United States Environmental Protection Agency

Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105

Inspection Date(s):	June 7, 2021	
Time:	**Entry:** 9:00 a.m.	**Exit:** 3:15 p.m.
Media:	Wastewater	
Regulatory Program(s)	Clean Water Act NPDES	
Permittee Name:	City of Eureka	
Facility or Site Name:	Elk River Wastewater Treatment Plant (WWTP)	
Site Physical Location:	4301 Hilfiker Lane Eureka, CA 95503	
Geographic Coordinates:	40° 46' 24" (N); 124° 12' 45" (W)	
Mailing address:	4301 Hilfiker Lane Eureka, CA 95503	
Facility/Site Contact:	Michael Hansen	**Title**: Deputy Public Works Director
	City of Eureka	**Email**: mphansen@ci.eureka.ca.gov
Facility/Site Identifier:	NPDES Permit No. CA0024449	
NAICS:	221320	
SIC:	4952	

Facility/Site Personnel Participating in Inspection:

Name	Affiliation	Title	Email
Michael Hansen	City of Eureka	Deputy Public Works Director	mphansen@ci.eureka.ca.gov
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Jeremy Dempsey	City of Eureka	Laboratory Supervisor	--
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Inspection Report Author:	Jake Albright PG Environmental	Jacob Albright — Digitally signed by Jacob Albright Date: 2021.08.09 15:49:29 -04'00'
		703-956-1957 **Date:** August 4, 2021
Inspection Report Reviewer:	Michael Weiss EPA Region 9	Weiss, Michael — Digitally signed by Weiss, Michael Date: 2021.08.09 12:01:42 -07'00'
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Manager:	Eric Magnan EPA Region 9	ERIC MAGNAN — Digitally signed by ERIC MAGNAN Date: 2021.08.06 19:31:21 -07'00'
		415-947-4179 **Date:**

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SECTION I – INTRODUCTION

I.1 Purpose of the Inspection

On June 7, 2021, representatives from U.S. Environmental Protection Agency (EPA) Region 9 and EPA's contract inspector, PG Environmental, (hereinafter referred to as the EPA Inspection Team) inspected the Elk River Wastewater Treatment Plant (hereinafter, WWTP or Facility) in Eureka, California (see Photograph 1). One purpose of the inspection was to evaluate compliance with National Pollutant Discharge Elimination System (NPDES) Permit No. CA0024449 (hereinafter, Permit), which became effective on August 1, 2016 and is scheduled to expire on July 31, 2021. However, the main purpose of the inspection was to further investigate the cause of effluent exceedances that resulted in the Facility being in significant noncompliance (SNC). The Facility had been in SNC for the 4th quarter of 2018 through the 3rd quarter of 2019 as well as the 1st quarter of 2021.

The EPA Inspection Team arrived at the Facility at 9:00 a.m. (PDT) for the inspection. Mike Weiss of EPA Region 9 and Jake Albright of PG Environmental displayed their Clean Water Act inspector credentials to the Deputy Director of Public Works at the outset of the inspection and explained that the purpose of the inspection was to observe compliance with the Permit.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

The WWTP provides preliminary solids removal and primary clarification and accomplishes secondary-level biological treatment using two trickling filters, followed by secondary clarification, and chlorine disinfection. Under normal conditions, chlorinated effluent is stored in a holding pond then dechlorinated and discharged at Discharge Point EFF-001 to Humboldt Bay in conjunction with ebb tide cycles.

The Facility is operated seven days per week (8:00 a.m.– 4:30 p.m.). An on-call operator is available during the unmanned hours. The WWTP's supervisory control and data acquisition (SCADA) system was integrated with Win911 for alarms and call outs. The Deputy Director of Public Works stated the Win911 system is scheduled to be upgraded to a new software, TopView.

At the time of the inspection, the Permittee was nearing the end of a project to upgrade the Facility's cogeneration facility. When in operation, the cogeneration unit provides 50 to 70 percent of the power needs for the Facility (see *Section III – Observations* of this report).

II.2 Wastewater Sources

Wastewater influent is conveyed to the WWTP via a collection system consisting of approximately 125 miles of sewer mains, both gravity and force mains. The collection system services about 44,000 residents and three significant industrial users (a brewery, a fish processing facility, and a commercial laundry). The WWTP also receives hauled-in septage from local haulers at the Facility headworks.

II.3 Wastewater Treatment

Once wastewater enters the WWTP, it undergoes primary treatment with mechanical bar screens, aerated grit removal, and primary clarification. Biological secondary treatment is

accomplished using two trickling filters, a solids contact channel, and two secondary clarifiers. Wastewater is disinfected with chlorine gas. Chlorinated effluent flows through a chlorine basin before being stored in a holding pond. Under normal conditions, wastewater is dechlorinated using sulfur dioxide gas and discharged through Discharge Point EFF-001 to Humboldt Bay in conjunction with ebb tide cycles.

The Facility has an average dry weather treatment capacity of 5.24 million gallons per day (mgd), a peak dry weather treatment capacity of 8.6 mgd, and a peak wet weather secondary treatment capacity of 12.0 mgd. The Facility can fully treat up to 12.0 mgd during wet weather and can provide primary treatment up to about 32.0 mgd during extended periods of wet weather.

Flows above 12.0 mgd receive primary treatment and overflow into a bypass channel and blend with secondary treated effluent prior to disinfection and discharge. BOD and TSS sampling is performed on a weekly basis for bypass flows during these events. Bypass flow sampling is coordinated with effluent sampling. See *Section IV -Areas of Concern* of this report for additional details on bypass flows.

During periods of sustained extreme wet weather events, excess treated wastewater from the effluent holding pond will overflow a weir in the eastern portion of the holding pond and be directed to a 13-acre freshwater holding marsh (Overflow Marsh), which can be pumped back to the effluent holding pond once flows subside. According to Facility Representatives, flows to the Overflow Marsh are dechlorinated with sulfur dioxide, in order to comply with the Permit which requires that discharges of treated wastewater to the Overflow Marsh must have no detectable chlorine residual.

Primary and secondary solids are treated by anaerobic digestion and stored in one of two facultative sludge lagoons. Solids can be dewatered using a centrifuge to achieve Class B. The Permittee has a contract with Synagro to haul off Class B solids as needed.

Refer to Photographs 2 through 24 for photos of the treatment train.

II.4 Compliance History

Effluent Limit Violations

According to the California Integrated Water Quality System (CIWQS) database, the Facility reported the following 23 effluent violations between June 1, 2018 and March 31, 2021. During that same time period, according to EPA's Enforcement and Compliance History Online (ECHO) database[1], the Facility was in a state of SNC during the 4th quarter of 2018 through the 3rd quarter of 2019 as well as the 1st quarter of 2021. See *Section IV -Areas of Concern* of this report for additional details.

Sanitary Sewer Overflows (SSOs)

According to CIWQS, the City of Eureka reported the following 11 SSOs between June 1, 2018 and June 7, 2021, 7 of which reached receiving waters (see Table 1).

[1] EPA ECHO Database: https://echo.epa.gov/detailed-facility-report?fid=110009547213

Table 1. City of Eureka SSOs (from CIWQS)

Start Date	SSO Volume (gal.)	Volume Recovered (gal.)	Volume of SSO Reached Surface Water (gal.)	SSO Failure Point
2018-12-03 12:30:00.0	25	0	0	Gravity Mainline
2019-02-25 09:05:00.0	3,675	2,000	1,675	Gravity Mainline
2019-02-26 11:00:00.0	90	1,000	90	Gravity Mainline
2019-02-26 22:45:00.0	750	1,000	750	Manhole
2019-02-27 03:00:00.0	20,400	15,000	5,400	Gravity Mainline
2019-02-27 00:00:00.0	28,420	25,000	3,420	Gravity Mainline
2019-02-27 00:45:00.0	76,035	75,000	1,035	Gravity Mainline
2019-08-12 13:00:00.0	10	10	0	Private upper lateral
2019-09-19 09:05:00.0	10	10	0	Gravity Mainline
2020-01-12 13:30:00.0	4,000	3,000	1,000	Gravity Mainline
2021-03-23 07:40:00.0	100	100	0	Gravity Mainline

After the onsite inspection, the Permittee provided reports for 14 additional SSO events occurring between January 1, 2020 and the date of the inspection that appeared to have been reported but did not show up in the CIWQS online database (see Table 2 and Attachment 1).

Table 2. Additional SSOs Reported by City of Eureka (January 1, 2020 through date of inspection)

Date	SSO Volume (gal.)
1/20/2020	200
2/28/2020	200
3/6/2020	900
3/23/2020	100
4/5/2020	25
4/7/2020	10
4/9/2020	15
5/8/2020	50

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Date	SSO Volume (gal.)
6/3/2020	30
6/23/2020	15
8/5/2020	10
8/7/2020	20
9/8/2020	10
11/7/2020	10

Cease and Desist Order

At the time of the inspection, the Facility was under a cease and desist order (CDO; Order No. R1-2020-0020; see Attachment 2). In general, the CDO prohibits discharges that are not complaint with the Permit as well as releases of untreated or partially treated waste from anywhere within the collection, treatment, or disposal systems (except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset)). The CDO also establishes deadlines for tasks to be completed to achieve overall compliance with the Permit (see completed tasks in Figure 1).

Tasks	Deadlines
TRE Work Plan Revisions (MRP section V.C.1)	October 1, 2016
Sanitary Sewer Evaluation Survey (CDO Task 1A)	November 1, 2016
Outfall Inspection Workplan (NPDES Special Provision VI.C.2.a)	December 1, 2016
Wet Weather Improvement Plan (WWIP) (CDO Task 1B)	March 1, 2017
Implement Approved WWIP (CDO Task 1C)	July 1, 2017
Outfall Inspection Report (NPDES Special Provision VI.C.2.a)	December 1, 2017
Local Limits Study (NPDES Special Provision VI.C.2.b)	May 1, 2018
WWIP Annual Report (CDO Task 1D)	July 1, 2018 and annually by July 1 thereafter
Biological Survey Workplan (MRP section VIII.B)	July 1, 2018
Updated Sewer Use Ordinance Evaluation Report (NPDES Special Provision VI.C.2.c)	November 1, 2018
Biological Survey Report (MRP section VIII.B)	July 1, 2019
Updated Sewer Use Ordinance (NPDES Special Provision VI.C.2.c)	November 1, 2019
Climate Change Readiness Study (NPDES Special Provision VI.C.2.d)	July 1, 2020

Figure 1. Completed CDO Tasks.

It should be noted that CDO No. R1-2020-0020 is a modification to a previous order (Order No. R1-2016-0012). The modification extended the original due dates in the original version of the CDO for several tasks by 15 months. Due dates for remaining tasks are listed below.

- Task 2A Feasibility Study due date extended from July 1, 2020 to October 1, 2021.
- Task 2B Preliminary design plans and specifications for construction due date extended from July 1, 2022 to October 1, 2023.

- Task 2C Environmental Impact Report or other CEQA documentation for preferred alternative(s) identified in Task 2A due date extended from July 1, 2023 to October 1, 2024.
- Task 2D Final design plans and specifications for construction due date extended from July 1, 2024 to October 1, 2025.
- Task 2E Procure and submit copies of all permits necessary to implement the preferred alternative(s) due date extended from July 1, 2026 to October 1, 2027.
- Task 2F Complete construction of the preferred alternative which complies with the Enclosed Bays and Estuaries Policy and achieve compliance with all Regional Water Board waste discharge requirements due date extended from July 1, 2030 to October 1, 2031.

SECTION III – OBSERVATIONS

1. Fifteen (15) of the 23 effluent violations reported by the Permittee in CIWQS over the three years prior to the inspection were total ammonia exceedances. Facility representatives stated that the Permittee is working with its consulting engineer and the Regional Board to determine appropriate Facility upgrades to comply with current and future ammonia limits and the requirements of CDO No. Order No. R1-2020-0020. According to the CDO, upgrades are scheduled to be completed in 2031.

   Facility representatives further explained that the Facility's discharge was classified as an ocean discharge and an enclosed bay estuary discharge at the time of the inspection. They explained that the Facility was not originally designed to meet the nutrient requirements of both types of discharges. The Deputy Director stated that the Permittee is planning to upgrade the Facility to become compliant with the enclosed bay estuary designation in the future but that a determination had not been made by the Regional Board on how the Facility would be classified. He stated that the determination will ultimately dictate how the CDO-required improvements are designed and implemented. The City's most recent capital improvement program plan includes a line item for an *Enclosed Bays & Estuaries Compliance Feasibility Study* (see Attachment 3).

   Facility representatives stated that, at the time of the inspection, influent ammonia levels coming into the Facility were about 30 mg/L. They stated that concentrated ammonia is also present in the centrate that gets returned to the head of the plant from the solids centrifuge. The Deputy Director stated that operators can recirculate effluent in the trickling towers to achieve greater ammonia removal; however, the Facility needs to maintain enough ammonia in the effluent to combine with chlorine gas to form chloramines for disinfection.

2. The Facility's cogeneration station was out of service at the time of the inspection for upgrades (see Photograph 2). Facility representatives stated that when in service, the station will provide 50 to 70 percent of the power needs for the Facility. At the time of the inspection, the Facility was running exclusively off power provided by Pacific Gas and Electric (PG&E) and flaring excess gas from the digesters. The Facility has a backup generator that is exercised regularly.

3. Flows above 12.0 mgd receive primary treatment and overflow into a bypass channel and are blended with secondary treated effluent prior to disinfection and discharge. BOD and TSS sampling is performed on bypass flows during these events.

   During periods of sustained extreme wet weather, excess treated wastewater from the effluent holding pond will overflow a weir in the holding and be directed to a 13-acre freshwater holding marsh (Overflow Marsh) and pumped back to the effluent storage pond once flows subside. Discharges to the overflow marsh are monitored for flow and total residual chlorine. According to the Permit Fact Sheet, "The Overflow Marsh is a component of the Facility, as described in the "Final Environmental Impact Report – Wastewater Management Plan for the Greater Eureka Area" (July 10, 1980), and as established in Waste Discharge Requirements Order No. 81-1 adopted for the Facility by the Regional Water Board on January 22, 1981."

4. The Facility receives hauled in septage, which is primarily from portable toilets. The Permittee was able to provide associated documentation, including hauler tracking logs and monitoring.

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

1. According to the CIWQS database, the Facility reported 23 effluent violations between June 1, 2018 and March 31, 2021 (see Table 3). As stated previously, 15 of the 23 effluent violations reported by the Permittee in CIWQS over the three years prior to the inspection were total ammonia exceedances. Facility representatives stated that the Permittee is working with its consulting engineer and the Regional Board to determine appropriate Facility upgrades to comply with current and future ammonia limits and the requirements of CDO No. Order No. R1-2020-0020. According to EPA's ECHO database[2], the Facility was in a state of SNC during the 4th quarter of 2018 through the 3rd quarter of 2019 as well as the 1st quarter of 2021.

Table 3. Elk River WWTP Effluent Limit Violations June 1, 2018 through March 31, 2021 (from CIWQS)

Violation Description	Corrective Action	Occurred Date
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 6.0 mg/L at EFF-001.	The City is working with consultants and the Water Board for long term solutions to this issue.	1/31/2021
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 6.6 mg/L at EFF-001.	Long term ammonia solutions are being investigated by the City's consultants.	12/31/2020
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 8.9 mg/L at EFF-001.	Long term ammonia solutions are being investigated by our consultants.	10/31/2020
Fecal Coliform Daily Maximum limit is 43 MPN/100 mL and reported value was 80 MPN/100 mL at EFF-001.	Additional monitoring of disinfection system until we stabilize.	10/21/2020

[2] EPA ECHO Database: https://echo.epa.gov/detailed-facility-report?fid=110009547213

Violation Description	Corrective Action	Occurred Date
Ammonia, Total (as N) Daily Maximum limit is 10 mg/L and reported value was 16 mg/L at EFF-001.	Long term ammonia solutions are being evaluated by our consulting team.	10/6/2020
Fecal Coliform Daily Maximum limit is 43 MPN/100 mL and reported value was 50 MPN/100 mL at EFF-001.	Chlorine dosage upped and increased monitoring.	8/5/2020
Fecal Coliform Daily Maximum limit is 43 MPN/100 mL and reported value was 130 MPN/100 mL at EFF-001.	Chlorine dosage upped and increased monitoring.	8/3/2020
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 6.6 mg/L at EFF-001.	Long term solutions being examined	12/31/2019
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 4.4 mg/L at EFF-001.	Long term solutions being examined	11/30/2019
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 7.4 mg/L at EFF-001.	Long term solutions being explored with the Water Board.	7/31/2019
Ammonia, Total (as N) Daily Maximum limit is 10 mg/L and reported value was 12 mg/L at EFF-001.	Long term solutions are being addressed with the Water Board.	7/3/2019
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 9.5 mg/L at EFF-001.	Long term solutions are being explored.	6/30/2019
Ammonia, Total (as N) Daily Maximum limit is 10 mg/L and reported value was 12 mg/L at EFF-001.	Long term solutions for this issue are being explored.	6/13/2019
Cyanide, Total (as CN) Monthly Average limit is 0.5 ug/L and reported value was 2.9 ug/L at EFF-001.	We are exploring our options to deal with false positives related to preservation that are well documented on the State Waterboard website.	4/30/2019
Cyanide, Total (as CN) Daily Maximum limit is 1.0 ug/L and reported value was 2.9 ug/L at EFF-001.	We are working to find a lab that can meet our detection limits but that also can back up their data with solid QA/QC. We are also looking into ways to have our samples analyzed without having to preserve them, but this has proven difficult due to our isolated nature.	4/1/2019
Fecal Coliform Monthly Maximum limit is 43 MPN/100 mL and reported value was 50 MPN/100 mL at EFF-001.	Turned chlorine up and monitored the system for issues. No problems encountered.	2/11/2019
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 5.3 mg/L at EFF-001.	Working on short and long term solutions for this issue.	1/31/2019
Cyanide, Total (as CN) Daily Maximum limit is 1.0 ug/L and reported value was 1.9 ug/L at EFF-001.	No action at this time.	1/1/2019
Cyanide, Total (as CN) Monthly Average (Mean) limit is 0.5 ug/L and reported value was 1.9 ug/L at EFF-001.	No action at this time.	1/1/2019
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 5.8 mg/L at EFF-001.	Short and long term solutions are being explored.	12/31/2018
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 6.4 mg/L at EFF-001.	Short and long term solutions are being explored.	11/30/2018

Violation Description	Corrective Action	Occurred Date
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 5.3 mg/L at EFF-001.	Short and long term solutions are being investigated.	10/31/2018
Ammonia, Total (as N) Monthly Average limit is 4.1 mg/L and reported value was 7.1 mg/L at EFF-001.	The City is currently working on long-term solutions for this issue.	9/30/2018

2. The Deputy Director stated that the City's collection system has significant inflow and infiltration (I/I) impacts and has experienced influent flows as high as 32 mgd in the past. These I/I impacts result in high influent flows to the Facility and increased occurrences of secondary treatment bypassing and discharges to the Overflow Marsh.

   The Permittee provided records showing bypasses on seven days between April 1, 2020 and the date of the inspection (i.e., the 12 most recently reported months). The Permittee also provided data showing BOD and TSS were monitored five times during these bypass events. The data show bypasses occurred on three straight days from January 26 through 28, 2021, and samples were taken on January 28 (see Table 4). Table E-7 of the Permit only requires weekly monitoring of BOD and TSS when bypass flows occur (to be coordinated with effluent sampling).

   Table 4. Bypass Events (April 1, 2020 through date of inspection)

Date	Total Bypass Flow, MG	BOD mg/L	TSS mg/L
4/5/2020	0.284	58	39
1/26/2021	0.154	--	--
1/27/2021	0.781	--	--
1/28/2021	1.017	59	32
2/15/2021	0.056	40	39
3/5/2021	0.410	52	28
3/18/2021	0.776	81	30

   According to CIWQS, the Facility experienced 60 bypass events total between June 1, 2018 and the date of the inspection.

   According to data contained in CIWQS, the Overflow Marsh was documented as used on five days over the three years preceding the inspection. According to the data, each time the marsh was used, the Facility also had periods where secondary treatment was bypassed.

   - **January 20, 2019**: 18.07 mgd influent flow; 1.43 mgd to the Overflow Marsh; 7.62 mgd bypassed secondary treatment; 22.32 mgd discharged to EFF-001.
   - **February 25, 2019**: 22.00 mgd influent flow; 3.37 mgd to the Overflow Marsh; 13.6 mgd bypassed secondary treatment; 20.46 mgd discharged to EFF-001.
   - **February 26, 2019**: 27.83 mgd influent flow; 4.25 mgd to the Overflow Marsh; 11.3 mgd bypassed secondary treatment; 12.27 mgd discharged to EFF-001.
   - **February 27, 2019:** 24.50 mgd influent flow; 6.47 mgd to the Overflow Marsh; 16.8 mgd bypassed secondary treatment; 14.37 mgd discharged to EFF-001.

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- **February 27, 2019:** 16.04 mgd influent flow; 1.41 mgd to the Overflow Marsh; 7.1 mgd bypassed secondary treatment; 20.76 mgd discharged to EFF-001.

As noted in Table 1 of this report, the collection system also experienced several SSOs on February 25, 26, and 27, 2019 (i.e., days the Overflow Marsh was used), accounting for over 128,000 gallons of sewage spilled.

3. At the time of the inspection, the Permittee had 174 open work orders generated in the Facility's computerized maintenance management system (CMMS), Facility Dude (mostly preventive maintenance). Of the open orders, 101 were within their scheduled timeframe for completion and 73 were past due. The majority of the past due orders were less than one year old. The oldest outstanding work order had been open for 521 days and was for pumping down the Overflow Marsh for inspection. Facility representatives stated that previous efforts to drain the marsh back to the effluent holding pond were only partially successful as the overflow marsh could only be drained so far. At the time of the inspection, the EPA Inspection Team observed the Overflow Marsh to be mostly drained and filled with vegetation (see Photograph 21).

   Facility representatives stated that some of the outstanding orders may have been completed but were never closed out. They stated that they would need to review the backlog and cleanup any of the entries that were no longer applicable.

4. At the time of the inspection, algae and vegetation was observed accumulated in the weirs and effluent trough of the secondary clarifiers (see Photographs 13 and 14). Facility representatives stated the weirs are hosed down weekly.

5. At the time of the inspection, effluent was not flowing evenly over the weirs in either of the secondary clarifiers. In some locations, no effluent was flowing over the weirs, and in other locations effluent was flowing heavily over the weirs (see Photographs 12 through 14). Facility representatives stated that the tanks either had not been installed level or had settled over time. It is unclear if this condition was impacting how solids settle and are collected in the clarifiers.

6. At the time of the inspection, the EPA Inspection Team observed that the wall of the chlorine contact chamber was leaking near its influent end, into the effluent holding pond (see Photograph 17). As a result, wastewater was entering the holding pond before completing the designed contact time.

7. At the time of the inspection, the EPA Inspection Team observed solids built up in the Facility's south sludge lagoon to the point sludge piles had breached the surface (see Photograph 22). Facility representatives stated that they had recently begun dredging the lagoon and sending solids to the biosolids storage tanks (see Photograph 24). Facility representatives also stated they had recently completed a project to dredge the north lagoon (see Photograph 23). They stated that the north lagoon had 8 to 10 inches of freeboard over the solids at the time of the inspection.

   Facility representatives stated that the Facility's centrifuge did not have enough capacity to dewater solids to keep up with demand from the digesters and lagoons. They stated that they are planning to upgrade the solids processing at the Facility to achieve Class A

solids, which includes making improvements to increase dewatering capacity. After the inspection, the Permittee provided a copy of the City of Eureka's 2021–2026 capital improvement plan, which includes line items for Class A solids and dewatering system upgrades (see Attachment 3). Per the CIP, the biosolids project is planned to occur in 2024-2026 but it is unclear if the funds for the project have been allocated yet.

APPENDICES

Appendix 1 – Inspection Checklist

Appendix 2 – Facility Site Map/Process Flow Schematic

Appendix 3 – Photograph Log

ATTACHMENTS

Attachment 1 – City of Eureka SSO Correspondence (January 1, 2020 through June 7, 2021)

Attachment 2 – CDO No. R1-2020-0020

Attachment 3 – City of Eureka Capital Improvement Plan Excerpts

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Appendix 1- INSPECTION CHECKLIST

I. GENERAL

Facility Type	☒Municipal ☐Industrial ☐Agricultural ☐Federal ☐Oil & Gas
Inspection Type	☒ Compliance Evaluation (non-sampling) ☐ Compliance Sampling ☐ _____
Weather ☒ Dry ☐ Rain ☐ Clear ☐ Recent Rains ☐ Overcast ☐ _____	
Was facility notified in advance?	Yes ☒ No ☐
Presented credentials?	Yes ☒ No ☐
Notes: The Facility was notified of the inspection on June 3, 2021. Jake Albright, PG Environmental, and Mike Weiss, US EPA Region 9, presented their Clean Water Act inspector credentials to the Deputy Public Works Director once arriving onsite fir the inspection.	

II. RECORDS AND REPORTS REVIEW

RECORDS	Available onsite?			
	Yes	No	N/A	Not Inspected
NPDES permit	☒	☐	☐	☐
Monitoring and reporting records for past 3 years	☒	☐	☐	☐
Maintenance records	☒	☐	☐	☐
Operational records/ logbooks	☒	☐	☐	☐
Auxiliary power check logs	☒	☐	☐	☐
Employee Training	☒	☐	☐	☐
Have any spills been reported since last inspection?	☐	☒	☐	☐
Spill records	☐	☐	☒	☐
Have any bypasses been reported since last inspection?	☒	☐	☐	☐
Bypass records	☒	☐	☐	☐
Notes: Flows above 12.0 mgd receive primary treatment and overflow into a bypass channel and are blended with secondary treated effluent prior to disinfection and discharge. The Permittee provided records showing bypasses occurred on seven days between January 1, 2020 and the date of the inspection. The Permittee provided data showing BOD and TSS were monitored during bypass events. See *Section IV -Areas of Concern* of this report.				

REPORTS	Completed in time frame and frequency as required by permit?			
	Yes	No	N/A	Not Inspected
Notification of Non-compliance	☒	☐	☐	☐
Notification of spills	☐	☐	☒	☐
Notification of bypass	☒	☐	☐	☐
Pollution Prevention Plan	☐	☐	☒	☐
Spill prevention control and countermeasure (SPCC) plan	☐	☐	☐	☒
POTW: Biosolids Monitoring/Management Reports	☐	☐	☐	☒
POTW: CSO/ I & I Reports	☐	☐	☐	☒
POTW: Pretreatment Reports	☐	☐	☐	☒
Asset Management Plan	☐	☐	☒	☐
Other: CMMS	☐	☐	☒	☐
Other:	☐	☐	☐	☐
Notes: The EPA Inspection Team did not review a comprehensive asset management plan for the Facility but did review records in the Facility's CMMS. See *Section IV -Areas of Concern* of this report.				

III. SELF MONITORING PROGRAM

SAMPLING RECORDS & DMRS	Yes	No	N/A	Not Inspected
Are DMRs submitted in timeframe and frequency required by permit?	☒	☐	☐	☐
Sampling QA/QC Plan is available, complete and is being utilized	☒	☐	☐	☐
Sampling Records have: Dates, times, location, & name of individual performing sampling:	☒	☐	☐	☐
Lab Reports have: Analytical methods, results, dates and time of analyses:	☒	☐	☐	☐
Are samples collected and preserved using methods approved in 40 CFR Part 136?	☒	☐	☐	☐
Lab Report results are correctly transcribed to DMR:	☒	☐	☐	☐
Detection limits are reported for "less than" results:	☒	☐	☐	☐
Does discharger monitor effluent more frequently than required by Permit?	☐	☒	☐	☐
If Yes, is all data collected reported on DMRs?	☐	☐	☒	☐
Notes: NA				

SAMPLE MONITORING	Yes	No	N/A	Not Inspected
Are sample locations and methods representative of Effluent?	☒	☐	☐	☐
Representative of Influent?	☒	☐	☐	☐
Representative of Receiving Waters?	☒	☐	☐	☐
What Flow Measurement Device is utilized?				
☒ Flume ☐ Weir ☒ Meter: Magnetic ☐ Calculation ☐ Other_____				
Device appears to be functioning properly without obstructions:	☒	☐	☐	☐
Is flow meter calibration available onsite?	☒	☐	☐	☐
Date of last calibration: September 2020				
Calibration performed by: Information not acquired				
Notes: The Permittee provided the calibration information following the inspection and did not specify who calibrated/verified the meters.				

ANALYTICAL MONITORING	Yes	No	N/A	Not Inspected
Does discharger perform on-site analysis for compliance monitoring?	☒	☐	☐	☐
Parameters analyzed on-site: pH, temperature, flow, total chlorine residual, biochemical oxygen demand (BOD), total suspended solids (TSS), settleable solids, total ammonia nitrogen, turbidity, and fecal coliform.				
Are records of equipment calibration available?	☒	☐	☐	☐
Is the on-site laboratory certified?	☒	☐	☐	☐
Certification Number: 1360				
Expiration Date: October 31, 2022				

COMPLIANCE MONITORING RATING CODE	Satisfactory	Marginal	Unsatisfactory	Not Rated
	☐	☐	☐	☒

Notes: The Permittee utilizes the Central and Northern California Ocean Observation System (CeNCOOS) for obtaining receiving water monitoring data. Data is accessed through the CeNCOOS website (http://www.cencoos.org/data/shore/humboldt).

IV. SITE REVIEW OPERATIONS AND MAINTENANCE

General	Yes	No	N/A	Not Inspected
Does the Permit and Fact sheet correctly describe the Facility? (Flow, Production Rates, Treatment Units, Monitoring Locations, Receiving Waters)	☒	☐	☐	☐
Have there been significant changes in operation since last Permit Issuance or Inspection?	☐	☒	☐	☐
Notes: At the time of the inspection, the Permittee was nearing the end of a project to upgrade the Facility's cogeneration equipment. The Permittee provided a copy of the City of Eureka Capital Improvement Plan (CIP; Fiscal Years 2021-22 through 2025-26). The CIP includes line items for lift station and pump station upgrades and WWTP biosolids Class "A" and solids dewatering upgrades.				

Treatment Units & Supporting Equipment	Yes	No	N/A	Not Inspected
Hydraulic and loadings rates appear consistent with the permit and plant design:	☒	☐	☐	☐
Tanks, floats, pipes, valves, etc. appear in good working condition:	☒	☐	☐	☐
Equipment appears adequately maintained and functioning correctly	☐	☒	☐	☐
There is no visible evidence of hydraulic short-circuiting:	☐	☒	☐	☐
Process controls appear adequate:	☒	☐	☐	☐
No safety concerns observed that may interfere with operation, maintenance, monitoring:	☒	☐	☐	☐
Notes: The secondary clarifiers were not level, resulting in uneven flow over the weirs and the southern facultative sludge lagoon was at capacity. See *Section IV -Areas of Concern* of this report.				

Operation & Maintenance	Yes	No	N/A	Not Inspected
O &M Manuals are organized and maintained for use:	☒	☐	☐	☐
The maintenance activities, spare parts on-hand, and equipment available appear adequate to ensure continuous operation of treatment system:	☒	☐	☐	☐
Is a maintenance management program in place?	☒	☐	☐	☐
Number of open work orders: 174				
Oldest date of open work order: 521 days				
Notes: The EPA Inspection Team reviewed records in the Facility's CMMS. See *Section IV -Areas of Concern* of this report.				

Emergencies / Power Outage	Yes	No	N/A	Not Inspected

Alarm systems for power and equipment failure:	☒	☐	☐	☐
Auxiliary power available and maintained:	☒	☐	☐	☐
Notes: NA				

Stormwater	Yes	No	N/A	Not Inspected
Does facility have exposure and potential to discharge Stormwater?	☐	☒	☐	☐
Is discharger subject to Multi Sector General Permit (MSGP)?	☐	☒	☐	☐
If Yes→ Filed Notice of Intent?	☐	☐	☒	☐
If Yes → Stormwater Pollution Prevention Plan (SWPPP) available	☐	☐	☒	☐
Is there evidence of unauthorized (non-stormwater) discharges?	☐	☒	☐	☐
Are there signs of spills to soil, groundwater, or surface water?	☐	☒	☐	☐
Is adequate equipment available for spill cleanup and containment?	☐	☐	☐	☒

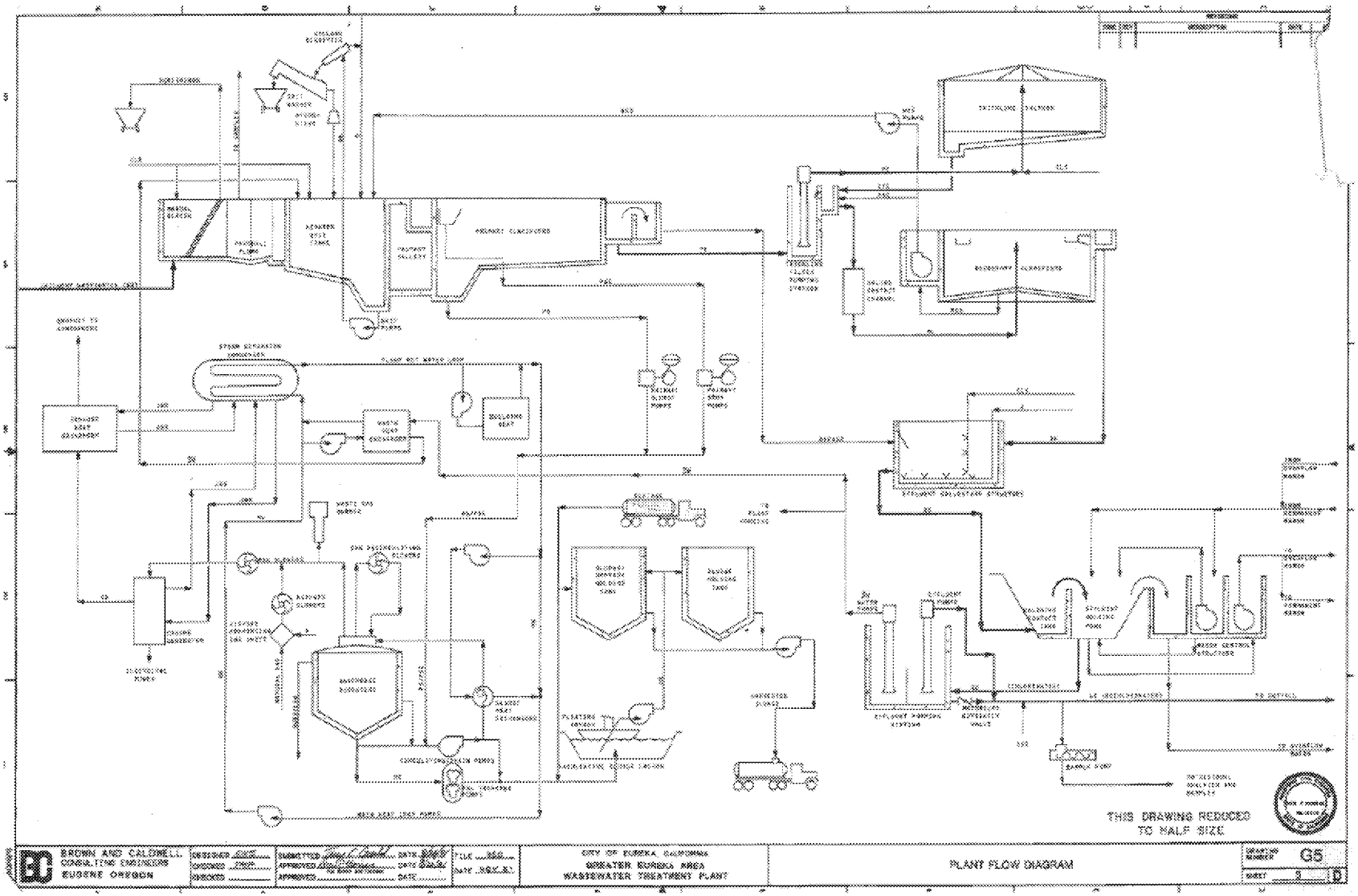
Are the following areas observed to have BMPs and generally free of pollutants ?	Yes	No	N/A	Not Inspected
Storage areas	☐	☐	☐	☒
Fueling areas	☐	☐	☐	☒
Maintenance areas	☐	☐	☐	☒
Loading and unloading areas	☐	☐	☐	☒
Waste disposal areas	☐	☐	☐	☒
Chemicals are stored in secondary containment:	☐	☐	☐	☒
Notes: Facility representatives stated that stormwater collected onsite is routed to the head of the WWTP.				

V. FINAL EFFLUENT AND RECEIVING WATER MONITORING

EFFLUENT APPEARANCE	Yes	No	N/A	Not Inspected
Clear	☒	☐	☐	☐
Colorless	☒	☐	☐	☐
Free of oil sheen	☒	☐	☐	☐
Free of floatables	☒	☐	☐	☐
Free of objectionable odor	☒	☐	☐	☐
Notes: NA				

RECEIVING WATER APPEARANCE				
Free of visible plume	☐	☐	☐	☒
Free of foam and sheen	☐	☐	☐	☒
Free of erosion at the discharge point	☐	☐	☐	☒
Free of bottom deposits, algae growth	☐	☐	☐	☒
Notes: Discharge Point EFF-001 is located at the end of a 4,100-foot long 48-inch diameter pipeline, submerged in Humboldt Bay. The vicinity of the discharge point was not inspected at the time of the inspection.				

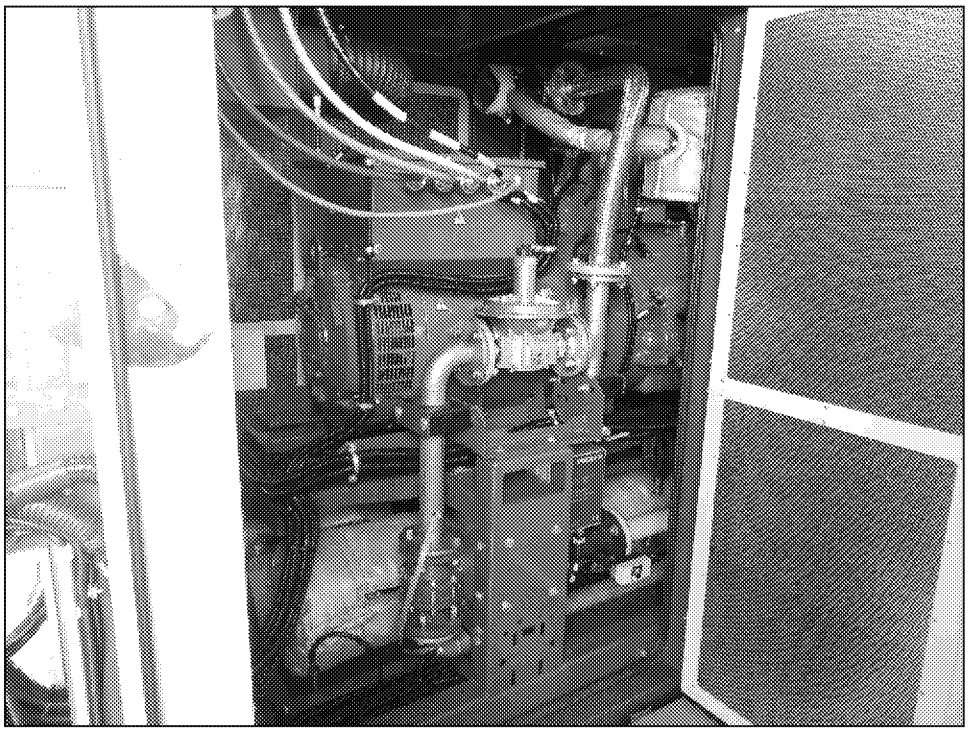
Appendix 2 – Facility Site Map/Process Flow Schematic



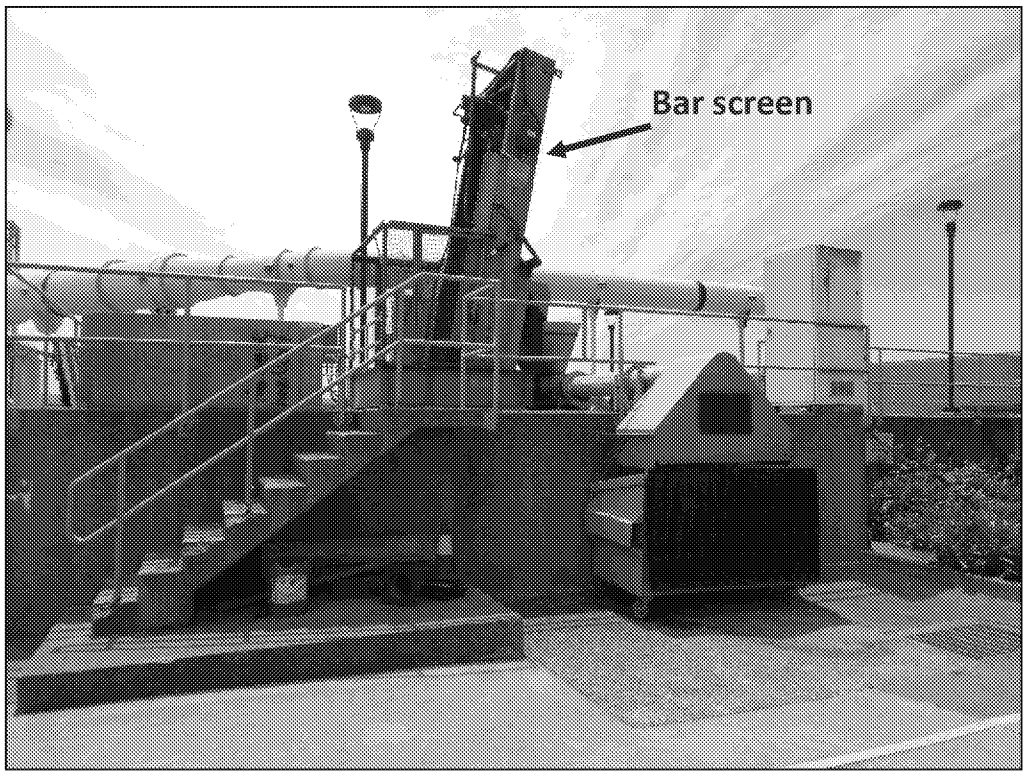
Appendix 2 – Photograph Log

The photographs were taken during the inspection by Jake Albright from PG Environmental. Original copies of the photos are maintained by EPA Region 9.

Photograph 1. View of the Facility entrance sign.



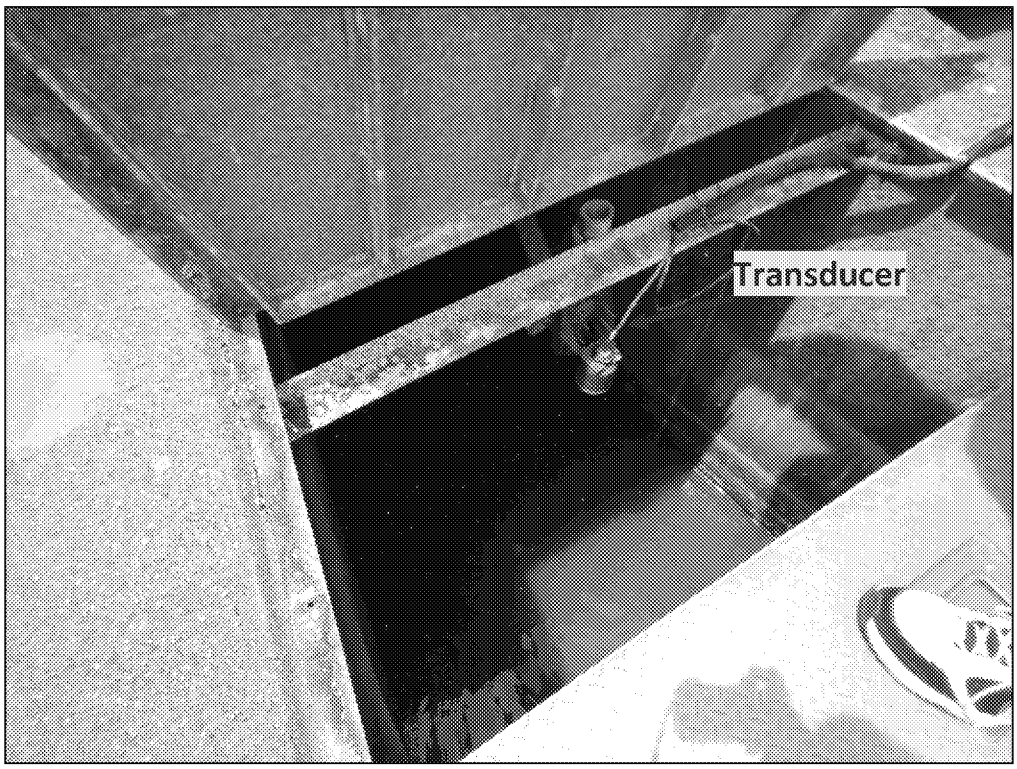
Photograph 2. View of the Facility's new cogeneration engine (not yet in service).



Photograph 3. View of the Facility headworks with mechanical bar screen.

Photograph 4. View of the grit conveyer and disposal bin.

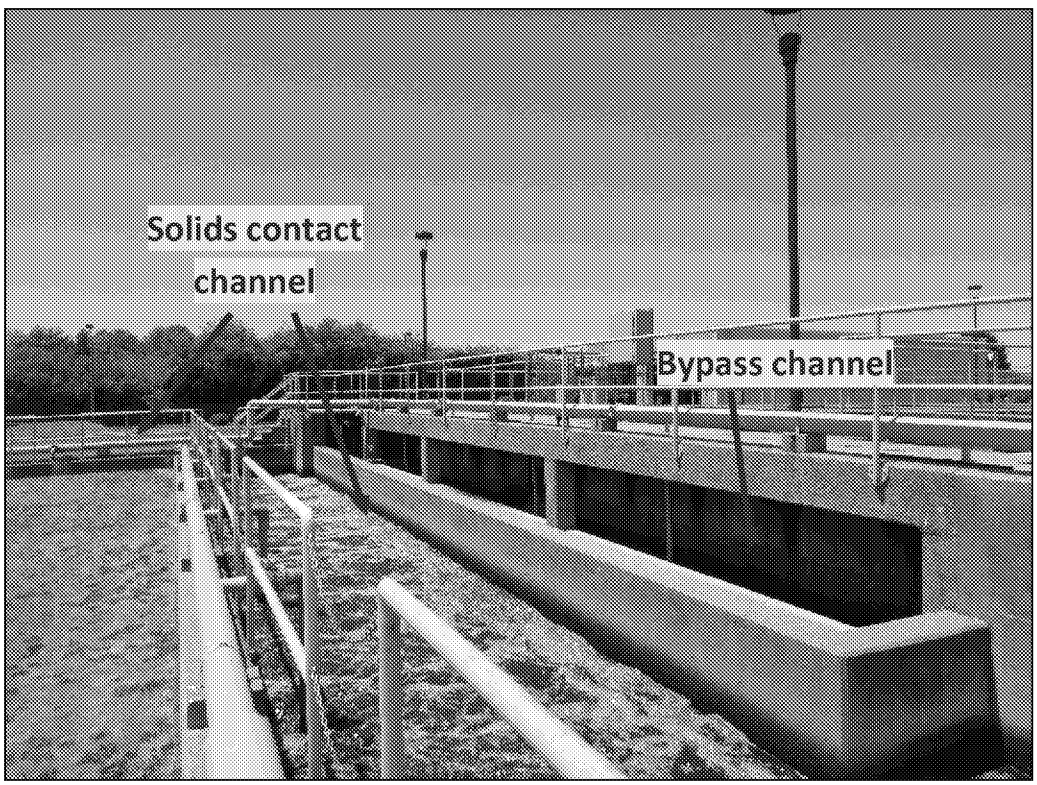
Photograph 5. View of the influent Parshall flume.



Photograph 6. View of the influent ultrasonic transducer.

ED_006495_00001342-00021

Photograph 7. View, facing south, of the primary clarifiers.



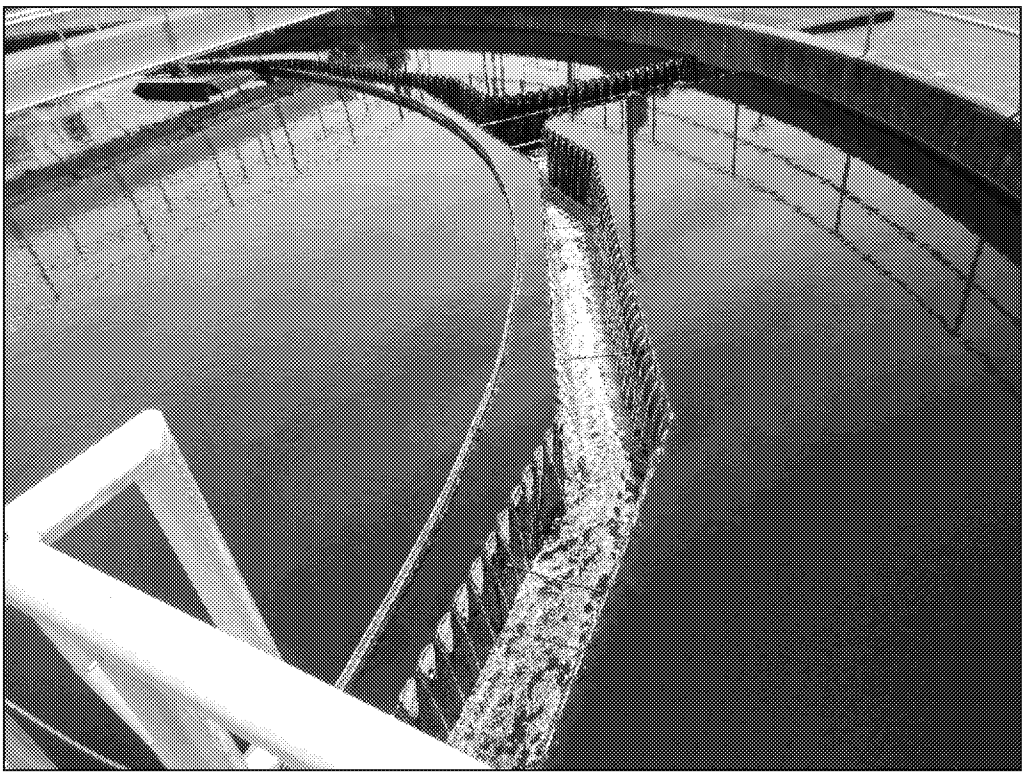
Photograph 8. View of the bypass channel at the southern end of the primary clarifiers. The solids aerated contact chamber, which receives effluent from the trickling towers, is also shown.

Photograph 9. View inside the southern trickling tower.

Photograph 10. View inside the northern trickling tower.

ED_006495_00001342-00023

Photograph 11. View, facing east, of the secondary clarifiers.



Photograph 12. View of the northern secondary clarifier. Note the heavy flow over the weirs in the southwest corner of the clarifier.

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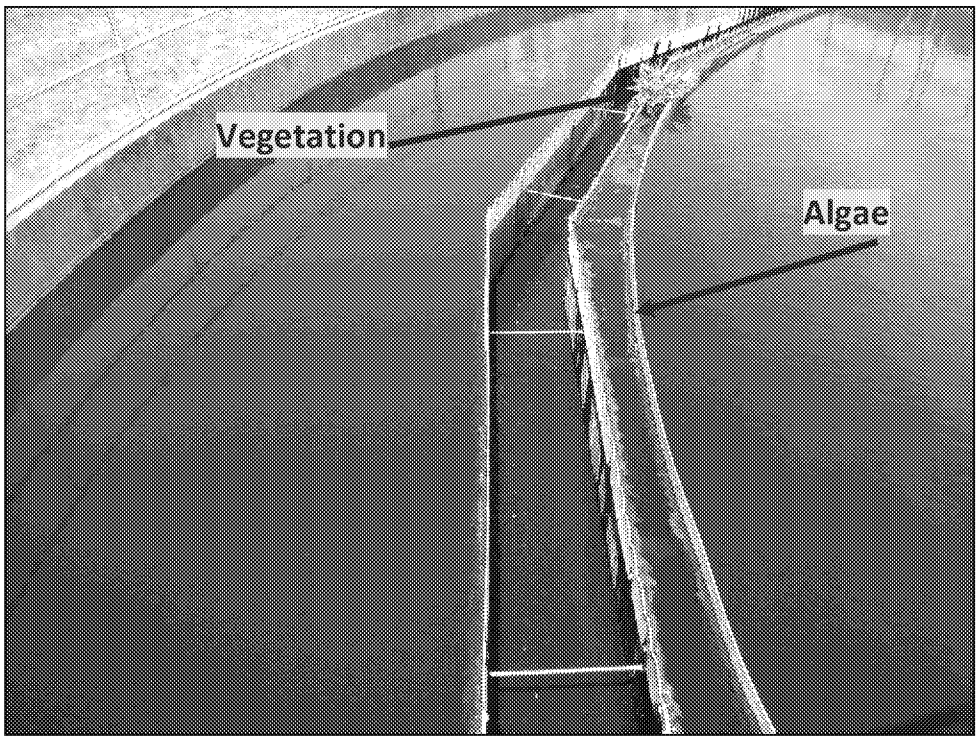
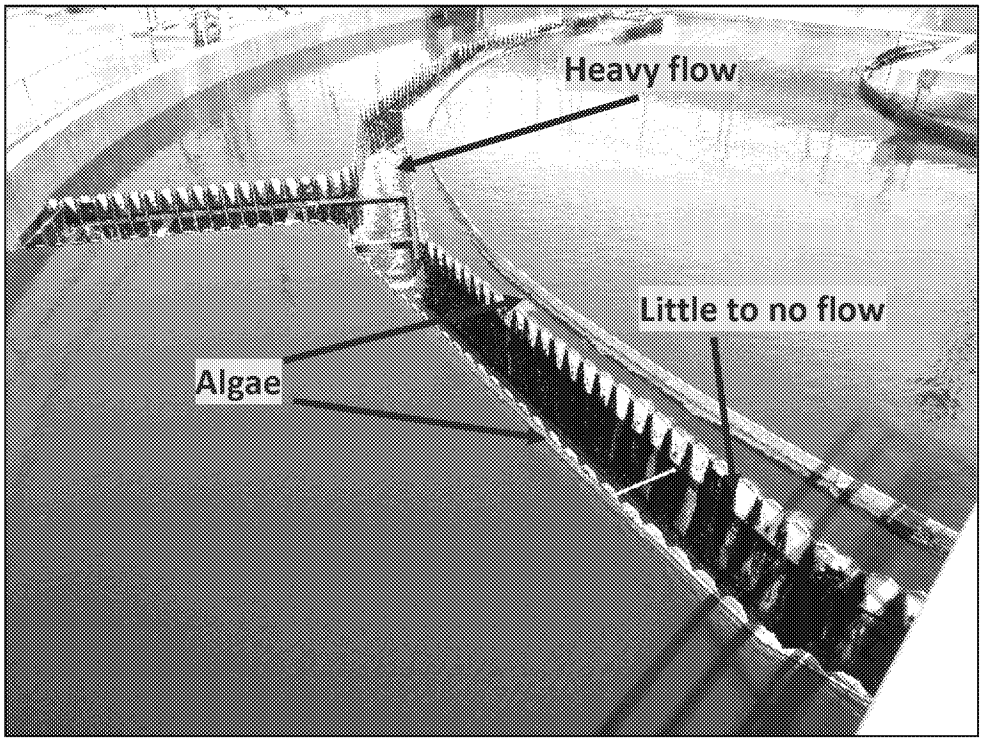
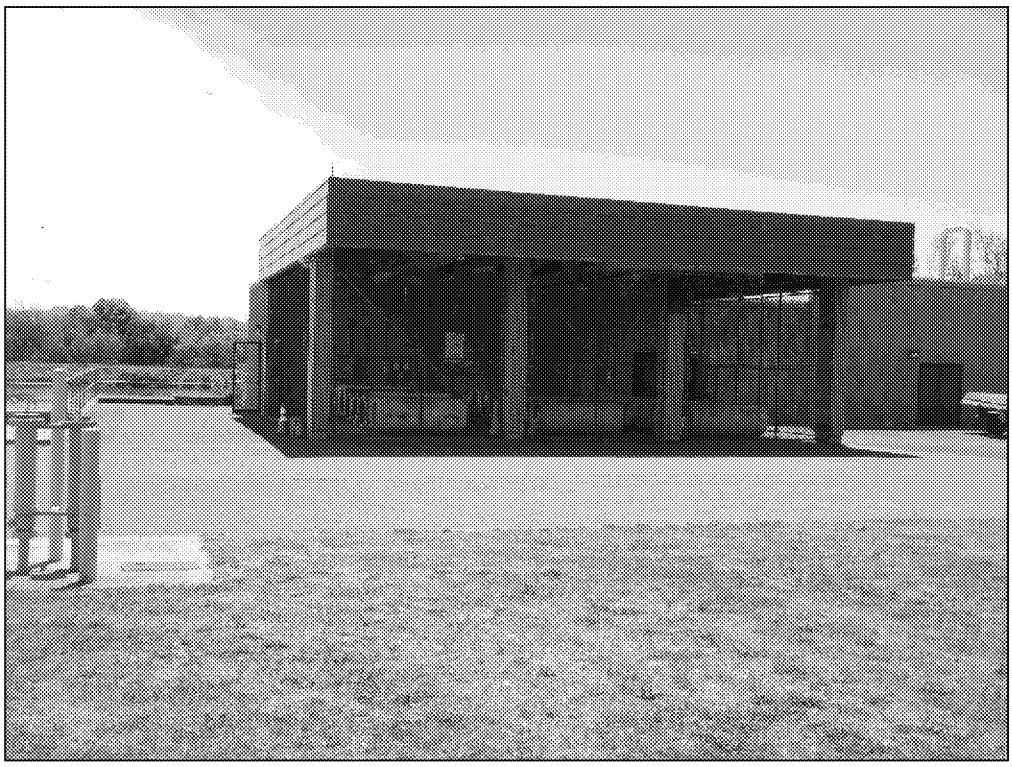


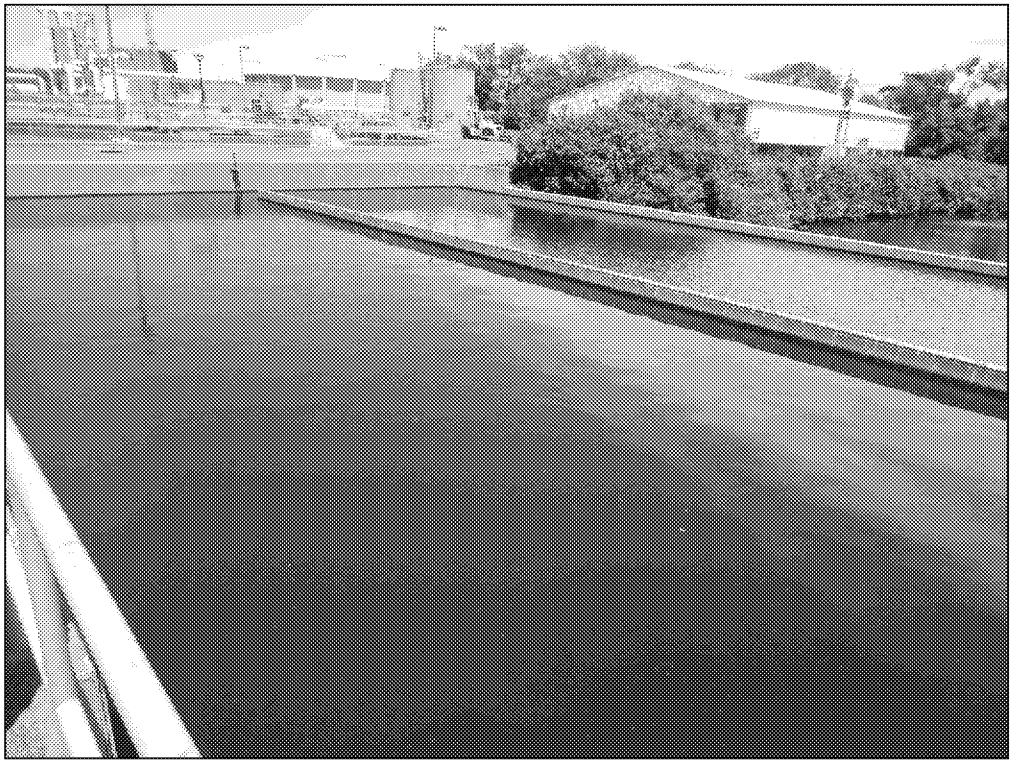
Photograph 13. View of the northern secondary clarifier. Note there was no flow over the weirs in the northwest corner of the clarifier. Note that algae and vegetation was also observed in the weirs.



Photograph 14. View of the southern secondary clarifier. Note that there was heavy flow over the weirs in the northwest corner, and little to no flow over the weirs in the southwest corner. Note that algae was also observed in the weirs.



Photograph 15. View of the chlorine and sulfur dioxide gas storage building.



Photograph 16. View, facing northeast, of the chlorine contact chamber.

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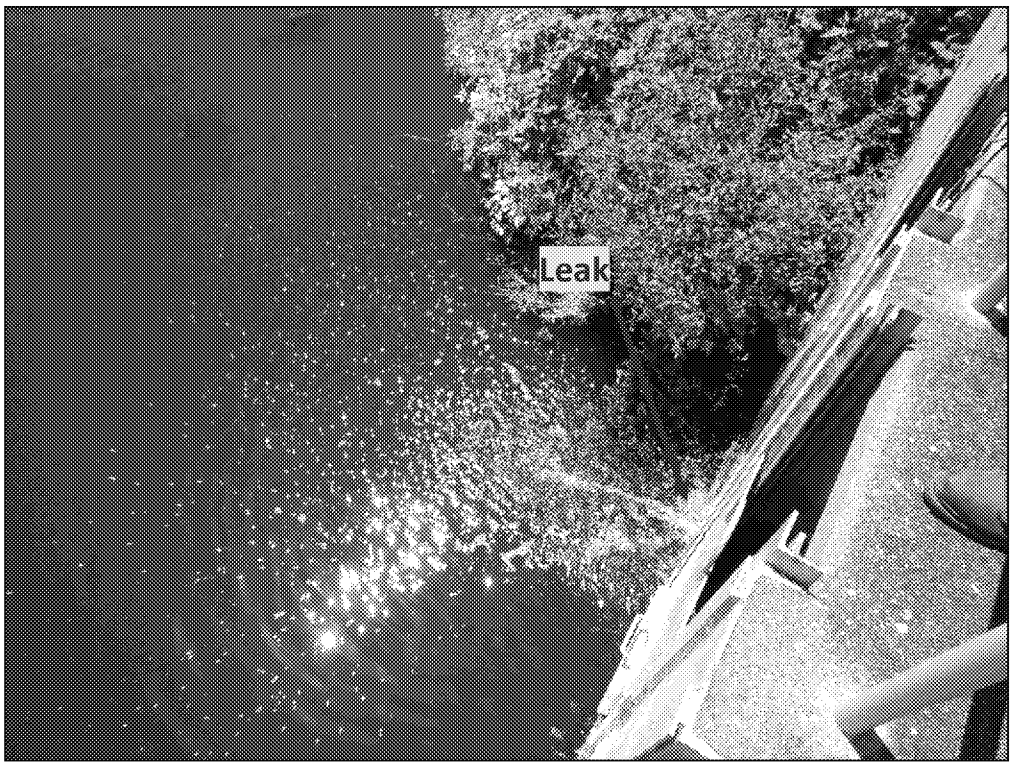
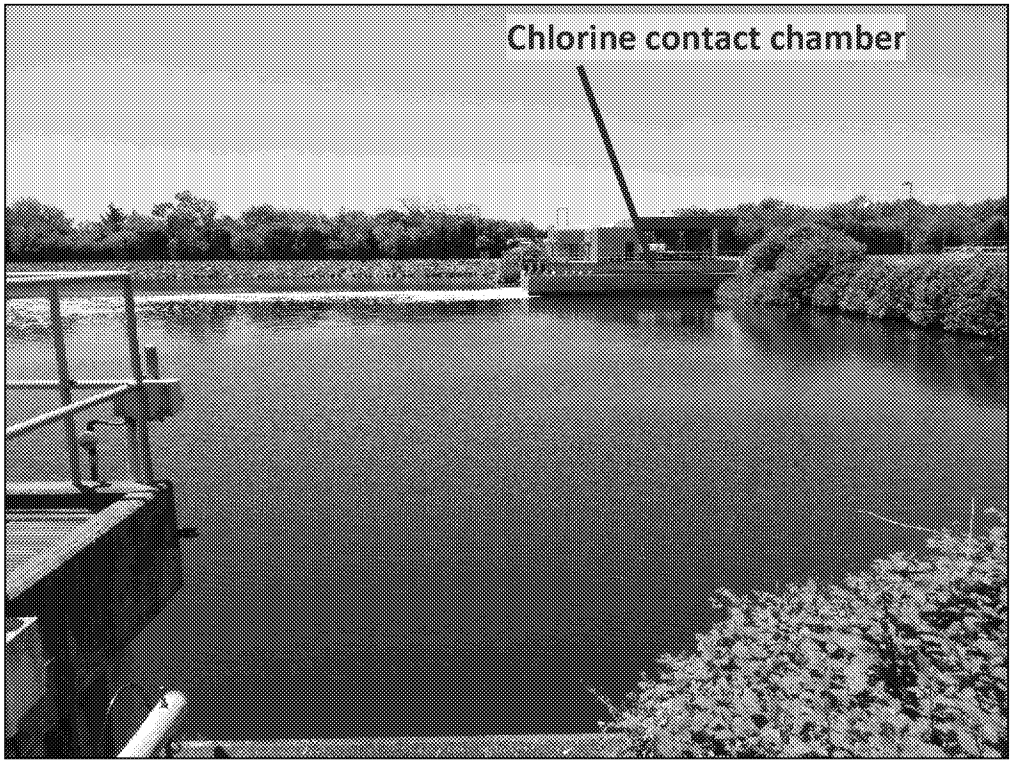


Photograph 17. View of a leak into the effluent holding pond from the influent end of the chlorine contact chamber.



Photograph 18. View, facing west, of the effluent holding pond. The chlorine contact chamber is in the background.

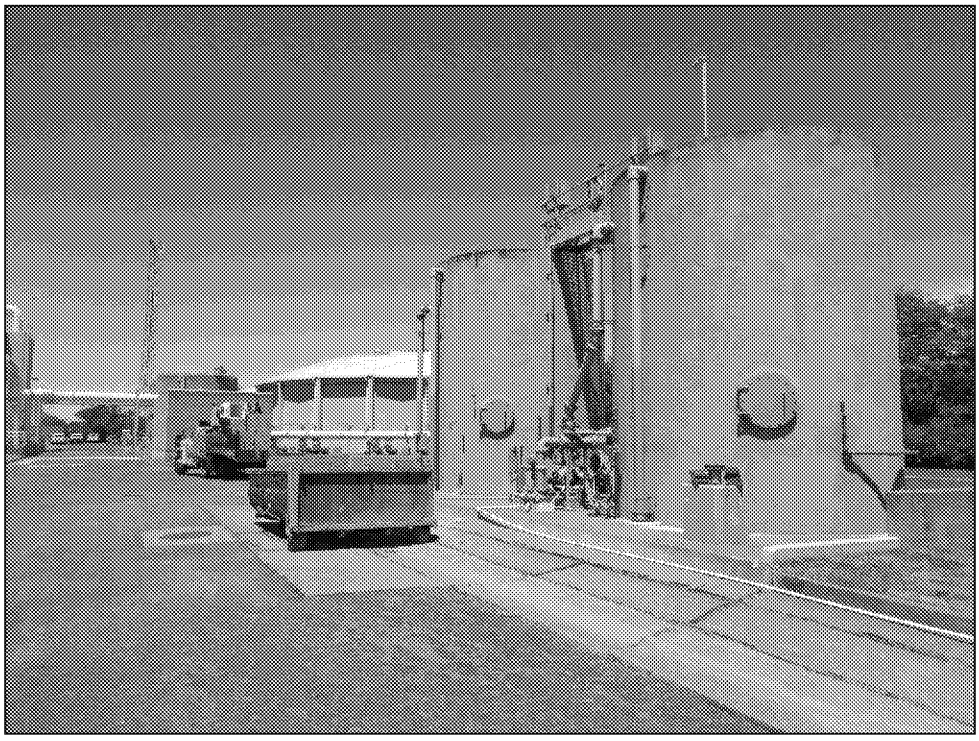
Photograph 19. View, facing east, towards Humboldt Bay and the location of EFF-001.

Photograph 20. View of the overflow weir and pump chamber that conveys water from the effluent holding pond to the Overflow Marsh during extreme wet weather events.

Photograph 21. View, facing east, of the Overflow Marsh.

Photograph 22. View, facing south, of the southern sludge lagoon. Note that the lagoon was full to the point solids had breached the surface.

Photograph 23. View, facing north, of the northern sludge lagoon. Note that the lagoon had been recently dredged. Facility representatives stated that there was 8 to 10 inches of freeboard at the time of the inspection.



Photograph 24. View, facing north, of the biosolids storage tanks.