



NPDES Off-Site Compliance Monitoring Clean Water Act Desk Audit Report

City of Wrangell Wastewater Treatment Plant

Wrangell, Alaska

Permit # AK0021466

Prepared by:

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Signature/Date:

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Supervisor Signature/Date:

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(Unless otherwise noted, all details in this report were obtained from conversations with Andrew Scambler, or from observations made during the off-site compliance review.)

I. Facility Information

Facility Name:	City of Wrangell Wastewater Treatment Plant (WWTP)
Facility Operator:	City and Borough of Wrangell, Alaska
Physical Address:	Mile 1.7, Zimovia Highway, Wrangell, AK 99929
Lat/Long:	N 56.453575 W -132.380623
Mailing Address:	City and Borough of Wrangell P.O. Box 531 Wrangell, Alaska 99929
Facility Contacts:	Brian Christian, Lead Operator City and Borough of Wrangell (907) 874-3458 wrgwwtp@atpalaska.net Andrew Scambler, Operator City and Borough of Wrangell Stephen Prysunka, Mayor City and Borough of Wrangell
Permit Number:	AK0021466
NAICS Code:	221320 – Sewage Treatment Facilities
Receiving Water:	Zimovia Strait

II. Off-Site Compliance Monitoring Information

An off-site Clean Water Act Desk Audit was conducted for the City of Wrangell Wastewater Treatment Plant. The purpose of the audit was to evaluate the facility's compliance with the National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act (CWA). The evaluation included a scheduled phone interview with a facility representative and a records request/review of permit related documents.

EPA Representative:	Jon Klemesrud, NPDES Inspector EPA Region 10, ECAD / FDDWES
Documents Reviewed:	5-Year ICIS Exceedance Report 2017 Annual Report 2018 Annual Report 2019 Annual Report February 2020 Admiralty Analytical Report February 2020 Discharge Monitoring Report November 2019 Admiralty Analytical Report November 2019 Discharge Monitoring Report March 2018 Admiralty Analytical Report March 2018 Discharge Monitoring Report Sludge Log Quality Assurance Plan Facility Diagram Photographs Provided by City of Wrangell AK0021466 NPDES Permit & Fact Sheet
Facility Interview (via phone):	08/26/2020 (approximately 1.5 hours)
Individuals Present for Interview:	Andrew Scambler, City and Borough of Wrangell

III. Permit Information

The City of Wrangell Wastewater Treatment Plant (WWTP) is permitted to discharge under NPDES permit AK0021466. The facility operates under CWA Section 301(h) waiver to discharge effluent after primary treatment. According to the Permit Fact Sheet, the first NPDES permit was issued to the facility on November 24, 1974. The facility's current permit became effective on January 7, 2002 and has been administratively continued since the expiration date of January 7, 2007.

According to the EPA Region 10 NPDES Permits Section, the City of Wrangell's permit has been assigned to an EPA Permit Writer for reissuance.

IV. Background

The facility is owned and operated by the City and Borough of Wrangell and serves a population of 2,500 people. The maximum permitted daily flow through the WWTP is 3.5 million gallons per day (MGD) and the maximum permitted monthly average flow is 0.6 MGD. Actual monthly average flows range from 0.3 to 0.5 MGD. There are no industrial customers discharging to the WWTP.

The treatment processes utilized by the facility for treatment includes mechanical screening, an aeration basin and a sedimentation basin. The WWTP discharges to the Zimovia Strait via a submerged single outfall. See Attachment A, Facility Diagram.

The facility was last inspected for NPDES permit compliance on August 30, 2017.

V. Evaluation Chronology

This off-site compliance evaluation was announced. Approximately one week prior to the evaluation I called the Wrangell WWTP and spoke with operator Andrew Scambler. I discussed that due to the impacts of the COVID-19 pandemic, EPA would be conducting an off-site compliance evaluation in lieu of a routine inspection for the wastewater treatment facility. The evaluation would include a scheduled phone call to discuss WWTF operations, as well as a records request and review of permit related documents. I explained that my findings of the evaluation would be documented in a report that would be shared with the facility and reviewed by an EPA compliance officer.

Mr. Scambler and I agreed on the set date and time for the scheduled call. I provided Mr. Scambler with a list of records I would be requesting and reviewing, the complete list of records reviewed for the off-site evaluation are listed in Section II of this report.

Following the initial call, Mr. Scambler provided me with the documents I had requested via EPA's Files Transport Protocol (FTP) site. Mr. Scambler also provided me with photographs of the various WWTP components and current conditions. The photographs are attached to this report as Attachment B.

VI. Facility Summary

WWTP staff includes Mr. Scambler, Mr. Brian Christian and a drinking water operator who serves as a backup operator for the WWTP. Mr. Scambler has been at the facility for approximately 5 years, Mr. Christian has been at the facility for over 20 years. The WWTP is manned 8 hours a day, 5 days a week and is equipped with an alarm system to notify staff of a system failure outside of regular hours.

According to Mr. Scambler, the WWTP receives wastewater from approximately 14 lift stations and approximately 40 grinder pumps. Wastewater enters the plant and is screened prior to entering an aeration basin. Diffusers within the aeration basin are powered by three blowers, typically two blowers are operated simultaneously during the summer months, and only one during winter months. From the aeration basin, wastewater enters a sedimentation basin and then exits through a v-notch weir to the single permitted outfall. Primary treatment signage is present near the outfall shoreline location as required by the permit.

Effluent samples collected for permit compliance are collected by facility staff. According to Mr. Scambler, parameters analyzed onsite include pH, temperature, and dissolved oxygen. The WWTP contracts with Admiralty Environmental Laboratory in Juneau for analysis of the

remaining parameters under the permit. Ammonia analysis is additionally subcontracted through Microbac Laboratories, Inc. Monthly samples are normally collected on the first Tuesday of the month. Composite samples are collected using a composite sampler and are flow based.

Sludge levels are monitored annually in the sedimentation basin via sludge judge.

VII. File Review

As part of this off-site compliance evaluation, I reviewed the following documents that were provided to me by the facility:

- Discharge Monitoring Reports (DMRs), including Influent/Effluent Lab Reports, Chain-of-Custody and Bench Sheet Data for March 2018, November 2019 and February 2020.
- Quality Assurance Plan (QAP) – The current QAP was dated January 2011.
- 2019, 2018, 2017 Annual Reports – The reports summarize the receiving water quality monitoring data for the year.
- Facility Diagram
- Sludge Log – Sludge is monitored annually, the last measurement was July 30, 2020.

VIII. Areas of Concern

I noted the following area of concern during the off-site evaluation:

A. Effluent Limit Exceedance

Part I.A.5. of the permit states that the effluent limits shall apply all times. Table 1 (Effluent Limitations) states that for five-day Biochemical Oxygen Demand (BOD₅), “the average monthly percent removal shall be greater than or equal to 30%.”

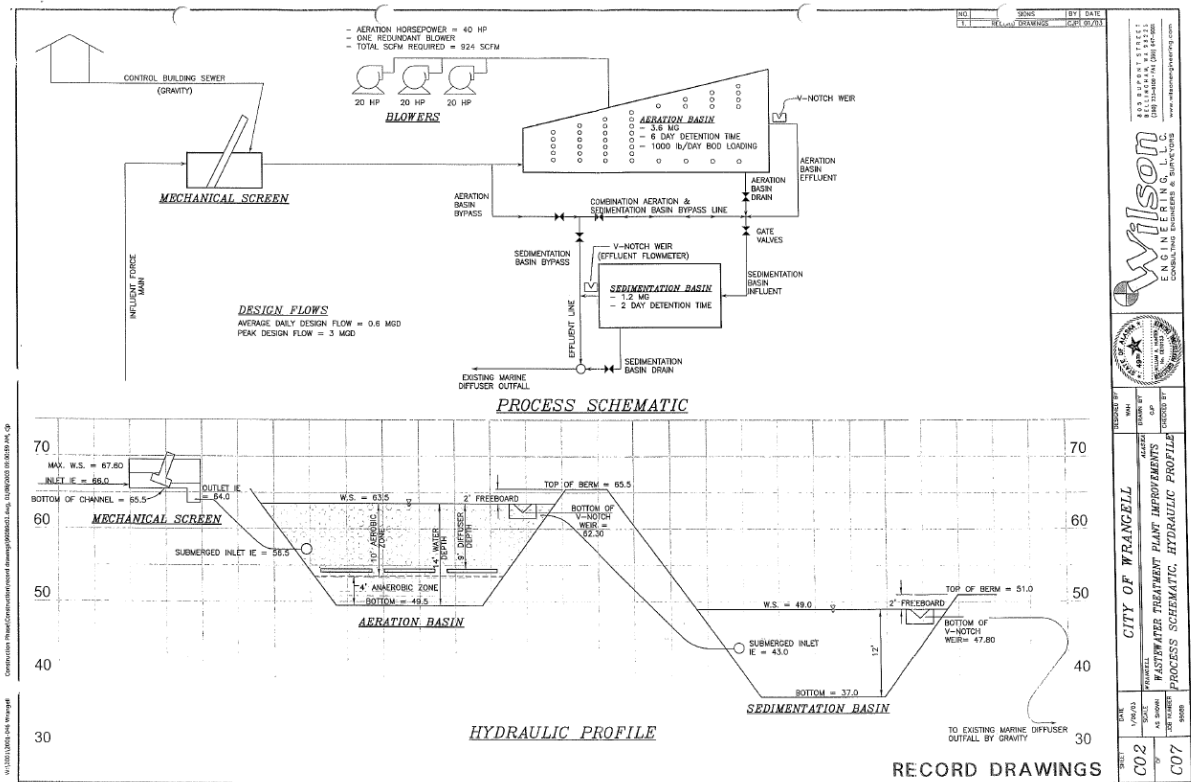
Based on my review of the reported 5-year effluent data, using EPA’s Integrated Compliance Information System (ICIS), the City of Wrangell had reported one instance of non-compliance over the past 5 years. For the month of November 2019, the average monthly percent removal was reported as 28.5%. The exceedance is outlined in a report generated by ICIS and attached to this report as Attachment C.

According to Mr. Scambler, Wrangell experienced a significant rain event(s) in the days leading up to the sampling event (November 6th, 2019). It is likely the percent removal exceedance was associated with infiltration/inflow (I&I) stemming from the rain event(s).

IX. Closing Conference

I held a closing conference with Mr. Scambler. We discussed the area of concern identified during the off-site evaluation. I thanked Mr. Scambler for his time and assistance.

ATTACHMENT A – Facility Diagram



ATTACHMENT B – Photograph Log

Photographs taken by WWTP Operator Andrew Scambler

Photo Log – City of Wrangell WWTP



Photo #:01 (IMG_2380)

Description: Photo of the flow recorder, relay totalizer and effluent flow.



Photo #:02 (IMG_2381)

Description: Photo of on-site laboratory including, dissolved oxygen and pH probes and turbidimeter. 2380



Photo #:03 (IMG_2382)

Description: Photo of the enclosed influent screen, and well as a spare pump station (foreground).



Photo #:04 (IMG_2383)

Description: Photo of the aeration basin.

Photo Log – City of Wrangell WWTP



Photo #:05 (IMG_2384)

Description: Photo of the dewatering box located at the sedimentation basin. The box is used during manual removal of duck weed.



Photo #:06 (IMG_2385)

Description: Photo of the sedimentation basin.



Photo #:07 (IMG_2386)

Description: Photo of the WWTP operations building/office.



Photo #:08 (IMG_2387)

Description: Photo of the sedimentation basin.

Photo Log – City of Wrangell WWTP



Photo #:09 (IMG_02388)
Description: Photo of the outlet of the aeration basin



Photo #:10 (IMG_2389)
Description: Photo of the aeration basin and diffusers.



Photo #:11 (IMG_2390)
Description: Photo of the 3 blowers that power the aeration basin.



Photo #:12 (IMG_2411)
Description: Photo of the sedimentation basin and dewatering box after duck weed removal.

ATTACHMENT C – ICIS 5-Year Exceedance Report

Facility Information

FRS Facility UIN	110064637898
NPDES ID	AK0021466
Permit Name	WRANGELL, CITY OF
Major/Minor	Major
Permit SIC Desc	Sewerage Systems
Water Body Name	ZIMOVIA STRAIT
TMDL ID	

Facility Location

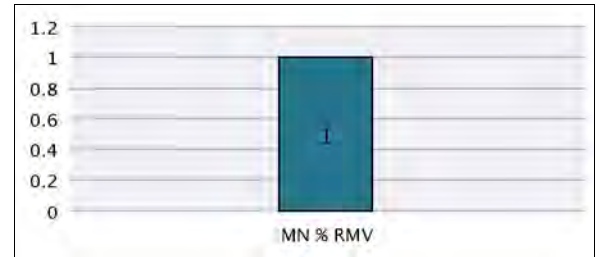
LAT	56.452436
LONG	-132.379463

Last Formal Enforcement Action

EA Identifier	
Final Order Issued	
EA Type Desc	

Permit Information

Original Issue Date	10/25/74
Issue Date	10/6/83
Effective Date	10/6/83
Expiration Date	10/5/88
Permit Status	EXP



Number and Months of Violations

30	1
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Month	Outfall	Parameter Code and Name	DMR Value	Permit Limit	% Exceeda	Limit Type	#V	Due/Rec'd	#DL
NOV 2019	001 A	81010 BOD, 5-day, percent removal	28.5	30 %	2	MN % RMV	30	12/10 12/03	