Fact Sheet

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

Metlakatla Indian Community
Metlakatla Sewer Treatment Plant
100 Oceanview Road
Metlakatla, Alaska 99926

Public Comment Start Date: April 24, 2020
Public Comment Expiration Date: May 26, 2020

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The EPA Proposes to Reissue NPDES Permit
The EPA proposes to reissue the NPDES permit for the Facility referenced above (see Part I.B, *Permit History*). 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

401 Water Quality Certification
Section 401 of the Clean Water Act (CWA) requires the State or tribe in which the discharge originates to certify that the discharge complies with the appropriate sections of the CWA, and with any appropriate requirements of State Law or tribal law. This Facility is located and discharges on the Annette Islands Reserve of the Metlakatla Tribe. Since this Facility discharges to tribal waters and the Tribe does not have Treatment as a State (TAS) from the EPA for purposes of the Clean Water Act, the EPA is the certifying authority. The EPA is taking comment on the EPA's intent to certify this permit.

Public Comment

Because of the COVID-19 virus, access to the Region 10 EPA building is limited. Therefore, we request that all comments on EPA's draft permits or requests for a public hearing be submitted via email to Kai Hon Shum (shum.kai@epa.gov). If you are unable to submit comments via email, please call 206-553-0060. Persons wishing to comment on, or request a Public Hearing for the draft permit for this facility may do so 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 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 Water Division 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 permits, fact sheet, and other information can also be found by visiting the Region 10 NPDES website at: 'http://EPA.gov/r10earth/waterpermits.htm' and at https://www.epa.gov/npdes-permits/alaska-npdes-permits. Because of the COVID-19 virus and limited building access, we cannot make hard copies available for viewing at our offices.

Acronyms

AML	Average Monthly Limit
AWL	Average Weekly Limit
BAT	Best Available Technology economically achievable
BCT	Best Conventional pollutant control Technology
BOD_5	Biochemical oxygen demand, five-day
BOD_{5u}	Biochemical oxygen demand, ultimate
BMP	Best Management Practices
BPT	Best Practicable
°C	Degrees Celsius
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CSO	Combined Sewer Overflow
CV	Coefficient of Variation
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved oxygen
EA	Environmental Assessment
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
Gpd	Gallons per day
HUC	Hydrologic Unit Code
ICIS	Integrated Compliance Information System
LA	Load Allocation
lbs/day	Pounds per day
mg/L	Milligrams per liter
mL	Milliliters
ML	Minimum Level
µg/L	Micrograms per liter

mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
MPN	Most Probable Number
N	Nitrogen
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
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
SIC	Standard Industrial Classification
SPCC	Spill Prevention and Control and Countermeasure
SS	Suspended Solids
SSO	Sanitary Sewer Overflow
s.u.	Standard Units
TMDL	Total Maximum Daily Load
TRC	Total Residual Chlorine
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
TSS	Total suspended solids
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards

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 #:	AK0053813
Applicant:	Metlakatla Indian Community for the Metlakatla Sewer Treatment Plant
Type of Ownership	Tribal
Physical Address:	100 Oceanview Road Metlakatla, AK 99926
Mailing Address:	P.O. Box 8 Metlakatla, AK 99926
Facility Contacts:	Reginald M. Atkinson Mayor Metlakatla Indian Community (907) 886-4441 mayor@metlakatla.com Rick Anderson Public Works Department Director Metlakatla Indian Community (907) 886-3355 Mic_maint@aptalaska.net
Facility Location	Annette Islands Reserve, Metlakatla Indian Community 55.1236 N, 131.5942 W
Receiving Water	Nichols Passage
Facility Outfall	2,400 feet from shore in Annette Islands Reserve. Coordinates at: 55.1253°N, 131.6072°W

B. Permit History

The most recent NPDES permit coverage for the Metlakatla Indian Community (MIC) Sewer Treatment Plant ("Facility") was on June 23, 2004. The Facility was authorized to discharge wastewater containing pollutants pursuant to coverage under NPDES General Permit No. AKG 571000, for *Small Publicly Owned Treatment Works (POTWs) and Other Small Treatment Works Providing Secondary Treatment of Domestic Sewage and Discharging to Marine Water*. The Facility's coverage under this General Permit was provided under EPA Permit No. AKG571014 (2004 Permit). The 2004 Permit became effective on June 23, 2004. The Facility did not submit a NPDES permit application within the time period set forth in the 2004 Permit. As such, upon the expiration date of the 2004 Permit, the Tribe was discharging without a permit.

On August 24, 2010, the EPA entered into an Administrative Order on Consent with the Facility that required the Facility to comply with all the requirements of the 2004 Permit until a new permit was issued and required the Facility to submit a NPDES permit application

within 45 days of the date the Administrative Order on Consent was signed. On April 22, 2019, the EPA and the Facility entered into a second Administrative Order on Consent which required the Facility to submit a NPDES permit application within 4 months of the date the Order was signed. On December 17, 2019, the EPA received a NPDES Permit Application from the Facility.

C. Tribal Consultation

The EPA coordinated with the MIC during the process of permit issuance.

II. Facility Information

A. Treatment Plant Description

Service Area

MIC owns and operates the sewage treatment plant located in MIC's Annette Islands Reserve in Alaska. The Facility services the area of Metlakatla which, according to the 2010 census, had a population of 1,405. There are no major industries discharging to the Facility.

Treatment Process

According to the Facility's discharge monitoring reports (DMRs), except for certain missing data, the reported actual daily maximum flows for each month from the Facility was 0.075 mgd from January 2014 to August 2019. In a letter from the Facility, dated April 3, 2020, the Facility provided information showing that the Facility's Design Average Flow Rate of 0.230 mgd[1]. The Facility has identified that the 2004 Permit utilized an incorrect design flow rate of 0.075 mgd, which was used in calculating the loading effluent limits in the 2004 Permit. Since 2004, there have been no recent upgrades to the Facility. The Facility operates two aerated lagoons, a stabilization basin, and one sludge storage lagoon as the principle process to treat wastewater. The Facility does not disinfect its wastewater prior to discharge.

A schematic of the wastewater treatment process and a map showing the location of the treatment Facility and discharge are included in Appendix A. Because the design flow is less than 1 mgd, the Facility is considered a minor facility.

Outfall Description

The Facility's marine outfall is in Nichols Passage, approximately 2,400 feet from shore, at a depth of approximately 70 feet below Mean Lower Low Water (MLLW). The outfall does not have a diffuser. The outfall is located within the distance of 3,000 feet from the shoreline, which is inside the Annette Islands Reserve boundary[2].

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[1] The 2019 Permit Application lists 0.69 mgd as the design flow, but the narrative description calls it the "Max flow through" which is not equivalent with design flow which requires proper wastewater treatment.

[2] Established on April 28, 1916, by Presidential Proclamation, 39 Stat. 1777; United States Department of the Interior, Bureau of Indian Affairs, Constitution and By-Laws of the Metlakatla Indian Community, Annette Islands Reserve, Alaska. Approved, August 23, 1944. http://thorpe.ou.edu/IRA/metlacons.html; and, at 25 CFR §241.2(a), Annette Islands Reserve; Definition; Exclusive Fishery; Licenses: https://www.govinfo.gov/content/pkg/CFR-2014-title25-vol1/pdf/CFR-2014-title25-vol1-sec241-3.pdf.

Effluent Characterization

To characterize the effluent, the EPA evaluated the Facility's DMR data, provided by the Facility. The effluent quality is summarized in Table 2. Data are provided in Appendix B.

Table 2 Effluent Characterization

Parameter	Minimum	Maximum	Notes
Flow Rate	0.075 mgd	0.075 mgd	Daily Maximum
BOD_5	6.96 mg/L	168.60 mg/L	Monthly Average
TSS	9.30 mg/L	236 mg/L	Monthly Average
pH	6.01 s.u.	9.89 s.u.	Monthly Min. and Max.
DO	3.1 mg/L	4.7 mg/L	Daily Minimum
Fecal Coliform	10 CFU/100mL	2,000,000 CFU/100mL	Daily Maximum

Source: DMRs from January 2014 to September 2019.

Compliance History

On August 24, 2010, the EPA issued an Administrative Order which stated that the Facility was discharging without a permit and required the Facility to comply with all the requirements of the 2004 Permit. The EPA inspected the Facility on September 15, 2015. The EPA found that the Facility would be in violation of many of the effluent limitations and reporting requirements in the 2004 Permit. In 2019, the EPA and the Facility entered into a second Administrative Order on Consent which required the Facility to submit a NPDES permit application within 4 months of the date the Order was signed. The Facility submitted a NPDES permit application in December 2019.

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=110020073908

III. 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 into marine waters of Nichols Passage in Alaska.

B. Water Quality Standards

Overview

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. 40 CFR § 122.4(d) requires that the conditions in NPDES permits ensure compliance with the water quality standards of all affected States. A State's water quality standards are composed of use classifications, numeric and/or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each water body is expected to achieve, such as drinking water supply, contact recreation, and aquatic life. The numeric and narrative water quality criteria are the criteria deemed necessary to support the beneficial use

classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

This Facility discharges inside the Annette Islands Reserve boundary. MIC has not applied for the status of Treatment as a State (TAS) from the EPA for purposes of the Clean Water Act. When MIC is granted TAS, and when it has Water Quality Standards (WQS) approved by the EPA, those tribal WQS will be used for determining effluent limitations. In the meantime, MIC does not currently have its own WQS. Therefore, Alaska's water quality standards will be used as a reference to protect downstream uses in Alaska waters. Alaska Water Quality Standards (WQS) are found in 18 AAC 70 (as amended, April 6, 2018).

C. Designated Beneficial Uses

Pursuant to Alaska WQS, the EPA is protecting the marine receiving water for the following beneficial uses as Alaska WQS require that unless otherwise specified, all waters in Alaska are protected for the uses listed below.

Marine Water

(A) water supply
(i) aquaculture;
(ii) seafood processing;
(iii) industrial;

(B) water recreation
(i) contact recreation;
(ii) secondary recreation;

(C) growth and propagation of fish, shellfish, other aquatic life, and wildlife; and

(D) harvesting for consumption of raw mollusks or other raw aquatic life.

D. Water Quality

There is no receiving water quality data from the marine waters of Annette Islands Reserve.

E. Water Quality Limited Waters

There are no listed impairments to water quality in the marine waters of Annette Islands Reserve, or in Port Chester in the vicinity of the discharge (Alaska's Final Integrated Water Quality Monitoring and Assessment Report, July 15, 2010).

IV. Effluent Limitations and Monitoring

Table 3 below presents the effluent limits and monitoring requirements in the 2004 Permit. Table 4, below, presents the proposed effluent limits and monitoring requirements in the draft permit.

Table 3. 2004 Permit - Effluent Limits and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Daily Maximum	Sample Location	Sample Frequency	Sample Type
Parameters with Effluent Limits							
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	60	Influent and Effluent	1/month	Grab or Composite
	lbs/day	19	28	38			Calculation
BOD_5 Percent Removal	%	65 (minimum)	--	--	--	1/month	Calculation
Total Suspended Solids (TSS)	mg/L	45	65	--	Influent and Effluent	1/month	Grab or Composite
	lbs/day	28	41	--			Calculation
TSS Percent Removal	%	65 (minimum)	--	--	--	1/month	Calculation
Fecal Coliform	CFU/ 100 mL	100,000	--	150,000	Effluent	1/month	Grab
Flow	mgd	--	--	0.075	Effluent	5/week	measured
Dissolved Oxygen	mg/L	Daily Minimum: 2			Effluent	1/month	Grab
pH	std units	Between 6.0 – 9.0			Effluent	3/week	Grab
Floating, Suspended, or Submerged Matter	--	See Footnote 4.				None	Visual Observation

Notes

1. BOD_5 and TSS mass loading limits apply to each discharge. The loading limits are calculated for each facility by the following formula: pounds per day limitation = concentration limit (mg/L) x facility design flow (mgd) x 8.34 (conversion factor). Loading limitations are applicable to the average monthly, average weekly, and maximum daily basis.
2. Average monthly fecal coliform results must be reported as the geometric mean of the samples.
3. Reporting is required within 24 hours of a violation of the daily limit.
4. The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.

Table 4. Draft Permit - Effluent Limits and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Parameters with Effluent Limits							
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	---	Influent and Effluent	1/month	Grab or 24-hour composite
	lbs/day	57.55	86.32	---			Calculation[1]
BOD_5 Percent Removal	%	85 (minimum)	--	--	--	1/month	Calculation[2]
Total Suspended Solids (TSS)[6]	mg/L	70	105	--	Influent and Effluent	1/month	Grab or 24-hour composite
	lbs/day	134.27	201.41	--			Calculation[1]
TSS Percent Removal[6]	%	Report	--	--	--	1/month	Calculation[2]
Fecal Coliform	CFU/ 100 ml	100,000[3]	--	150,000 [3,4]	Effluent	1/month	Grab
pH	std units	Between 6.0 – 9.0			Effluent	3/week	Grab
Dissolved Oxygen	mg/L	Daily Minimum: 2			Effluent	1/month	Grab
Report Parameters							
Flow	mgd	Report	---	Report	Influent and Effluent	5/week	Measure
Ammonia as N	mg/L	Report	---	---	Effluent	1/month	Grab or 24-hour composite
Floating, Suspended, or Submerged matter	---	See Paragraph I.B.2 of the permit			---	None	Visual Observation
NPDES Permit Application[5]	---				Effluent	1/year	---

Notes

1. Loading (in lbs/day) is calculated by multiplying the concentration (in mg/L) by the corresponding flow (in mgd) for the day of sampling and a conversion factor of 8.34. For more information on calculating, averaging, and reporting loads and concentrations see the *NPDES Self-Monitoring System User Guide* (EPA 833-B-85-100, March 1985).
2. Percent Removal. The monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month using the following equation:
(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration x 100.
Influent and effluent samples must be taken over approximately the same time period.
3. Fecal Coliform results must be reported as the geometric mean of the sample(s). See part VI of the permit for a definition of geometric mean.
4. Reporting is required within 24 hours of a maximum daily limit or instantaneous maximum limit violation. See Paragraph I.B.3 and Part III.G of the permit.
5. Effluent Testing Data - See NPDES Permit Application Form 2A, Table A for the list of pollutants to be included in this testing. The Permittee must use sufficiently sensitive analytical methods in accordance with Part I.B.5 of the permit. Monitoring results shall be reported in the January DMR of the following year.
6. The TSS limits are based on applying Alaska's Adjusted TSS Requirements for Waste Stabilization Ponds, per Exhibit 5-4, EPA's NPDES Permit Writers' Manual, 2010.

Differences in Effluent Limits between the Draft Permit and the 2004 Permit

1. BOD_5 Limits – Alaska's Secondary Treatment Standards are replaced by Federal Secondary Treatment Standards.
2. TSS Limits – Federal Equivalent to Secondary Treatment Standards are replaced by Alaska's Adjusted TSS Requirements for Waste Stabilization Ponds pursuant to 40 CFR §133.105(d).
3. Flow Limit – The Flow Limit has been eliminated.
4. Loading Limits – BOD_5 and TSS loading limits have been increased due to higher reported design flow.

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, DMR. and any special studies
- Are expected to be in the discharge based on the nature of the discharge

The wastewater treatment process for the Facility includes both primary and secondary treatment. 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), Fecal Coliform bacteria, pH, ammonia, temperature, and dissolved oxygen (DO).

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

- BOD_5
- DO
- TSS
- Fecal Coliform bacteria
- pH
- Temperature
- Ammonia

C. Monitoring and Reporting Requirements

Section 308 of the CWA and 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 permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs) or on the application for renewal, as appropriate, to the EPA.

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 can be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR § Part 136) and if the Method Detection Limits are less than the effluent limits.

The sampling location must be after the last treatment unit and prior to discharge to the receiving water. The samples must be representative of the volume and nature of the monitored discharge. If no discharge occurs during the reporting period, "no discharge" shall be reported on the DMR.

Except for the addition of ammonia monitoring, there are no changes to the required monitoring frequencies in the Draft Permit from the 2004 Permit.

V. Technology-Based Effluent Limits

A. Federal Secondary Treatment Effluent Limits

The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level, referred to as "secondary treatment," which POTWs were required to meet by July 1, 1977. The EPA has developed and promulgated "secondary treatment" effluent limitations, which are found in 40 CFR § 133.102. These technology-based effluent limits apply to certain municipal WWTPs and identify the minimum level of effluent quality attainable by application of secondary treatment in terms of BOD_5, TSS, and pH. The federally promulgated secondary treatment effluent limits are listed in Table 5. For additional information and background refer to Part 5.1 *Technology Based Effluent Limits for POTWs* in the Permit Writers Manual.

Table 5. Federal Secondary Treatment Effluent Limits

Parameter	30-day average	7-day average
BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
Removal for BOD_5 and TSS (concentration)	85% (minimum)	---
pH	within the limits of 6.0 - 9.0 s.u.	
Source: 40 CFR § 133.102		

Alaska's Secondary Treatment Standards

The 2004 General Permit required permittees to meet the Alaska wastewater disposal regulations at 18 AAC 72.050 which also require secondary treatment prior to discharge of domestic wastewater. The definition of secondary treatment in the state regulations (18 AAC 72.990(59)) includes the federal requirements with the addition of a maximum daily effluent concentration of 60 mg/L for BOD_5 and TSS. Alaska's secondary treatment requirements are summarized below:

Table 6. Alaska's Secondary Treatment Requirements

Parameter	30-day average	7-day average	Maximum Daily
BOD_5	30 mg/L	45 mg/L	60 mg/L
TSS	30 mg/L	45 mg/L	60 mg/L
Removal for BOD_5 and TSS (concentration)	65% (minimum)	---	
pH	within the limits of 6.0 - 9.0 s.u.		
Footnote: In reference to Table 1, on page 16 of the EPA's 2004 Permit Fact Sheet based on 18 AAC 72.990(59).			

The 2004 Permit was a general permit that allowed small POTWs within the State of Alaska to obtain coverage under the permit. Since the 2004 Permit authorized discharges from facilities within the State of Alaska into Alaska waters, the permit implemented Alaska's Secondary Treatment Requirements. The 2004 Permit included BOD_5 limits for the Metlakatla Facility based on Alaska's Secondary Treatment Requirements. However, it was an error to apply Alaska's Secondary Treatment Requirements to the Facility since the Facility is a tribal facility that discharges to tribal waters. Therefore, the Draft Permit removes the maximum daily effluent limit for BOD_5.

Treatment Equivalent to Secondary Treatment

On September 20, 1984, the EPA revised the Secondary Treatment Regulations (40 CFR § 133.102) for facilities that use waste stabilization ponds as the principal process. These revisions established effluent limitations for Treatment Equivalent to Secondary Treatment (40 CFR § 133.105) as shown below:

Table 7. Federal Treatment 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)	---

Due to a lack of data for analyses, the 2004 General Permit required facilities covered under the permit to meet Alaska Secondary Treatment Standards with a Maximum Daily Limit of

60 mg/L for BOD_5, and Treatment Equivalent to Secondary Treatment Standards for TSS[3]. Based on monitoring data since the 2004 General Permit (see Appendix B), the EPA is now able to evaluate if the Facility is eligible for Treatment Equivalent to Secondary Treatment.

Requirements for eligibility to Treatment Equivalent to Secondary Treatment

The regulations allow alternative limits for BOD_5 and TSS for facilities using trickling filters or waste stabilization ponds provided the following requirements are met (40 CFR § 133.101(g), and 40 CFR § 133.105(d)):

(1) The BOD_5 and TSS effluent concentrations consistently achievable through proper operation and maintenance (40 CFR § 133.101(f)) of the treatment works exceed the minimum level of the effluent quality set forth in §§ 133.102(a) and (b).

The regulation at 40 CFR § 133.101(f) defines effluent concentrations consistently achievable through proper operation and maintenance as the 95th percentile value for a given pollutant for the 30-day average effluent quality achieved by a treatment works in a period of at least two years and a 7-day average value equal to 1.5 times the value derived from that value.

Also, 40 CFR § 133.105(f) states:

"Furthermore, permitting authorities shall require more stringent limitations when adjusting permits if: (1) For existing facilities the permitting authority determines that the 30-day average and the 7- day average BOD_5 and TSS effluent values that could be achievable through proper operating and maintenance of the treatment work, based on an analysis of the past performance of the treatment works, would enable the treatment works to achieve more stringent limitations"

(2) A trickling filter or waste stabilization pond (lagoon) is used as the principal process, and

(3) The treatment works provide significant biological treatment of municipal wastewater. The regulations at 40 CFR § 133.101(k) defines *significant biological treatment* as the use of 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.

Evaluation of the Treatment Equivalent to Secondary Treatment Standards

Based on the last 5 years of data from January 2014 to September 2019, a summary of Facility performance for BOD_5 and TSS is shown below:

[3] Page 21, 2004 Fact Sheet: Small Publicly Owned treatment Works and other Small Treatment Works Providing Secondary Treatment of Domestic Sewage in Alaska, AKG570000, AKG571000.

Table 8. Evaluation of the Treatment Equivalent to Secondary Treatment Standards

Parameter	95th Percentile of the 30-day average	95th Percentile of the 7-day average
BOD_5	103 mg/L	103 mg/L
TSS	173 mg/L	173 mg/L
Percent Removal for BOD_5	5th percentile = 12%	
Footnote: Based on DMRs from January 2014 to September 2019.		

Based on the analyses of BOD_5 data, the Facility does not meet the requirements of eligibility for Treatment Equivalent to Secondary Treatment:

- The 5th percentile of the Percent Removal is 12%, which is less than the required 65%. The data shows that the facility does not provide significant biological treatment to achieve 65% removal consistently. Accordingly, the Facility's effluent limits for BOD_5 are based on the federal secondary treatment requirements. For TSS, federal regulations may allow for Alternate State Requirements if the Facility meets 40 CFR § 133.103(c), which allows for a variation.

Evaluation for Alternate State Requirements for Adjusted TSS Requirements for Waste Stabilization Ponds

In accordance with regulations adopted by EPA in 1977 and revised in 1984, states can adjust the maximum allowable TSS concentration for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. The regulation, found at 40 CFR § 133.103(c), defines "SS concentrations achievable with waste stabilization ponds" as the effluent concentration achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality for BOD_5 specified in 40 CFR § 133.105(a)(1) (45 milligrams per liter [mg/L] as a 30-day average).

To qualify for an adjustment up to as high as the maximum concentration allowed, a facility must:

- use a waste stabilization pond as its principal process for secondary treatment; and,
- its operations and maintenance data must indicate that it cannot achieve the equivalent to secondary treatment standards.

EPA published approved alternate TSS requirements in 49 *Federal Register* (FR) 37005, September 20, 1984. The adjusted TSS requirement for Alaska is 70 mg/L based on a 30-day average. [4]

[4] Section 5.1.2.1 Adjusted TSS Requirements for Waste Stabilization Ponds, NPDES Permit Writers' Manual, September 2010.

Analysis for Adjusted TSS Requirements for Waste Stabilization Ponds
The Facility qualifies for the an adjusted TSS requirement because the Facility meets both conditions:

- The Facility uses a waste stabilization pond as its principal process for secondary treatment; and,
- The Facility cannot achieve the equivalent to secondary treatment standards. The 90th percentile of the Facility's Average Monthly DMR data for TSS is 156 mg/L. The monitoring results are much higher than the Equivalent to Secondary Treatment Standards which establishes an Average Monthly limit for TSS of 45 mg/L.

Accordingly based on the above, the Facility qualifies for the Alternate TSS limitation of 70 mg/L (Average Monthly Limit) as described in Section 5.1.2.1 of EPA's NPDES Permit Writers' Manual (September 2010). Consistent with EPA's Permit Writers' Manual, the average weekly limitation can be set to 1.5 times the average monthly limitation[5].

Therefore, the Average Weekly Limit = Average Monthly Limit x 1.5 = 70 mg/L x 1.5 = 105 mg/L.

According to the Adjusted Requirements for Waste Stabilization Ponds, there is no requirement of percent removal requirement for TSS.

B. Mass-Based Limits

40 CFR § 122.45(f) requires that effluent limits be expressed in terms of mass, except under certain conditions. 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[6]

Since the design flow for this Facility is 0.075 mgd, the technology-based mass limits for BOD_5 are calculated as follows:

Average Monthly Limit (BOD_5) = 30 mg/L × 0.230 mgd × 8.34 = 57.55 lbs/day
Average Weekly Limit (BOD_5) = 45 mg/L × 0.230 mgd × 8.34 = 86.32 lbs/day

Average Monthly Limit (TSS) = 70 mg/L x 0.230 mgd x 8.34 = 134.27 lbs/day
Average Weekly Limit (TSS) = 105 mg/L x 0.230 mgd x 8.34 = 201.41 lbs/day

State of Alaska's Residues Criteria for Marine Water Uses

Alaska's regulation at 18 AAC 70.020(b)(20) describes narrative criteria concerning residues for the protection of marine water uses involving: floating solids, debris, sludge, deposits, foam, scum, or other residues. To comply with this criteria, the Draft Permit requires that the

[5] Section 5.1.3.4, Step 4: Calculate Effluent Limitations Based on Adjusted Standards, NPDES Permit Writers' Manual, September 2010.
[6] 8.34 is a conversion factor with units (lb ×L)/(mg × gallon×10^6)

permittee must not discharge floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses. The EPA normally would also require the permittee to perform visual monitoring to ensure compliance with this criteria. However, due to the location of the submerged outfall at 70 feet below MLLW, and at 2,400 feet from shore, visual monitoring of the outfall is impractical and thus is not required in the Draft Permit.

VI. Water Quality-Based Effluent Limits

A. Statutory and Regulatory Basis

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Discharges to State or Tribal waters must also comply with limitations imposed by the State or Tribe as part of its certification of NPDES permits under section 401 of the CWA. 40 CFR § 122.44(d)(1) 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.

B. 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 Alaska Water Quality Standards at 18 AAC 70.255(e)(1)(A) and (B) provides Alaska's mixing zone regulation for point source discharges in estuarine and marine waters. Unless

there are other factors, Alaska's regulation allows the size of the mixing zone in estuarine and marine waters not to exceed 10 percent of the total length of the cross-section and restricted to not exceed 10 percent of the surface area of the waterbody.

The 2004 Permit contained a 100-meter radius mixing zone for this facility. The cross-section distance across Nichols Passage at this location is approximately 8,400 meters; and the surface area of Nichols Passage is very large (consisting in the order of many square miles). When the size of the receiving waterbody is compared with the dimensions of Nichols Passage, the 2004 Mixing Zone is less than 10 percent of the total length of the cross section and is also less than 10 percent of the surface area of the receiving waterbody. Therefore, the permit retains the 100-meter mixing zone.

C. Reasonable Potential and Water Quality-Based Effluent Limits

The evaluation of reasonable potential and water quality-based effluent limits for specific parameters are summarized below.

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 2004 Permit did not require facilities covered under the permit to collect ammonia data, and as a result, there are no ammonia data to perform a reasonable potential analysis. However, given that the Facility's discharge is very small to marine waters at a depth of 70 feet with a 100 meter mixing zone, and there are no known indirect discharges of ammonia to the Facility, the EPA believes that there is no reasonable potential for ammonia to exceed Alaska Water Quality Standards. Thus, the permit does not contain an ammonia effluent limit. However, ammonia monitoring is added at a 1/month frequency in the Draft Permit so that a reasonable potential analysis can be conducted in the next permit cycle.

pH

The Alaska water quality standards designate the protection of the beneficial use of marine Water Supply (aquaculture) in 18 AAC 70.020(b)(18)(A)(i), which requires that the pH values of marine water, "*May not be less than 6.5 or greater than 8.5, and may not vary more than 0.2 pH unit outside the naturally occurring range*".

The 2004 Permit required facilities covered under the permit to meet a pH effluent limit of 6.0 s.u. to 9.0 s.u. This effluent limit included the application of a 100-meter mixing zone. Effluent pH data were compared to the water quality criteria. As reported in the Facility's DMRs from January 2014 to September 2019, the Facility's discharge was between the pH range of 6.01 s.u. to 9.89 s.u.

Since there is reasonable potential, the Draft Permit proposes to retain the same pH effluent limits that were in the 2004 Permit.

Dissolved Oxygen (DO)

Dissolved Oxygen (DO) - The Alaska water quality standard for DO which protects the beneficial use of marine Water Supply (aquaculture), requires that DO values in marine water "*may not be less than 6.0 mg/L for a depth of one meter except when natural*

conditions cause this value to be depressed. DO may not be reduced below 4 mg/L at any point beneath the surface." 18 AAC 70.020(b)(18)(A)(i). With the application of a 100-meter mixing zone for DO, the 2004 Permit required facilities covered under it to have a daily minimum limit of 2 mg/L.

If there is site specific ambient DO data, the reasonable potential to cause or contribute to violations of the dissolved oxygen criteria of 6 mg/L can be evaluated using the Streeter-Phelps model. The Streeter-Phelps equation (also known as the "dissolved oxygen sag" equation) is based on a mass balance which is affected by two processes. One is that oxygen is removed from water by the degradation of organic materials. In other words, the biochemical oxygen demand of an organic waste is satisfied by oxygen taken from the water. The second process is "reaeration" by oxygen transfer into the water from the atmosphere.

Currently, there is insufficient data to perform DO modeling. To perform this modeling, long-term site-specific ambient concentrations of DO must be available; however, no site-specific ambient DO data is available for this facility.

Ambient DO readings tend to vary with season and temperature with higher concentrations corresponding with lower temperature readings. Because there is no site specific information of ambient DO concentrations for modeling, and because there is no other source of BOD_5 in the vicinity that would significantly depress DO, there is high confidence that there is more than sufficient dilution to meet Alaska's Water Quality Standards for DO at the edge of the 100-meter mixing zone with the existing DO effluent limit. In addition, every facility that discharged into marine water that was covered under the 2004 Permit was authorized by ADEC to discharge DO in wastewater with a Daily Minimum Limit of 2.0 mg/L. The EPA is proposing to retain the 2004 Permit's effluent limitation for DO, which is a Daily Minimum Limit of 2.0 mg/L. Given that the Facility's effluent is small and is authorized a 100-meter mixing zone, that the receiving water is not impaired for DO, and the outfall located in relatively deep water (70-feet below MLLW), these circumstances would provide sufficient dilution to meet Alaska WQS for DO (4 mg/l) at the edge of the mixing zone.

The Draft Permit proposes to retain the requirement in the 2004 Permit.

Fecal Coliform

Based on a 5-tube decimal dilution test, the Alaska WQS state that waters of the State of Alaska that are designated for Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life, the fecal coliform median MPN may not exceed 14 FC/100mL, and not more than 10% of the samples may exceed a fecal coliform median MPN of 43 FC/100 mL (18 AAC 70.020(b)(14)(D)).

The 2004 Permit required facilities covered under the permit to meet Fecal Coliform effluent limits based on the geometric mean of the samples as follows:

Average Monthly Limit: 100,000 colonies/100 mL

Daily Maximum Limit: 150,000 colonies/100 mL

The Facility reported sampling results in its DMRs from January 2014 to September 2019 for Fecal Coliform which ranged from: 10 colonies/100 mL to 2,000,000 colonies/100 mL.

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.

40 CFR § 122.45(d)(2) requires 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.

The Draft Permit proposes to retain the effluent limits for Fecal Coliform that were in the 2004 Permit to ensure that beneficial uses are met.

Residues

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

D. Antibacksliding

An anti-backsliding analysis was done for the Metlakatla Sewer Treatment Plant. Section 402(o) of the Clean Water Act and 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*.

BOD_5

Section 402(o)(2)(B)(ii) of the CWA has the following anti-backsliding exception:

"*(T)the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section;"*

In 2004, the EPA incorrectly applied Alaska's Secondary Treatment Standards to this facility because the EPA assumed that the Facility discharged into state waters, not tribal waters. Upon review of the boundary of the Annette Islands Reserve, the EPA concludes that the Facility discharges into tribal waters. Accordingly, in the draft permit the effluent limits for BOD_5 are based on Federal Secondary Treatment Standards wherein the Maximum Daily effluent limits of 60 mg/L and 38 lbs/day have been eliminated since the federal standards do not have Maximum Daily effluent limits.

In addition, in 2004, the EPA used a design flow of 0.075 mgd to calculate the loading effluent limits. However, when the Facility submitted a permit application in 2001, the

Facility indicated that their design flow was 0.23 mgd. Therefore, it is unclear where the 0.075 mgd design flow came from. In a letter from the Facility dated April 3, 2020, the Facility stated that the design criteria for the Facility has an average flow rate of 0.230 mgd, which happens to closely corelate to the Facility's actual average flow rate in 2018. As a result, the EPA used the design flow of 0.230 mgd to calculate the loading limits in the permit. The use of the design flow of 0.075 mgd in the previous permit appears to have been used in error, thus, there was a technical mistake pursuant to CWA Section 402(o)(2)(B)(ii).

Due to the change in design flow rates in the Draft Permit, the loading limits have been revised and result in less stringent limits than the previous permit.

The differences in BOD_5 effluent limits are shown below.

Table 9: Differences in BOD_5 Effluent Limits

	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit	Percent Removal	Basis
2004 Permit BOD_5 Effluent Limits	30 mg/L and 19 lbs/day	45 mg/L and 28 lbs/day	60 mg/L and 38 lbs/day	65% minimum	Alaska's Secondary Treatment Standards 18 AAC 72.990(59)
Draft Permit BOD_5 Effluent Limits	30 mg/L and 57.55 lbs/day	45 mg/L and 86.32 lbs/day	None[1]	85%[2] minimum	Federal Secondary Treatment Standards 40 CFR § 133.102

Footnotes:

1. Maximum Daily Limits are not required in the draft permit which is less stringent than the 2004 Permit where backsliding provisions were evaluated.
2. Minimum Percent Removal requirements is more stringent in the draft permit which does not trigger backsliding.

TSS

Section 402(o)(2)(B)(i) of the CWA has the following anti-backsliding exception:

"(I)information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance".

The TSS effluent limit in the draft permit is less stringent than the previous permit. The TSS effluent limits are less stringent because the Facility's monitoring data is now available which indicates that the Facility qualifies for the less stringent Alternate State Requirements (40 CFR § 133.103(c)): the Alaska's Adjusted TSS Requirements for Waste Stabilization Ponds. In the 2004 Permit, the EPA based the TSS limits on Equivalent to Secondary Treatment Standards.

As explained above, the EPA used the wrong design flow when calculating the loading effluent limits in the previous permit. The correct design flow for the facility is 0.230 mgd. As a result of this technical mistake, the effluent limits in the draft permit are less stringent than the previous permit. Backsliding is allowed in this situation pursuant to Section 402(o)(2)(B)(ii) of the CWA.

The differences in TSS effluent limits are shown below.

Table 10. Differences in TSS Effluent Limits

	Average Monthly Limit	Average Weekly Limit	Percent Removal	Basis
2004 Permit **TSS Effluent Limits**	45 mg/L and 19 lbs/day	65 mg/L and 28 lbs/day	65% minimum	Treatment Equivalent to Secondary Treatment Standards (40 CFR § 133.105)
Draft Permit **TSS Effluent Limits**	70 mg/L and 134.27 lbs/day	105 mg/L and 201.41 lbs/day	None	Alternate State Requirements (40 CFR § 133.103(c))

Therefore, based on this information, which was not available during the previous permit issuance, the draft permit contains less stringent TSS effluent limits than the previous permit.

Flow Limit

The flow limit of 0.075 mgd in the previous permit has been eliminated since it is unnecessary as the draft permit contains mass-based limits based on the corrected design flow of 0.230 mgd.

VII. Monitoring Requirements

A. Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and 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 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.

Monitoring Changes from the Previous Permit

Except for the addition of ammonia monitoring at a once a month frequency, no changes to monitoring parameters and frequencies are proposed in the Draft Permit.

1. 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. Surface water monitoring is not required in the Draft Permit because the Facility discharges in marine waters that is a significant distance from shore.

2. 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.

3. 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. 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. 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 Draft Permit does not include a compliance schedule.

B. Operation and Maintenance Plan

The permit requires the Facility 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 upon request.

C. Sanitary Sewer Overflows 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.

D. 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 Facility 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 wastewater treatment plant 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*.

E. 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 any two months in a twelve-month period.

F. Quality Assurance Plan

The Metlakatla Sewer Treatment Plant is required to update the Quality Assurance Plan within 180 days of the effective date of the final permit. The Quality Assurance Plan must include of standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and be made available to the EPA upon request.

G. 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.

On January 8, 2020, the EPA found on a USFWS website (https://www.fws.gov/alaska/pages/endangered-species-program), the following species listed as endangered or threatened by USFWS in Alaska:

- Northern sea otter (*Enhydra lutris kenyoni*) SW DPS (threatened)
- Polar bear (*Ursus maritimus*) (threatened)
- Steller's eider (*Polysticta stelleri*) (threatened)
- Spectacled eider (*Somateria fischeri*) (threatened)
- Aleutian shield fern (*Polystichum aleuticum*) (endangered)
- Eskimo curlew (*Numenius borealis*) (endangered)
- Short-tailed albatross (*Phoebastria albatrus*) (endangered)
- Wood bison (*Bison athabascae*) (endangered)

The EPA utilized the IPaC tool on December 9, 2019, to identify threatened and endangered USFWS species in the vicinity of the discharge. Within an area of 5.31 square miles, no species were identified by the IPaC tool in the vicinity of the discharge.

On January 24, 2020, the EPA found 3 NOAA ESA Species that have critical habitat in Alaska, but none of these 3 species are within the area of the discharge. The information is found in NOAA's website at: https://www.fisheries.noaa.gov/alaska/endangered-species-conservation/endangered-threatened-and-candidate-species-alaska#pinnipeds. The 3 NOAA ESA Species that have Critical Habitat in Alaska are:

- Cook Inlet DPS Beluga Whale (*Delphinapterus leucas*) endangered) – the species exists within Cook Inlet and is not found at the vicinity of the discharge.
- North Pacific Right Whale (*Eubalaena japonica*) (endangered) – the species does not have critical habitat in SE Alaska at the vicinity of the discharge.
- Western DPS Steller Sea Lion (*Eumetopias jubatus*) endangered) – the Western Distinct Population Segment exists west of 144° W longitude. Only the Western DPS is endangered, and does not occur at the discharge located in 131° W longitude

No USFWS or NOAA species are expected near the discharge. In addition, there are other factors that were considered to support this No Effect determination, such as: the discharge is very small, and the isolated location of the discharge being 70 feet below MLLW and 2,400 feet from shore, and the discharge is directed towards much deeper water where no ESA-species are expected. Accordingly, the EPA believes that there is NO EFFECT to ESA species.

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). A review of the discharge shows that the Facility has no effect to EFH.

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

The EPA has determined that issuance of this permit has NO EFFECT on EFH in the vicinity of the discharge.

C. CWA and 401 Certification

Section 401 of the CWA requires the State or the tribe in which the discharge originates to certify that the discharge complies with the appropriate sections of the CWA, and with any appropriate requirements of State or tribal law. Since the Facility discharges to tribal waters and the Tribe does not have TAS from the EPA for purposes of the Clean Water Act, the EPA is the certifying authority. The EPA is taking comment on the EPA's intent to certify this permit.

D. Antidegradation

All the effluent limits are as stringent or more stringent as the 2004 Permit, except for changes in the BOD_5 and TSS limits, and the elimination of the flow limit. Even with the changes, all beneficial uses are expected to be met by the conditions of the Draft Permit. These changes are not expected to measurably change the water quality in the Nichols Passage. The reissuance of the NPDES permit will therefore not allow lower water quality relative to the prior permit. Therefore, no degradation is expected per 40 CFR 131.12.

E. Pretreatment Requirements

Since the Metlakatla Sewer Treatment Plant does not have an approved POTW pretreatment program, the EPA is the Control Authority of industrial users that might introduce pollutants into the Metlakatla Sewer Treatment Plant.

Special Condition in Part II.D of the Draft 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, 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 tribal, 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.

Background on the pretreatment program may be found at Introduction to the National Pretreatment Program (EPA, 2011).

F. Permit Expiration

The permit will expire five years from the effective date.

X. References

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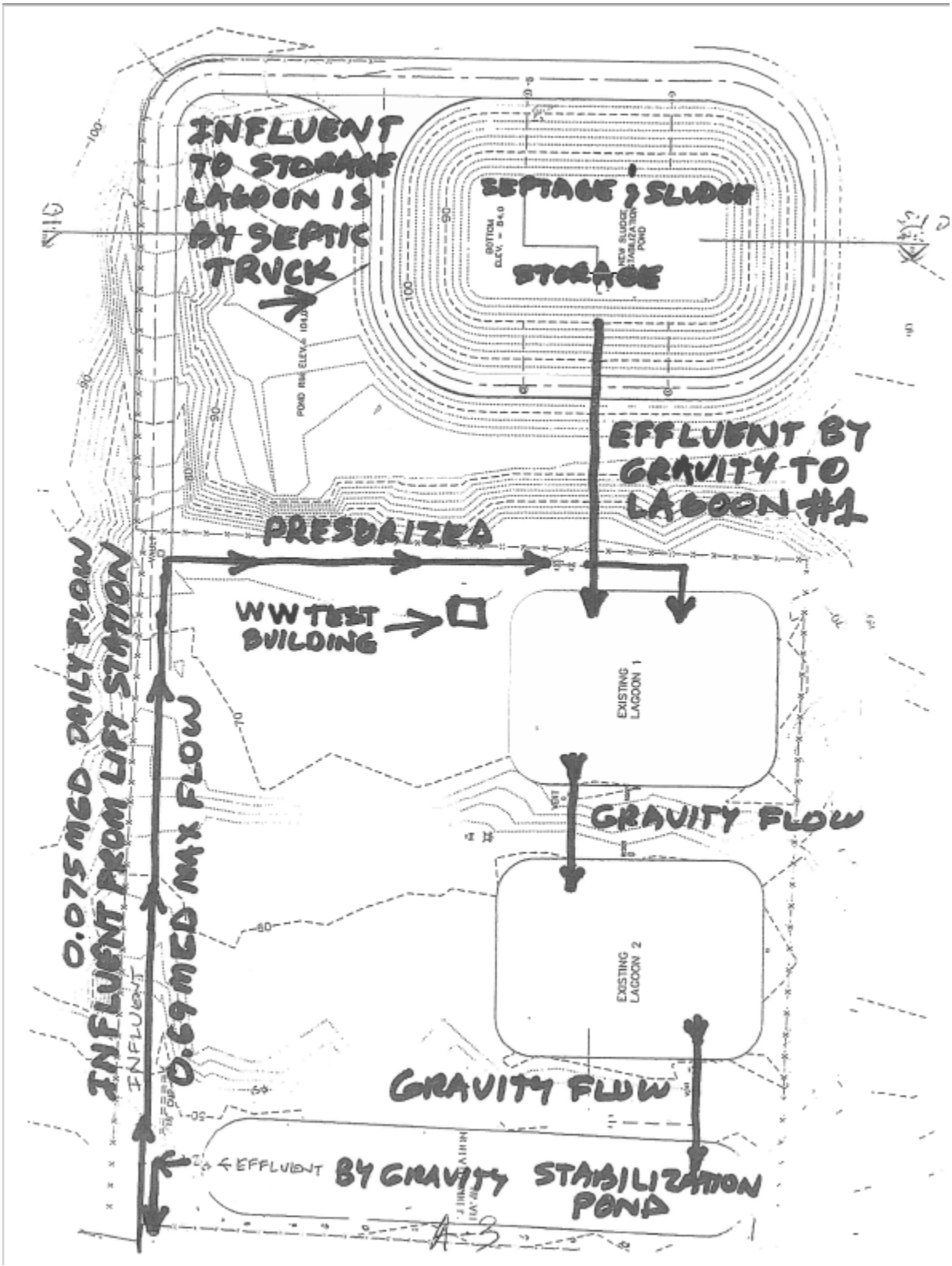
Alaska, *Waste Disposal Regulations*, 18 AAC 72. November 7, 2017.

Appendix A. Facility Information

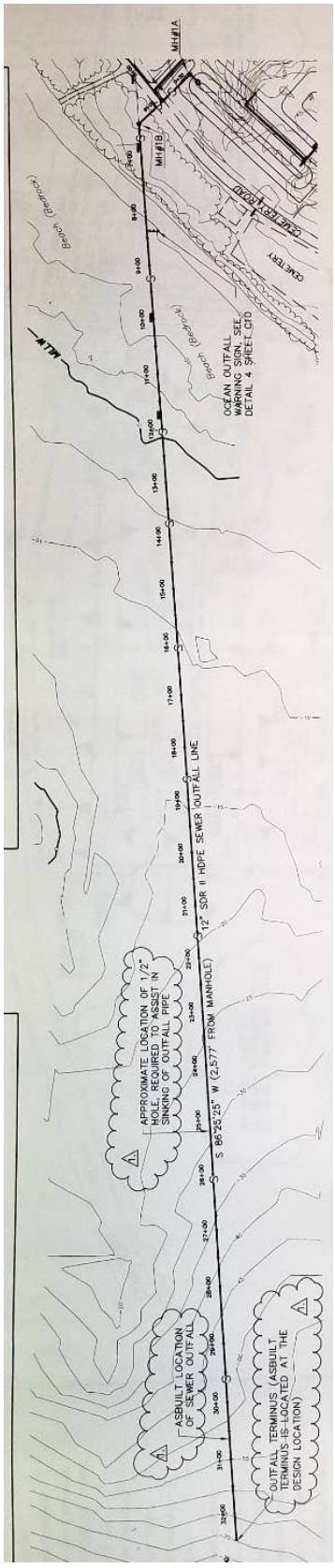
Facility – Aerial Photo

Source: Google Maps

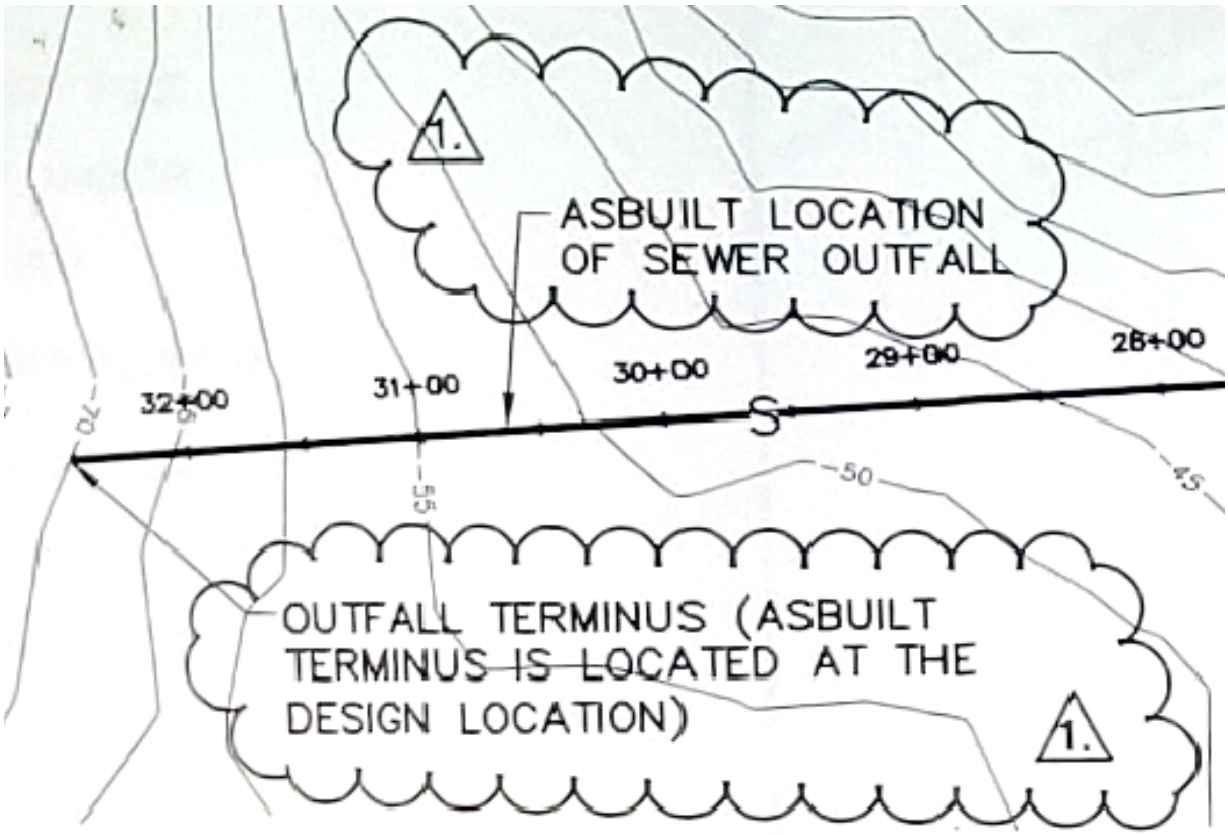
Facility Schematic Diagram



Outfall Schematic Diagram



Outfall Schematic showing the orientation of the marine outfall pipe from the Facility.



Close-up of diagram showing outfall terminus located at 70-feet below MLLW

Appendix B. Water Quality Data

Treatment Plant Effluent Data

BOD_5 Concentration

Effluent Gross	MO AVG	30.6	mg/L	WKLY AVG	30.6	mg/L	01/31/2014	DAILY MX	30.6	mg/L
Effluent Gross	MO AVG	53.85	mg/L	WKLY AVG	53.85	mg/L	02/28/2014	DAILY MX	53.85	mg/L
Effluent Gross	MO AVG	17.48	mg/L	WKLY AVG	17.48	mg/L	03/31/2014	DAILY MX	17.48	mg/L
Effluent Gross	MO AVG	20.88	mg/L	WKLY AVG	20.88	mg/L	04/30/2014	DAILY MX	20.88	mg/L
Effluent Gross	MO AVG	69.6	mg/L	WKLY AVG	69.6	mg/L	05/31/2014	DAILY MX	69.6	mg/L
Effluent Gross	MO AVG	120.6	mg/L	WKLY AVG	120.6	mg/L	06/30/2014	DAILY MX	120.6	mg/L
Effluent Gross	MO AVG	120.6	mg/L	WKLY AVG	120.6	mg/L	06/30/2014	DAILY MX	120.6	mg/L
Effluent Gross	MO AVG	74.04	mg/L	WKLY AVG	74.04	mg/L	07/31/2014	DAILY MX	74.04	mg/L
Effluent Gross	MO AVG	41.88	mg/L	WKLY AVG	41.88	mg/L	08/31/2014	DAILY MX	41.88	mg/L
Effluent Gross	MO AVG	21.78	mg/L	WKLY AVG	21.78	mg/L	09/30/2014	DAILY MX	21.78	mg/L
Effluent Gross	MO AVG	39.84	mg/L	WKLY AVG	39.84	mg/L	10/31/2014	DAILY MX	39.84	mg/L
Effluent Gross	MO AVG	45.6	mg/L	WKLY AVG	45.6	mg/L	11/30/2014	DAILY MX	45.6	mg/L
Effluent Gross	MO AVG	19.32	mg/L	WKLY AVG	19.32	mg/L	12/31/2014	DAILY MX	19.32	mg/L
Effluent Gross	MO AVG	36.6	mg/L	WKLY AVG	36.6	mg/L	01/31/2015	DAILY MX	36.6	mg/L
Effluent Gross	MO AVG	37.32	mg/L	WKLY AVG	37.32	mg/L	02/28/2015	DAILY MX	37.32	mg/L
Effluent Gross	MO AVG	30.36	mg/L	WKLY AVG	30.36	mg/L	03/31/2015	DAILY MX	30.36	mg/L
Effluent Gross	MO AVG	31.08	mg/L	WKLY AVG	31.08	mg/L	04/30/2015	DAILY MX	31.08	mg/L
Effluent Gross	MO AVG	47.04	mg/L	WKLY AVG	47.04	mg/L	05/31/2015	DAILY MX	47.04	mg/L
Effluent Gross	MO AVG	47.28	mg/L	WKLY AVG	47.28	mg/L	06/30/2015	DAILY MX	47.28	mg/L
Effluent Gross	MO AVG	80.1	mg/L	WKLY AVG	80.1	mg/L	07/31/2015	DAILY MX	80.1	mg/L
Effluent Gross	MO AVG	80.1	mg/L	WKLY AVG	80.1	mg/L	07/31/2015	DAILY MX	80.1	mg/L
Effluent Gross	MO AVG	20.04	mg/L	WKLY AVG	20.04	mg/L	08/31/2015	DAILY MX	20.04	mg/L
Effluent Gross	MO AVG	25.26	mg/L	WKLY AVG	25.26	mg/L	09/30/2015	DAILY MX	25.26	mg/L
Effluent Gross	MO AVG	30.72	mg/L	WKLY AVG	30.72	mg/L	10/31/2015	DAILY MX	30.72	mg/L
Effluent Gross	MO AVG	24.96	mg/L	WKLY AVG	24.96	mg/L	11/30/2015	DAILY MX	24.96	mg/L
Effluent Gross	MO AVG	45.96	mg/L	WKLY AVG	45.96	mg/L	12/31/2015	DAILY MX	45.96	mg/L
Effluent Gross	MO AVG	29.88	mg/L	WKLY AVG	29.88	mg/L	01/31/2016	DAILY MX	29.88	mg/L
Effluent Gross	MO AVG	23.34	mg/L	WKLY AVG	23.34	mg/L	02/29/2016	DAILY MX	23.34	mg/L
Effluent Gross	MO AVG	16.62	mg/L	WKLY AVG	16.62	mg/L	03/31/2016	DAILY MX	16.62	mg/L
Effluent Gross	MO AVG	71.76	mg/L	WKLY AVG	71.76	mg/L	04/30/2016	DAILY MX	71.76	mg/L
Effluent Gross	MO AVG	58.2	mg/L	WKLY AVG	58.2	mg/L	05/31/2016	DAILY MX	58.2	mg/L
Effluent Gross	MO AVG	42.6	mg/L	WKLY AVG	42.6	mg/L	06/30/2016	DAILY MX	42.6	mg/L
Effluent Gross	MO AVG		mg/L	WKLY AVG		mg/L	07/31/2016	DAILY MX		mg/L
Effluent Gross	MO AVG	82.83	mg/L	WKLY AVG	82.83	mg/L	08/31/2016	DAILY MX	82.83	mg/L
Effluent Gross	MO AVG	43.92	mg/L	WKLY AVG	43.92	mg/L	09/30/2016	DAILY MX	43.92	mg/L

Effluent Gross	MO AVG	25.02	mg/L	WKLY AVG	25.02	mg/L	10/31/2016	DAILY MX	25.02	mg/L
Effluent Gross	MO AVG	26.16	mg/L	WKLY AVG	26.16	mg/L	11/30/2016	DAILY MX	26.16	mg/L
Effluent Gross	MO AVG		mg/L	WKLY AVG		mg/L	12/31/2016	DAILY MX		mg/L
Effluent Gross	MO AVG	19.92	mg/L	WKLY AVG	19.92	mg/L	01/31/2017	DAILY MX	19.92	mg/L
Effluent Gross	MO AVG		mg/L	WKLY AVG		mg/L	02/28/2017	DAILY MX		mg/L
Effluent Gross	MO AVG	44.88	mg/L	WKLY AVG	44.88	mg/L	03/31/2017	DAILY MX	44.88	mg/L
Effluent Gross	MO AVG	27.6	mg/L	WKLY AVG	27.6	mg/L	04/30/2017	DAILY MX	27.6	mg/L
Effluent Gross	MO AVG	30.84	mg/L	WKLY AVG	30.84	mg/L	05/31/2017	DAILY MX	30.84	mg/L
Effluent Gross	MO AVG	37.2	mg/L	WKLY AVG	37.2	mg/L	06/30/2017	DAILY MX	37.2	mg/L
Effluent Gross	MO AVG	168.6	mg/L	WKLY AVG	168.6	mg/L	07/31/2017	DAILY MX	168.6	mg/L
Effluent Gross	MO AVG		mg/L	WKLY AVG		mg/L	08/31/2017	DAILY MX		mg/L
Effluent Gross	MO AVG	27.48	mg/L	WKLY AVG	27.48	mg/L	09/30/2017	DAILY MX	27.48	mg/L
Effluent Gross	MO AVG	21.88	mg/L	WKLY AVG	21.88	mg/L	10/31/2017	DAILY MX	21.88	mg/L
Effluent Gross	MO AVG	22.8	mg/L	WKLY AVG	22.8	mg/L	11/30/2017	DAILY MX	22.8	mg/L
Effluent Gross	MO AVG	20.46	mg/L	WKLY AVG	20.46	mg/L	12/31/2017	DAILY MX	20.46	mg/L
Effluent Gross	MO AVG	6.96	mg/L	WKLY AVG	6.96	mg/L	01/31/2018	DAILY MX	6.96	mg/L
Effluent Gross	MO AVG	70.98	mg/L	WKLY AVG	70.98	mg/L	02/28/2018	DAILY MX	70.98	mg/L
Effluent Gross	MO AVG	13.43	mg/L	WKLY AVG	13.43	mg/L	03/31/2018	DAILY MX	13.43	mg/L
Effluent Gross	MO AVG	25.44	mg/L	WKLY AVG	25.44	mg/L	04/30/2018	DAILY MX	25.44	mg/L
Effluent Gross	MO AVG	18.68	mg/L	WKLY AVG	18.68	mg/L	05/31/2018	DAILY MX	18.68	mg/L
Effluent Gross	MO AVG	19.2	mg/L	WKLY AVG	19.2	mg/L	06/30/2018	DAILY MX	19.2	mg/L
Effluent Gross	MO AVG	24.45	mg/L	WKLY AVG	24.45	mg/L	07/31/2018	DAILY MX	24.45	mg/L
Effluent Gross	MO AVG	38.76	mg/L	WKLY AVG	38.76	mg/L	08/31/2018	DAILY MX	38.76	mg/L
Effluent Gross	MO AVG	51.15	mg/L	WKLY AVG	51.15	mg/L	09/30/2018	DAILY MX	51.15	mg/L
Effluent Gross	MO AVG	38.37	mg/L	WKLY AVG	38.37	mg/L	10/31/2018	DAILY MX	38.37	mg/L
Effluent Gross	MO AVG	28.44	mg/L	WKLY AVG	28.44	mg/L	11/30/2018	DAILY MX	28.44	mg/L
Effluent Gross	MO AVG	27.12	mg/L	WKLY AVG	27.12	mg/L	12/31/2018	DAILY MX	27.12	mg/L
Effluent Gross	MO AVG	34.11	mg/L	WKLY AVG	34.11	mg/L	01/31/2019	DAILY MX	34.11	mg/L
Effluent Gross	MO AVG	30.27	mg/L	WKLY AVG	30.27	mg/L	02/28/2019	DAILY MX	30.27	mg/L
Effluent Gross	MO AVG	19.2	mg/L	WKLY AVG	19.2	mg/L	03/31/2019	DAILY MX	19.2	mg/L
Effluent Gross	MO AVG	54.48	mg/L	WKLY AVG	54.48	mg/L	04/30/2019	DAILY MX	54.48	mg/L
Effluent Gross	MO AVG	59.52	mg/L	WKLY AVG	59.52	mg/L	05/31/2019	DAILY MX	59.52	mg/L
Effluent Gross	MO AVG	36.72	mg/L	WKLY AVG	36.72	mg/L	06/30/2019	DAILY MX	36.72	mg/L
Effluent Gross	MO AVG	82.35	mg/L	WKLY AVG	82.35	mg/L	07/31/2019	DAILY MX	82.35	mg/L
Effluent Gross	MO AVG	109.71	mg/L	WKLY AVG	109.71	mg/L	08/31/2019	DAILY MX	109.72	mg/L
Effluent Gross	MO AVG		mg/L	WKLY AVG		mg/L	09/30/2019	DAILY MX		mg/L
	High	**168.60**	**mg/L**	**High**	**168.60**	**mg/L**		**High**	**168.60**	**mg/L**
	Low	**6.96**	**mg/L**	**Low**	**6.96**	**mg/L**		**Low**	**6.96**	**mg/L**
	Average	**43.09**	**mg/L**	**Average**	**43.09**	**mg/L**		**Average**	**168.60**	**mg/L**
	95th Percentile	**102.99**	**mg/L**	**95th Percentile**	**102.99**	**mg/L**		**95th Percentile**	**117.336**	**mg/L**

BOD_5 Loading

Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	01/31/2014
Effluent Gross	MO AVG	34.	lbs/day	WKLY AVG	34.	lbs/day	02/28/2014
Effluent Gross	MO AVG	11.	lbs/day	WKLY AVG	11.	lbs/day	03/31/2014
Effluent Gross	MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	04/30/2014
Effluent Gross	MO AVG	44.	lbs/day	WKLY AVG	44.	lbs/day	05/31/2014
Effluent Gross	MO AVG	75.	lbs/day	WKLY AVG	75.	lbs/day	06/30/2014
Effluent Gross	MO AVG	75.	lbs/day	WKLY AVG	75.	lbs/day	06/30/2014
Effluent Gross	MO AVG	46.	lbs/day	WKLY AVG	46.	lbs/day	07/31/2014
Effluent Gross	MO AVG	26.	lbs/day	WKLY AVG	26.	lbs/day	08/31/2014
Effluent Gross	MO AVG	14.	lbs/day	WKLY AVG	14.	lbs/day	09/30/2014
Effluent Gross	MO AVG	25.	lbs/day	WKLY AVG	25.	lbs/day	10/31/2014
Effluent Gross	MO AVG	29.	lbs/day	WKLY AVG	29.	lbs/day	11/30/2014
Effluent Gross	MO AVG	12.	lbs/day	WKLY AVG	12.	lbs/day	12/31/2014
Effluent Gross	MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	01/31/2015
Effluent Gross	MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	02/28/2015
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	03/31/2015
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	04/30/2015
Effluent Gross	MO AVG	29.	lbs/day	WKLY AVG	29.	lbs/day	05/31/2015
Effluent Gross	MO AVG	30.	lbs/day	WKLY AVG	30.	lbs/day	06/30/2015
Effluent Gross	MO AVG	50.	lbs/day	WKLY AVG	50.	lbs/day	07/31/2015
Effluent Gross	MO AVG	50.	lbs/day	WKLY AVG	50.	lbs/day	07/31/2015
Effluent Gross	MO AVG	12.5	lbs/day	WKLY AVG	12.5	lbs/day	08/31/2015
Effluent Gross	MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	09/30/2015
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	10/31/2015
Effluent Gross	MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	11/30/2015
Effluent Gross	MO AVG	29.	lbs/day	WKLY AVG	29.	lbs/day	12/31/2015
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	01/31/2016
Effluent Gross	MO AVG	15.	lbs/day	WKLY AVG	15.	lbs/day	02/29/2016
Effluent Gross	MO AVG	10.	lbs/day	WKLY AVG	10.	lbs/day	03/31/2016
Effluent Gross	MO AVG	45.	lbs/day	WKLY AVG	45.	lbs/day	04/30/2016
Effluent Gross	MO AVG	36.	lbs/day	WKLY AVG	36.	lbs/day	05/31/2016
Effluent Gross	MO AVG	27.	lbs/day	WKLY AVG	27.	lbs/day	06/30/2016
Effluent Gross	MO AVG		lbs/day	WKLY AVG		lbs/day	07/31/2016
Effluent Gross	MO AVG	52.	lbs/day	WKLY AVG	52.	lbs/day	08/31/2016
Effluent Gross	MO AVG	27.	lbs/day	WKLY AVG	27.	lbs/day	09/30/2016
Effluent Gross	MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	10/31/2016
Effluent Gross	MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	11/30/2016
Effluent Gross	MO AVG		lbs/day	WKLY AVG		lbs/day	12/31/2016
Effluent Gross	MO AVG	12.	lbs/day	WKLY AVG	12.	lbs/day	01/31/2017
Effluent Gross	MO AVG		lbs/day	WKLY AVG		lbs/day	02/28/2017
Effluent Gross	MO AVG	28.	lbs/day	WKLY AVG	28.	lbs/day	03/31/2017
Effluent Gross	MO AVG	17.	lbs/day	WKLY AVG	17.	lbs/day	04/30/2017
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	05/31/2017
Effluent Gross	MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	06/30/2017
Effluent Gross	MO AVG	105.	lbs/day	WKLY AVG	105.	lbs/day	07/31/2017
Effluent Gross	MO AVG		lbs/day	WKLY AVG		lbs/day	08/31/2017
Effluent Gross	MO AVG	17.	lbs/day	WKLY AVG	17.	lbs/day	09/30/2017
Effluent Gross	MO AVG	14.	lbs/day	WKLY AVG	14.	lbs/day	10/31/2017
Effluent Gross	MO AVG	14.	lbs/day	WKLY AVG	14.	lbs/day	11/30/2017
Effluent Gross	MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	12/31/2017

Effluent Gross	MO AVG	44.	lbs/day	WKLY AVG	44.	lbs/day	01/31/2018
Effluent Gross	MO AVG	44.	lbs/day	WKLY AVG	44.	lbs/day	02/28/2018
Effluent Gross	MO AVG	8.	lbs/day	WKLY AVG	8.	lbs/day	03/31/2018
Effluent Gross	MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	04/30/2018
Effluent Gross	MO AVG	12.	lbs/day	WKLY AVG	12.	lbs/day	05/31/2018
Effluent Gross	MO AVG	12.	lbs/day	WKLY AVG	12.	lbs/day	06/30/2018
Effluent Gross	MO AVG	15.	lbs/day	WKLY AVG	15.	lbs/day	07/31/2018
Effluent Gross	MO AVG	24.	lbs/day	WKLY AVG	24.	lbs/day	08/31/2018
Effluent Gross	MO AVG	32.	lbs/day	WKLY AVG	32.	lbs/day	09/30/2018
Effluent Gross	MO AVG	24.	lbs/day	WKLY AVG	24.	lbs/day	10/31/2018
Effluent Gross	MO AVG	18.	lbs/day	WKLY AVG	18.	lbs/day	11/30/2018
Effluent Gross	MO AVG	17.	lbs/day	WKLY AVG	17.	lbs/day	12/31/2018
Effluent Gross	MO AVG	21.	lbs/day	WKLY AVG	21.	lbs/day	01/31/2019
Effluent Gross	MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	02/28/2019
Effluent Gross	MO AVG	12.	lbs/day	WKLY AVG		lbs/day	03/31/2019
Effluent Gross	MO AVG	34.	lbs/day	WKLY AVG	34.	lbs/day	04/30/2019
Effluent Gross	MO AVG	37.	lbs/day	WKLY AVG	37.	lbs/day	05/31/2019
Effluent Gross	MO AVG	22.9	lbs/day	WKLY AVG	22.9	lbs/day	06/30/2019
Effluent Gross	MO AVG	52.	lbs/day	WKLY AVG	52.	lbs/day	07/31/2019
Effluent Gross	MO AVG	69.	lbs/day	WKLY AVG	69.	lbs/day	08/31/2019
Effluent Gross	MO AVG		lbs/day	WKLY AVG		lbs/day	09/30/2019
	High	**105.**	**lbs/day**	**High**	**105.**	**lbs/day**	
	Low	**8.**	**lbs/day**	**Low**	**8.**	**lbs/day**	
	Average	**27.52**	**lbs/day**	**Average**	**27.76**	**lbs/day**	
	95th Percentile	**64.75**	**lbs/day**	**95th Percentile**	**65.6**	**lbs/day**	

BOD_5 Percent Removal

DMR Parameter	DMR Value	Limit Value	Limit Unit Desc	Monitoring Period Start Date
Percent Removal	19.	65.	%	1/1/2014
Percent Removal	34.	65.	%	2/1/2014
Percent Removal	11.	65.	%	3/1/2014
Percent Removal	13.	65.	%	4/1/2014
Percent Removal	44.	65.	%	5/1/2014
Percent Removal	75.	65.	%	6/1/2014
Percent Removal	46.	65.	%	7/1/2014
Percent Removal	26.	65.	%	8/1/2014
Percent Removal	14.	65.	%	9/1/2014
Percent Removal	13.	65.	%	10/1/2014
Percent Removal	29.	65.	%	11/1/2014
Percent Removal	12.	65.	%	12/1/2014
Percent Removal	23.	65.	%	1/1/2015
Percent Removal	23.	65.	%	2/1/2015
Percent Removal	19.	65.	%	3/1/2015
Percent Removal	19.5	65.	%	4/1/2015
Percent Removal	24.	65.	%	5/1/2015
Percent Removal	30.	65.	%	6/1/2015
Percent Removal	50.1	65.	%	7/1/2015
Percent Removal	50.1	65.	%	7/1/2015
Percent Removal	13.	65.	%	8/1/2015
Percent Removal	16.	65.	%	9/1/2015
Percent Removal	19.	65.	%	10/1/2015
Percent Removal	16.	65.	%	11/1/2015
Percent Removal	29.	65.	%	12/1/2015
Percent Removal	19.	65.	%	1/1/2016
Percent Removal	15.	65.	%	2/1/2016
Percent Removal	10.	65.	%	3/1/2016
Percent Removal	49.	65.	%	4/1/2016
Percent Removal	36.	65.	%	5/1/2016
Percent Removal	27.	65.	%	6/1/2016
Percent Removal	52.	65.	%	8/1/2016
Percent Removal	27.	65.	%	9/1/2016
Percent Removal	16.	65.	%	10/1/2016
Percent Removal	16.	65.	%	11/1/2016
Percent Removal	19.	65.	%	5/1/2017
Percent Removal	19.	65.	%	5/1/2017
Percent Removal	23.	65.	%	6/1/2017
Percent Removal	76.	65.	%	2/1/2019
Percent Removal	65.	65.	%	3/1/2019
Percent Removal	39.	65.	%	4/1/2019
Percent Removal	72.	65.	%	5/1/2019
Percent Removal	44.	65.	%	6/1/2019
Percent Removal	22.	65.	%	8/1/2019

High	**76.**	**%**
Low	**10.**	**%**
Average	**29.86**	**%**
5th Percentile	**12.15**	**%**

TSS Concentration

MO AVG	18.	mg/L	WKLY AVG	18.	mg/L	01/31/2014	DAILY MX	18.	mg/L
MO AVG	46.	mg/L	WKLY AVG	46.	mg/L	02/28/2014	DAILY MX	46.	mg/L
MO AVG	13.3	mg/L	WKLY AVG	13.3	mg/L	03/31/2014	DAILY MX	13.3	mg/L
MO AVG	11.5	mg/L	WKLY AVG	11.5	mg/L	04/30/2014	DAILY MX	11.5	mg/L
MO AVG	20.	mg/L	WKLY AVG	20.	mg/L	05/31/2014	DAILY MX	20.	mg/L
MO AVG	38.8	mg/L	WKLY AVG	38.8	mg/L	06/30/2014	DAILY MX	38.8	mg/L
MO AVG	74.	mg/L	WKLY AVG	74.	mg/L	07/31/2014	DAILY MX	74.	mg/L
MO AVG	46.	mg/L	WKLY AVG	46.	mg/L	08/31/2014	DAILY MX	46.	mg/L
MO AVG	20.	mg/L	WKLY AVG	20.	mg/L	09/30/2014	DAILY MX	20.	mg/L
MO AVG	20.	mg/L	WKLY AVG	20.	mg/L	10/31/2014	DAILY MX	20.	mg/L
MO AVG	28.	mg/L	WKLY AVG	28.	mg/L	11/30/2014	DAILY MX	28.	mg/L
MO AVG	21.5	mg/L	WKLY AVG	21.5	mg/L	12/31/2014	DAILY MX	21.5	mg/L
MO AVG	48.	mg/L	WKLY AVG	48.	mg/L	01/31/2015	DAILY MX	48.	mg/L
MO AVG	53.3	mg/L	WKLY AVG	53.3	mg/L	02/28/2015	DAILY MX	53.3	mg/L
MO AVG	14.	mg/L	WKLY AVG	14.	mg/L	03/31/2015	DAILY MX	14.	mg/L
MO AVG	16.	mg/L	WKLY AVG	16.	mg/L	04/30/2015	DAILY MX	16.	mg/L
MO AVG	38.	mg/L	WKLY AVG	38.	mg/L	05/31/2015	DAILY MX	38.	mg/L
MO AVG	156.7	mg/L	WKLY AVG	156.7	mg/L	06/30/2015	DAILY MX	156.7	mg/L
MO AVG	236.	mg/L	WKLY AVG	236.	mg/L	07/31/2015	DAILY MX	236.	mg/L
MO AVG	236.	mg/L	WKLY AVG	236.	mg/L	07/31/2015	DAILY MX	236.	mg/L
MO AVG	37.5	mg/L	WKLY AVG	37.5	mg/L	08/31/2015	DAILY MX	37.5	mg/L
MO AVG	16.	mg/L	WKLY AVG	16.	mg/L	09/30/2015	DAILY MX	16.	mg/L
MO AVG	57.5	mg/L	WKLY AVG	57.5	mg/L	10/31/2015	DAILY MX	57.5	mg/L
MO AVG	18.3	mg/L	WKLY AVG	18.3	mg/L	11/30/2015	DAILY MX	18.3	mg/L
MO AVG	62.	mg/L	WKLY AVG	62.	mg/L	12/31/2015	DAILY MX	62.	mg/L
MO AVG	32.	mg/L	WKLY AVG	32.	mg/L	01/31/2016	DAILY MX	32.	mg/L
MO AVG	29.	mg/L	WKLY AVG	29.	mg/L	02/29/2016	DAILY MX	29.	mg/L
MO AVG	36.	mg/L	WKLY AVG	36.	mg/L	03/31/2016	DAILY MX	36.	mg/L
MO AVG	26.	mg/L	WKLY AVG	26.	mg/L	04/30/2016	DAILY MX	26.	mg/L
MO AVG	31.	mg/L	WKLY AVG	31.	mg/L	05/31/2016	DAILY MX	31.	mg/L
MO AVG	48.	mg/L	WKLY AVG	48.	mg/L	06/30/2016	DAILY MX	48.	mg/L
MO AVG		mg/L	WKLY AVG		mg/L	07/31/2016	DAILY MX		mg/L
MO AVG	115.	mg/L	WKLY AVG	115.	mg/L	08/31/2016	DAILY MX	115.	mg/L
MO AVG	58.	mg/L	WKLY AVG	58.	mg/L	09/30/2016	DAILY MX	58.	mg/L
MO AVG	37.	mg/L	WKLY AVG	37.	mg/L	10/31/2016	DAILY MX	37.	mg/L
MO AVG	36.	mg/L	WKLY AVG	36.	mg/L	11/30/2016	DAILY MX	36.	mg/L
MO AVG		mg/L	WKLY AVG		mg/L	12/31/2016	DAILY MX		mg/L
MO AVG	33.3	mg/L	WKLY AVG	33.3	mg/L	01/31/2017	DAILY MX	33.3	mg/L
MO AVG		mg/L	WKLY AVG		mg/L	02/28/2017	DAILY MX		mg/L
MO AVG	43.	mg/L	WKLY AVG	43.	mg/L	03/31/2017	DAILY MX	43.	mg/L
MO AVG	14.	mg/L	WKLY AVG	14.	mg/L	04/30/2017	DAILY MX	14.	mg/L
MO AVG	30.	mg/L	WKLY AVG	30.	mg/L	05/31/2017	DAILY MX	30.	mg/L
MO AVG	43.	mg/L	WKLY AVG	43.	mg/L	06/30/2017	DAILY MX	43.	mg/L
MO AVG	100.	mg/L	WKLY AVG	100.	mg/L	07/31/2017	DAILY MX	100.	mg/L

MO AVG		mg/L	WKLY AVG		mg/L	08/31/2017	DAILY MX		mg/L
MO AVG	60.8	mg/L	WKLY AVG	60.8	mg/L	09/30/2017	DAILY MX	60.8	mg/L
MO AVG	176.	mg/L	WKLY AVG	176.	mg/L	10/31/2017	DAILY MX	176.	mg/L
MO AVG	73.5	mg/L	WKLY AVG	73.5	mg/L	11/30/2017	DAILY MX	73.5	mg/L
MO AVG	48.8	mg/L	WKLY AVG	48.	mg/L	12/31/2017	DAILY MX	48.8	mg/L
MO AVG	45.	mg/L	WKLY AVG	45.	mg/L	01/31/2018	DAILY MX	45.	mg/L
MO AVG	185.	mg/L	WKLY AVG	412.2	mg/L	02/28/2018	DAILY MX	185.	mg/L
MO AVG	55.	mg/L	WKLY AVG	55.	mg/L	03/31/2018	DAILY MX	55.	mg/L
MO AVG	101.7	mg/L	WKLY AVG	101.7	mg/L	04/30/2018	DAILY MX	101.7	mg/L
MO AVG	148.	mg/L	WKLY AVG	148.	mg/L	05/31/2018	DAILY MX	148.	mg/L
MO AVG	155.	mg/L	WKLY AVG	155.	mg/L	06/30/2018	DAILY MX	155.	mg/L
MO AVG	160.	mg/L	WKLY AVG	160.	mg/L	07/31/2018	DAILY MX	160.	mg/L
MO AVG	140.	mg/L	WKLY AVG	140.	mg/L	08/31/2018	DAILY MX	140.	mg/L
MO AVG	136.	mg/L	WKLY AVG	136.	mg/L	09/30/2018	DAILY MX	136.	mg/L
MO AVG	36.	mg/L	WKLY AVG	36.	mg/L	10/31/2018	DAILY MX	36.	mg/L
MO AVG	24.	mg/L	WKLY AVG	24.	mg/L	11/30/2018	DAILY MX	24.	mg/L
MO AVG	18.	mg/L	WKLY AVG	18.	mg/L	12/31/2018	DAILY MX	18.	mg/L
MO AVG	19.3	mg/L	WKLY AVG	19.3	mg/L	01/31/2019	DAILY MX	19.3	mg/L
MO AVG	21.7	mg/L	WKLY AVG	21.7	mg/L	02/28/2019	DAILY MX	21.7	mg/L
MO AVG	9.3	mg/L	WKLY AVG	9.3	mg/L	03/31/2019	DAILY MX	9.3	mg/L
MO AVG	28.	mg/L	WKLY AVG	28.	mg/L	04/30/2019	DAILY MX	28.	mg/L
MO AVG	41.	mg/L	WKLY AVG	41.	mg/L	05/31/2019	DAILY MX	41.	mg/L
MO AVG	39.	mg/L	WKLY AVG	39.	mg/L	06/30/2019	DAILY MX	39.	mg/L
MO AVG	160.	mg/L	WKLY AVG	160.	mg/L	07/31/2019	DAILY MX	160.	mg/L
MO AVG	68.	mg/L	WKLY AVG	68.	mg/L	08/31/2019	DAILY MX	68.	mg/L
MO AVG		mg/L	WKLY AVG		mg/L	09/30/2019	DAILY MX		mg/L
High	**236.00**	**mg/L**	**High**	**412.20**	**mg/L**		**High**	**236.00**	**mg/L**
Low	**9.30**	**mg/L**	**Low**	**9.30**	**mg/L**		**Low**	**9.30**	**mg/L**
Average	**61.64**	**mg/L**	**Average**	**65.13**	**mg/L**		**Average**	**61.64**	**mg/L**
95th Percentile	**172.8**	**mg/L**	**95th Percentile**	**172.80**	**mg/L**		**95th Percentile**	**172.80**	**mg/L**

90th Percentile	**156.0 mg/L**

TSS Loading

MO AVG	11.	lbs/day	WKLY AVG	11.	lbs/day	01/31/2014
MO AVG	29.	lbs/day	WKLY AVG	29.	lbs/day	02/28/2014
MO AVG	8.	lbs/day	WKLY AVG	8.	lbs/day	03/31/2014
MO AVG	8.	lbs/day	WKLY AVG	8.	lbs/day	04/30/2014
MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	05/31/2014
MO AVG	24.	lbs/day	WKLY AVG	24.	lbs/day	06/30/2014
MO AVG	46.	lbs/day	WKLY AVG	46.	lbs/day	07/31/2014
MO AVG	29.	lbs/day	WKLY AVG	29.	lbs/day	08/31/2014
MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	09/30/2014
MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	10/31/2014
MO AVG	18.	lbs/day	WKLY AVG	18.	lbs/day	11/30/2014
MO AVG	13.	lbs/day	WKLY AVG	13.	lbs/day	12/31/2014
MO AVG	30.	lbs/day	WKLY AVG	30.	lbs/day	01/31/2015
MO AVG	33.	lbs/day	WKLY AVG	33.	lbs/day	02/28/2015
MO AVG	9.	lbs/day	WKLY AVG	9.	lbs/day	03/31/2015
MO AVG	10.	lbs/day	WKLY AVG	10.	lbs/day	04/30/2015
MO AVG	24.	lbs/day	WKLY AVG	24.	lbs/day	05/31/2015
MO AVG	98.	lbs/day	WKLY AVG	98.	lbs/day	06/30/2015
MO AVG	148.	lbs/day	WKLY AVG	148.	lbs/day	07/31/2015
MO AVG	148.	lbs/day	WKLY AVG	148.	lbs/day	07/31/2015
MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	08/31/2015
MO AVG	10.	lbs/day	WKLY AVG	10.	lbs/day	09/30/2015
MO AVG	36.	lbs/day	WKLY AVG	36.	lbs/day	10/31/2015
MO AVG	11.	lbs/day	WKLY AVG	11.	lbs/day	11/30/2015
MO AVG	39.	lbs/day	WKLY AVG	39.	lbs/day	12/31/2015
MO AVG	20.	lbs/day	WKLY AVG	20.	lbs/day	01/31/2016
MO AVG	18.	lbs/day	WKLY AVG	18.	lbs/day	02/29/2016
MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	03/31/2016
MO AVG	16.	lbs/day	WKLY AVG	16.	lbs/day	04/30/2016
MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	05/31/2016
MO AVG	30.	lbs/day	WKLY AVG	30.	lbs/day	06/30/2016
MO AVG		lbs/day	WKLY AVG		lbs/day	07/31/2016
MO AVG	72.	lbs/day	WKLY AVG	72.	lbs/day	08/31/2016
MO AVG	36.	lbs/day	WKLY AVG	36.	lbs/day	09/30/2016
MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	10/31/2016
MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	11/30/2016
MO AVG		lbs/day	WKLY AVG		lbs/day	12/31/2016
MO AVG	21.	lbs/day	WKLY AVG	21.	lbs/day	01/31/2017
MO AVG		lbs/day	WKLY AVG		lbs/day	02/28/2017
MO AVG	26.	lbs/day	WKLY AVG	26.	lbs/day	03/31/2017
MO AVG	9.	lbs/day	WKLY AVG	9.	lbs/day	04/30/2017
MO AVG	19.	lbs/day	WKLY AVG	19.	lbs/day	05/31/2017
MO AVG	27.	lbs/day	WKLY AVG	27.	lbs/day	06/30/2017
MO AVG	63.	lbs/day	WKLY AVG	63.	lbs/day	07/31/2017
MO AVG		lbs/day	WKLY AVG		lbs/day	08/31/2017
MO AVG	38.	lbs/day	WKLY AVG	38.	lbs/day	09/30/2017
MO AVG	110.	lbs/day	WKLY AVG	110.	lbs/day	10/31/2017
MO AVG	46.	lbs/day	WKLY AVG	46.	lbs/day	11/30/2017
MO AVG	31.	lbs/day	WKLY AVG	31.	lbs/day	12/31/2017
MO AVG	28.	lbs/day	WKLY AVG	28.	lbs/day	01/31/2018

MO AVG	116.	lbs/day	WKLY AVG	116.	lbs/day	02/28/2018
MO AVG	34.	lbs/day	WKLY AVG	34.	lbs/day	03/31/2018
MO AVG	64.	lbs/day	WKLY AVG	64.	lbs/day	04/30/2018
MO AVG	93.	lbs/day	WKLY AVG	93.	lbs/day	05/31/2018
MO AVG	97.	lbs/day	WKLY AVG	97.	lbs/day	06/30/2018
MO AVG	100.	lbs/day	WKLY AVG	100.	lbs/day	07/31/2018
MO AVG	88.	lbs/day	WKLY AVG	88.	lbs/day	08/31/2018
MO AVG	85.	lbs/day	WKLY AVG	85.	lbs/day	09/30/2018
MO AVG	23.	lbs/day	WKLY AVG	23.	lbs/day	10/31/2018
MO AVG	15.	lbs/day	WKLY AVG	15.	lbs/day	11/30/2018
MO AVG	11.	lbs/day	WKLY AVG	11.	lbs/day	12/31/2018
MO AVG	12.	lbs/day	WKLY AVG	12.	lbs/day	01/31/2019
MO AVG	14.	lbs/day	WKLY AVG	14.	lbs/day	02/28/2019
MO AVG	6.	lbs/day	WKLY AVG	6.	lbs/day	03/31/2019
MO AVG	18.	lbs/day	WKLY AVG	18.	lbs/day	04/30/2019
MO AVG	26.	lbs/day	WKLY AVG	26.	lbs/day	05/31/2019
MO AVG	24.3	lbs/day	WKLY AVG	24.3	lbs/day	06/30/2019
MO AVG	100.	lbs/day	WKLY AVG	100.	lbs/day	07/31/2019
MO AVG	43.	lbs/day	WKLY AVG	43.	lbs/day	08/31/2019
MO AVG		lbs/day	WKLY AVG		lbs/day	09/30/2019
High	**148.00**	**lbs/day**	**High**	**148.00**	**lbs/day**	
Low	**6.00**	**lbs/day**	**Low**	**6.00**	**lbs/day**	
Average	**52.22**	**lbs/day**	**Average**	**55.25**	**lbs/day**	
95th Percentile	**160.00**	**lbs/day**	**95th Percentile**	**160.00**	**lbs/day**	

TSS Percent Removal

MN % RMV	36.	65.	%	01/31/2014
MN % RMV	7.	65.	%	02/28/2014
MN % RMV	19.	65.	%	03/31/2014
MN % RMV	30.	65.	%	04/30/2014
MN % RMV	31.	65.	%	05/31/2014
MN % RMV	*125	65.	%	06/30/2014
MN % RMV	19.	65.	%	07/31/2014
MN % RMV	18.	65.	%	08/31/2014
MN % RMV	41.	65.	%	09/30/2014
MN % RMV	53.	65.	%	10/31/2014
MN % RMV	39.	65.	%	11/30/2014
MN % RMV	30.	65.	%	12/31/2014
MN % RMV	100.	65.	%	01/31/2015
MN % RMV	90.	65.	%	02/28/2015
MN % RMV	*111	65.	%	03/31/2015
MN % RMV	*250	65.	%	04/30/2015
MN % RMV	12.5	65.	%	05/31/2015
MN % RMV	20.	65.	%	06/30/2015
MN % RMV	21.	65.	%	07/31/2015
MN % RMV	21.	65.	%	07/31/2015
MN % RMV	31.	65.	%	08/31/2015
MN % RMV	80.	65.	%	09/30/2015
MN % RMV	17.	65.	%	10/31/2015
MN % RMV	22.	65.	%	11/30/2015
MN % RMV	21.	65.	%	12/31/2015
MN % RMV	*950	65.	%	01/31/2016
MN % RMV	16.	65.	%	02/29/2016
MN % RMV	58.	65.	%	03/31/2016
MN % RMV	56.	65.	%	04/30/2016
MN % RMV	16.	65.	%	05/31/2016
MN % RMV	77.	65.	%	06/30/2016
MN % RMV		65.	%	07/31/2016
MN % RMV	27.	65.	%	08/31/2016
MN % RMV	25.	65.	%	09/30/2016
MN % RMV	18.	65.	%	10/31/2016
MN % RMV	30.	65.	%	11/30/2016
MN % RMV		65.	%	12/31/2016
MN % RMV		65.	%	01/31/2017
MN % RMV		65.	%	02/28/2017
MN % RMV		65.	%	03/31/2017
MN % RMV		65.	%	04/30/2017
MN % RMV	16.	65.	%	05/31/2017
MN % RMV	16.	65.	%	05/31/2017
MN % RMV	34.	65.	%	06/30/2017

MN % RMV		65.	%	07/31/2017
MN % RMV		65.	%	08/31/2017
MN % RMV		65.	%	09/30/2017
MN % RMV		65.	%	10/31/2017
MN % RMV		65.	%	11/30/2017
MN % RMV	72.	65.	%	02/28/2019
MN % RMV	92.	65.	%	03/31/2019
MN % RMV	22.	65.	%	04/30/2019
MN % RMV	88.	65.	%	05/31/2019
MN % RMV	66.	65.	%	06/30/2019
MN % RMV	*-651	65.	%	07/31/2019
MN % RMV	*-13	65.	%	08/31/2019
MN % RMV		65.	%	09/30/2019
High	**100.00**		**%**	
Low	**7.00**		**%**	
Average	**38.14**		**%**	
95th Percentile	**90.20**		**%**	

Note: Reported values with asterisk (*) denotes unreliable values that are excluded in statistical calculations. Percent removal cannot be negative values, or values in excess of 100%.

pH

INST MAX	8.37	S.U.	INST MIN	8.02	S.U.	01/31/2014
INST MAX	8.15	S.U.	INST MIN	8.05	S.U.	02/28/2014
INST MAX	8.16	S.U.	INST MIN	7.91	S.U.	03/31/2014
INST MAX	8.14	S.U.	INST MIN	8.01	S.U.	04/30/2014
INST MAX	8.45	S.U.	INST MIN	7.89	S.U.	05/31/2014
INST MAX	7.67	S.U.	INST MIN	7.22	S.U.	06/30/2014
INST MAX	7.67	S.U.	INST MIN	7.22	S.U.	07/31/2014
INST MAX	7.8	S.U.	INST MIN	7.38	S.U.	08/31/2014
INST MAX	7.94	S.U.	INST MIN	6.91	S.U.	09/30/2014
INST MAX	8.01	S.U.	INST MIN	6.95	S.U.	10/31/2014
INST MAX	6.95	S.U.	INST MIN	8.11	S.U.	11/30/2014
INST MAX	8.14	S.U.	INST MIN	8.03	S.U.	12/31/2014
INST MAX	8.21	S.U.	INST MIN	8.02	S.U.	01/31/2015
INST MAX	8.19	S.U.	INST MIN	8.	S.U.	02/28/2015
INST MAX	7.95	S.U.	INST MIN	8.11	S.U.	03/31/2015
INST MAX	8.69	S.U.	INST MIN	7.89	S.U.	04/30/2015
INST MAX	8.69	S.U.	INST MIN	7.95	S.U.	05/31/2015
INST MAX	8.21	S.U.	INST MIN	7.92	S.U.	06/30/2015
INST MAX	8.9	S.U.	INST MIN	7.92	S.U.	07/31/2015
INST MAX	9.89	S.U.	INST MIN	7.95	S.U.	08/31/2015
INST MAX	9.15	S.U.	INST MIN	7.79	S.U.	09/30/2015
INST MAX	8.01	S.U.	INST MIN	7.71	S.U.	10/31/2015
INST MAX	8.11	S.U.	INST MIN	7.71	S.U.	11/30/2015
INST MAX	8.19	S.U.	INST MIN	7.99	S.U.	12/31/2015
INST MAX	8.07	S.U.	INST MIN	7.79	S.U.	01/31/2016
INST MAX	8.21	S.U.	INST MIN	7.81	S.U.	02/29/2016
INST MAX	8.31	S.U.	INST MIN	7.79	S.U.	03/31/2016
INST MAX	8.45	S.U.	INST MIN	7.61	S.U.	04/30/2016
INST MAX	8.4	S.U.	INST MIN	7.07	S.U.	05/31/2016
INST MAX	8.11	S.U.	INST MIN	7.14	S.U.	06/30/2016
INST MAX		S.U.	INST MIN		S.U.	07/31/2016
INST MAX	8.11	S.U.	INST MIN	7.3	S.U.	08/31/2016
INST MAX	7.99	S.U.	INST MIN	7.31	S.U.	09/30/2016
INST MAX	8.85	S.U.	INST MIN	7.16	S.U.	10/31/2016
INST MAX	8.05	S.U.	INST MIN	7.35	S.U.	11/30/2016
INST MAX		S.U.	INST MIN		S.U.	12/31/2016
INST MAX	8.02	S.U.	INST MIN	7.43	S.U.	01/31/2017

INST MAX		S.U.	INST MIN		S.U.	02/28/2017
INST MAX	7.74	S.U.	INST MIN	7.25	S.U.	03/31/2017
INST MAX	7.8	S.U.	INST MIN	6.97	S.U.	04/30/2017
INST MAX	7.56	S.U.	INST MIN	7.25	S.U.	05/31/2017
INST MAX	7.54	S.U.	INST MIN	7.01	S.U.	06/30/2017
INST MAX	8.04	S.U.	INST MIN	7.06	S.U.	07/31/2017
INST MAX		S.U.	INST MIN		S.U.	08/31/2017
INST MAX	8.28	S.U.	INST MIN	7.23	S.U.	09/30/2017
INST MAX	7.65	S.U.	INST MIN	7.23	S.U.	10/31/2017
INST MAX	7.43	S.U.	INST MIN	7.43	S.U.	11/30/2017
INST MAX	7.21	S.U.	INST MIN	6.01	S.U.	12/31/2017
INST MAX	7.66	S.U.	INST MIN	7.22	S.U.	01/31/2018
INST MAX	7.77	S.U.	INST MIN	7.46	S.U.	02/28/2018
INST MAX	8.77	S.U.	INST MIN	7.31	S.U.	03/31/2018
INST MAX	8.36	S.U.	INST MIN	7.75	S.U.	04/30/2018
INST MAX	8.47	S.U.	INST MIN	7.08	S.U.	05/31/2018
INST MAX	7.72	S.U.	INST MIN	7.2	S.U.	06/30/2018
INST MAX	7.98	S.U.	INST MIN	7.22	S.U.	07/31/2018
INST MAX	7.7	S.U.	INST MIN	7.01	S.U.	08/31/2018
INST MAX	7.22	S.U.	INST MIN	6.81	S.U.	09/30/2018
INST MAX	7.18	S.U.	INST MIN	7.01	S.U.	10/31/2018
INST MAX	7.27	S.U.	INST MIN	7.1	S.U.	11/30/2018
INST MAX	7.27	S.U.	INST MIN	7.04	S.U.	12/31/2018
INST MAX	7.61	S.U.	INST MIN	7.14	S.U.	01/31/2019
INST MAX	8.3	S.U.	INST MIN	7.8	S.U.	02/28/2019
INST MAX	8.1	S.U.	INST MIN	7.9	S.U.	03/31/2019
INST MAX	8.1	S.U.	INST MIN	7.7	S.U.	04/30/2019
INST MAX	8.7	S.U.	INST MIN	7.88	S.U.	05/31/2019
INST MAX	8.5	S.U.	INST MIN	7.9	S.U.	06/30/2019
INST MAX	8.3	S.U.	INST MIN	7.9	S.U.	07/31/2019
INST MAX	8.2	S.U.	INST MIN	7.7	S.U.	08/31/2019
INST MAX		S.U.	INST MIN		S.U.	09/30/2019
High	**9.89**	**S.U.**	**High**	**8.11**	**S.U.**	
Low	**6.95**	**S.U.**	**Low**	**6.01**	**S.U.**	

Flow

DAILY MX	.075	MGD	01/31/2014
DAILY MX	.075	MGD	02/28/2014
DAILY MX	.075	MGD	03/31/2014
DAILY MX	.075	MGD	04/30/2014
DAILY MX	.075	MGD	05/31/2014
DAILY MX	.075	MGD	06/30/2014
DAILY MX	.075	MGD	07/31/2014
DAILY MX	.075	MGD	08/31/2014
DAILY MX	.075	MGD	09/30/2014
DAILY MX	.075	MGD	10/31/2014
DAILY MX	.075	MGD	11/30/2014
DAILY MX	.075	MGD	12/31/2014
DAILY MX	.075	MGD	01/31/2015
DAILY MX	.075	MGD	02/28/2015
DAILY MX	.075	MGD	03/31/2015
DAILY MX	.075	MGD	04/30/2015
DAILY MX	.075	MGD	05/31/2015
DAILY MX	.075	MGD	06/30/2015
DAILY MX	.075	MGD	07/31/2015
DAILY MX	.075	MGD	08/31/2015
DAILY MX	.075	MGD	09/30/2015
DAILY MX	.075	MGD	10/31/2015
DAILY MX	.075	MGD	11/30/2015
DAILY MX	.075	MGD	12/31/2015
DAILY MX	.075	MGD	01/31/2016
DAILY MX	.075	MGD	02/29/2016
DAILY MX	.075	MGD	03/31/2016
DAILY MX	.075	MGD	04/30/2016
DAILY MX	.075	MGD	05/31/2016
DAILY MX	.075	MGD	06/30/2016
DAILY MX	.075	MGD	08/31/2016
DAILY MX	.075	MGD	09/30/2016
DAILY MX	.075	MGD	10/31/2016
DAILY MX	.075	MGD	11/30/2016
DAILY MX	.075	MGD	06/30/2017
DAILY MX	.075	MGD	04/30/2019
DAILY MX	.075	MGD	05/31/2019
DAILY MX	.075	MGD	06/30/2019
DAILY MX	.075	MGD	07/31/2019
DAILY MX	.075	MGD	08/31/2019
DAILY MX		MGD	09/30/2019
High	**0.075**	**MGD**	
Low	**0.075**	**MGD**	

Fecal Coliform

Effluent Gross	MO GEOMN	40.	#/100mL	01/31/2014
Effluent Gross	MO GEOMN	50000.	#/100mL	02/28/2014
Effluent Gross	MO GEOMN	14.852	#/100mL	03/31/2014
Effluent Gross	MO GEOMN	2400.	#/100mL	04/30/2014
Effluent Gross	MO GEOMN	40.	#/100mL	05/31/2014
Effluent Gross	MO GEOMN	30000.	#/100mL	06/30/2014
Effluent Gross	MO GEOMN	870.	#/100mL	07/31/2014
Effluent Gross	MO GEOMN	520.	#/100mL	08/31/2014
Effluent Gross	MO GEOMN	5300.	#/100mL	09/30/2014
Effluent Gross	MO GEOMN	6931.	#/100mL	10/31/2014
Effluent Gross	MO GEOMN	70000.	#/100mL	11/30/2014
Effluent Gross	MO GEOMN	38000.	#/100mL	12/31/2014
Effluent Gross	MO GEOMN	30.	#/100mL	01/31/2015
Effluent Gross	MO GEOMN	30000.	#/100mL	02/28/2015
Effluent Gross	MO GEOMN	10.	#/100mL	03/31/2015
Effluent Gross	MO GEOMN	240.	#/100mL	04/30/2015
Effluent Gross	MO GEOMN	30.	#/100mL	05/31/2015
Effluent Gross	MO GEOMN	20000.	#/100mL	06/30/2015
Effluent Gross	MO GEOMN	30.	#/100mL	07/31/2015
Effluent Gross	MO GEOMN	7100.	#/100mL	08/31/2015
Effluent Gross	MO GEOMN	80000.	#/100mL	09/30/2015
Effluent Gross	MO GEOMN	60000.	#/100mL	10/31/2015
Effluent Gross	MO GEOMN	240000.	#/100mL	11/30/2015
Effluent Gross	MO GEOMN	80.	#/100mL	12/31/2015
Effluent Gross	MO GEOMN	190000.	#/100mL	01/31/2016
Effluent Gross	MO GEOMN	290000.	#/100mL	02/29/2016
Effluent Gross	MO GEOMN	210000.	#/100mL	03/31/2016
Effluent Gross	MO GEOMN	90000.	#/100mL	04/30/2016
Effluent Gross	MO GEOMN	30000.	#/100mL	05/31/2016
Effluent Gross	MO GEOMN	230000.	#/100mL	06/30/2016
Effluent Gross	MO GEOMN		#/100mL	07/31/2016
Effluent Gross	MO GEOMN	2000000.	#/100mL	08/31/2016
Effluent Gross	MO GEOMN	90000.	#/100mL	09/30/2016
Effluent Gross	MO GEOMN	40000.	#/100mL	10/31/2016
Effluent Gross	MO GEOMN	70000.	#/100mL	11/30/2016
Effluent Gross	MO GEOMN		#/100mL	12/31/2016
Effluent Gross	MO GEOMN		#/100mL	01/31/2017

Effluent Gross	MO GEOMN		#/100mL	09/30/2017
Effluent Gross	MO GEOMN		#/100mL	10/31/2017
Effluent Gross	MO GEOMN		#/100mL	11/30/2017
Effluent Gross	MO GEOMN		#/100mL	12/31/2017
Effluent Gross	MO GEOMN		#/100mL	01/31/2018
Effluent Gross	MO GEOMN	10.	#/100mL	02/28/2018
Effluent Gross	MO GEOMN	10.	#/100mL	03/31/2018
Effluent Gross	MO GEOMN	10.	#/100mL	04/30/2018
Effluent Gross	MO GEOMN	10.	#/100mL	05/31/2018
Effluent Gross	MO GEOMN	10.	#/100mL	06/30/2018
Effluent Gross	MO GEOMN	50.	#/100mL	07/31/2018
Effluent Gross	MO GEOMN	10.	#/100mL	08/31/2018
Effluent Gross	MO GEOMN	18.317	#/100mL	09/30/2018
Effluent Gross	MO GEOMN	10000.	#/100mL	10/31/2018
Effluent Gross	MO GEOMN	20000.	#/100mL	11/30/2018
Effluent Gross	MO GEOMN	900.	#/100mL	12/31/2018
Effluent Gross	MO GEOMN	70.	#/100mL	01/31/2019
Effluent Gross	MO GEOMN	40000.	#/100mL	02/28/2019
Effluent Gross	MO GEOMN	3400.	#/100mL	03/31/2019
Effluent Gross	MO GEOMN	3200.	#/100mL	04/30/2019
Effluent Gross	MO GEOMN	100000.	#/100mL	05/31/2019
Effluent Gross	MO GEOMN	160.	#/100mL	06/30/2019
Effluent Gross	MO GEOMN	120.	#/100mL	07/31/2019
Effluent Gross	MO GEOMN	170000.	#/100mL	08/31/2019
Effluent Gross	MO GEOMN		#/100mL	09/30/2019
	High	**2000000.**	**#/100mL**	
	Low	**10.**	**#/100mL**	

Receiving Water Data

There is no receiving water data.

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

Part A of this appendix explains the process the EPA used to determine if the discharge authorized in the draft permit has the reasonable potential to cause or contribute to a violation of Alaska's federally approved WQS.

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 WQBEL must be included in the permit.

In this case, the EPA does not have sufficient information to perform a reasonable potential analysis for ammonia, which would be the only water quality-based parameter. For this permit, Ammonia is the only parameter of concern applicable for a reasonable potential analysis because this parameter is present in the waste stream and has a WQ-based standard. Because no effluent data and receiving water data for is available, the EPA is unable to calculate if there is reasonable potential to exceed WQS. However, the EPA considered several site-specific factors, including: the discharge is small; the receiving marine water temperature is cold; the discharge has abundant dilution; therefore, the EPA expects that the discharge would have no reasonable potential to exceed Alaska WQS.