.69	76	65.76	8.4	6.8	0.025	0.1	0.02	0.1	1	1
6/30/2013																				
7/31/2013																				
8/31/2013																				
9/30/2013																				
10/31/2013																				
11/30/2013																				
12/31/2013																				
1/31/2014	0.061	0.038	5.6	17.3	6.23	17.3	94.1	8.1	25	9	25	89.5	8	7.1	0.05	0.1	0.032	0.1	1	1
2/28/2014	0.047	0.036	3	9.79	3.88	9.79	85.3	9.83	32	12.68	32	90.4	8.1	7.4	0.039	0.1	0.03	0.1	1	1
3/31/2014	0.072	0.062	10.59	20.8	10.7	20.8	94	20.37	40	20.58	40	93.6	8.4	8.2	0.06	0.1	0.05	0.1	1	1
4/30/2014	0.072	0.045	11.5	30.6	6.79	30.6	93.2	18.4	49	10.8	49	93.2	9.5	7.1	0.06	0.1	0.03	0.1	133.4	5
5/31/2014	0.03	0.023	4.45	22.4	3.65	22.4	91.9	5.36	27	4.4	27	96.3	8.5	6.69	0.025	0.1	0.019	0.1	1	1
6/30/2014																				
7/31/2014																				
8/31/2014																				
9/30/2014																				
10/31/2014																				
11/30/2014	0.061	0.023	2.59	12.1	2.41	13.1	94.4	6.5	33	6	33	80.3	8.5	7.87	0.051	0.1	0.019	0.1	16	2
12/31/2014	0.054	0.027	2.47	10.8	1.88	10.8	92.17	5.05	22	3.84	22	86	8.2	7.5	0.045	0.1	0.022	0.1	1	1
1/31/2015	0.047	0.034	0.57	2	0.5	2	98.1	7.41	26	6.55	26	89.6	8.2	7.3	0.039	0.1	0.028	0.1	1	1
2/28/2015	0.072	0.052	5.1	11.6	5.22	11.6	94	20.2	46	20.7	46	87.79	9	7.7	0.06	0.1	0.043	0.1	488.4	24
3/31/2015	0.061	0.037	0.61	2	0.42	2	98.9	9.78	32	6.72	32	88.6	8.8	7.6	0.05	0.1	0.03	0.1	1	1
4/30/2015	0.039	0.024	1.33	6.64	0.88	6.64	87.4	1.4	7	0.93	7	94.2	8.9	7	0.03	0.1	0.02	0.1	9.7	2
5/31/2015	0.033	0.02	4.87	28.4	5.37	28.4	49.2	15.7	91.7	17.3	91.7	60.8	9.87	7	0.027	0.1	0.017	0.1	12.1	2
6/30/2015																				
7/31/2015																				
8/31/2015																				
9/30/2015																				
10/31/2015																				
11/30/2015																				
12/31/2015																				
1/31/2016																				
2/29/2016	0.072	0.058	5.92	12.1	6.2	12.1	90.5	13.6	28	14.4	28	89.2	8.7	7.48	0.06	0.1	0.048	0.1	51.2	3
3/31/2016	0.072	0.052	7.02	16	9.6	16	89.4	9.6	22	13.2	22	84.17	8.6	7.5	0.06	0.1	0.043	0.1	20	2
4/30/2016	0.072	0.034	3.16	10.9	2.61	10.9	93.6	0.87	3	0.72	3	99.2	7.9	6.9	0.06	0.1	0.029	0.1	1	1
5/31/2016	0.025	0.017	1.51	10.6	2.1	10.6	93.9	1.84	13	2.57	13	95.2	8.5	7.22	0.021	0.1	0.014	0.1	1	1
6/30/2016																				
7/31/2016																				
8/31/2016																				
9/30/2016																				
10/31/2016	0.098	0.059	17.46	35.2	28.76	35.2	51	18.35	37	30.24	37	91.3	8	7	0	0.1	0	0.1	2419.6	12.6
11/30/2016	0.043	0.028	10.97	45.7	9.68	45.7	94.7	12.97	54	11.94	54	98.3	8.2	7.1	0	0	0	0	81.3	4.6
12/31/2016																				
1/31/2017	0.115	0.064	24	44.8	6.9	44.8	71.8	12.8	23.9	3.73	23.9	71.6	8.5	7.1	0	0	0	0	2419.6	4.75
2/28/2017	0.446	0.127	45.4	42.8	30.8	42.8	19	10.9	10.3	7.4	10.3	78	8.5	7.2	0	0	0	0	1	1
3/31/2017	0.59	0.333	48.3	17.4	44.7	17.4	54	289	10.4	26.7	10.4	91.2	8.5	7	0	0	0	0	686.7	6.72
4/30/2017	0.23	0.146	33.17	27.1	24.08	27.1	15	15.42	12.6	11.2	12.6	61.7	8.5	7.4	0	0	0	0	1	1
5/31/2017	0.133	0.079	14.72	22.3	16.06	22.3	27.5	18.03	27.3	19.67	27.3	81.6	8.2	7.3	0	0	0	0	1	1
6/30/2017																				
7/31/2017																				
8/31/2017																				
Average	0.10	0.05	9.73	18.80	8.64	18.83	80.37	19.78	30.71	10.90	30.71	86.02	8.48	7.32	0.03	0.08	0.02	0.08	225.34	3.82
Minimum	0.025	0.017	0.57	2	0.42	2	15	0.87	3	0.72	3	60.8	7.9	6.69	0	0	0	0	1	1
Maximum	0.59	0.333	48.3	45.7	44.7	45.7	98.9	289	91.7	30.24	91.7	99.2	9.87	8.3	0.06	0.1	0.05	0.1	2419.6	24
Count	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29
Std Dev	0.12	0.06	12.44	11.74	10.38	11.72	24.28	51.17	18.91	7.50	18.91	9.91	0.43	0.37	0.02	0.04	0.01	0.04	626.60	5.74
CV	1.29	1.12	1.28	0.62	1.20	0.62	0.30	2.59	0.62	0.69	0.62	0.12	0.05	0.05	0.67	0.51	0.71	0.51	2.78	1.50
95th Percentile	0.35	0.14	39.90	43.90	29.88	43.90	97.34	20.29	66.10	24.00	66.10	97.40	9.28	8.05	0.06	0.10	0.05	0.10	1726.44	17.64
5th Percentile	0.03	0.02	0.90	3.85	0.67	3.85	22.83	1.60	8.49	1.67	8.49	63.53	8.00	6.85	0	0	0	0	1	1

Reference

Discharge Monitoring Reports 9/30/2012 – 8/31/2017.

	Effluent Gross	Effluent Gross	Effluent Gross	Effluent Gross
	Nitrogen, ammonia total [as N]	Oxygen, dissolved [DO]	Phosphorus, total [as P]	Temperature, water deg. centigrade
	Daily Maximum	Minimum	Daily Maximum	Daily Maximum
	mg/L	mg/L	mg/L	°C
1/31/2006	9.81	4.86	1.67	5
2/28/2006	9.55	6	1.66	5.8
3/31/2006	1.07	9.94	1.39	10.6
4/30/2006	3.06	9.8	1.31	10.2
5/31/2006	5.38	2.79	2.39	16
6/30/2006	8.57	1.25	2.28	19.2
7/31/2006				
8/31/2006				
9/30/2006				
10/31/2006	9.85	2.62	2.95	3.9
11/30/2006	16.4	4.42	3.48	30
12/31/2006	20.2	3.43	3.19	28
Average	9.32	5.01	2.26	14.3
Minimum	1.07	1.25	1.31	3.9
Maximum	20.2	9.94	3.48	30
Count	9	9	9	9
Std Dev	6.05	3.08	0.81	9.74
CV	0.65	0.61	0.36	0.68
95th Percentile	18.68	9.884	3.364	29.2
5th Percentile	1.866	1.798	1.342	4.34

Reference
Discharge Monitoring Reports 2006.

	Maximum Daily Value		Average Daily Value		
Parameter	**value**	**unit**	**value**	**unit**	**count**
pH (min)	1.9	*s.u.*			
pH (max)	8.5	*s.u.*			
Flow Rate	0.071	*mgd*	0.037	*mgd*	260
Temp (winter)	6.5	*°C*	3.77	*°C*	260
Temp (summer)	No discharge during summer months				
BOD5	85.2	*mg/L*	26	*mg/L*	20
E. coli	1600	*#/100 mL*	6	*#/100 mL*	20
TSS	82	*mg/L*	29.05	*mg/L*	20

Reference
Data provided in 2009 application, section A.12.

B. Receiving Water Data

	Temp	D.O.	NH_3-N	Total P	pH
	C	mg/L	mg/L	mg/L	s.u.
6/21/2006	16.9	9.19		0.02	7.6
9/26/2006	15.3	10.2		0.05	7.79
Oct-Dec					
Jan-Mar					
6/25/2007	18	7.85		0.0183	8.67
9/20/2007	10	9.06	0.16		7.56
12/6/2007	2.3	13.52	0.364	0.0702	6.83
3/27/2008	3.3	14.03	0.143	0.0704	7.2
6/24/2008	22.5	8.26	0.064	0.0357	7.78
9/16/2008	16.6	11.65	0.062	0.0284	7.5
12/29/2008	0.2	14.56			7.02
Jan-Mar					
6/29/2009	17.5	9.42	0.071	0.0218	7.41
9/10/2009	15.8	9.51	0.082	0.0187	7.2
Oct-Dec	4.5	12.95	0.106	0.0153	7.46
Average	11.91	10.85	0.13	0.03	7.50
Min	0.2	7.85	0.062	0.0153	6.83
Max	22.5	14.56	0.364	0.0704	8.67
Count	12	12	8	10	12
St Dev	7.48	2.37	0.10	0.02	0.47
CV	0.63	0.22	0.77	0.61	0.06
95%	20.03	14.27	0.29	0.07	8.19
90%			0.22		
5%	1.36	8.08	0.06	0.02	6.93

Reference
Surface Water, City of Kendrick.

	Dissolved Oxygen	NO2+NO3	TP	Temperature	pH
	mg/L	mg/L	mg/L	°C	
12/26/2001	14.1	1.4	0.05	-0.2	7.5
1/7/2002	nd	3.5	0.29	1.6	7.8
1/22/2002	14	1.1	0.05	0.3	7.4
2/4/2002	nd	1.3	0.05	0.4	8.4
2/19/2002	13.5	1.9	0.06	1.5	7.8
3/4/2002	12.7	1.1	0.07	0.6	7.6
3/18/2002	nd	1.1	0.07	2	7.5
4/4/2002	12.8	0.17	0.06	7.1	7.8
4/18/2002	nd	0.1	0.05	6	7.6
4/29/2002	10.5	1.5	0.12	8.9	7.6
5/13/2002	9.4	BDL	0.03	11	7.5
5/28/2002	9.9	BDL	0.04	16.7	7.7
6/10/2002	11.6	BDL	0.04	14.6	7.9
6/24/2002	10	BDL	0.05	22.4	8.2
7/8/2002	12.6	BDL	0.03	22	8.4
7/23/2002	10.1	BDL	0.05	26.1	8.8
8/5/2002	9.7	BDL	0.04	21.7	8.2
8/19/2002	9.1	BDL	0.03	22.2	8.9
9/2/2002	10.1	BDL	0.04	23.8	8.4
9/18/2002	9.3	BDL	0.03	19.4	8.9
10/1/2002	9.9	BDL	0.02	11.7	8.2
10/15/2002	11.1	BDL	0.02	7.5	8.4
10/29/2002	9.9	BDL	0.03	7.9	8.4
11/12/2002	11	BDL	0.02	5.4	8.2
11/25/2002	11.9	BDL	BDL	4.8	8.5
12/10/2002	10.8	BDL	0.1	3.5	8.6
Average	11.09	1.32	0.06	10.34	8.08
Min	9.1	0.1	0.02	-0.2	7.4
Max	14.1	3.5	0.29	26.1	8.9
Count	22	10	25	26	26
St Dev	1.57	0.95	0.05	8.72	0.47
CV	0.14	0.72	0.94	0.84	0.06
95%	13.98	2.78	0.12	23.45	8.88
5%	9.305	0.1315	0.02	0.325	7.5

Reference
PTR-3 At the Kendrick Bridge, IDEQ,*2008 TMDL*.

	Dissolved Oxygen	NH3	NO2+NO3	TP	Temperature	pH
	mg/L	mg/L	mg/L	mg/L	C	s.u.
7/5/2000	9	0.02	0.02	0.08	20.9	9
8/2/2000	nd	<0.01	0.06	0.07	nd	nd
9/6/2000	12.4	0.01	0.08	0.07	19.5	8.4
10/10/2000	13.5	0.05	nd	0.02	10.9	8.2
12/5/2000	14.7	0.06	nd	0.02	3.7	8.7
1/17/2001	nd	<0.01	0.2	0.03	1	8.6
6/12/2001	15.5	0.01	0.02	0.03	15.4	8.4
7/9/2001	12.7	0.02	<0.01	0.05	23.4	8.5
8/29/2001	17	0.01	0.03	0.08	17.7	9.1
10/23/2001	12.7	<0.01	<0.01	0.04	9.5	7.7
10/30/2001	10.8	<0.01	<0.01	0.04	10.9	7.7
11/14/2001	14	<0.01	<0.01	0.03	9	8.6
11/15/2001	nd	nd	nd	nd	nd	nd
12/5/2001	17.4	<0.01	0.95	0.05	4.1	8.1
12/17/2001	13.4	<0.01	1.87	0.08	3.4	7.7
1/22/2002	14.4	<0.01	1.83	0.07	1.7	6.8
1/30/2002	12.8	<0.01	2.02	0.09	3	7.3
2/25/2002	15.6	0.01	2.38	0.14	1.7	7.2
3/6/2002	14	<0.01	2.95	0.09	3.6	7.4
3/12/2002	13.7	nd	2.35	nd	1.8	7.2
3/20/2002	13.3	0.01	2.67	0.15	3.4	7.4
4/8/2002	13.5	<0.01	0.25	0.07	6	7.1
4/15/2002	12.3	<0.01	0.21	0.22	4.9	7
5/14/2002	11.8	<0.01	0.02	0.05	11.5	8
5/29/2002	10.4	0.02	0.03	0.05	16.7	7.5
6/10/2002	9.7	0.02	0.05	0.04	12.9	7.6
6/24/2002	8.3	0.02	0.03	0.05	20.3	7.7
7/2/2002	10.9	0.01	0.02	0.06	19.6	7.9
7/29/2002	16	0.01	0.02	0.02	27.8	9
8/6/2002	12.3	0.03	0.03	0.04	22.5	9.4
9/9/2002	19.3	0.02	0.04	0.06	21.2	8.9
Average	13.26	0.02	0.76	0.07	11.31	8.00
Min	8.3	0.01	0.02	0.02	1	6.8
Max	19.3	0.06	2.95	0.22	27.8	9.4
Count	28	29	28	29	29	29
St Dev	2.52	0.01	1.05	0.04	8.15	0.72
CV	0.19	0.72	1.39	0.66	0.72	0.09
95%	17.26	0.0525	2.63	0.15	23.04	9.06
90%		0.04				
5%	9.25	0.01	0.02	0.02	1.7	7.04

Reference
PTR-1 At the Mouth of the Potlatch River, IDEQ, *2008 TMDL*.

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

A. Reasonable Potential Analysis

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

Mass Balance

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

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

where,

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

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

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

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

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

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

Where:

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

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

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

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

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

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

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

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

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

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

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

Maximum Projected Effluent Concentration

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

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

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

where,

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

and

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

Where,

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

CV = coefficient of variation (standard deviation ÷ mean)

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

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

where MRC = Maximum Reported Concentration

Maximum Projected Effluent Concentration at the Edge of the Mixing Zone

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

Reasonable Potential

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

B. WQBEL Calculations

Calculate the Wasteload Allocations (WLAs)

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

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

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

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

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

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

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

where,

σ^2 = $\ln(CV^2 + 1)$

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

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

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

where,

σ_{30}^2 = $\ln(CV^2/30 + 1)$

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

Derive the maximum daily and average monthly effluent limits

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

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

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

where σ, and σ^2 are defined as they are for the LTA equations above, and,

σ_n^2 = $\ln(CV^2/n + 1$
z_a = 1.645 (z-score for the 95th percentile probability basis)
z_m = 2.326 (z-score for the 99th percentile probability basis)
n = number of sampling events required per month. With the exception of ammonia, if the AML is based on the LTA_c, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 4. For ammonia, In the case of ammonia, if the AML is based on the LTA_c, i.e., $LTA_{minimum} = LTA_c$), the value of ''n'' should is set at a minimum of 30.

C. Critical Low Flow Conditions

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

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

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

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

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

Facility Name	Kendrick, City of
Facility Flow (mgd)	0.128
Facility Flow (cfs)	0.198

			Jun - Oct Seasonal Low Flow	Nov-May Seasonal High Flow	Annual Crit. Flows
Critical River Flows		(IDAPA 58.01.02 03. b)			
Aquatic Life - Acute Criteria - Criterion Max. Concentration (CMC)	**1Q10**		0.16	12.70	0.16
Aquatic Life - Chronic Criteria - Criterion Continuous Concentration (CCC)	**7Q10 or 4B3**		0.21	14.90	1.35
Ammonia	**30B3/30Q10** (seasonal)		0.51	29.10	2.66
			Seasonal Low Flow	**Seasonal** High Flow	
Receiving Water Data		Notes:			
Temperature, °C	Temperature, °C	95th percentile	24.72	15.26	
pH, S.U.	pH, S.U.	95th percentile	9.04	8.6	

Pollutants of Concern			**AMMONIA,** default: cold water, fish early life stages	**AMMONIA,** default: cold water, fish early life stages	**CHLORINE (Total Residual)**
Effluent Data	**Number of Samples in Data Set (n)**		9	9	30
	Coefficient of Variation (CV) = Std. Dev./Mean (default CV = 0.6)		0.6	0.6	0.51
	Effluent Concentration, µg/L (Max. or 95th Percentile) - (C_e)		20,200	20,200	100
Receiving Water Data	**90th Percentile Conc., µg/L - (C_u)**		364	364	0
Applicable Water Quality Criteria	Aquatic Life Criteria, µg/L	Acute	831.8	1,770.83	19.
	Aquatic Life Criteria, µg/L	Chronic	237.87	876.88	11.
	Aquatic Life - Acute	**1Q10**	25%	25%	25%
Percent River Flow Default Value = **25%**	Aquatic Life - Chronic	7Q10 or 4B3	--	--	25%
	Ammonia	30B3 or 30Q10	25%	25%	25%
	Human Health - Non-Carcinogen	30Q5	--	--	25%
Calculated Dilution Factors (DF) (or enter Modeled DFs)	Aquatic Life - Acute	1Q10	1.2	17.0	1.2
	Aquatic Life - Chronic	7Q10 or 4B3			2.7
	Ammonia - Chronic	30B3 or 30Q10	1.6	37.7	4.4

Aquatic Life Reasonable Potential Analysis

σ	$\sigma^2=\ln(CV^2+1)$		0.555	0.555	0.481
P_n	=(1-confidence level)$^{1/n}$, where confidence level =	**99%**	0.599	0.599	0.858
Multiplier (TSD p. 57)	$=\exp(z\sigma-0.5\sigma^2)/\exp[\text{normsinv}(P_n)\sigma-0.5\sigma^2]$, where	**99%**	3.2	3.2	1.8
Statistically projected critical discharge concentration (C_e)			63811.20	63811.20	182.95
Predicted max. conc.(ug/L) at Edge-of-Mixing Zone		Acute	53148.52	4088.73	152.21
(note: for metals, concentration as dissolved using conversion factor as translator)		Chronic	38959.83	2045.19	67.65
Reasonable Potential to exceed Aquatic Life Criteria			**YES**	**YES**	**YES**

Aquatic Life Effluent Limit Calculations

Number of Compliance Samples Expected per month (n)			4	4	4
n used to calculate AML (if chronic is limiting then use min=4 or for ammonia min=30)			30	4	4
LTA Coeff. Var. (CV), decimal	(Use CV of data set or default = 0.6)		0.600	0.600	0.510
Permit Limit Coeff. Var. (CV), decimal	(Use CV from data set or default = 0.6)		0.600	0.600	0.510
Acute WLA, ug/L	$C_d = (\text{Acute Criteria} \times MZ_a) - C_u \times (MZ_a-1)$	Acute	926.3	24,328.1	22.8
Chronic WLA, ug/L	$C_d = (\text{Chronic Criteria} \times MZ_c) - C_u \times (MZ_c-1)$	Chronic	156.7	19,719.7	29.7
Long Term Ave (LTA), ug/L	WLAc x $\exp(0.5\sigma^2-z\sigma)$, Acute	**99%**	297.4	7,809.8	8.4
(99th % occurrence prob.)	WLAa x $\exp(0.5\sigma^2-z\sigma)$; ammonia n=30, Chronic	**99%**	122.2	15,386.7	17.1
Limiting LTA, ug/L	used as basis for limits calculation		122.2	7,809.8	8.4
Average Monthly Limit (AML), ug/L	, where % occurrence prob =	**95%**	**145**	**12,124**	**12**
Maximum Daily Limit (MDL), ug/L	, where % occurrence prob =	**99%**	**381**	**24,328**	**23**
Average Monthly Limit (AML), mg/L			**0.1454**	**12.124**	**0.012**
Maximum Daily Limit (MDL), mg/L			**0.3808**	**24.328**	**0.023**
Average Monthly Limit (AML), lb/day			**0.1552**	**12.942**	**0.013**
Maximum Daily Limit (MDL), lb/day			**0.4065**	**25.971**	**0.024**

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

Appendix E. Performance Based Effluent Calculations: Ammonia

Performance-based Effluent Limits

INPUT		
LogNormal Transformed Mean:	1.9608	
LogNormal Transformed Variance:	0.8120	
Number of Samples per month for compliance monitoring:	2	
Autocorrelation factor (n_e) (use 0 if unknown):	0	
OUTPUT		
E(X) =	10.6633	
V(X) =	142.402	
VARn	0.4862	
MEANn=	2.1237	
VAR(Xn)=	71.201	lb/day
Maximum Daily Effluent Limit (mg/L):	**57.7**	**61.6**
Average Monthly Effluent Limit (mg/L):	**26.3**	**28.1**

Ammonia (mg/L)	ln(Pollutant conc)
9.81	2.283
9.55	2.257
1.07	0.068
3.06	1.118
5.38	1.683
8.57	2.148
9.85	2.287
16.4	2.797
20.2	3.006

EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD) Appendix E describes the process to determine monthly average and daily maximum permit limits based on the lognormal distribution. Daily pollutant discharges are generally lognormally distributed and using this distribution based on past performance effluent data is useful in determining achievable interim effluent limits.

Appendix F. Effluent Limit Calculations for pH

Calculation of pH of a Mixture of Two Flows

Based on the procedure in the EPA's DESCON program (EPA, 1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. US EPA Office of Water, Washington D.C.)

	Yr. Around Basis	
INPUT	**Min Limit**	**Max Limit**
1. Dilution Factor at Mixing Zone Boundary	2.7	2.7
2. Ambient/Upstream/Background Conditions		
Temperature (deg C):	0.29	22.70
pH:	7.17	8.82
Alkalinity (mg $CaCO_3$/L):	25.00	25.00
3. Effluent Characteristics		
Temperature (deg C):	3.90	30.00
pH:	**6.85**	**9.28**
Alkalinity (mg CaCO3/L):	25.00	25.00
OUTPUT		
1. Ionization Constants		
Upstream/Background pKa:	6.57	6.36
Effluent pKa:	6.53	6.32
2. Ionization Fractions		
Upstream/Background Ionization Fraction:	0.80	1.00
Effluent Ionization Fraction:	0.68	1.00
3. Total Inorganic Carbon		
Upstream/Background Total Inorganic Carbon (mg CaCO3/L):	31	25
Effluent Total Inorganic Carbon (mg CaCO3/L):	37	25
4. Conditions at Mixing Zone Boundary		
Temperature (deg C):	1.62	25.40
Alkalinity (mg CaCO3/L):	25.00	25.00
Total Inorganic Carbon (mg CaCO3/L):	33.31	25.07
pKa:	6.55	6.35
RESULTS		
pH at Mixing Zone Boundary:	**7.03**	**8.93**

Appendix G. Basis for Equivalent to Secondary Treatment Limits

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

The EPA conducted a DMR review of BOD_5 and TSS effluent concentrations and percent removal. As discussed in Part V.C of this Fact Sheet, the facility must meet all three criteria to be eligible for equivalent to secondary treatment limits.

The average monthly effluent concentrations reported by the City of Kendrick were reviewed for a five year period (2012-2017) in accordance with Criterion #1, shown below. Between June 2016 and September 2017 the City underwent a lagoon improvement project, replacing the old system with new lagoons. BOD_5 and TSS effluent data during this time period were excluded from the equivalent to secondary treatment analysis due to unusual conditions as stated under 40 CFR 133.101(f)(1).

	Effluent *95th Percentile of 30-day Average*	**Secondary Treatment Standard** *30-day Average*	**Exceeds Secondary Treatment Standard?**
BOD_5 (mg/L)	27.8	30	No
TSS (mg/L)	73.3	30	Yes
	1.5 x Average 95th Percentile	*7-day Average*	Exceeds Limit?
BOD_5 (mg/L)	41.7	45	No
TSS (mg/L)	109.95	45	Yes

The data above show that the WWTP consistently exceeds the secondary treatment standards for TSS set forth in 40 CFR 133.102(a) and (b) and therefore meets Criterion #1. The WWTP, however, does meet the secondary treatment standards for BOD_5. Therefore, the City will be required to meet BOD_5 secondary treatment limits as found in Part I.B of the permit.

The City complies with Criterion #2 as the treatment lagoon is the primary treatment process. A lagoon system qualifies as a waste stabilization pond system.

With respect to Criterion #3, DMR values for 30-day average BOD_5 and TSS removal rates were considered for the 2012-2017, five-year period, excluding time when the facility was under its lagoon improvement project. The Kendrick WWTP was calculated to have a consistent (5^{th} percentile) 30-day average removal rate of 83.5% for BOD_5 and 67% for TSS. The facility treatment works include a facultative lagoon which utilizes biological treatments to consistently achieve a 30-day average of at least 65 percent removal of BOD_5 and TSS. Therefore, the facility meets Criterion #3.

	Criterion #1	**Criterion #2**	**Criterion #3**	**Receives Treatment Equivalent to Secondary Limits**
BOD_5	Fail	Pass	Pass	No
TSS	Pass	Pass	Pass	Yes

The City of Kendrick satisfies the requirements of Criteria 1 through 3 for TSS, and therefore has continued eligibility for equivalent to secondary treatment standards for TSS only.

Appendix H. Endangered Species Act

A. Overview

As discussed in Section IX of this fact sheet, Section 7 of the Endangered Species Act requires federal agencies to consult with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) if there are potential affects a federal action may have on threatened and endangered species. EPA has determined that there is no affect to threatened and endangered species resulting from discharge from the City of Kendrick WWTP.

B. Species List

USFWS Species and Critical Habitat

On December 18, 2017, the EPA obtained an official species list from the U.S. Fish and wildlife Service, using its ECOS-IPaC website. According to the official species list, the threatened bull trout and Spalding's Catchfly (a flowering plant) are present in the vicinity of the City of Kendrick WWTP. Since the Spalding's Catchfly is not an aquatic species and therefore has no exposure pathway for pollutants discharged by the City, this species is not addressed further.

The letter providing the species list cautions that "the IPaC module for producing a list of proposed and designated critical habitat is currently incomplete," and thus asks that the action agency check the USFWS website to determine if the action area includes critical habitat. The City is located in Latah County, however, the Potlatch River, which is the receiving water for the discharge, forms part of the border between Latah and Nez Perce counties. Thus, the EPA checked the lists of critical habitat for both Nez Perce and Latah Counties. The only USFWS species with designated critical habitat in Nez Perce or Latah Counties is bull trout. The Clearwater River, which is downstream from the Potlatch River, is designated bull trout critical habitat, but the Potlatch River is not designated bull trout critical habitat.

NOAA NMFS Species and Critical Habitat

The Potlatch River may be used by Snake River fall Chinook salmon, Snake River spring/summer Chinook salmon, Snake River sockeye salmon, and Snake River steelhead.

The Potlatch River is designated critical habitat for Snake River steelhead (70 FR 52781). The Clearwater River, downstream from the Potlatch River, is designated critical habitat for Snake River Fall Chinook salmon (58 FR 68543).

C. Potential Impacts from the Discharge on Listed Species

The following sections present general and chemical specific impacts to the listed aquatic species.

General Discussion

Bull trout, Snake River fall Chinook salmon, Snake River spring/summer Chinook salmon, Snake River sockeye salmon, and Snake River steelhead can be found in the Potlatch river, which is the receiving water for the NPDES permittee addressed by this BE.

The NMFS' assessment of impacts to fall Chinook salmon and steelhead in the Columbia River basin largely focuses on impacts from major dam operations. Other sources of effects include

hatcheries and habitat effects from large-scale land disturbance. Impacts from small municipal wastewater dischargers are not identified.

The Potlatch and Clearwater Rivers are part of the Lower Snake region of the Mid-Columbia Recover Unit for bull trout and provide foraging, migration, and overwintering (FMO) habitat for bull trout; there are no local bull trout populations in the lower-middle Clearwater River (USFWS 2015a). Factors affecting the status of bull trout across its range in the coterminous United States include passage barriers including dams, forest management practices, livestock grazing, agricultural practices, transportation networks, mining, residential development and urbanization, fisheries management activities, as well as natural events (e.g., wildfire, drought, flooding) that may contribute to core area isolation and habitat fragmentation (USFWS 2015b). A number of stream restoration projects have been implemented on federal lands in the Clearwater River basin (USFWS 2015a).

The recovery plans reference the need to complete Total Maximum Daily Loads (TMDLs) to address water quality concerns in critical habitat areas. One of the conservation recommendations in the mid-Columbia Recovery Unit Implementation Plan for Bull Trout is to mitigate point and nonpoint thermal pollution, and the Potlatch River is one of the priority watersheds for this conservation recommendation (USFWS 2015a). IDEQ completed the *Potlatch River Subbasin Assessment and TMDLs* (*2008 TMDL*), which addressed impairments caused by temperature and sedimentation/siltation in September 2008, and the EPA approved the TMDL in February 2009. IDEQ issued a draft revision to the temperature portion of the TMDL in August 2017. The permit includes effluent limits for TSS and temperature which are consistent with the TMDL. The cold water aquatic life use is also impaired by physical habitat substrate alterations and flow regime alterations, however, no TMDL is needed for those impairments because they are not caused by pollutants.

Chemical-specific Effects

The following subsections describe the characteristics of the permitted discharge from the Kendrick treatment plant and their potential effects on listed species. EPA is not aware of any influent sources of other toxic pollutants (e.g., metals and organic pollutants) to the treatment plant. Since reissuance of the permit will not change the current discharge, it is generally unlikely to cause degradation in water quality and associated impacts on listed species.

Total Suspended Solids (TSS)

The Idaho Administrative Procedures Act (IDAPA) Section 58.01.02.200.08 provides a narrative water quality standard for sediment. Sediment shall not exceed quantities specified in Section 250, or in the absence of specific sediment criteria, quantities that impair designated beneficial uses. Other sources provide appropriate numeric limits and targets for suspended sediment. Suggested limits for suspended sediment have been developed by the European Inland Fisheries Advisory Commission and the National Academy of Sciences, and have been adopted by the State of Idaho in previous TMDLs. A limit of 25 mg/L of suspended sediment provides a high level of protection of aquatic organisms; 80 mg/L moderate protection; 400 mg/L low protection; and over 400 mg/L very low protection (USDA FS 1990, Thurston et al. 1979). The *2008 TMDL* established TSS targets of 50 mg/L as a monthly average and 80 mg/L as a daily maximum.

Suspended solids from the City's wastewater discharges are highly unlikely to pose any risk or harm to aquatic life, including threatened or endangered salmonids in the region, because the

effluent dilution is high (typically more than 12:1). With the effluent limits of 45 mg/L (monthly average) and 65 mg/L (maximum weekly average), the large amount of receiving stream flow will dilute and disperse any suspended solids resulting in an extremely low concentration at any point in the stream. This concentration of TSS will be indistinguishable from natural background concentrations and harmless to aquatic life.

Chlorine

Chlorine has been shown to cause avoidance responses in fish (Heath 1995). In freshwater, residual chlorine is composed of both "free" chlorine (made up of hypochlorous acid and hypochlorite ions) and combined chlorine (primarily made up of monochloramine). Free chlorine is more toxic than the combined form, and fish avoid it at lower concentrations (Chery et al, 1979). Both marine and freshwater fish species have been shown to avoid chlorine at concentrations well below the lethal level (but it is important to understand that temperature, body size, and time of exposure can influence the organism's response). Wastewater treatment plants effluents may contain chlorine and also have waste heat. This combination of a contaminant that is avoided by fish (at sub-lethal levels) and elevated water temperature, would elicit an avoidance response in the salmonid species of concern considered in this BE.

To minimize the potential effects on desirable species of aquatic life from chlorine discharge into receiving waters, the EPA (1986) established criteria for chlorine at 11 µg/L as a 4-day average and 19 µg/L as a 1-hour average. Idaho applies its water quality standard, equivalent to that established by EPA (1986), for residual chlorine to all waters throughout the state for the protection of aquatic life. The permit includes total residual chlorine limits based on application of the above water quality standards with a mixing zone that takes into account the allowed 25 percent of the stream flow. This will ensure protection of downstream water quality. In addition:

1. Chlorine dissipates very quickly (within minutes) and does not bioaccumulate or cause chronic toxicity problems
2. Potential acute effects of chlorine are extremely low because of the dilution that occurs when effluents are discharged to relatively large receiving streams. With the very quick dissipation of chlorine and the dilution in the receiving stream, only a very small area near the discharge point would have even marginally toxic concentrations of chlorine at any given time.
3. Fish such as salmonids are adept at sensing and avoiding very low (subacute) concentrations of chlorine. Thus, even if there was a small area of relatively higher chlorine concentration near the discharge point in the river, fish would easily avoid the area.

Ammonia

The permit limits for Ammonia are based on reasonable potential to exceed the IDAPA 58.01.02.250.02 water quality standards.

Ammonia concentrations in the City's discharge are very unlikely to cause any harm, directly or indirectly, to threatened or endangered aquatic species for the following reasons

1. Ammonia toxicity is related to the unionized fraction, which is greater as pH and temperature increase. Ammonia limits are based on critical conditions for both pH and temperature, in addition to stream flow. Thus, in general, the unionized fraction of ammonia would be relatively low (i.e., most of the ammonia is in an ionized or non-toxic

state), relative to the critical conditions used to derive the limits. Therefore, ammonia is not likely to cause toxicity.

2. The concentration of ammonia at any point in the river will be low given the dilution experienced by the effluent. The dilution would also negate any potentially higher effluent pH on ammonia toxicity; ammonia speciation and toxicity will be driven by the stream pH rather than the effluent pH because stream flow is so much greater.
3. Fish, such as the listed species, are adept at sensing and avoiding very low concentrations of ammonia. Thus, even if there was a small area of higher ammonia concentration, fish could easily avoid it. In addition, fish have been reported to have the ability to enter waters that contain acutely toxic concentrations of ammonia without suffering any obvious long-term effects, as long as the trips are followed by periods in which the fish are in waters that contain ammonia concentrations below acute toxicity levels (Thurston et al. 1981). The low ammonia concentrations in the effluent vicinity and the extremely small effected area, if any, would not impact these fish populations because critical habitat would not be affected in any measureable way.
4. Indirect effects of ammonia, such as nutrient enrichment for primary producers, would also be insignificant because of the dilution of the effluent.

Bacteria

Effluent limitations for *E. coli* will ensure that bacterial levels will be extremely low in the discharge and receiving water. Furthermore, bacteria from domestic waste that might be present in the effluent is unlikely to cause harm to aquatic life because these are not aquatic pathogens.

pH

In 1969, the European Inland Fisheries Advisory Commission (EIFAC) concluded that the pH values ranging from 5.0-6.0 are unlikely to harm any species unless either, the concentration of free carbon dioxide exceeds 20 parts per million (ppm) or the water contains iron salts precipitated as ferric hydroxide, a compound of unknown toxicity. pH values ranging from 6.0 to 6.5 are unlikely to harm fish unless free carbon dioxide is present in excess of 100 ppm, while pH values ranging from 6.5 to 9.0 are harmless to fish, although the toxicity of other compounds may be affected by changes within this range. These and other studies evaluating the effects of pH on various fish species and macroinvertebrates led EPA (1986) to conclude that a pH range of 6.5 to 9.0 appears to provide adequate protection for the life of freshwater fish and bottom dwelling invertebrates. The permit requires compliance with a pH limit of 6.5-9.0 at the point of discharge, which is Idaho's water quality standard for aquatic life. Therefore, issuance of the NPDES permit will not cause pH-related effects on listed species.

BOD/Dissolved Oxygen

The BOD limits of 30 mg/L (monthly average) and 45 mg/L (maximum weekly average) should be fully protective of listed species, given that the stream is not impaired for dissolved oxygen and the dilution available. The dilution would result in little, if any, area where BOD may be slightly higher than background. The slight, if any, increase in BOD at the discharge point would not have a measurable impact on dissolved oxygen levels and fish populations. Furthermore, the relatively cool water temperature of these streams typically results in high oxygen saturation and therefore, adequate oxygen for fish and other aquatic life.

Temperature

The permit proposes two options for effluent temperature limits. Option 1 has effluent limits for temperature which are consistent with the wasteload allocations in the *2008 TMDL*. Option 2 has effluent limits which are consistent with the proposed wasteload allocations in the draft *Potlatch River Watershed Assessment and Total Maximum Daily Loads: 2017 Temperature TMDL*. These wasteload allocations and resulting effluent limits ensure compliance with water quality standards for temperature.

Critical Habitat

The Clearwater River, which is downstream from the Potlatch River, is designated critical habitat for bull trout and Snake River fall Chinook salmon. Both the Potlatch river and the Clearwater River are designated critical habitat for Snake River Steelhead.

The discharge is not expected to have any effect upon the Clearwater River, which is about 8 miles downstream from the discharge. The 4B3 flow rate of the Potlatch River at USGS station #13341570, Potlatch River below Little Potlatch Creek near Spalding, is 1.36 CFS. The design flow of the Kendrick WWTP is 0.198 CFS, which is 14.5% of the 4B3 flow rate of the Potlatch River. Thus, the discharge from the Kendrick WWTP will be so dilute that it will have no effect on critical habitat in the Potlatch River or the Clearwater River.

D. Conclusion

The BE process concludes that the action of permit issuance for the Kendrick wastewater treatment plant in the Clearwater River Subbasin will have no effect on any of the listed threatened and endangered species.

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Appendix I. Essential Fish Habitat Assessment

Pursuant to the requirements for Essential Fish Habitat (EFH) assessments, this appendix contains the following information:

- Listing of EFH Species in the Facility Area
- Description of the Facility and Discharge Location
- The EPA's Evaluation of Potential Effects to EFH

A. Listing of EFH Species in the Facility Area

All waterbodies used by anadromous salmon throughout Idaho must be considered for EFH identification. The receiving water may be used by Snake River fall Chinook salmon, Snake River spring/summer Chinook salmon, Snake River sockeye salmon, and Snake River steelhead.

B. Description of the Facility and Discharge Location

The activities and sources of wastewater at the City of Kendrick waste water treatment facility are described in detail in Part III of this fact sheet. The location of the outfall is described in Part IV ("Receiving Water").

C. The EPA's Evaluation of Potential Effects to EFH

Water quality is an important component of aquatic life habitat. NPDES permits are developed to protect water quality in accordance with state water quality standards. The standards protect the beneficial uses of the waterbody, including all life stages of aquatic life. The development of permit limits for an NPDES discharger includes the basic elements of ecological risk analysis. The underlying technical process leading to NPDES permit requirements incorporates the following elements of risk analysis:

Effluent Characterization

Characterization of the City of Kendrick's effluent was accomplished using a variety of sources, including:

- Permit application monitoring
- Permit compliance monitoring
- Statistical evaluation of effluent variability
- Quality assurance plans and evaluations

Identification of Pollutants of Concern and Threshold Concentrations

The pollutants of concern include pollutants with aquatic life criteria in the Idaho Water Quality Standards. Threshold concentrations are equal to the numeric water quality criteria for the protection of aquatic life. No other pollutants of concern were identified by NMFS.

Exposure and Wasteload Allocation

Analysis of the transport of pollutants near the discharge point with respect to the following:

- Mixing zone policies in the Idaho Water Quality Standards
- Dilution modeling and analysis
- Exposure considerations (e.g., prevention of lethality to passing organisms)
- Consideration of multiple sources and background concentrations

Statistical Evaluation for Permit Limit Development

Calculation of permit limits using statistical procedures addressing the following:

- Effluent variability and non-continuous sampling
- Fate/transport variability
- Duration and frequency thresholds identified in the water quality criteria

Monitoring Programs

Development of monitoring requirements, including:

- Compliance monitoring of the effluent
- Ambient monitoring

Protection of Aquatic Life in NPDES Permitting

The EPA's approach to aquatic life protection is outlined in detail in the *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). The EPA and states evaluate toxicological information from a wide range of species and life stages in establishing water quality criteria for the protection of aquatic life.

The NPDES program evaluates a wide range of chemical constituents to identify pollutants of concern with respect to the criteria values. When a facility discharges a pollutant at a level that has a "reasonable potential" to exceed, or to contribute to an exceedance of, the water quality criteria, permit limits are established to prevent exceedances of the criteria in the receiving water (outside any authorized mixing zone).

Effects Determination

Since the proposed permit has been developed to protect aquatic life species in the receiving water in accordance with the Idaho water quality standards, the EPA has determined that issuance of this permit will have no effect on any EFH in the vicinity of the discharge. The EPA will provide NMFS with copies of the draft permit and fact sheet during the public notice period. Any recommendations received from NMFS regarding EFH will be considered prior to reissuance of this permit.

Appendix J. CWA 401 State Certification

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1118 F Street • Lewiston, Idaho 83501 • (208) 799-4370
www.deq.idaho.gov

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

May 9, 2018

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

Subject: DRAFT 401 Water Quality Certification for the City of Kendrick Wastewater Treatment Plant, Permit #ID0024554

Dear Mr. Lidgard:

The Lewiston Regional Office of the Department of Environmental Quality (DEQ) has reviewed the above-referenced permit for the City of Kendrick Wastewater Treatment Plant. Section 401 of the Clean Water Act requires that states issue certifications for activities that are authorized by a federal permit and may result in the discharge to surface waters. In Idaho, the DEQ is responsible for reviewing these activities and evaluating whether the activity will comply with Idaho's Water Quality Standards, including any applicable water quality management plans (e.g., total maximum daily loads). A federal discharge permit cannot be issued until DEQ has provided certification or waived certification either expressly, or by taking no action.

This letter is to inform you that DEQ is issuing the attached 401 certification subject to the terms and conditions contained therein.

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

Sincerely,

John Cardwell
Regional Administrator
Lewiston Regional Office

c: Maxwell Petersen, EPA Region 10
Loren Moore, DEQ State Office
Mark Cecchini-Beaver, Deputy AG

Idaho Department of Environmental Quality

Draft §401 Water Quality Certification

May 9, 2018

NPDES Permit Number(s): City of Kendrick Wastewater Treatment Plant, Permit #ID0024554

Receiving Water Body: Potlatch River – 6th order, Big Bear Creek to mouth

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

Based upon its review of the above-referenced permit and associated fact sheet, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the discharge will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits.

Antidegradation Review

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier I review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

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

Pollutants of Concern

The City of Kendrick Wastewater Treatment Plant (WWTP) discharges the following pollutants of concern: five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), *E. coli*, temperature, pH, ammonia, total residual chlorine (TRC), dissolved oxygen (DO), and total phosphorous (TP). Effluent limits have been developed for BOD_5, TSS, *E. coli*, temperature, pH, ammonia, and TRC. No effluent limits are proposed for DO and TP.

Receiving Water Body Level of Protection

The City of Kendrick WWTP discharges to the Potlatch River within the Clearwater Subbasin assessment unit (AU) ID17060306CL044_06 (Potlatch River – 6th order, Big Bear Creek to mouth). This AU has the following designated beneficial uses: cold water aquatic life, salmonid spawning, primary contact recreation, and domestic water supply. In addition to these uses, all waters of the state are protected for agricultural and industrial water supply, wildlife habitat, and aesthetics (IDAPA 58.01.02.100).

According to DEQ's 2014 Integrated Report, the aquatic life uses in this AU are not fully supported. Causes of impairment include temperature, sediment, substrate habitat alterations, and flow regime alterations. The primary contact recreation beneficial use is fully supported. As such, DEQ will provide Tier 1 protection (IDAPA 58.01.02.051.01) for the aquatic life use and Tier II protection (IDAPA 58.01.02.051.02) in addition to Tier I for the primary contact recreation use (IDAPA 58.01.02.052.05.c).

Protection and Maintenance of Existing Uses (Tier I Protection)

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

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. A central purpose of TMDLs is to establish wasteload allocations for point

source discharges, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharge permits must contain limitations that are consistent with wasteload allocations in the approved TMDL.

Prior to the development of the TMDL, the WQS require the application of the antidegradation policy and implementation provisions to maintain and protect uses (IDAPA 58.01.02.055.04).

The EPA-approved *Potlatch River Subbasin Assessment and TMDLs* (2008) establishes wasteload allocations for sediment and temperature. These wasteload allocations are designed to ensure the Potlatch River will achieve the water quality necessary to support its existing and designated aquatic life beneficial uses and comply with the applicable numeric and narrative criteria. The effluent limitations and associated requirements contained in the City of Kendrick WWTP permit are set at levels that comply with the EPA-approved wasteload allocation.

In sum, the effluent limitations and associated requirements contained in the City of Kendrick WWTP permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS and the wasteload allocation established in the *Potlatch River Subbasin Assessment and TMDLs* (2008). Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Potlatch River in compliance with the Tier I provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

High-Quality Waters (Tier II Protection)

The Potlatch River is considered high quality for primary contact recreation. As such, the water quality relevant to primary contact recreation uses of the Potlatch River must be maintained and protected, unless a lowering of water quality is deemed necessary to accommodate important social or economic development.

To determine whether degradation will occur, DEQ must evaluate how the permit issuance will affect water quality for each pollutant that is relevant to the primary contact recreation use of the Potlatch River (IDAPA 58.01.02.052.05). These include *E. coli*, ammonia, and TP. The proposed permit and the current permit both provide effluent limits for *E. coli,* and for the proposed permit includes a new limit for ammonia. No limits have been set for 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 the water quality that would result from the activity or discharge as proposed in the reissued permit or license. For a new permit or license, the effect on water quality is determined by reviewing the difference between the existing receiving water quality and the water quality that would result 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

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 Kendrick WWTP permit, this means determining the permit's effect on water quality based upon the limits for BOD_5, TSS, *E. coli*, pH, and TRC

in the current and proposed permits. Table 1 provides a summary of the current permit limits and the proposed or reissued permit limits.

Table 1. Comparison of current and proposed permit limits for pollutants of concern relevant to uses receiving Tier II protection.

Pollutant	Units	Current Permit			Proposed Permit			Change[a]
		Average Monthly Limit	Average Weekly Limit	Single Sample Limit	Average Monthly Limit	Average Weekly Limit	Single Sample Limit	
Pollutants with limits in both the current and proposed permit								
Biological Oxygen Demand (BOD_5)	mg/L	30	45	—	30	45	—	NC
	lb/day	20	30	—	20	30	—	
	% removal	85%	—	—	85%	—	—	
TSS	mg/L	45	65	—	45	65	—	NC
	lb/day	30	43	—	27	43	48.1	
	% removal	65%	—	—	65%	—	—	
pH	standard units	6.5–9.0 all times			6.5–9.0 all times			NC
E. coli	no./100 mL	126	—	406	126	—	406	NC
Total Residual Chlorine	mg/L	0.007	—	0.018	0.007	—	0.018	NC
	lb/day	0.005	—	0.012	0.005	—	0.012	
Pollutants with new limits in the proposed permit								
Total Ammonia (as N) June 1 – October 31	mg/L	—	—	Report	0.15	—	0.4	New
	lbs/day	—	—		0.16	—	0.42	
Total Ammonia (as N) November 1 – May 31	mg/L	—	—	Report	12.1	—	24.3	New
	lbs/day	—	—		12.9	—	25.9	
Ammonia (as N) (Interim)	mg/L	—	—	—	26.3	—	57.7	New
	lbs/day	—	—		28.1	—	61.6	
Temperature	°C	—	—	Report	See Table 2			New, TMDL
	Btu (million)/day	—	—					
Pollutants with no limits in both the current and proposed permit								
Total Phosphorus	mg/L	—	—	Report	—	—	Report	NC
Dissolved Oxygen	mg/L	—	—	Report	—	—	Report	NC
Nitrate + Nitrite	mg/L	—	—	Report	—	—	Report	New

[a] NC = no change

The proposed permit limits for pollutants of concern that have limits in the current permit—namely,BOD_5, TSS, *E. coli*, pH, and TRC—are the same as, or more stringent than, 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

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 Kendrick WWTP includes new limits for ammonia (Table 1). These limits were included in the permit based on reasonable potential to exceed Idaho water quality standards (IDAPA 58.01.02.250.02). The ammonia 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 these pollutants.

Pollutants with No Limits

There is one pollutant of concern relevant to the Tier II protection of recreation—phosphorous—that currently is not limited and for which the proposed permit also contains no limit (Table 1). For such pollutants, a change in water quality is determined by reviewing whether changes in production, treatment, or operation that will increase the discharge of these pollutants are likely (IDAPA 58.01.02.052.06.a.ii).

The Potlach River is not impaired for nutrients. The current permit is based on the average day design flow of 0.08 million gallons per day (mgd). Reported actual average monthly flows from the facility are 0.054 mgd. EPA's proposed permit bases effluent limits on the WWTP's maximum month design flow of 0.128 mgd. Although effluent limitations have been developed to represent the worst case scenario, there have been no changes in effluent volume, influent quality or treatment process that would result in an increased discharge of pollutants of concern. DEQ has concluded that the proposed permit will not contribute phosphorus loads to the receiving water body.

In sum, DEQ concludes that this discharge permit complies with the Tier II provisions of Idaho's WQS (IDAPA 58.01.02.051.02 and IDAPA 58.01.02.052.06).

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

Mixing Zones

Temperature

The proposed permit for the City of Kendrick WWTP includes new limits for temperature. These limits were included in the permit to be consistent with the wasteload allocations in the approved *Potlatch River Subbasin Assessment and TMDLs* (2008). DEQ may authorize a mixing zone for a TMDL listed pollutant when the permitted discharge is consistent with an approved TMDL allocation that demonstrates there is assimilative capacity and authorizing a mixing zone is consistent with achieving compliance with water quality standards in the receiving water (IDAPA 58.01.02.060.01.a). In accordance with the *Potlatch River Subbasin Assessment and TMDLs* (2008), a mixing zone for temperature is granted for the City of Kendrick's effluent when the Potlatch River has assimilative capacity. When the river is naturally exceeding the applicable temperature criterion upstream from the discharge, the City of Kendrick's effluent temperature must not raise the Potlatch River's receiving water temperature by more than 0.3°C in accordance with IDAPA 58.01.02.401.01.c. Table 2 presents the allowable effluent discharge temperatures that would not exceed the salmonid spawning (9°C) and cold water aquatic life (19°C) average daily temperature criterion by more than 0.3°C during the applicable times of year. The table reflects a 25% mixing zone.

Table 2. Maximum Daily Effluent Temperature Limits (°C)

April 1 – July 15 (spawning and incubation)					
Stream Flow[1] (CFS)	WWTP Flow[1] (mgd)				
	≤ 0.0064	> 0.0064 - 0.045	> 0.045 - 0.097	> 0.097 - 0.15	> 0.15
< 2	16.8	10.4	9.8	9.6	9.6
2 - < 5	24.3	11.4	10.3	10.0	9.8
5 - <10	46.8	14.7	11.8	10.9	10.6
10 - < 25	84.3	20.0	14.3	12.6	11.8
25 - < 50	—	36.1	21.8	17.5	15.6
50 - < 100	—	62.9	34.3	25.6	21.8
≥ 100	—	—	59.3	41.9	34.3
July 16 – September 30 (cold water aquatic life)					
Stream Flow[1] (CFS)	WWTP Flow[1] (mgd)				
	≤ 0.0064	> 0.0064 - 0.045	> 0.045 - 0.097	> 0.097 - 0.15	> 0.15
< 2	26.8	20.4	19.8	19.6	19.6
2 - < 5	34.3	21.4	20.3	20.0	19.8
5 - <10	56.8	24.7	21.8	20.9	20.6
10 - < 25	94.3	30.0	24.3	22.6	21.8
25 - < 50	—	46.1	31.8	27.5	25.6
50 - < 100	—	72.9	44.3	35.6	31.8
≥ 100	—	—	69.3	51.9	44.3

Notes:
1. River flow must be determined using data from USGS station number 13341570. The applicable temperature limit is determined daily, based on the mean river flow and the mean effluent flow for that day.

Chlorine

EPA conducted a reasonable potential analysis (Appendix D of the Fact Sheet) that showed the applicable technology-based effluent limits have reasonable potential to exceed aquatic life criteria with a mixing zone that utilizes 25% of the critical flow volumes of the river. Based on that analysis, EPA proposes to retain the water-quality based effluent limit for chlorine in the current permit, which incorporates a mixing zone that utilizes 25% of the critical flow volumes of the river. EPA determined this limit would not have reasonable potential to exceed applicable criteria. Pursuant to IDAPA 58.01.02.060, DEQ authorizes a chlorine mixing zone utilizing 25% of the critical flow volumes of the Potlatch River.

Ammonia

EPA conducted a reasonable potential analysis (Appendix D of the Fact Sheet) that showed the applicable technology-based effluent limits have reasonable potential to exceed aquatic life criteria with a mixing zone that utilizes 25% of the critical flow volumes of the river. Based on

that analysis, EPA proposes seasonal water-quality based effluent limits that utilize 25% of the critical flow volumes of the river. Pursuant to IDAPA 58.01.02.060, DEQ authorizes an ammonia mixing zone utilizing 25% of the critical flow volumes of the Potlatch River.

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, 208-799-4370 or Sujata.Connell@deq.idaho.gov.

DRAFT

John Cardwell
Regional Administrator
Lewiston Regional Office