ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT – FINAL

Permit Number: AK0023213

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations. The

CITY AND BOROUGH OF JUNEAU

is authorized to discharge from the Juneau-Douglas Wastewater Treatment Facility (JD WWTF) at Juneau, Alaska at the following locations:

Outfall	Receiving Waterbody	Latitude	Longitude
001	Gastineau Channel	58° 17′ 2″ North	134° 23′ 13″ West

Combined Sewer Outfall	Receiving Waterbody	Latitude	Longitude
N-11	Gastineau Channel	58° 18′ 21″ North	134° 25′ 48″ West
N-11.2	Gastineau Channel	58° 17′ 58″ North	134° 24′ 24″ West
N-15.1	Gastineau Channel	58° 16′ 37″ North	134° 23′ 32″ West

In accordance with the discharge point effluent limitations, monitoring requirements, and other conditions set forth herein:

This permit and authorization shall become effective June 1, 2015

This permit and the authorization to discharge shall expire at midnight, May 31, 2020

The permittee shall reapply for a permit reissuance on or before December 2, 2019, 180 days before the expiration of this permit if the permittee intends to continue operations and discharge at the facility beyond the term of this permit.

The permittee shall post or maintain a copy of this permit to discharge at the facility and make it available to the public, employees, and subcontractors at the facility.

Wade Strickland
Signature

April 13, 2015
Date

Wade Strickland
Printed Name

Program Manager
Title

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SCHEDULE OF SUBMISSIONS

The Schedule of Submissions summarizes some of the required submissions and activities the permittee must complete and/or submit to the Alaska Department of Environmental Conservation (DEC or Department) during the term of this permit. The permittee is responsible for all submissions and activities even if they are not summarized below.

Table 1. Schedule of Submissions

Location of Requirement	Submittal or Completion	Frequency	Due Date	Submit to [a]
Appendix A Section 3.2	Discharge Monitoring Report (DMR)	Monthly	Must be postmarked or submitted electronically through the eDMR system, on or before the 15th day of the following month.	Compliance Program
Permit Section 1.3.6	Whole Effluent Toxicity Monitoring Report	As required under Permit Section 1.3	Toxicity tests taken from April 1 through October 31 shall be reported with the December DMR. Toxicity tests taken from November 1 through March 31 shall be reported with the May DMR.	Compliance Program
Permit Section 1.5.2.3	Receiving Waterbody Monitoring Station Approval	1/permit cycle	Written approval must be submitted within 180 days after the effective date of the final permit.	Permitting Program
Permit Section 1.6.6	Combined Sewer Overflow Annual Report	Annually	The report must be submitted no later than January 31 of each year following the effective date of the final permit.	Compliance Program
Permit Section 2.1	Quality Assurance Project Plan	1/permit cycle	The plan must be reviewed and updated within 180 days after the effective date of the final permit. Provide DEC written notice upon completion.	Compliance Program

Location of Requirement	Submittal or Completion	Frequency	Due Date	Submit to [a]
Permit Section 2.3	Operations and Maintenance Plan (OMP)	Annually	The plan must be reviewed and updated within 180 days after the effective date of the final permit. Provide DEC written notice upon completion.	Compliance Program
Permit Section 2.4	Industrial User Survey	1/permit cycle	180 days before expiration of the final permit	Permitting Program
Appendix A Section 1.3	Application for Permit Reissuance	1/permit cycle	180 days before expiration of the final permit	Permitting Program
Permit Section 2.5	Facility Plan	1/permit cycle	180 days before expiration of the final permit	Permitting Program
Appendix A Section 3.4	Oral notification of noncompliance	As required	Within 24 hours from the time the permittee becomes aware of the circumstances of noncompliance	Compliance Program
Appendix A Section 3.4	Written documentation of noncompliance	As required	Within 5 days after the permittee becomes aware of the circumstances	Compliance Program

a) See Appendix A 1.1 for addresses

1.0 LIMITATIONS AND MONITORING REQUIREMENTS

1.1 Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from Outfall 001 specified herein to Gastineau Channel, within the limits and subject to conditions set forth herein. This permit authorizes discharge of only those pollutants resulting from facility processes, waste streams, and operations clearly identified in the permit application process.

1.2 Effluent Limits and Monitoring

The permittee must limit and monitor discharges from Outfall 001 as specified in Table 2. All values represent maximum effluent limits, unless otherwise indicated. The permittee must comply with effluent limitations in the table at all times unless otherwise indicated, regardless of monitoring frequency or reporting required by other provisions of this permit.

Table 2. Outfall 001: Effluent Limits and Monitoring Requirements

Effluent Limits						Monitoring Requirements		
Parameter	**Units**	**Average Monthly Limit**	**Average Weekly Limit**	**Maximum Daily Limit**	**Minimum Daily Limit**	**Sample Location**	**Sample Frequency**	**Sample Type**
Flow	million gallons per day (mgd)	2.76	not applicable (N/A)	6.0	N/A	effluent	continuous	recording
Biochemical Oxygen Demand (BOD_5)	milligrams per liter (mg/L)	30	45	60	N/A	influent and effluent [b]	1/month	24-hour composite [c]
	pounds per day (lbs/day) [a]	690	1,035	1,380				
Total Suspended Solids (TSS)	mg/L	30	45	60	N/A	influent and effluent [b]	1/month	24-hour composite [c]
	lbs/day [a]	690	1,035	1,380				
BOD_5 minimum percent (%) removal: 85%			TSS minimum percent removal: 85%			influent and effluent	1/month	calculated [d]
Fecal Coliform (FC) Bacteria [e]	FC/100 mL	200	400	800	N/A	effluent	1/week	grab
Enterococci Bacteria	count/100 milliliters (mL)	N/A	N/A	report	N/A	effluent	1/month[f]	grab
Total Ammonia, as Nitrogen	mg/L	14	21	30	N/A	effluent	1/month	24-hour composite [c]
Copper, total recoverable	micrograms per liter (µg/L)	N/A	N/A	report	N/A	effluent	1/quarter	24-hour composite [c]
pH	standard units (s.u.)	N/A	N/A	8.5	6.5	effluent	5/week	grab
Dissolved Oxygen (DO)	mg/L	N/A	N/A	17	2.0	effluent	5/week	grab
Temperature	degrees Celsius (˚C)	N/A	N/A	report	N/A	effluent	5/week	grab
Whole Effluent Toxicity (WET)	Chronic Toxic Units (TUc)	N/A	N/A	report	N/A	See Permit Section 1.3 for WET requirements		

Table 2. Outfall 001: Effluent Limits and Monitoring Requirements

Effluent Limits						Monitoring Requirements		
Parameter	**Units**	**Average Monthly Limit**	**Average Weekly Limit**	**Maximum Daily Limit**	**Minimum Daily Limit**	**Sample Location**	**Sample Frequency**	**Sample Type**

Footnotes:

a. lbs/day = concentration (mg/L) x flow (mgd) x 8.34 (conversion factor). Influent and effluent samples must be taken over approximately the same time period.
b. Limits apply to effluent. Report average monthly influent concentration.
c. See Appendix C for a definition.
d. Minimum % Removal = [(monthly average influent concentration in mg/L - monthly average effluent concentration in mg/L) / (monthly average influent concentration in mg/L)] x 100. The monthly average percent removal must be calculated using the arithmetic mean of the influent value and the arithmetic mean of the effluent value for that month.
e. All FC bacteria average results must be reported as the geometric mean. When calculating the geometric mean, replace all results of zero, 0, with a one, 1. The geometric mean of "n" quantities is the "nth" root of the quantities. For example the geometric mean of 100, 200, and 300 is (100 x 200 x 300)1/3= 181.7.
f. Sampling required once per month only during the time period May-Sept. Sampling should be conducted at same time as FC bacteria sampling.

1.2.1 The discharge shall not cause contamination of surface or ground waters, and shall not cause or contribute to a violation of the Alaska Water Quality Standards (18 AAC 70), unless allowed in this permit through exceptions to the standards or in a compliance schedule 18 AAC 70.200 – 70.270 and 18 AAC 70.910.

1.2.2 Influent samples must be collected prior to the waste stream flowing into the first treatment unit of the wastewater treatment system. Effluent samples must be collected from the effluent stream after the last treatment unit before discharge into receiving waters.

1.2.3 The permittee must not discharge any floating solids, debris, sludge, deposits, foam, scum or other residues that cause a film, sheen, or discoloration on the surface of the receiving water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.

1.2.4 For all effluent monitoring, the permittee must use an Environmental Protection Agency (EPA) approved test method that can achieve a reporting limit less than the effluent limit. For a parameter without an effluent limit, the permittee must use the test method; approved under Code of Federal Regulation Title 40 (40 CFR) Part 136, adopted by reference at
18 AAC 83.010, with the most sensitive method detection limit (MDL) necessary for compliance monitoring.

1.2.5 Monthly averages are to be calculated over a calendar month and weekly averages are to be calculated over a time period of Sunday through Saturday. The permittee shall include in the Quality Assurance Project Plan (QAPP), required in Part 2.1, how weekly averages that overlap two months will be reported on DMRs.

1.2.6 For purposes of reporting on the DMR for a single sample, if a value is less than the MDL, the permittee must report "less than [numeric value of MDL]" and if a value is less than a minimum level (ML), the permittee must report "less than [numeric value of ML]."

1.2.7 For purposes of calculating a monthly average, zero may be assigned for values less than the MDL, and the numeric value of the MDL may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of MDL}." if the average value is less than the ML, the permittee must report "less than [numeric value of ML]." If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level, ML, in assessing compliance.

1.2.8 Permittees have the option of taking more frequent samples than are required in the permit. These samples must be used for averaging if they are conducted using the Department-approved test methods (generally found in 18 AAC 70 and 40 CFR §136 [adopted by reference in 18 AAC 83.010]) and if the method detection limits are less than the effluent limits.

1.3 Whole Effluent Toxicity Testing Requirements

The permittee must conduct chronic WET tests on effluent samples from Outfall 001. Testing must be conducted in accordance with Sections 1.3.1 through 1.3.6.

1.3.1 The permittee must conduct annual toxicity tests on 24-hour composite effluent samples as described below.

1.3.2 Chronic Test Species and Methods

1.3.2.1 The permittee must conduct larval development tests with a bivalve species, either *Crassostrea gigas* (Pacific oyster) or *Mytulis galloprovincialis* (blue mussel) depending on the availability of the bivalve, and fertilization tests with an echinoderm, either *Strongylocentrotus purpuratus* (purple sea urchin) or *Dendraster excentricus* (sand dollar), depending on the availability of the echinoderm.

1.3.2.2 Presence of chronic toxicity must be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*,EPA/600/R/95-136, August 1995).

1.3.2.3 Results must be reported in TUc where TUc =100/no observed effect concentration (NOEC) or 100/IC25 (in percent effluent). See Appendix C for a definition of NOEC and IC25.

1.3.2.4 Both the NOEC and the IC25 must be reported. The NOEC must be used for compliance with the WET testing conditions.

1.3.3 Quality Assurance

1.3.3.1 The toxicity testing on each organism shall include a series of five test dilutions and a control. The series must include the instream waste concentration (IWC), two dilutions above the IWC, and two dilutions below the IWC. No concentration shall be greater than two times that of the next lower concentration. The IWC is the concentration of the effluent at the boundary of the mixing zone. The IWC for this discharge is estimated at 5.0%.

1.3.3.2 The chronic toxicity trigger is defined as toxicity exceeding 20 TUc corresponding to receiving water dilution of 5.0%.

1.3.3.3 All quality assurance criteria and statistical analyses used for chronic tests and reference toxicant tests must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, (EPA/600/R/95-136, August 1995).and individual test protocols.

1.3.3.4 In addition to those quality assurance measures specified in the methodology, quality assurance procedures must be followed:

1.3.3.4.1 If organisms are not cultured in-house, concurrent testing with reference toxicants must be conducted. If organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests must be conducted using the same test conditions as were used in the effluent toxicity tests.

1.3.3.4.2 If either one of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the permittee must re-sample and re-test within 14 days of receipt of the test results.

1.3.3.4.3 To the extent practicable, control and dilution water should be receiving water. If the dilution water used is different from the culture water, a second control using culture water shall also be used. For purposes of this paragraph, “receiving water” means water collected from Gastineau Channel, outside of the influence of the permittee’s discharge. In no case shall water that has not met test acceptability criteria be used as dilution water.

1.3.4 Accelerated Testing

1.3.4.1 If toxicity is greater than 20 TUc in any test, the permittee shall conduct six biweekly (every two weeks) tests over a 12-week period. Accelerated testing must be initiated within two weeks of receipt of test results that indicate exceedance.

1.3.4.2 Initial investigation: If the permittee demonstrates through an evaluation of facility operations that the cause of the exceedance is known and corrective actions have been implemented, only one accelerated test is necessary.

1.3.4.3 The permittee shall notify DEC in writing of exceedances within two weeks of receipt of the test results. Notification shall include the following information:

1.3.4.3.1 a status report on any actions required by the permit with a schedule for actions not yet completed;

1.3.4.3.2 a description of any additional actions the permittee has taken or will take to investigate and correct the cause(s) of toxicity; and

1.3.4.3.3 where no actions have been taken, a discussion of all reasons for not taking action.

1.3.4.4 If none of the accelerated tests indicates toxicity greater than 20 TUc, the permittee may return to the normal testing frequency.

1.3.4.5 If toxicity is greater than 20 TUc in any of the accelerated tests, the permittee must initiate TRE as outlined in Section 1.3.5 within 15 days of the exceedance.

1.3.4.6 If the permittee is able to adequately demonstrate through an evaluation of facility operations that the cause of the exceedance(s) is known and corrective actions have been immediately implemented, or in cases where additional test quality assurance or quality control is necessary, only one accelerated test is necessary. If toxicity is greater than 20 TUc in this test, then TRE requirements in Section 1.3.5 shall apply.

1.3.5 Toxicity Reduction Evaluation and Toxicity Identification Evaluation

1.3.5.1 If toxicity is greater than 20 TUc in any of the accelerated tests, the permittee shall initiate a TRE in accordance with *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833-B-99-002, August 1999). The permittee will develop a more detailed TRE workplan as expeditiously as possible. At a minimum, the workplan shall include:

1.3.5.1.1 further actions to investigate and identify the cause of toxicity,

1.3.5.1.2 actions the permittee will take to mitigate impact of the discharge and to prevent recurrence of toxicity, and

1.3.5.1.3 a schedule for these actions.

1.3.5.2 If a TRE is initiated before completion of accelerated testing, the accelerated testing schedule may be terminated or used as necessary in performing the TRE.

1.3.5.3 The permittee may initiate a Toxicity Identification Evaluation (TIE) as part of the TRE process. Any TIE must be performed in accordance with EPA guidance manuals, *Toxicity Identification Evaluation, Characterization of Chronically Toxic Effluents, Phase I* (EPA/600-6-91-005F, May 1992); *Methods for Aquatic Toxicity Identification Evaluation, Phase II: Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600-R-92-080, September 1993); and *Methods for Aquatic Toxicity Identification Evaluations, Phase III: Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600-R-92-081, September 1993).

1.3.6 Reporting

1.3.6.1 Toxicity tests taken from April 1 through October 31 shall be reported with (in a separate written report) the December DMR. Toxicity tests taken from November 1 through March 31 shall be reported (in a separate written report) with the May DMR.

1.3.6.2 The permittee shall submit results of any accelerated testing, under Section 1.3.5, within two weeks of receipt of results from the laboratory. The full report must be submitted within four weeks of receipt of results from the laboratory. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, the result of the investigation must be submitted with the DMR for the month following completion of the investigation.

1.3.6.3 The toxicity test report results must include all relevant information outlined in Section 10, *Report Preparation of Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, (EPA/600-R-95-136, August 1995).In addition to toxicity test results, the permittee must report: dates of sample collection and initiation of each test; the toxicity triggers as defined in Section 1.3.5; flow rate at the time of sample collection; and results of the monitoring required in Section 1.3.

1.4 Mixing Zone

1.4.1 In accordance with state regulations at 18 AAC 70.240, as amended through June 26, 2003, a mixing zone for ammonia, copper, dissolved oxygen, FC bacteria, and WET is authorized in Gastineau Channel for this discharge.

1.4.2 The chronic mixing zone for this discharge has a dilution of 20.3:1 and is defined as a circle, with a radius of 83 meters (m), centered on the outfall line and over the diffuser.

1.4.3 The acute mixing zone for this discharge has a dilution of 2.6:1 and is defined as a circle with a radius of 9 m, centered on the outfall line and over the diffuser.

1.5 Receiving Waterbody Monitoring

1.5.1 The permittee must conduct receiving water monitoring. Receiving water monitoring must start within 180 days of the effective date of the permit and continue for the duration of the permit.

1.5.2 Two receiving waterbody monitoring stations, a boundary of the mixing zone station (Station MXZ), and an ambient station (Station AMB), must be established in Gastineau Channel.

1.5.2.1 The boundary of Station MXZ must be established either at the southeast boundary of the chronic mixing zone during an ebb tide (receding or outgoing tide) or at the northwest boundary of the chronic mixing zone during a flood tide (rising or incoming tide).

1.5.2.2 Station AMB, representing ambient conditions in Gastineau Channel, must be established in a location outside the influence of the facility's discharge, greater than 83 m from the end of the outfall diffuser.

1.5.2.3 The permittee must seek written approval of the receiving water monitoring stations from DEC within 180 days of the effective date of the permit. A failure to obtain DEC approval of the locations of the receiving water monitoring stations does not relieve the permittee of the receiving water monitoring requirements.

1.5.3 To the extent practicable, receiving water sample collection must occur on the same day as corresponding effluent sample collection.

1.5.4 Samples must be analyzed for the parameters listed in Tables 3 and 4 and must achieve MDLs that are equivalent to or less than their respective receiving water limits. The permittee may request different MDLs. The request must be in writing and must be approved by DEC.

1.5.5 FC bacteria must be monitored once per month May through October and two more times between November and April.

1.5.6 Based upon the results and DEC approval, after two years, FC bacteria monitoring may be reduced to twice per year. If the sampling frequency has been reduced, and the method of disinfection changes, monitoring must recommence as stated above.

Table 3. Station MXZ: Boundary of Chronic Mixing Zone Monitoring Requirements

Parameter	Units	Sampling Frequency	Sample Type
FC Bacteria [a]	FC/100 mL	1/month [b,c]	grab
Enterococci Bacteria	counts/100 mL	2/year [c,d,e]	grab

Footnotes:

a. FC bacteria average results must be reported as the geometric mean. When calculating the geometric mean, replace all results of zero, 0, with a one, 1. The geometric mean of "n" quantities is the "nth" root of the quantities. For example the geometric mean of 100, 200, and 300 is (100 x 200 x 300)1/3= 181.7.
b. FC bacteria must be monitored once per month during May, June, July, Aug, Sept, and Oct and two more times during Nov through April. See Permit Section 1.5.5.
c. Monitoring results must be submitted to DEC with the DMR for the month following sample collection.
d. Twice per year consists of one sample taken in the summer months (June 1– Sept 30), and one in the winter (Oct 1-May 31).
e. Sampling only required during the months May-Sept. Sampling should occur at the same time as FC bacteria sampling.

Table 4. Station AMB: Ambient Station Monitoring Requirements

Parameter	Units	Sampling Frequency	Sample Type
Total Ammonia as Nitrogen [a]	mg/L	2/year [b,c]	grab
pH [a]	s.u.	2/year [b,c]	grab
Temperature [a]	°C	2/year [b,c]	grab
Salinity [a]	grams/kilogram	2/year [b,c]	grab

Footnotes:

a. Ambient station ammonia, pH, temperature, and salinity samples should be taken concurrently with the boundary of the mixing zone ammonia sample.
b. Twice per year consists of one sample taken in the summer months (June 1– Sept 30), and one in the winter (Oct 1-May 31).
c. Monitoring results must be submitted to DEC with the DMR for the month following sample collection.

1.5.7 Quality assurance/quality control (QA/QC) plans for all the monitoring must be documented in the QAPP required under Section 2.1., "Quality Assurance Project Plan".

1.5.8 Receiving water monitoring results must be submitted to DEC with the DMR for the month following sample collection. At a minimum, the report must include:

1.5.8.1 Dates of sample collection and analyses;

1.5.8.2 Results of sample analyses; and

1.5.8.3 Relevant QA/QC information.

1.6 Combined Sewer Overflows

The permittee is authorized to discharge from the combined sewer overflow (CSO) outfalls listed in Table 5 in accordance with the terms and conditions of this section.

Table 5. Permitted Combined Sewer Overflows

Diversion Structure	Location	Receiving Waterbody
N-11 (High School)	Sta "AE" 2+82 1' Rt. Near intersection of Glacier Avenue and Highland Drive	Gastineau Channel
N11.2 (City Hall)	Sta "C" Intersection of Marine Way and South Seward Street, Sealaska Diversion	Gastineau Channel
N-15.1 (formerly MH#T-4) (Douglas)	Water's edge, approximately at the intersection of Front and Dock Streets in Douglas	Gastineau Channel

1.6.1 The permittee must comply with the following technology-based requirements:

1.6.1.1 No dry weather CSOs are permitted.

1.6.1.2 The permittee must use all available and reasonable measures to prevent or moderate such discharges through proper operation and regular maintenance.

1.6.1.3 The permittee must maximize use of the collection system for storage.

1.6.1.4 The permittee shall continue to implement selected CSO controls to minimize CSO impacts from nondomestic discharges.

1.6.1.5 The permittee must maximize flow to the WWTF for treatment.

1.6.1.6 The permittee must control solid and floatable materials in sewer overflows.

1.6.1.7 The permittee must implement a pollution prevention program.

1.6.1.8 The permittee must ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

1.6.2 The permittee must comply with the following water –quality based requirements:

1.6.2.1 The permittee shall not discharge any pollutant at a level that causes or contributes to an instream excursion above numeric or narrative criteria adoped as part of Alaska Water Quality Standards (18 AAC 70), unless allowed in this permit through exceptions to the standards or in a compliance schedule 18 AAC 70.200 – 70.270 and 18 AAC 70.910.

1.6.2.2 The permittee shall discharge no more than an average of four overflow events per year not receiving the following minimum treatment:

1.6.2.2.1 Primary clarification or equivalent.

1.6.2.2.2 Solids and floatables disposal.

1.6.2.2.3 Fecal Coliform counts maintained below a maximum daily 43 FC/100 mL.

1.6.2.2.4 Total Residual Chlorine concentration below a maximum daily 0.013 mg/L.

1.6.3 The permittee shall implement and effectively operate and maintain the CSO controls identified in the JD WWTF Long Term Control Plan.Each diversion structure listed in Table 5 above, must be monitored, when discharging, as listed in Table 6, below.

1.6.4 By January 31st of each year, the permittee must submit an annual report summarizing the information from each discharge from the previous year and demonstrating compliance with the technology-based requirements at Permit Section 1.6.1, water-quality based requirements at Permit Section 1.6.2, and the controls outlined in Table 6, below.

Table 6. CSO Diversion Monitoring Requirements

Parameter	Units	Sample Location	Sampling Frequency	Sample Type
Flow	mgd	effluent	once per diversion event	record and report the total volume of discharge per day for each opening when discharging
BOD_5	mg/L and lbs/day [a]	effluent	once per diversion event	grab
TSS	mg/L and lbs/day [a]	effluent	once per diversion event	grab
FC Bacteria	FC/100 mL	effluent	once per diversion event	grab
Enterococci Bacteria	counts/100 mL	effluent	once per diversion event	grab
Duration of opening	minutes	effluent	once per diversion event	report the time that the overflow is opened and closed and total minutes open
Reason for discharge	N/A	N/A	once per diversion event	N/A

Footnote:
a. lbs/day = concentration (mg/L) x flow (mgd) x 8.34 (conversion factor).

2.0 SPECIAL CONDITIONS

2.1 Quality Assurance Project Plan

2.1.1 Within 180 days of the effective date of the permit, the permittee must develop and implement a QAPP for all monitoring required by this permit. Any existing QAPP may be modified under this section.

2.1.2 The QAPP must be designed to assist in planning for the collection and analysis of effluent and receiving water samples in support of the permit and to help explain data anomalies whenever they occur.

2.1.3 The permittee may use either the generic DEC WWTF QAPP or develop a facility-specific QAPP. Some facility specific information is required to complete the QAPP when using the generic DEC QAPP. A generic DEC QAPP is located at http://dec.alaska.gov/water/wqapp/wqapp_index.htm.

2.1.4 The permittee must provide written notice to DEC when the QAPP has been completed. The QAPP shall be maintained onsite and made available to DEC upon request.

2.1.5 Throughout all sample collection and analysis activities, the permittee must use DEC-approved QA/QC and chain-of-custody procedures, as described in the *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5, March 2001)at http://www.epa.gov/quality/qs-docs/r5-final.pdf and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5, December 2002) at http://www.epa.gov/quality/qs-docs/g5-final.pdf. The QAPP must be prepared in the format specified in these documents.

2.1.6 At a minimum, a QAPP must include the following:

2.1.6.1 Details on number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;

2.1.6.2 Maps indicating the location of each sampling point;

2.1.6.3 Qualification and training of personnel;

2.1.6.4 Name, address, and telephone number of all laboratories used by or proposed to be used by the permittee; and

2.1.6.5 The inclusion of how weekly averages that overlap two months will be reported on the DMR.

2.1.7 The permittee must amend the QAPP whenever sample collection, sample analysis, or other procedure addressed by the QAPP is modified.

2.2 Additional Effluent Monitoring

2.2.1 The permittee shall perform the additional effluent testing in the Alaska Pollutant Discharge Elimination System (APDES) Application Form 2A, Section 11 as well as all applicable supplemental monitoring listed in Section 12. The permittee shall submit the results of the additional testing with their application for reissuance of this APDES permit. The permittee shall consult and review Form 2A, Section 11 upon permit issuance to ensure that the required monitoring in the application will be completed prior to submitting a request for permit reissuance. Form 2A may be found at the following site: http://dec.alaska.gov/water/wwdp/index.htm. Monitoring for the parameters contained in this permit may be used to satisfy this specific monitoring requirement as long as the “different calendar year and season” criteria as described in Form 2A are met.

2.3 Operation and Maintenance Plan

2.3.1 In addition to requirements specified in Appendix A, Part 1.6 of this permit (Proper Operation and Maintenance), within 180 days of the effective date of this permit, the permittee shall review and update as necessary, the JD WWTF OMP. Any existing OMP may be modified under this section.

2.3.2 The permittee must provide written notice to DEC when the OMP has been completed. The OMP shall be maintained onsite and made available to DEC upon request.

2.3.3 The OMP must be reviewed annually. Documentation of annual plan review by the permittee shall be retained onsite and made available to DEC upon request.

2.3.4 The OMP must include appropriate best management practices (BMPs) which prevent or minimize potential for the release of pollutants to Gastineau Channel.

2.3.5 The permittee must develop a description of pollution prevention measures and controls appropriate for the facility. The appropriateness and priorities of controls in the OMP must reflect identified potential sources of pollutants at the facility. The description of BMPs must address to the extent practicable, the following minimum components:

2.3.5.1 Spill prevention and control;

2.3.5.2 Optimization of chemical usage;

2.3.5.3 Preventive maintenance program;

2.3.5.4 Minimization of pollutant inputs from industrial users;

2.3.5.5 Research, development, and implementation of a public information and education program to control the introduction of household hazardous materials to the sewer system; and

2.3.5.6 Water conservation.

2.4 Industrial User Survey

The permittee shall conduct an industrial user survey of industrial users connected to JD WWTF. The industrial user survey must be conducted once during the term of this permit and be submitted to DEC at least 180 days before the expiration of the permit.

2.5 Facility Planning Requirement

2.5.1 The permittee must develop a Facility Plan that evaluates the facility's existing condition and identifies near and long-term needs and improvements appropriate for a 10-20 year planning window. A guidance manual for preparing a facility plan has been published by EPA (EPA-430/9-76-015 *Construction Grants Program Requirements*, 1975). Permittee may, at its discretion, follow procedures outlined in this publication. The finalized Facility Plan must be submitted with the application for APDES permit reissuance, 180 days before expiration of this permit. Any existing Facility Plan may be modified under this section.

2.5.2 The Facility Plan must include, but is not limited to:

2.5.2.1 An evaluation of existing wastewater treatment and disposal systems used by the facility. This section of the Facility Plan must assess performance relative to existing design capacity given current conditions and identify any existing deficiencies and/or problems;

2.5.2.2 A determination of the adequacy of the facility's treatment process, maintenance program, process control measures, operating procedures, and records management protocols;

2.5.2.3 An evaluation of reasonably foreseeable future wasteloads and flows including an evaluation of future needs for treatment and infrastructure changes or upgrades, including identifying when changes or upgrades should be initiated;

2.5.2.4 A proposed schedule for implementation of specific recommendations identified from sections 2.4.2.1-2.4.2.3, above; and

2.5.2.5 A specified schedule wherein the Facility Plan will be reviewed, revised and amended in order to keep the plan up to date.

3.0 GENERAL PROVISIONS

3.1 Identification Sign

At least one sign must be posted on the shoreline near the discharge area during discharge. Signs must inform the public that secondary treated domestic wastewater is being discharged, state that there is a mixing zone and describe it, warn users of the area that certain activities such as the harvesting of aquatic life for raw consumption and bathing should not take place in the mixing zone, and provide the phone number and identify of the discharger.

3.2 Removed Substances

Collected screenings, grit, solids, scum, and other facility residuals, or other pollutants removed in the course of treatment or control of water and wastewaters shall be disposed of in a Department approved manner and method in accordance with 18 AAC 60, such as to prevent any pollution from such materials from entering navigable waters.

APPENDIX A

STANDARD CONDITIONS

APDES INDIVIDUAL PERMIT

PUBLICLY OWNED TREATMENT WORKS

September 2011

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Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

Documents, reports, and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-3487
Email: DEC.Water.WQPermit@alaska.gov

1.1.2 Compliance and Enforcement Program

Documents and reports required under the permit and Appendix A relating to compliance are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 180 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

1.5 Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

1.6.3 In accordance with 18 AAC 72.065, the owner of operator of a domestic system that has 100 or more service connections or that is used, or intended for use, by 500 or more people per day shall ensure that the system is operated by a person certified under 18 AAC 74.

1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;

1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;

1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and

1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least three years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:

1.11.2.1 All calibration and maintenance records,

1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,

1.11.2.3 All reports required by a permit,

1.11.2.4 Records of all data used to complete the application for a permit,

1.11.2.5 Field logbooks or visual monitoring logbooks,

1.11.2.6 Quality assurance chain of custody forms,

1.11.2.7 Copies of discharge monitoring reports, and

1.11.2.8 A copy of this APDES permit.

1.11.3 Records of monitoring information must include:

1.11.3.1 The date, exact place, and time of any sampling or measurement;

1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);

1.11.3.3 The date(s) and time any analysis was performed;

1.11.3.4 The name(s) of any individual(s) who performed any analysis;

1.11.3.5 Any analytical technique or method used; and

1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

1.12 Signature Requirement and Penalties

1.12.1 Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2) and (c)(3), and AS 46.03.790(g).

1.12.2 In accordance with 18 AAC 83.385, an APDES permit application must be signed as follows:

1.12.2.1 For a corporation, a responsible corporate officer shall sign the application; in this subsection, a responsible corporate officer means:

1.12.2.1.1 A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

1.12.2.1.2 The manager of one of more manufacturing, production, or operating facilities, if

1.12.2.1.2.1 The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;

1.12.2.1.2.2 The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

1.12.2.1.2.3 Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

1.12.2.2 For a partnership or sole proprietorship, by the general partner or the proprietor, respectively, shall sign the application.

1.12.2.3 For a municipality, state, federal, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means:

1.12.2.3.1 The chief executive officer of the agency; or

1.12.2.3.2 A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

1.12.3 Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1.12.3.1 The authorization is made in writing by a person described in Appendix A, Part 1.12.2;

1.12.3.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility; or an individual or position having overall responsibility for environmental matters for the company; and

1.12.3.3 The written authorization is submitted to the Department to the Permitting Program address in Appendix A, Part 1.1.1.

1.12.4 If an authorization under Appendix A, Part 1.12.3 is no longer effective because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Appendix A, Part 1.12.3 must be submitted to the Department before or together with any report, information, or application to be signed by an authorized representative.

1.12.5 Any person signing a document under Appendix A, Part 1.12.2 or Part 1.12.3 shall certify as follows:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1.13 Proprietary or Confidential Information

1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words “confidential business information” on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.

1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.

1.13.3 A permittee’s claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee

from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under state laws addressing oil and hazardous substances.

1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (http://www.dnr.state.ak.us/parks/oha/), is to be notified immediately at (907) 269-8721.

1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

2.0 Special Reporting Obligations

2.1 Planned Changes

2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:

2.1.1.1 The alteration or addition may make the facility a “new source” under one or more of the criteria in 18 AAC 83.990(44); or

2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.

2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.

2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.2 Anticipated Noncompliance

2.2.1 A permittee shall give seven days’ notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.

2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.3 Transfers

2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.

2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.4 Compliance Schedules

2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.

2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.5 Corrective Information

2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.

2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.6 Bypass of Treatment Facilities

2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

2.6.2 Notice of bypass

2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.

2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.

2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

2.6.3.1 Does not cause an effluent limitation to be exceeded, and

2.6.3.2 Is for essential maintenance to assure efficient operation.

2.7 Upset Conditions

2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of Appendix A, Part 2.7.2 are met.

2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;

2.7.2.2 The permitted facility was at the time being properly operated;

2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and

2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.

2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

2.8 Notice of New Introduction of Pollutants

2.8.1 Any POTW shall provide adequate notice to the Department, including information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW as soon as the POTW has knowledge of a change, but no later than seven days in advance of any:

2.8.1.1 New introduction of pollutants into the POTW from an indirect discharger if that introduction of pollutants would be subject to 33 U.S.C 1311 or 33 U.S.C 1316 if the POTW directly discharged those pollutants, and

2.8.1.2 Substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

2.8.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

3.2 Reporting of Monitoring Results

At intervals specified in the permit, monitoring results must be reported on the EPA discharge monitoring report (DMR) form, as revised as of March 1999, adopted by reference.

3.2.1 Monitoring results shall be summarized each month on the DMR or an approved equivalent report. The permittee must submit reports monthly postmarked by the 15th day of the following month.

3.2.2 The permittee must sign and certify all DMRs and all other reports in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. All signed and certified legible original DMRs and all other documents and reports must be submitted to the Department at the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

3.2.3 If, during the period when this permit is effective, the Department makes available electronic reporting, the permittee may, as an alternative to the requirements of Appendix A, Part 3.2.2, submit monthly DMRs electronically by the 15th day of the following month in accordance with guidance provided by the Department. The permittee must certify all DMRs and other reports, in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. The permittee must retain the legible originals of these documents and make them available to the Department upon request.

3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

3.4.1 A report must be made:

3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and

3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.

3.4.2 A report must include the following information:

3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;

3.4.2.2 The period of noncompliance, including exact dates and times;

3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and

3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3.4.3 An event that must be reported within 24 hours includes:

3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).

3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).

3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.

3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.

3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4.1.2 by submitting the written report via email, if the following conditions are met:

3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;

3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;

3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12.3 and 1.12.5.;

3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the email; and

3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.

3.4.6 The email and PDF written report will satisfy the written report submission requirements of this permit provided the email is received by the Department within five days after the time the permittee becomes aware of the noncompliance event, and the email and written report satisfy the criteria of Part 3.4.5. The email address to report noncompliance is: dec-wqreporting@alaska.gov

3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2 (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. The permittee should read the applicable statutes for further substantive and procedural details.

4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful order of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the state for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues,

and that shall reflect, when applicable:

4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

4.1.2 Reasonable costs incurred by the state in detection, investigation, and attempted correction of the violation;

4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and

4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

4.2 Injunctive Relief

4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.

4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);

4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);

4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);

4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or

4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,000; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(1)(B), (c)(2), and (c)(3)).

Appendix B

Acronyms

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The following acronyms are common terms that may be found in an Alaska Pollutant Discharge Elimination System (APDES) permit.

18 AAC 15	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 15: Administrative Procedures
18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards
18 AAC 72	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal
18 AAC 83	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System

All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database http://www.legis.state.ak.us/cgi-bin/folioisa.dll/aac

40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
APDES	Alaska Pollutant Discharge Elimination System
AS	Alaska Statutes
AS 46.03	Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/default.htm
AML	Average Monthly Limit
BMP	Best Management Practices
BOD_5	5-Day Biochemical Oxygen Demand
º C	Degrees Celsius
C_d	Aquatic life criteria that cannot be exceed downstream
C_e	Concentration of pollutant in effluent
C_u	Upstream background concentration of pollutant
CSO	Combined Sewer Overflow
CV	Coefficient of Variation
CWA	Clean Water Act
D	Dilution Factor
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FC	Fecal Coliform

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ft	Feet
gpd	Gallons per day
IC_{25}	Inhibition Concentration 25%
L	Liter
lb	Pound
ln	Natural log
LTA	Long Term Average
LTCP	Long Term Control Plan
MDL	Maximum Daily Limit
MDL	Method Detection Limit
MEC	Maximum Expected Concentration
m	Meter
mg/L	Milligrams per Liter
mgd	Million gallons per day
mL	Milliliter
ML	Minimum Level
MOC	Maximum Observed Concentration
MPN	Most Probable Number
MZ	Mixing Zone
n	Sample size
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
N/A	Not Applicable
NOEC	No Observed Effect Concentration
OMP	Operations and Maintenance Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
Q_d	Receiving Waterbody Flow Rate = $Q_e + Qu$
Q_e	Effluent Flow
Q_u	Receiving Waterbody Flow
RP	Reasonable Potential
RPA	Reasonable Potential Analysis
RPM	Reasonable Potential Multiplier

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RWC	Receiving Water Concentration
SIU	Significant Industrial User
s.u.	Standard Units
TBEL	Technology-Based Effluent Limit
TIE	Toxicity Identification Evaluation
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TUc	Toxic Unit, Chronic
μ	Mean
μg/L	Micrograms per Liter
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
UV	Ultraviolet
WET	Whole Effluent Toxicity
WLA	Waste Load Allocation
WQBEL	Water-Quality Based Effluent Limit
WQS	Water Quality Standards
WWTF	Wastewater Treatment Facility
z	Z test value or z score
σ	Standard deviation
σ^2	Variance

Appendix C

Definitions

APPENDIX C

The following are common definitions of terms associated with APDES permits. Not all the terms listed may appear in a permit. Consult the footnote references for a complete list of terms and definitions.

Administrator[a]	Means the Administrator of the EPA or an authorized representative
Alaska Pollutant Discharge Elimination System (APDES)[a]	Means the state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345
Aquaculture[b]	Means the cultivation of aquatic plants or animals for human use or consumption
Average	Means an arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities
Average Monthly Limit	Means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured for that month
Biochemical Oxygen Demand (BOD)[c]	Means the amount, in milligrams per liter, of oxygen used in the biochemical oxidation of organic matter in five days at 20º C
Bypass[a]	Means the intentional diversion of waste streams from any portion of a treatment facility
Clean Water Act (CWA)[a]	Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972
Commissioner[a]	Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee
Composite Samples	Composite samples must consist of at least eight equal volume grab samples. 24 hour composite sample means a combination of at least eight discrete samples of equal volume collected at equal time intervals over a 24-hour period at the same location. A "flow proportional composite" sample means a combination of at least eight discrete samples collected at equal time intervals over a 24-hour period with each sample volume proportioned according to the flow volume. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.
Criterion[b]	Means a set concentration or limit of a water quality parameter that, when not exceeded, will protect an organism, a population of organisms, a community of organisms, or a prescribed water use with a reasonable degree of safety. A criterion might be a narrative statement instead of a numerical concentration or limit.
Daily Discharge[a]	Means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

	mass of the pollutant discharged over the day. For pollutants with a limitation expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
Department[a]	Means the Alaska Department of Environmental Conservation
Design Flow[a]	Means the wastewater flow rate that the plant was designed to handle
Director[a]	Means the commissioner or the commissioner's designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director
Discharge[a]	When used without qualification, discharge means the discharge of a pollutant
Discharge of a Pollutant[a]	Means any addition of any pollutant or combination of pollutants to waters of the United States from any point source or to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. Discharge includes any addition of pollutants into waters of the United States from surface runoff that is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person that do not lead to a treatment works; discharges through pipes, sewers, or other conveyances leading into privately owned treatment works; and does not include an addition of pollutants by any indirect discharger.
Dissolved Oxygen (DO)[b]	Means the concentration of oxygen in water as determined either by the Winkler (iodometric) method and its modifications or by the membrane electrode method. The oxygen dissolved in water or wastewater and usually expressed in milligrams per liter or percent saturation
Domestic Wastewater[c]	Means waterborne human wastes or graywater derived from dwellings, commercial buildings, institutions, or similar structures. "Domestic wastewater" includes the contents of individual removable containers used to collect and temporarily store human wastes.
Effluent[b]	Means the segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment
Fecal Coliform (FC)[b]	Bacteria that can ferment lactose at 44.5° + 0.2°C to produce gas in a multiple tube procedure. Fecal coliform bacteria also means all bacteria that produce blue colonies in a membrane filtration procedure within 24 ± 2 hours of incubation at 44.5° + 0.2°C in an M-FC broth.
Final Approval to Operate	Means the approval that the Department issues after it has reviewed and approved the construction and operation of the engineered wastewater treatment works plans submitted to the Department in accordance with 18 AAC 72.215 through 18 AAC 72.280 or as amended.
Geometric Mean	The geometric mean is the Nth root of the product of N. All sample results of zero will use a value of 1 for calculation of the geometric mean. Example geometric mean calculation: $\sqrt[4]{12x23x34x990} = 55$.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
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Grab Sample	Means a single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place
Influent	Means untreated wastewater before it enters the first treatment process of a wastewater treatment works
Inhibition Concentration 25% (IC_{25})[e]	Means the point estimate of the toxicant concentration that would cause 25% reduction in a nonlethal biological measurement of the test organisms, such as reproduction or growth
Maximum Daily Limit[a]	Means the highest allowable "daily discharge"
Mean[b]	Means the average of values obtained over a specified period and, for fecal coliform analysis, is computed as a geometric mean
Mean Lower Low Water[b]	Means the tidal datum plane of the average of the lower of the two low waters of each day, as would be established by the National Geodetic Survey, at any place subject to tidal influence.
Measured	Means the actual volume of wastewater discharged using appropriate mechanical or electronic equipment to provide a totalized reading. Measure does not provide a recorded measurement of instantaneous rates.
Method Detection Limit (MDL)[d]	Means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte
Micrograms per Liter (μg/L)[b]	Means the concentration at which one millionth of a gram (10^{-6} g) is found in a volume of one liter
Milligrams per Liter (mg/L)[b]	Means the concentration at which one thousandth of a gram (10^{-3} g) is found in a volume of one liter. It is approximately equal to the unit "parts per million (ppm)," formerly of common use.
Minimum Level (ML)[e]	Means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed. This level is used as the compliance level if the effluent limit is below it.
Mixing Zone[b]	Means a volume of water adjacent to a discharge in which wastes discharged mix with the receiving water
Month	Means the time period from the 1st of a calendar month to the last day in the month
Monthly Average	Means the average of daily discharges over a monitoring month calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month
No Observed Effect Concentration (NOEC)[e]	Means the highest concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. NOEC is

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
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	determined using hypothesis testing.
Permittee	Means a company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit
pH[g]	Means a measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in mg/L. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.
Pollutant[a]	Means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water
Primary Contact Recreation	Means activities in which there is direct and intimate contact with water. Contact recreation includes swimming, diving, and water skiing. Contact recreation does not include wading.
Priority Pollutants	Means the set of chemical pollutants that EPA regulates and for which EPA has published analytical test methods. A list of the Priority Pollutants can be found in Appendix A to 40 CFR Part 423.
Principal Executive Officer[a]	Means the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of division of the agency
Quality Assurance Project Plan (QAPP)	Means a system of procedures, checks, audits, and corrective actions to ensure that all research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality
Quarter	Means the time period of three months based on the calendar year beginning with January
Receiving Waterbody	Means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state. (See “Waters of the U.S.” at 18 AAC 83.990(77))
Recorded	Means a permanent record using mechanical or electronic equipment to provide a totalized reading, as well as a record of instantaneous readings
Report	Report results of analysis
Reporting Limit	Minimum concentration of a given parameter that can be reliably measured and reported by a laboratory using a particular analytical method. A reporting limit is greater than or equal to a method detection limit and is typically set by a laboratory.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

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Residual Chlorine	Means chlorine remaining in water or wastewater at the end of a specified contact period as combined or free chlorine
Responsible Corporate Officer[a]	Means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation The Responsible Corporate Officer can also be the manager of one or more manufacturing, production, or operating facilities if the requirements of 18 AAC 83.385(a)(1)(B)(i)-(iii) are met.
Secondary Recreation[b]	Means activities in which incidental water use can occur. Secondary recreation includes boating, camping, hunting, hiking, wading, and recreational fishing. Secondary contact recreation does not include fish consumption.
Significant Industrial User (SIU)[g]	Means an indirect discharger that is the focus of control efforts under the national pretreatment program; includes all indirect dischargers subject to national categorical pretreatment standards, and all other indirect dischargers that contribute 25,000 gpd or more of process wastewater, or which make up five percent or more of the hydraulic or organic loading to the municipal treatment plant, subject to certain exceptions [40 CFR $403.3(t)].
Suspended Solids	Means insoluble solids that either float on the surface of, or are in suspension in, water, wastewater, or other liquids. The quantity of material removed from wastewater in a laboratory test, as prescribed in *Standard Methods for the Examination of Water and Wastewater* and referred to as nonfilterable.
Total Suspended Solids (TSS)[g]	Means a measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136
Toxic Unit, Chronic (TUc)[e]	Means the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., 100/NOEC)
Twice per year	Means two time periods during the calendar year: October through April and May through September
Upset[a]	Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
Waters of the United States or Waters of the U.S.	Has the meaning given in 18 AAC 83.990(77)
Water Supply[b]	Means any of the waters of the United States that are designated in 18 AAC 70 to be protected for fresh water or marine water uses. Water supply includes waters used for drinking, culinary, food processing, agricultural, aquacultural, seafood processing, and industrial purposes. Water supply does not necessarily mean that water in a waterbody that is protected as a supply for the uses listed in this paragraph is safe to drink in its

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
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	natural state.
Week	Means the time period of Sunday through Saturday

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual