

EPA REGION 5 Enforcement and Compliance Assurance Division

INSPECTION REPORT

Inspection Entry Date/Time	07/25/2023 08:00 AM (ET)	Announced: Yes	
Inspection Exit Date/Time	07/26/2023 08:45 AM (ET)	Access: Granted	
Weather	Day 1 – Sunny, warm (day of physical inspection)		
Media	Water		
Statute(s)/Program(s)	Clean Water Act, NPDES, WWTP		
Type of Inspection	Compliance Evaluation Inspection (CEI)		
Permittee Name	City of Marietta		
Facility or Site Name	Marietta Wastewater Treatment Works		
Facility/Site Physical Address	440 East Eighth Street		
City, State, Zip Code	Marietta, OH 45750		
County/Borough/Parish	Washington County		
Facility GPS Coordinates	39.40896, -81.43308		
Mailing Address (If different)			
City, State, Zip Code			
FRS ID	110039783552		
Permit Number(s) (If Applicable)	OH0026344		
SIC and/or NAICS	4952		
Regulatory Representatives Participating in Inspection:			
Title	Name	Organization	
Chemist	Ken Gunter	U.S. EPA	
Lead Inspector:			
Dean Maraldo	[Signature] DINO MARALDO Digitally signed by DINO MARALDO Date: 2023.08.11 08:23:13 -05'00'		
	U.S. EPA REGION 5	Maraldo.Dean@epa.gov	(312) 353-2098
Supervisor Review:			
Ryan Bahr	[Signature] RYAN BAHR Digitally signed by RYAN BAHR Date: 2023.08.11 10:52:38 -05'00'		
	EPA REGION 5	bahr.ryan@epa.gov	

SECTION I – INTRODUCTION**Site Entry and Inspection Objectives**

I, U.S. EPA REGION 5 Lead Inspector, Dean Maraldo, arrived at the Marietta Wastewater Treatment Works ("Facility" or "Marietta WWTP"), located at 440 East Eighth Street, Marietta, OH 45750, at 08:00 AM (ET) on 07/25/2023 for an announced inspection. I met Steve Elliott (Wastewater Superintendent) and Ryan Boley (Operations Manager) upon entry and presented my inspector credentials to Steve Elliott and informed them that this was a U.S. EPA REGION 5 inspection to determine compliance as authorized by Clean Water Act (CWA) Section 308 and implementing regulations. U.S. EPA chemist Ken Gunter joined me on the inspection. This report is based on information supplied by Facility representatives, my direct observations, records and reports maintained by the permittee and other information including: photographs taken during the inspection, physical evidence collected, verbal or written statements made by information supplied by Facility representatives during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to me by Facility representatives during or subsequent to the on-site inspection. In addition, information gathered prior to or subsequent to the inspection from a review of U.S. EPA, State, and/or public records may be included in this report.

Attendees

Organization	Attendee Name	Title	Present in Opening Conf.	Present in Closing Conf.
U.S. EPA Region 5	Dean Maraldo	Lead Inspector	Yes	Yes
U.S. EPA Region 5	Ken Gunter	Chemist	Yes	Yes
City of Marietta	Craig Johnson	Operator	No	No
City of Marietta	Ryan Boley	Wastewater Operations Manager	Yes	Yes
City of Marietta	Steve Elliott	Superintendent	Yes	Yes

Facility/Site Description

I began by reviewing the Facility description provided in the permit (excerpt below) and the Facility representatives either confirmed or corrected (in bold below) the information as described below. Unless noted otherwise, Facility responses were provided by Mr. Elliott.

Permit Fact Sheet Facility Description:

*The City of Marietta WWTP was constructed in 1955 and is currently in the process of upgrading their facility, with construction scheduled to be complete July 31, 2019. **Upgrades now complete.***

*The average design flow is 4.0 million gallons per day (MGD) and a peak hydraulic capacity of 9.0 MGD. Once construction is complete and two new, larger clarifiers are in operation, peak hydraulic capacity will be 11.0 MGD. **Current peak is 11.4 MGD.***

The City of Marietta WWTP serves the City of Marietta, Washington County subdivisions, and the Reno Water and Sewer District, a population of approximately 15,000.

The Marietta WWTP has the following treatment processes

- Influent Pumping
- Bar Screen (course BS and wet well then perf plate fine screen)
- Grit Removal

- Scum Removal
- Primary Sedimentation
- Pre-Aeration
- Activated Sludge Stabilization
- Secondary Clarification
- Ultraviolet Disinfection

Marietta WWTP has one (1) bypass at the head of the plant. During high flow events, flows are diverted to the 2.6 MG flow equalization basin, to be redirected back to the WWTP when flows subside. When the basin is full, excess flows are discharged directly to the Ohio River via a relief sewer, which will henceforth be monitored as Station 002.

The Marietta WWTP does have an approved pretreatment program. The Marietta WWTP has one (1) categorical users (**Thermo Fischer Scientific**) that discharge 0.05 MGD of flow; The Marietta WWTP has two (2) significant non-categorical users that discharge 0.197 MGD of flow; there are 8 non-significant industrial users.

The Marietta WWTP utilizes the following sewage sludge treatment processes:

- Aerobic Digestion - Air
- Mechanical Dewatering - Centrifuge
- Gravity Thickening (**no longer used**)
- Polymer, Lime, Ferric-chloride Alum Addition (**no longer use lime or ferric. Only use polymer**)
- Landfill Treated sludge is disposed of in a municipal landfill or transferred to another NPDES permit holder (**currently only to landfill**)

Facility/Site Information

Next, I asked some background questions. Unless noted otherwise, Mr. Elliott provided the responses in the table below.

Background Question	Facility Response
How do you manage your biosolids?	Dewater and landfill, do not fully digest
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	Collection system work in Colegate area due to Sanitary Sewer Overflows ("SSOs"). (CT Consultants). Duck Creek sewershed SSO (Hazen and Sawyer is the firm), flow monitoring/lining
Is there currently any portion of the treatment train that is non-operational?	No
Do you accept waste from septage haulers? If so, what problems have you experienced?	Yes, and other NPDES facilities. No problems
Do you use in-house or contract out for laboratory analyses? (including metals or WET testing)	Use two labs Alloway (metals, biochemical oxygen demand ("BOD"), ammonia), Microbac (bacteria); Enviroscience (toxicity). In house total suspended solids ("TSS"), pH, dissolved oxygen ("DO")
Operation schedule (days of operation, # shifts/day, # operators/shift, coverage overnight, weekends & emergencies)	24 hour, 7 days; 1 operator 24/7; M-F one operator for pretreatment; 12-hour shifts
Outfalls: (and do the numbers, locations, and receiving)	001; 002 (influent bypass wet weather)

waters match the permit?)	
Contributing (or shared) Jurisdictions	Yes, Washington County; Reno Water and Sewer Association (mainly residential); Shawnee/Devola Subdivision
WWTP Approx. # of residents served	6,000 connections
WWTP Design Capacity & Average Daily Flow	~2.3 MGD, 4.0 MGD design; 11.4 MGD wet weather flow
Responsible official	Ryan Boley submits DMRs
CBI concerns?	No

Inspection Focus Areas and Locations

Inspection Area	Description
Interview	Facility Office
Self Monitoring	
Operations and Maintenance	
Flow Monitoring	
CSO/SSO	
Review of Effluent Limit Exceedances	
Pretreatment	
Permit Compliance Schedule Review	
Bypasses	
Laboratory Review	Facility Laboratory
Physical Inspection	Facility Wastewater Treatment Works

SECTION II – OBSERVATIONS

Location: Interview/Self Monitoring	
Observation #: DM1-OB-001	Date: 07/25/2023
Facility responses regarding Self Monitoring were provided by Ryan Boley, unless noted otherwise. I began by confirming that the influent and effluent samples are collected at locations specified in the permit and representative of the waste stream. Effluent composite samples are collected as flow proportioned (flow meter) composite samples after UV, and grab samples are collected after UV with a dipper. Ken Gunter asked if they also monitor <i>E.coli</i> before UV. Mr. Boley said they have in the past to investigate UV issues, but no longer. Influent samples are collected prior to the bar screen, and composite samples are collected from a flow proportioned composite sampler. Influent grab samples collected at the same location. Composites are collected three times per week (T, W, Th) along with bacteria grab samples. Monthly samples are collected the first Monday or Tuesday of the month. Composite samples are cooled to <4°C to properly preserve them during the compositing period and results are recorded in a log. A refrigerator is used for preserving composite samples and temperature is monitored with a thermometer which is changed out at least annually. Operators use a dipper for bacteria sampling, collected in a pre-preserved sterile bottle. Samples are refrigerated, and then packed in ice for transport to the contract lab (Microbac). Samples normally collected	

around 8 AM and to lab by noon.

Location: Interview/Operations and Maintenance

Observation #: DM1-OB-002

Date: 07/25/2023

Facility responses regarding Operations and Maintenance ("O&M") were provided by Steve Elliott, unless noted otherwise. I started by asking if all treatment units are currently operable. Mr. Elliott said they were operable.

I asked for a description of the organizational structure of the Facility. Mr. Elliott said that he reports to Director of Public Safety and Service. Other staff include Ryan Boley (Operations Manager), the technical administrative coordinator (Mike Miser), maintenance manager (plant and lift stations); plant operators (five, includes pretreatment operator); electrical instrumentation technician; and maintenance and general utility mechanics. The collection system staff includes two equipment operators, and wastewater service technicians (four). Total number of staff is 16. Three operators have class 1 certification, one operator has class 2 certification, and another operator is working towards initial certification.

The Facility maintains an O&M record system, including:

- As-built drawings
- Maintenance history (electronic system "Antero AllMax" program)
- Repair history (Antero AllMax program)
- Paper and electronic instruction files for O&M of each item of major equipment
- O&M manual is available in Paper and electronic form.

I requested copies of chapters 2, 5, 9, 12, 13, 14 of the O&M manual, relating to plant operations, disinfection, and lab procedures.

I asked if the Facility experiences any sludge wasting issues. Mr. Elliott said they do not.

Mr. Boley described routine process monitoring, including daily 30-minute settleometer testing, along with routine testing for alkalinity, ammonia, nitrates nitrites; and daily primary sludge and waste activated sludge testing; temperature, dissolved oxygen and pH monitoring.

I asked about treatment bypasses. Mr. Boley said river levels of 28.3 feet or higher can trigger a bypass at Outfall 002. At 32.9 feet they must activate the high river pump station to force discharge to the river. Mr. Elliott added that the high river pump station was installed around 2019 and only used a few times. In February 2022 the high river pump station failed, resulting in flooding of the UV system and bacteria violations.

I asked about alarm systems for essential equipment. Mr. Boley said they have a SCADA system, and alarms are triggered by pump faults, amperages, gates/valve faults, high flow at the bar screen, the internal bypass (at 8 MGD sustained for a couple minutes, which may have happened overnight according to Mr. Elliott), and UV faults. Outfall 002 also has flow alarms (SCADA shows how much flow and the number of occurrences).

Routine and preventive maintenance schedules are provided by a computer program (Antero AllMax), which creates weekly work orders. Operators also maintain a written logbook which documents all plant activities daily.

I asked if the Facility maintains an inventory of spare parts, either at the Facility or close by, sufficient to keep all treatment units operational. Mr. Boley said they have a spreadsheet inventory of spare parts. Mr. Elliott added that this is something that will go into the computer program eventually.

For standby power, there are two generators at plant (each dedicated to certain portions of plant), and two

large portable generators for lift stations. One lift station has permanent backup power (Harmar Pump Station - largest station). All generators are test run weekly, per work orders. Lately, power loss is not an issue according to Mr. Elliott.

Location: Interview/Flow Monitoring

Observation #: DM1-OB-003

Date: 07/25/2023

Influent and effluent flow measuring devices are professionally calibrated, at least annually, accruing to Mr. Elliott.

Mr. Boley provided a list of all flow meters at the Facility, including the mag meters used to measure influent and effluent flow (See Appendix 2 – Document Log). Mr. Elliott added that effluent flow is measured over a parshall flume and flow measuring devices are calibrated annually.

Location: Interview/CSO/SSO

Observation #: DM1-OB-004

Date: 07/25/2023

I began with a question about combined sewers. I asked if any portion of the Facility's sewage collection system is combined with the storm water collection system. Mr. Elliott said he was not aware of any combined sewers.

I then turned to sanitary sewer overflows and asked if they experienced any backups or overflows in the sanitary sewer collection system, including pump stations, manholes and piping, over last year. The Facility experienced three SSOs in January 2023, with flows to receiving waters (two to a tributary to the Muskingum River, and one directly to the Muskingum River). No SSOs since the January 2023 events. Mr. Elliott provided copies of a list of SSO locations, SSO reports, and annual reports since 2020, per my request. (See Appendix 2 – Document Log).

The sanitary sewer collection system includes 89 miles of sanitary conveyance and 13 lift stations.

I asked if there was a sewer/basement backup complaint log. Mr. Elliott said there was and that there is not a significant basement backup problem in the system. Mr. Boley recalled only one basement backup complaint on South Street due to high flow and plant failure.

I asked if there were any lift stations with chronic SSOs/basement backups. Mr. Boley said there were not, but the Duck Creek lift station pump sometimes clogs, but does not result in overflows.

I concluded the SSO discussion with a question about pending improvement projects in collection system.

Mr. Boley mentioned potential projects in the Duck Creek sewershed, including slip lining main lines (first phase), followed by a possible flow study to make sure lining worked and to develop better design criteria for Duck Creek lift station renovation project. Mr. Elliott added that they are working on funding for lining now, and the rest is "to be determined". I received a copy of the work plan for the Duck Creek sewershed (See Appendix 2 – Document Log).

Mr. Boley then described planned sewer improvements in the Colegate Drive area, including inflow and infiltration improvements, flow monitoring, and smoke testing. He said that there is more inflow than infiltration in this area and the remedy is to be determined. I received a copy of the scope of services for planned sewer work in the Colegate Drive area (See Appendix 2 – Document Log). The city expects to receive further recommendations for work in this area from its consultant (CT consultants) in August 2023.

Location: Interview/Review of Effluent Limit Exceedances**Observation #:** DM1-OB-005**Date:** 07/25/2023

I reviewed the list of permit effluent limit exceedances with the Facility representatives. (See Appendix 2 – Document Log, for summary of effluent limit exceedances). The causes of recent exceedances are described below.

- *E.coli* effluent limit exceedance during last week of July 2023, (See Appendix 2 – Document Log, for copy of the notice to OEPA). Cause unknown.
- TSS effluent limit exceedances February 2022: Mr. Boley said the exceedances likely occurred due to a flood affecting the UV treatment system.
- *E.coli* effluent limit exceedances from February 20, 2022 to May 2022 - due to lack of UV treatment, resulting from February 2022 flooding event.
- December 2022 *E.coli* effluent limit exceedances likely due to issue with contract lab, according to Mr. Boley.
- *E.coli* violations in January, March, April, May, and July 2023 due to UV system failures according to Mr. Boley. Bulbs not working at times with frequent major and minor system errors and alarms.

Mr. Boley added that since December 2022 the lab issues are resolved and attributed recent bacteria effluent limit exceedances to UV system issues. Mr. Boley also mentioned that Ohio EPA's compliance assistance staff visited in December 2022 and concluded that bacteria effluent limit exceedances are likely due to UV system "manufacturers issues".

The city is trying to get the UV system vendor (Enaqua) to evaluate and fix the UV system.

Location: Interview/Pretreatment**Observation #:** DM1-OB-006**Date:** 07/25/2023

I conducted a brief interview regarding the city's pretreatment program. The inspection did not include a pretreatment audit.

The city has an approved POTW pretreatment program. The Facility pretreatment operator, Craig Johnson, provided the responses below, unless noted otherwise.

The number of POTW industrial users subject to pretreatment standards? 11.

Are all industries aware of their responsibility to comply with applicable standards? Yes, all in compliance.

Are all categorical industries submitting the required semiannual report? Yes.

Has the POTW submitted an annual pretreatment report? Yes (See Appendix 2 – Document Log).

Has the POTW taken enforcement actions against noncomplying industrial users? Yes, some notices of violation and fines. Mr. Johnson showed a recent example from Marietta Memorial Hospital, with an associated fine (May 2023). I asked if they ever issued a pretreatment order. Mr. Boley said they had not.

The city conducts annual inspections for significant industrial users, all other industrial users ("IUs") are inspected every three years.

No recent incidents involving IUs causing pass through or interference.

Location: Interview/Records Review and Compliance Schedules**Observation #:** DM1-OB-007**Date:** 07/25/2023

We reviewed compliance schedules under the permit (pages 14-17). Responses were provided by Steven Elliott:

1. Pretreatment compliance schedule: all done, in compliance.
2. Bypass monitoring: all done, in compliance.
3. High Flow Treatment Optimization: could not complete, due to lack of high wet weather flows related to river flow. Provided copies of related documents (See Appendix 2 – Document Log).

All noncompliance which may endanger health or the environment, including all violations of daily limits, were orally reported within 24 hours and followed up with a letter to Ohio EPA within 5 days.

Location: Interview/Bypasses**Observation #:** DM1-OB-008**Date:** 07/25/2023

Mr. Boley explained that full treatment bypasses occur at Outfall 002, a collection system hydraulic relief bypass prior to entry into the plant. Bypasses occur when the Ohio and Muskingum River are up (~28.3 feet) and any flows unable to reach the plant due to capacity (including full EQ basin) are routed to Outfall 002 to the Ohio River. Outfall 002 data is included in Discharge Monitoring Reports ("DMRs") (gallons, duration, and occurrences). See Appendix 2 – Document Log, for latest example of DMR documenting bypass from Outfall 002 on January 3, 2023).

Mr. Boley also described an internal partial treatment bypass (also referred to by Facility staff as "internal hydraulic relief") in the wastewater treatment train, occurring when plant flows reach 8 MGD. The partial bypass directs flow around primary treatment (grit removal, pre-aeration, primary settling tanks, and the biological and anoxic selector system), directly to activated sludge, secondary clarification, and UV disinfection.

I requested a list of internal bypass events since January 1, 2023. Since the internal bypasses are not included in DMRs the Facility did not have a list of recorded bypass events. However, Mr. Johnson provided copies of flow charts, annotated with flow peaks, including dates and times, representing internal bypass events (when flows > 8MGD) from January 1, 2023 to July 25, 2023. The annotated charts document 25 internal bypass events since January 1, 2023 (See Appendix 2 – Document Log).

Location: Physical Inspection**Observation #:** DM1-OB-009**Date:** 07/25/2023**Weather:** warm and sunny

The physical inspection of the Facility began at 2:05 PM ET, at the on-site laboratory. Craig Johnson led the lab tour along with Ryan Boley.

pH area: Ken Gunter noted that the pH calibration process did not including bracketing of the permit compliance range, and recommended calibrations including pH buffers 4 thru 10. Mr. Gunter also recommended pH bench sheets include the ID number for the specific pH probe in use.

TSS area: Ken Gunter recommend documenting weight to constant weight measurements.

The physical inspection of the Facility wastewater treatment system began at 2:45 PM ET, led by Mr. Boley. Observations are noted in the Photo Log (Appendix 1). We concluded the physical inspection at 3:45 PM ET on 7/25/23 and agreed to return the next morning (7/26/23) at 7:30 AM ET to conclude the inspection with a closing conference.

Photo(s)

1. [MRTA0255.JPG](#)
2. [MRTA0259.JPG](#)
3. [MRTA0260.JPG](#)
4. [MRTA0261.JPG](#)
5. [MRTA0252.JPG](#)
6. [MRTA0253.JPG](#)
7. [MRTA0254.JPG](#)
8. [MRTA0256.JPG](#)
9. [MRTA0257.JPG](#)
10. [MRTA0258.JPG](#)
11. [MRTA0263.JPG](#)
12. [MRTA0262.JPG](#)
13. [MRTA0264.JPG](#)
14. [MRTA0265.JPG](#)
15. [MRTA0266.JPG](#)
16. [MRTA0267.JPG](#)

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Record: Laboratory Analysis Reports		AOC: Yes
Ref #: DM1-RR-001	Reviewed By: Dean Maraldo and Ken Gunter	Reviewed Date: 07/25/2023
Ken Gunter and I reviewed recent laboratory chains of custody (“COCs”) and bench sheets. Mr. Gunter noted the following issues: • COC inconsistencies (lack of signatures, location of transfer). • In House TSS: SOP includes calibration of balance, but no mention of certification or certain class standards, and lacks reweighing standard methods. Bench sheet for TSS lacks re-weight and confirmation that oven maintained 103-105 degree temp, or the length of time the sample is in oven. • pH SOP: should include verification of buffer standard expiration. Bench sheet should also include collection time, analysis time, and who performed test (same issue for dissolved oxygen bench sheet). Buffers should bracket compliance range, for example 4, 10 pH buffers would bracket the Facility’s pH permit compliance range.		

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS**No sampling was conducted.****SECTION V - AREAS OF CONCERN**

Areas of Concern may not be in sequential order.

The presentation of Areas of Concern does not constitute a formal compliance determination or violation.

AOC Reference #: DM1-OB-004	Location: Interview/SSOs
Regulation and/or Permit Requirement	
Permit Part I, B.2.c: all sanitary sewer overflows are prohibited.	
AOC:	
The Facility experienced three SSOs in January 2023, with flows to receiving waters (two to a tributary to the Muskingum River, and one directly to the Muskingum River).	
Additional Notes: Facility reported 58 SSO occurrences (Outfall 300) in DMRs from January 1, 2019 to June 30, 2023.	

AOC Reference #: DM1-OB-005	Location: Interview/Review of Effluent Limit Exceedances
Regulation and/or Permit Requirement	
Permit Part I.A.1: final effluent limitations and monitoring requirements.	
AOC:	
Permit effluent limit exceedances. The causes of recent exceedances are described below.	
<i>E.coli</i> effluent limit exceedance during last week of July 2023, (See Appendix 2 – Document Log, for copy of notice to OEPA). Cause unknown. - TSS effluent limit exceedances February 2022: Mr. Boley said the exceedances likely occurred due to a flood effecting the UV treatment system. <i>E.coli</i> effluent limit exceedances from February 20, 2022 to May 2022 - due to lack of UV treatment, resulting from flooding event. - December 2022 <i>E.coli</i> effluent limit exceedances likely due to issues with contract lab, according to Mr. Boley. <i>E.coli</i> violations in January, March, April, May, and July 2023 due to UV system failures according to Mr. Boley. Bulbs were not working at times with frequent major and minor system errors and alarms.	

AOC Reference #: DM1-OB-007	Location: Interview/Records Review and Compliance Schedules
Regulation and/or Permit Requirement	
Permit Part I.C.C: compliance schedule for high flow treatment optimization.	

AOC:

High Flow Treatment Optimization requirement not complete pursuant to permit compliance schedule, due to lack of high wet weather flows related to river flow.

AOC Reference #: DM1-OB-008**Location: Interview/Bypasses****Regulation and/or Permit Requirement**

Permit Part III.11: Unauthorized bypasses

AOC:

Bypasses occur when the Ohio and Muskingum River are up (~28.3 feet) and any flows unable to reach the plant due to capacity (including full EQ basin) are routed to Outfall 002 to the Ohio River. Outfall 002 data is included in Discharge Monitoring Reports ("DMRs") (gallons, duration, and occurrences). See Appendix 2 – Document Log, for latest example of DMR documenting bypass from Outfall 002 on January 3, 2023).

Mr. Boley also described an internal partial treatment bypass (also referred to by Facility staff as "internal hydraulic relief") in the wastewater treatment train, occurring when flows reach 8 MGD. The partial bypass directs flow around primary treatment (grit removal, pre-aeration, primary settling tanks, and the biological and anoxic selector system), directly to activated sludge, secondary clarification, and UV disinfection.

Mr. Johnson provided copies of flow charts annotated with flow peaks, including dates and times, representing internal bypass events (when flows > 8MGD) from January 1, 2023 to July 25, 2023. The annotated charts document 25 internal bypass events since January 1, 2023.

AOC Reference #: DM1-OB-009**Location: Physical Inspection/Laboratory****Regulation and/or Permit Requirement**

Permit Part III.5 - Sampling and Analytical Method; and 40 CFR 136: Test Procedures for the Analysis of Pollutants

AOC:

pH area: Ken Gunter noted that pH calibration process did not including bracketing of the permit compliance range, and recommended calibration including pH buffers 4 thru 10. Mr. Gunter also recommended pH bench sheets include the ID number for the specific pH probe in use.

TSS area: Ken Gunter recommend documenting weight to constant weight measurements.

AOC Reference #: DM1-OB-009**Location: Physical Inspection/Effluent Autosampler****Regulation and/or Permit Requirement**

Permit Part III.3.A – Facility Operation and Quality Control. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

AOC:

Observed growth inside the effluent autosampler tubing (see Photo Log image MRTA0264.JPG). Tubing normally replaced twice per year.

AOC Reference #: DM1-OB-009	Location: Physical Inspection/Effluent Flume
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Regulation and/or Permit Requirement

Permit Part III.5 – Sampling and Analytical Method. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow.

AOC:

Observed flow sensor off center of flume (see Photo Log image MRTA0265.JPG). Ryan Boley said the off-center sensor placement was due to turbulence in the center of flume.

AOC Reference #: DM1-OB-009	Location: Physical Inspection/Outfall 002
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Regulation and/or Permit Requirement

Permit Part II.V – Outfall signage. The permittee shall maintain a permanent sign on the Ohio River at each outfall that is regulated under this NPDES permit. This includes final outfalls and bypasses. The sign shall include, at a minimum, the name of the establishment to which the permit was issued, the Ohio EPA permit number, and the outfall number and a contact telephone number.

AOC:

Outfall 002 to the Ohio River could not be observed due to heavy vegetation (see Photo Log image MRTA0267.JPG, capturing location of Outfall 002, obscured by riverbank vegetation, and the outfall manhole). No outfall sign was observed for Outfall 002.

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP**Closing Conference**

I held a closing conference for the inspection with Facility personnel at 07:45 AM (ET) on 07/26/2023. During the closing conference, I discussed the observations and preliminary Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

Steve Elliott asked if labs are allowed to average dilution water for BOD. Ken Gunter said he would look into it and get back to him. Steve Elliott asked about next steps. I reviewed U.S. EPA's general enforcement process and provided an estimated timeframe for completion of the inspection report. We concluded the closing conference and the inspection at 8:45 AM ET on 07/26/2023 and departed the Facility.

Communication Log

Type	From	To	Date	Description	Attachment(s)
Email	Steve Elliott	Dean Maraldo	7/26/2023	transmitting attachment	Notice of Exceedance of Daily Max Discharge Limit to OEPA (1/25/2019)
Email	Ryan Boley	Dean Maraldo	7/27/2023	Request for copies of documents received (high flow optimization)	NA
Email	Dean Maraldo	Ryan Boley	7/27/2023	Request for copies of documents received	Copies of high flow optimization records
Email	Ken Gunter	Steve Elliott and Ryan Boley	8/2/2023	Transmitting lab Procedures	Copy of Standard Method 5210B and Standard Method 4500 HB
Email	Steve Elliott	Ken Gunter	8/3/2023	Acknowledgement of email above, and update on lab procedures	NA

SECTION VII – LIST OF APPENDICES

1. Photo Log
2. Document Log

APPENDIX 1: PHOTO LOG

Influent pump station			MRTA0252.JPG
07/25/2023 02:48 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40851, -81.43356666
Bar screens cleaned weekly.			



Grit removal			MRTA0253.JPG
07/25/2023 02:51 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40873833, -81.433145
Grit dewatering system (Vortex).			



Grit collector			MRTA0254.JPG
07/25/2023 02:52 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40874499, -81.43314666



Influent sampler			MRTA0255.JPG
07/25/2023 02:54 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40862, -81.43329666
Manufacturer: Manning Env. Inc.			

Marietta Wastewater Treatment Works

Inspection Date(s):

07/25/2023 - 07/26/2023



Fine screen			MRTA0256.JPG
07/25/2023 02:57 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40844166, -81.43280166



Primary settling tanks (3)			MRTA0257.JPG
07/25/2023 03:00 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40856666, -81.43308333
One tank out of service due to low flows. 2' sludge measured in primary, about 2' preferred, 3' max.			

Marietta Wastewater Treatment Works

Inspection Date(s):

07/25/2023 - 07/26/2023



Biological anoxic selector			MRTA0258.JPG
07/25/2023 03:08 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			<i>Geographic Coordinates NA</i>
Biological anoxic selector stirs wastewater prior to secondary.			



Activated sludge aeration tanks (3)			MRTA0259.JPG
07/25/2023 03:12 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40941166, -81.43398833
One tank out of service due to low flows.			

Marietta Wastewater Treatment Works

Inspection Date(s):

07/25/2023 - 07/26/2023



Final clarifiers (2)			MRTA0260.JPG
07/25/2023 03:16 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40942166, -81.43535166
Installed in 2019. No significant growth or O&M issues observed.			



EQ basin			MRTA0261.JPG
07/25/2023 03:19 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40938333, -81.43574166
2.6 MGD capacity. Used infrequently.			



UV system			MRTA0262.JPG
07/25/2023 03:23 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40943833, -81.43491166
2 channel system. One channel offline due to low flows. Photo of UV-2.			



Effluent sampler			MRTA0263.JPG
07/25/2023 03:26 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.409815, -81.434935
Manufacturer: Manning Env., Inc. Noted thermometer to measure cooler temps.			



Effluent sampler tubing			MRTA0264.JPG
07/25/2023 03:26 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.409815, -81.434935
Observed growth inside effluent tubing. Tubing replaced twice per year.			



Effluent Parshall flume			MRTA0265.JPG
07/25/2023 03:31 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.409815, -81.434935
Observed flow sensor off center of flume. Ryan Boley said this was due to turbulence in the center of flume.			

Marietta Wastewater Treatment Works

Inspection Date(s):

07/25/2023 - 07/26/2023



Outfall 001 (Ohio River)			MRTA0266.JPG
07/25/2023 03:37 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.408595, -81.43433833
Outfall flow appeared clear.			



Manhole for Outfall 002 (Ohio River)			MRTA0267.JPG
07/25/2023 03:39 PM	No CBI	No PII	Photographer: Dean Maraldo
Physical Inspection			39.40898, -81.43503333
Actual outfall to the Ohio River could not be observed due to vegetation. No outfall sign was observed (permit requires 2'x2' sign including permit number telephone number, etc. for each outfall and bypass on the Ohio River).			

APPENDIX 2: DOCUMENT LOG**Documents Received and Attached to Report**

Document Name	Contains CBI or PII	Date Received	Pages
List of Flow Meters	No	7/25/2023	2
Sanitary Sewer Overflow Annual Report (2020-2022), 5-day reports	No	7/25/2023	95
Workplans for sewer work in Duck Creek and Colegate areas	No	7/25/2023	22
Pretreatment Program Annual Report Certification 2022	No	7/25/2023	9
Bypass DMRs (1/2023, 2/2022, 5/2022, 6/2022)	No	7/25/2023	4
Internal Bypass Event Summary January 1, 2023 – July 25, 2023	No	7/25/2023	7
Non-compliance Notification for Exceedance of a Daily Maximum Discharge Limit (12/2022 – 4/2023)	No	7/25/2023	4
Lab procedures and forms	No	7/25/2023	7
SSO locations	No	7/25/2023	2
Sewer customer breakdown	No	7/25/2023	1
Effluent Limit Exceedance Summary (7/1/2018-5/31/2023)	No	Provided by EPA	1

Documents Received and Not Attached to Report

Document Name	Contains CBI or PII	Date Received
High Flow Optimization Plan files	No	7/25/2023
Facility O&M Plan Chapters 2, 5, 9, 12, 13, 14)	No	7/25/2023
DMRs (January 1, 2019 – July 20, 2023)	No	7/25/2023
Operations Lab Sheet (July 2022 – Jul 2023)	No	7/25/2023
Laboratory Records (Microbac and Alloway) (July 2022 – Jul 2023)	No	7/25/2023
Chain of Custodies (Alloway) Oct-Dec 2022	No	7/25/2023
Operator Daily Logs (July 2022 – Jul 2023)	No	7/25/2023

City of Marietta WWTP Flow Meters

Use/Location	Type	Manufacturer	Model#	Serial #	Order #	Line Size	Range
Influent East	Mag Meter	Siemens	Sitrans F M Mag 5100 W	PBD-J6150027	7ME65805DJ142AA2	12 inch	
Influent-E HMI	N/A	Siemens	Sitrans F M Mag 5000	N1J5040105	7ME6910-1AA10-1AA0	N/A	
Influent West	Mag Meter	Siemens	Sitrans F M Mag 5100 W	PBD-J6150026	7ME65805DJ142AA2	12 inch	
Influent-W HMI	N/A	Siemens	Sitrans F M Mag 5000	N1J5040007	7ME6910-1AA10-1AA0	N/A	
Effluent	Ultra Sonic Partial Flume	Siemens	Sitrans LUT430 7ML50500BA111DA0	PBD/L3190197	N/A	N/A	
RAS	Mag Meter	ABB Watermaster	FEV125200V1C4A1B1B1 A2P2B3A1.M5.V3.CWC	3K220000202752	N/A	8 inch	
WAS	Mag Meter	ABB Watermaster	FEV125080V1C4A1B1B1 A2P2B3A1.V3.CWC	3K220000202750	N/A	3 inch	
RAS/WAS 1	Mag Meter	Siemens	Sitrans F M MAG 5100 W	PBD-K6124805	7ME65804PJ142AA2-Z N02	8 Inch	
RAS/WAS 1 HMI	N/A	Siemens	Sitrans F M MAG 5000	NIK-3090192	7ME6910-1AA10-1AA0	N?A	
RAS/WAS 3	Mag Meter	Siemens	Sitrans F M MAG 5100 W	PBD-K6124806	7ME65804PJ142AA2-Z N02	8 Inch	
RAS/WAS 3 HMI	N/A	Siemens	Sitrans F M MAG 5000	IXH00512162	7ME6910-1AA10-1AA0	N/A	
Raw Sludge	Mag Meter	Badger Meter	Magnetoflow	0907- 018/36304857	N/A	3 Inch	

Sludge Thickener	Mag Meter	ABB Watermaster	FEV125080V1C4A1B1B1 A2P2B3A1.V3.CWC	3K220000202749	N/A	3 Inch	
Dewatering Centrifuge	Mag Meter	Endress & Hauser	Pro Mag 50 & Pro Mag P	H21FDB19000	50P80-EL0A1AA0BAAA	3 Inch	
Thickening Centrifuge Inlet	Mag Meter	Endress & Hauser	Pro Mag 50 & Pro Mag P	H21FDA19000	50P80-EL0A1AA0BAAA	3 Inch	
Thickening Centrifuge Outlet	Mag Meter	Endress & Hauser	Pro Mag 50 & Pro Mag P	H21FD919000	50P50-EL0A1AA0BAAA	3 Inch	
Load Out	Mag Meter	ABB Watermaster	FEV125080V1C4A1B1B1 A2P2B3A1.V3.CWC	3K220000202751	N/A	3 inch	
Septage Receiving	Mag Meter	Yokogawa	AXF150C	-E2AL1L-AA11-21B	N/A	6 Inch	
Devola	Mag Meter	Badger Ultra Mag	M2000	1110- 742/43937149	N/A	4 inch	
Harmar L.S.	Mag Meter	Siemens	Sitrans FM Mag 5100	819303U496	7ME65805DJ142AA2	12 inch	
Portable Fire Hydrant Meter	Turbine	Zenner	FHM03	16010727	N/A	2 1/2 Inch Fire Thread	
Gilman L.S.	Mag Meter	Siemens	Sitrans F M Mag 5100 W	7ME658314901U15 3	Code# & 7ME6580-3TJ14 2AA2		
East Norwood L.S.							
					Updated 09-27-2021		



Sanitary Sewer Overflow Annual Report

Division of Surface Water

Date: January 19th, 2021

Facility name: City of Marietta Wastewater Treatment

Ohio NPDES permit no.: OPD 00016*SD

Period covered by report: January 1, 2020 to December 31, 2020

Contact person

Name: Michael K. Miser

Title: Assistant Wastewater Superintendent

Mailing address: City of Marietta W.W.T.P.
440 East Eighth Street
Marietta, Ohio 45750

Telephone: (740)373 - 3858

Email: mmiser@mariettaoh.net

Certification:

I certify under penalty of law that I have personally examined and am familiar with the information in this report and all attachments. Based on my inquiry of those persons immediately for obtaining the information contained in the report, I believe that the information is true, accurate, and complete.

Name Michael K. Miser **Title:** Asst Wastewater Superintendent

(typed):

Signature: Michael K. Miser WW3-1014691-93 **Date:** January 19th 2021

Use additional pages as needed.

[illegible]

A. Enter date as "MM/DD/YY". Enter "Various" to summarize overflows of less than 1000 gallons from an SSO location

B. Enter the unique identification assigned in Table 1.

C. Enter name of receiving water. If an SSO enters a storm sewer, enter "SS to (name of receiving water)." If an SSO does not reach a receiving water, enter "None".

D. Enter estimate of volume in MG (million gallons). Enter estimate of total volume if summarizing data.

SSO Annual Report: Water in Basement Narratives

Ohio NPDES Permit No.: OPD 00016*SD

Enter narrative analysis of WIB patterns by location, frequency and cause.

None Reported

**Sanitary Sewer Overflow Annual Report**

Division of Surface Water

Date: January 18th 2022
Facility name: City of Marietta Wastewater Treatment
Ohio NPDES permit no.: OPD00016*SD
Period covered by report: January 1, 2021 to December 31, 2021

Contact person

Name: Michael K. Miser
Title: Technical Administrative Coordinator
Mailing address: City of Marietta W.W.T.P.
440 East Eighth Street
Marietta, Ohio 45750
Telephone: (740)373 - 3858
Email: mmiser@mariettaoh.net

Certification:

I certify under penalty of law that I have personally examined and am familiar with the information in this report and all attachments. Based on my inquiry of those persons immediately for obtaining the information contained in the report, I believe that the information is true, accurate, and complete.

Name Michael K. Miser
(typed): _____

Title: Technical Administrativ Coordi

Signature: Michael K. Miser

Date: January 18th 2022

Use additional pages as needed.

[illegible]

- A. Enter date as "MM/DD/YY". Enter "Various" to summarize overflows of less than 1000 gallons from an SSO location
- B. Enter the unique identification assigned in Table 1.
- C. Enter name of receiving water. If an SSO enters a storm sewer, enter "SS to (name of receiving water)." If an SSO does not reach a receiving water, enter "None".
- D. Enter estimate of volume in MG (million gallons). Enter estimate of total volume if summarizing data.

Use additional pages as needed.

[illegible]

A. A sewershed is a specific geographic area, such as a city block or a subdivision, that drains to a common outlet.

B. Enter the total number of water in basement occurrences report for the sewershed.

C. Enter all causes that apply: W = extreme weather; E = equipment failure; P = power failure; D = debris in line; R = roots; G = grease; B = other blockages; L = Line deterioration; V = vandalism; O = other, prove details.

Use additional pages as needed.

SSO Annual Report: Water in Basement Narratives

Ohio NPDES Permit No.: OPD00016*SD

Enter narrative analysis of WIB patterns by location, frequency and cause.

- 1.) 03/23/2021, 600 Block 6th street, Sewer baced up into first home due to root ball cleaned from another service lateral by Plumber. second home back up happened while city was cleaning the sanitary sewer with high presure cleaning equipment.
- 2) 03/31/2021, 111 WoodCrest Drive, Root blockag in Sanitary Main and in Service Lateral Cleaned ,Root Cut and applied root foam.



Sanitary Sewer Overflow Annual Report Division of Surface Water

Date: 01/06/2023		
Facility Name: Marietta WWTP *		
Ohio NPDES Permit Number: OPD00016*SD		
Period Covered by Report: 01/01/2022 - 12/31/2022		
Contact Person: Ryan Boley	Title: Wastewater Operation Manager	
Mailing Address: 440 E 8th St.		
City: Marietta	State: OH	Zip Code: 45750
Country: USA		
Sanitary Sewer Overflows Spreadsheet(attachment) : 2022 Sanitary Sewers Overflow data sheet.xlsm		
Water In Basement Occurrences Spreadsheet(attachment) : 2022 WIB Occurance data sheet.xlsm		
Narrative analysis of WIB patterns by location, frequency and cause: 1.) 9/21/2022-411 Fearing St. Water backing up in basement of home. City crew jetted main at 1000 on 9/21/2022 to unplug main. Water in basement receded and main flowing normal.		
ADDITIONAL INFORMATION		
Please add any additional comments or attachments below.		
Certification		
I certify under penalty of law that I have personally examined and am familiar with the information in this report and all attachments. Based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information is true, accurate, and complete.		
Name: Ryan Boley	Title: Certified operator	
Signature(Electronically submitted by): Ryan Boley (User ID: rboley85)	Submission Date: 01/06/2023	

SSO Annual Report - Data Entry Spreadsheet

Permit Number

0PD00016*SD

Facility Name

City of Marietta WWTP

Reporting Period

From:

1/1/2022

To:

12/31/2022

Table 1: SSO Identification

[illegible]

[illegible]

Permit Number	OPD0001615D
Facility Name	Marietta WWTP
Reporting Period	
From	1/1/2022
To	12/31/2022

Inspection Dates 7/25/2023-7/26/2023



Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	01/17/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	01/16/2020
Contact Person Name	Steve Elliott
Contact Person Title	Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 2
E-mail Address	steveelliott@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found Jan 16th 2020 @ 13:30 while inspecting right of ways
Event end date and time	Stopped Jan 16th 2020 @ 15:30
Location(s) the SSO – include unique ID number if one exists	MH 12-17 on Westview Right of Way off of Westview Road Location # 324
Destination(s) of overflow	☐ Basement or building ☒ Ground ☒ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Unnamed Tributary to Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	10 " using 2.0 ft/sec Velocity est. 120 minutes = .0583 MG Estimated 1.09 cft/sec X 60 = 65cf/min X 120 = 7800cf x 7.48 = 58,344 gallon .0583MG
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☒ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain)

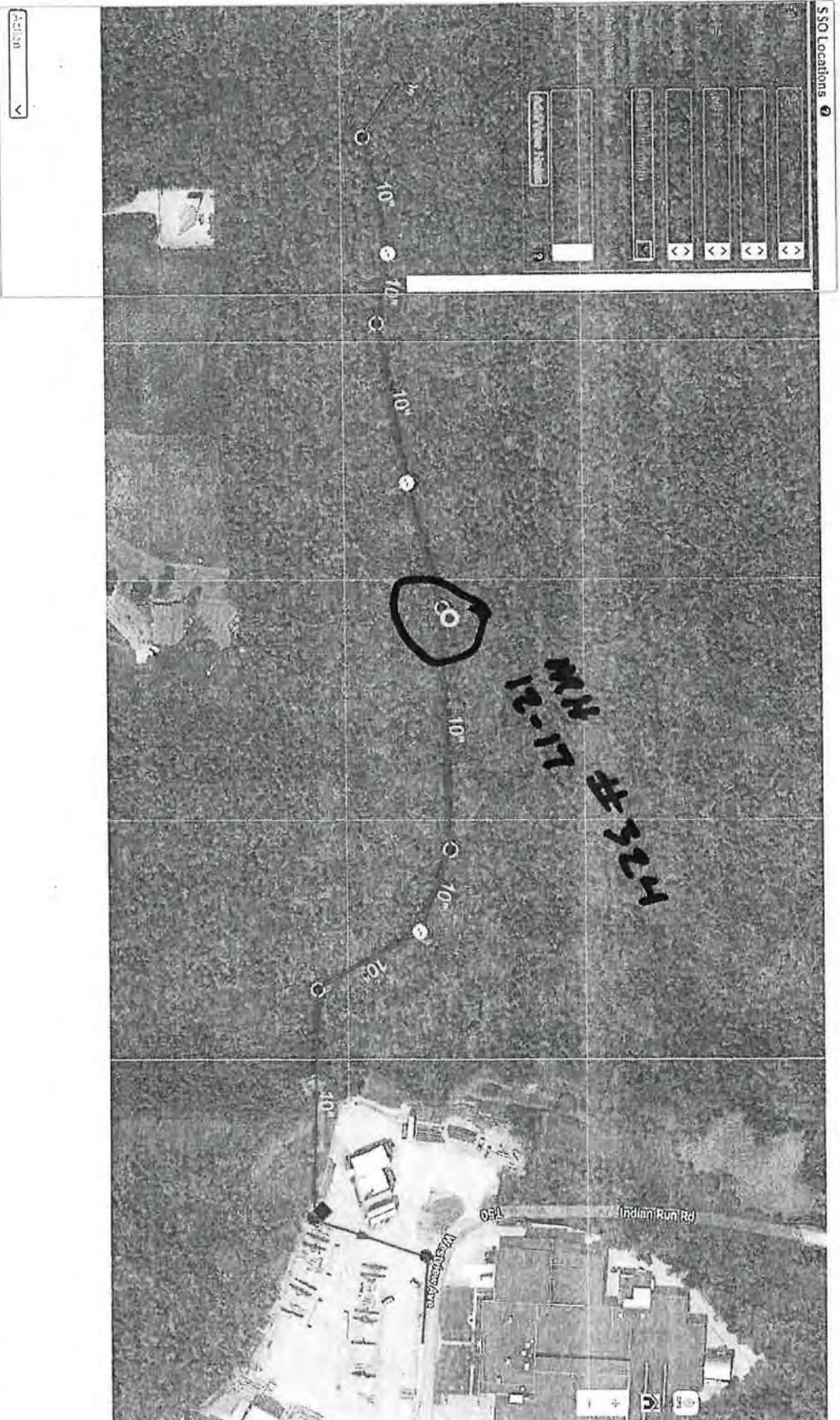
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	High Pressure sewer cleaning equipment used to clear Plugged sanitary line on remote wooded right of way. Had to use tractor to pull jetting equipment on site. Adding this right of way inspection to monthly basis, from quarterly. Cleaned sanitary sewer 2 manholes down from SSO Location.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	increase inspection frequency of this right of way to monthly. We will attempt to cctv inspect the sanitary sewer line to determine if there are any defects that may be causing the plugging
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area around the Manhole
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location Complaint Report

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Stephen Elliott
Signature Date

Jan 21, 2020

Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	03/09/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	03/07/2020
Contact Person Name	Steve Elliott
Contact Person Title	Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 2
E-mail Address	steveelliott@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by home owner at 116 Riverview Drive @0945 on 02/07/2020, as sewer coming up out of the ground
Event end date and time	Stopped March 7th 2020 @ 13:45
Location(s) the SSO – include unique ID number if one exists	SSO # 346 Sanitary Sewer between MH 11-164 and MH 11-162 located at 116 Riverview Drive.
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Unnamed Tributary to Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	10,000 gallons estimated. it was leaking out of ground at pipe joints. there was not a good way to measure the flow.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☒ Other (explain) Pipe was plugged with roots, Leaking around joints
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☒ Debris in line ☒ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain)

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Used high pressure sewer cleaning equipment to open up the plug. Used a root cutter cleaning head to clear roots and open up pipe. Stopped leaking at 13:45. on 3-07-2020
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Received property owner permission to remove two trees that were growing directly above the sanitary sewer. CCTV inspected the sanitary sewer to rule out any broken lines. CCTV confirmed that roots were entering the sanitary sewer at a joint. the clay tile all looked in tact. will remove the two Holly Trees and preform heavy root cutting and foaming.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the leak.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location Complaint Report

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Stephen Elwell
Signature Date

March 9, 2020

Wastewater Superintendent
Title



City of Marietta
Estimate Number
100 E. 1st St. Marietta, GA 30060
Phone: 770.426.5122 Fax: 770.426.5124

WASTEWATER COMPLAINT SHEET

Complaint Number: 22-20

Date: 3-7-20

Time: 0945

Person Receiving Complaint: Johnson

Person Calling in Complaint: Kristie Mahurin

Phone Number: 740-568-8982 Address: 116 Riverview Dr

Reason for Complaint: Continuous stream of water that looks like sewage running over the hill.

Right side of the house.

N/A

1. Is water backing up ONLY when you use water or flush toilet etc. Yes / No
If YES inform them that it is possibly their service line and they need to contact a plumber. If the plumber says it's the City's main, have the Plumber contact the City.
Plumber's Name: _____
Inform caller that we will have someone to check the City's Sewer Main, however if it is determined that the problem is not the City's there may be a charge for all costs incurred. informed / not informed
2. Or is water coming in non-stop? Yes / No
If YES inform them that we will check the City's Sewer Main.

RESOLUTION OF PROBLEM:

Person (s) checking complaint: Schultheis / King

Main plugged: ☒ Yes / ☐ No Date: _____ Time: _____

Main cleaned: ☒ Yes / ☐ No Date: _____ Time: 1500

Service line plugged: Yes / No / Unknown Date: 3-7-20 Time: _____

Service line cleaned by City Crew:

Yes / ☒ No Date: 3-7-20 Time: _____

HSTS (Home sewage treatment system)

- Failing: Yes / No (Reported to Health Department: Yes / No)

Water Line

- Break: Yes / No (Reported to Water Treatment Plant: Yes / No)

PLEASE COMPLETE THE BACK SIDE OF THIS FORM

Street and/or Storm Drain

- Possibility of illegal dumping: Yes / No (Reported to Street Department: Yes / No)
- Possibility of uncontained spill entering: Yes / No (Reported to Street Dept.: Yes / No)

SSO (Sanitary Sewer Overflow) Yes / No Date: ____ / ____ / ____ Time: ____

- Main overflowing: Yes / No;
- Sample collected for lab Yes / No
- Lateral overflowing: Yes / No ; Reported to City's Health Department Yes / No

Sewer Line Maintenance BMP's

- Gravity system- sewage to next accessible manhole: Yes / No
- Forced main – valves closed- deters flooding: Yes / No
- Inlet protection – absorbent socks – protects storm drains: Yes / No
- Sewage water – vacuumed & discharged to plant influent: Yes / No

Further Comments if needed:

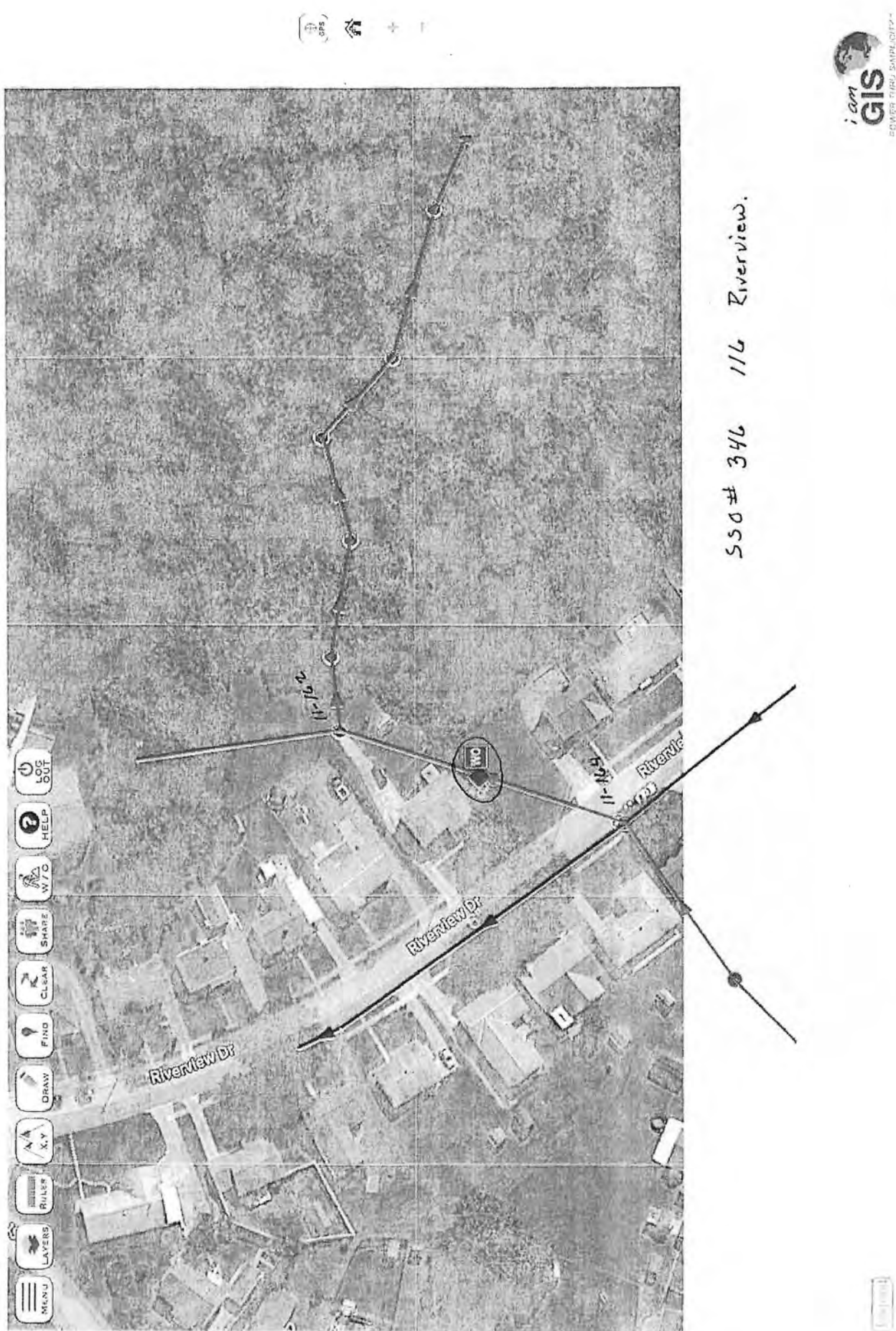
Main line leaking from River View over the hill.
Ran little job with root cutter head- Talked with
the lady @ the River View and informed her that we
would be up there first of the week to repair her.

CCTV main on 3-9-20 and confirmed Root Intrusion.
Has a "Flapper" directly under Tree. Planning on Tree Removal.
& Root Cutting

PHK/100 3-9-20

*NOTE: LABEL SAMPLE COLLECTED FROM OVERFLOWING MAIN WITH THE COMPLAINT
SHEET NUMBER

Signature of person who completed this form





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	05/21/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	05/20/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found Manhole overflowing on May 20th at 1400 hrs
Event end date and time	Unknown stop time, Estimate to be 2000hrs on 5-2020 due to decrease in flow to the WWTP and at Harmar Lift station on west side of town. Was not over flowing on inspection 05-21-20 at 0900
Location(s) the SSO – include unique ID number if one exists	1402 Colegate Dr. MH 9-2 SSO # 306
Destination(s) of overflow	☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Millcreek tributary to the Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	12 " using 2.0 ft/sec Velocity est. 4 hours = .169 MG MG Assuming full flow 1.57cft/sec X 60 X60 = 5652 cuft/hr x7.48 = 42277gph X 4 hr = .169 MG
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) 1.2 inches rain on the 19th and 2.3 inches rain on the 20th.

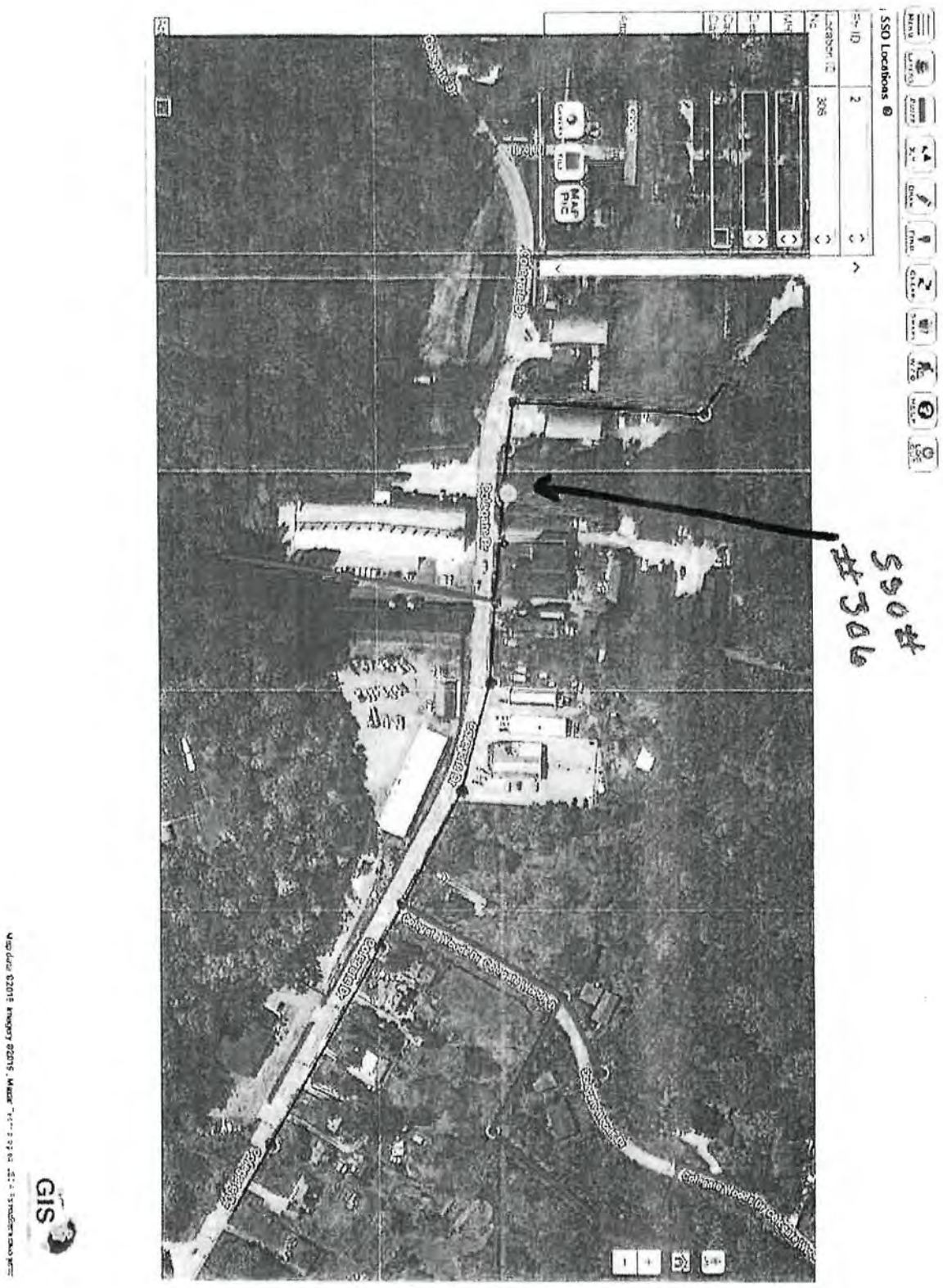
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	1.2 inches of rain on 05/19/2020, 2.3 inches inch rain on 05/21/2020. River rising rain , This section of the collection system is being cleaned and inspected for I & I problems as weather permits. The Down stream 12 inch Sanitary Line has recently been inspected and found to be flowing with no obstructions found. The Interceptor downstream of this overflow was surcharged at the time of the SSO recent rain events, The WWTP flow was over 9 MGD
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	The City will continue cleaning and CCTV investigations in this area to identify and plan to reduce or eliminate Inflow and Infiltration. repairs were made to four manholes upstream of the SSO. I&I dishes have been installed at seven manholes up stream of the SSO and they are catching water. We are planing on smoke testing this summer as weather permits.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area was cleaned up and lime applied
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing locations

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Griner
Signature Date

May 21st 2020

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	05/21/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	05/20/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-373-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found Manhole overflowing on May 20th at 1400 hrs
Event end date and time	Unknown stop time, Estimate to be 2000hrs on 5-2020 due to decrease in flow to the WWTP and at Harmar Lift station on west side of town. Was not over flowing on inspection 05-21-20 at 0900
Location(s) the SSO – include unique ID number if one exists	MH 8-60 #339 East Muskingum Interceptor, behind 829 Front Street near Washington County Fairgrounds
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	18 " using 2.0 ft/sec Velocity est. 4 hours = .380 MG Assuming full pipe flow $3.53 \text{ cft/sec} \times 60 \times 60 = 12708 \text{ cf/hr} \times 7.48 = 95055 \text{ gph} \times 4 \text{ hr} = .380 \text{ Mg}$
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) 1.2 inches rain on the 19th and 2.3 inches rain on the 20th.

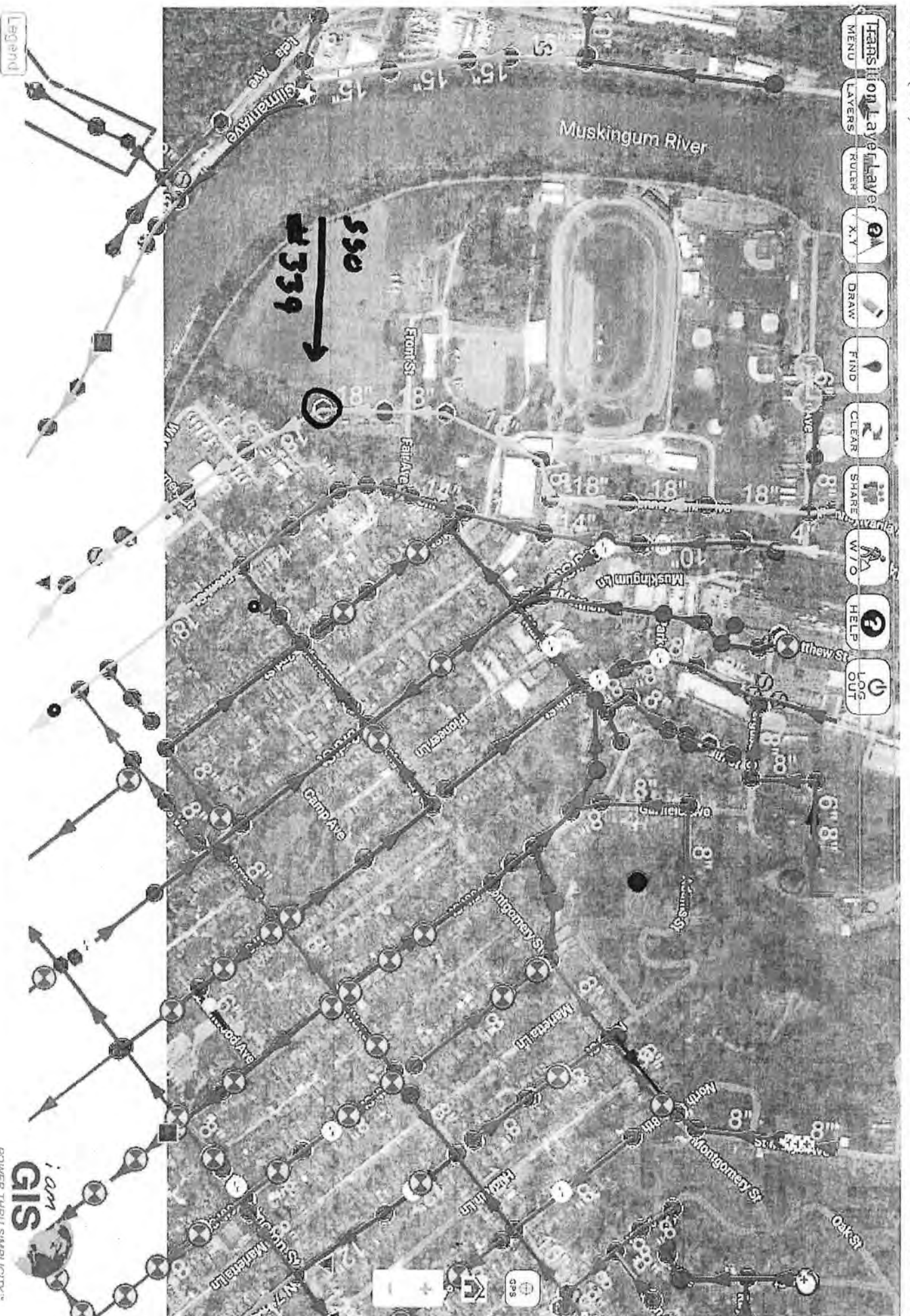
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	1.2 inches of rain on 05/19/2020, 2.3 inches inch rain on 05/21/2020. River rising rain , This section of the collection system is being cleaned and inspected for I & problems as weather permits. The Interceptor downstream of this overflow was surcharged at the time of the SSO recent rain events, The WWTP flow was over 9 MGD
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	The City will continue cleaning and CCTV investigations in this area to identify and plan to reduce or eliminate Inflow and Infiltration. repairs were made to four manholes upstream of the SSO. I&I dishes have been installed at nine manholes up stream of the SSO and they are catching water. We are planing on smoke testing this summer as weather permits.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Lime was applied to the area of the overflow
Additional information (attach additional pages, maps, etc. as needed)	Washington Co. GIS map showing the location of the Overflow.

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Grimes
Signature Date

May 21st 2020

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	06/02/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	03/01/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found while performing routine lift station Checks at 1000 am 6-1-20
Event end date and time	Stopped June 1 2020 @ 10:15
Location(s) the SSO – include unique ID number if one exists	SSO # 347 Manchester Lift Station, Manchester Drive, Marietta, Ohio
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Unnamed Tributary to Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	1000 gallon estimated. it was leaking out lid on station valve pit. there was not a good way to measure the flow.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☒ Pump station ☐ Other (explain) Pumps failed to start
Cause(s) of overflow	☐ Extreme weather ☒ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) Pumps failed to start, found float in station not working.

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Started pumps on manual control to pump down station and stop the SSO. replace the defective float
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Float has been replaced. The City is in the process of replacing the Scada system to allow the lift stations to be better monitored from the Wastewater Plant
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

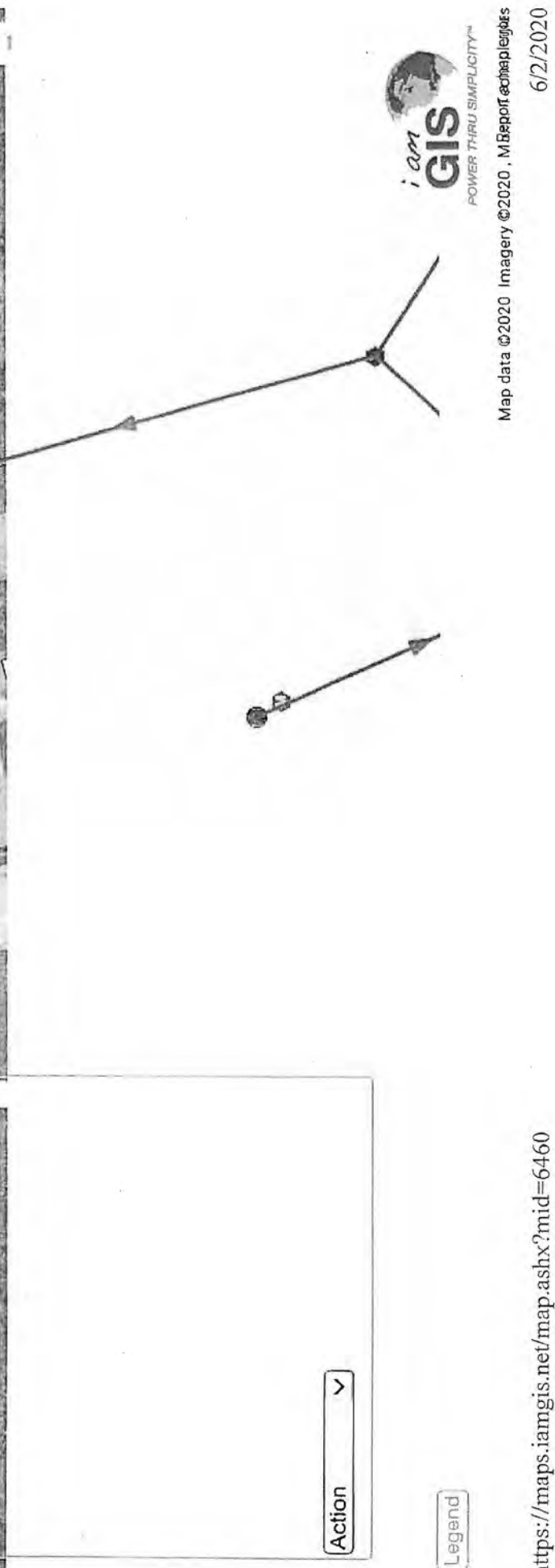
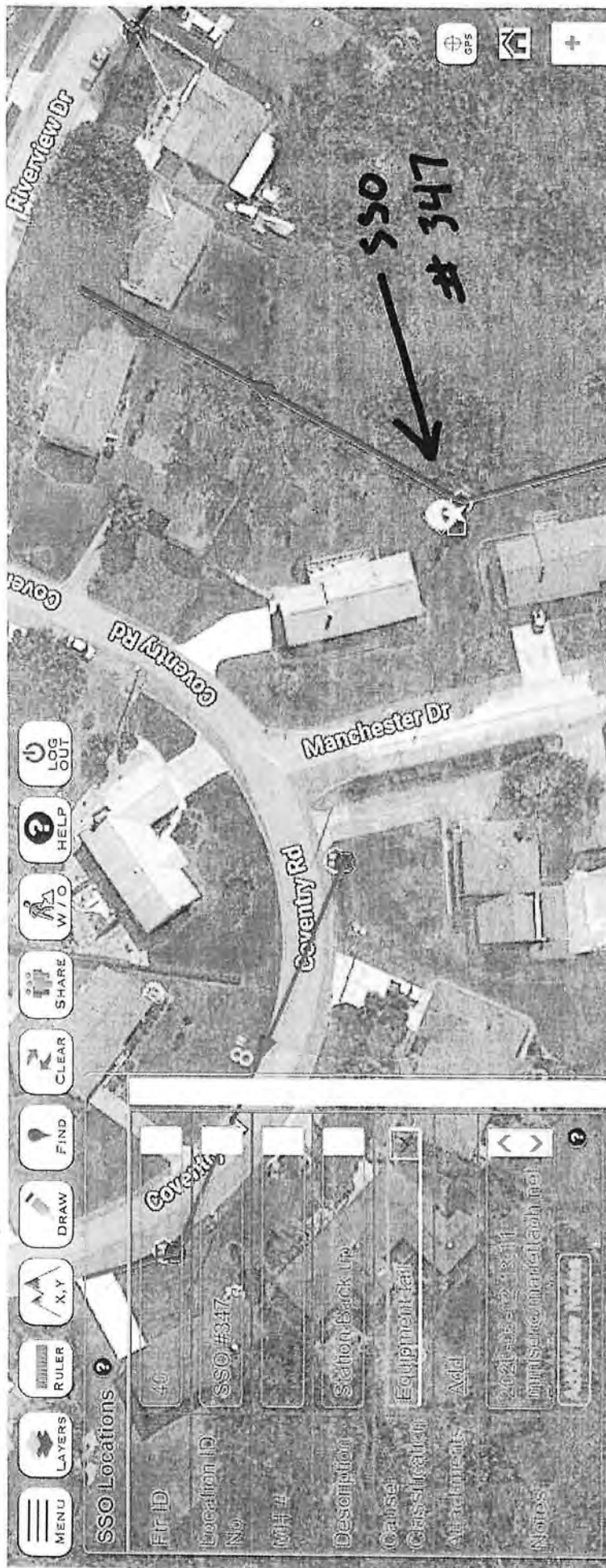
I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael H. Wise
Signature Date

6-2-2020

Assistant Wastewater Superintendent

Title





Amended

Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	06/02/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	06/01/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found while performing routine lift station Checks at 1000 am 6-1-20
Event end date and time	Stopped June 1 2020 @ 10:15
Location(s) the SSO – include unique ID number if one exists	SSO # 347 Manchester Lift Station, Manchester Drive, Marietta, Ohio
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Unnamed Tributary to Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	1000 gallon estimated. it was leaking out lid on station valve pit. there was not a good way to measure the flow
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☒ Pump station ☐ Other (explain) Pumps failed to start
Cause(s) of overflow	☐ Extreme weather ☒ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) Pumps failed to start, found float in station not working

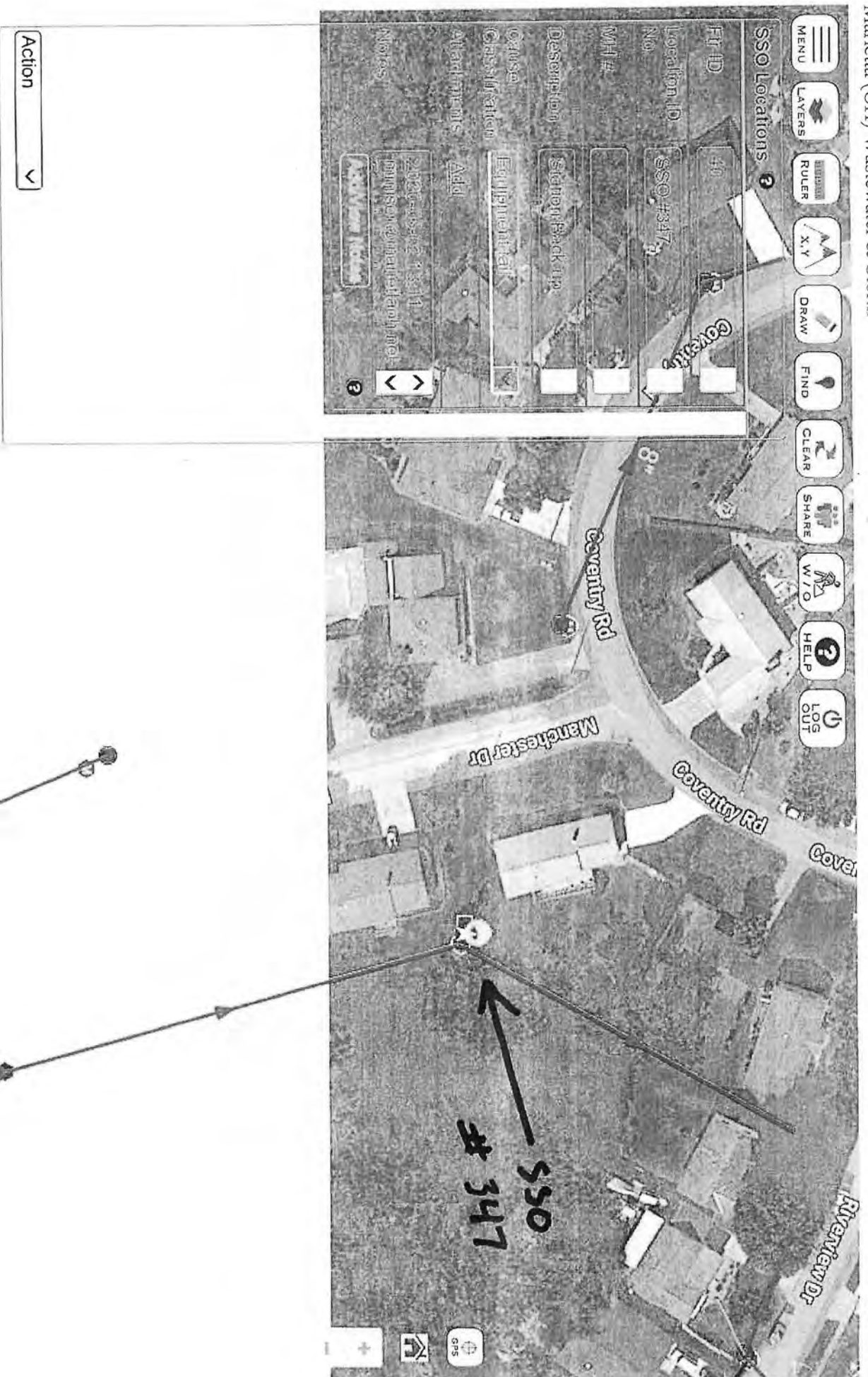
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Started pumps on manual control to pump down station and stop the SSO. replace the defective float
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Float has been replaced. The City is in the process of replacing the Scada system to allow the lift stations to be better monitored from the Wastewater Plant
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Mize 7-14-20
Signature Date

Corrected "Period Covered Date"

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:

Date	06/22/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD00016*SD
Period Covered by Report	6/20/2022
Contact Person Name	Ryan Boley
Contact Person Title	Wastewater Operation Manager
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 110
E-mail Address	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each	June 20th, 2022 @ 0800
Event end date and time	June 20th, 2022 @ 1020
Location(s) the SSO – include unique ID number if one exists	201 Colegate Drive, Lamp hole ID # 310
Destination(s) of overflow	☐ Basement or building ☐ Ground ☒ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	8 " using 2.0 ft/sec Velocity est. 2.25 hours = .042 MG Assuming full pipe flow $.698 \text{ cft/sec} \times 60 \times 60 = 2513 \text{ cft/hr} \times 7.48 = 18797 \text{ gph} \times 2.25 \text{ hr} = .042 \text{ MG}$
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☒ Other (explain) "Lamp Hole"
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☒ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) wet wipes removed from main line

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Cleaned the Sanitary Sewer using High pressure Sewer cleaning equipment to remove the plug. CCTV main line on 6/21/2022 to inspect for any problems. No issues found with main sewer line.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue routine sanitary sewer cleaning.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Clean and vac debris off side walk. Added main line to our quarterly routine cleaning list.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing locations

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Ryan Boley 6/22/22
Signature Date

Wastewater Operation Manager
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	11/16/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	11/12/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

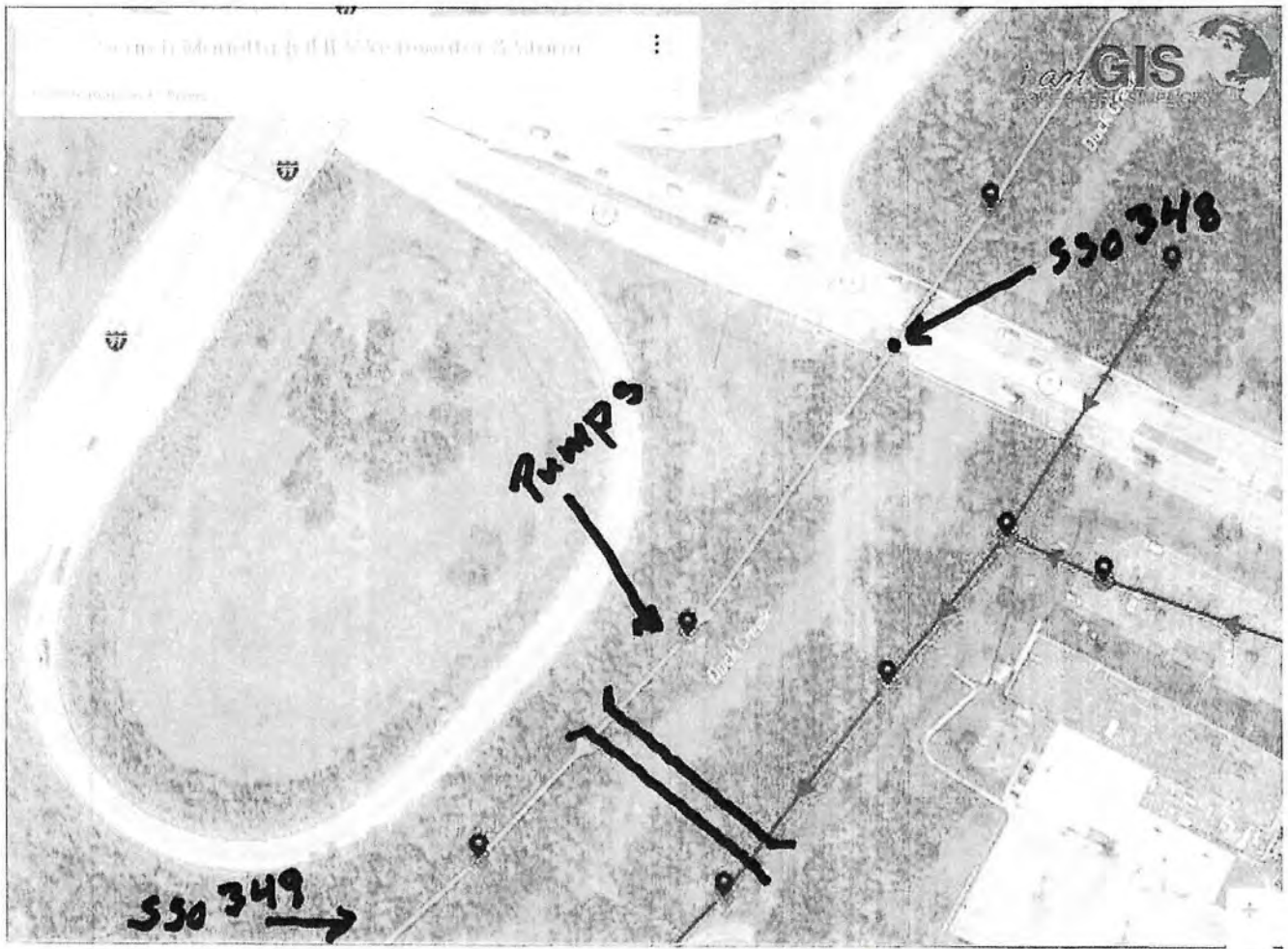
Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 12:15 pm 11/12/2020
Event end date and time	Stopped November 12th 2020 @ 13:40
Location(s) the SSO – include unique ID number if one exists	SSO # 348 6 inch Hole in top of 30 inch sewer main.
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate .0158 MGD from the time of report to the time SSO stopped. May have been more, we do not know exact date and time the batteries were taken and S.S.O. started.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☐ Other (explain) 6 inch Hole in top of 30 inch sewer main.
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☒ Other blockages ☒ Line deterioration ☒ Vandalism ☐ Other (explain) Batteries stolen from Pump around pumps, Sewer line backed up and pressure found week point in 30 " CMP Pipe

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Batteries replaced in 1 pump, Started pumping at 1300 11/12/20, SSO stopped at 13:40 11/12/2020. Report filed with Marietta Police Department. Hole in sewer line repaired on Friday 11/13/20.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Remote Camera installed by the City to monitor Pumps. Increase checks to daily by Wastewater personnel and City Police.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Grier 11-14-20
Signature Date

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	11/16/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	11/13/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 09:15 11/13/2020 while checking pumps, Pump was found running but not pumping.
Event end date and time	Stopped November 13th 2020 @ 10:30 (1.25 hour)
Location(s) the SSO – include unique ID number if one exists	SSO # 348 6 inch Hole in top of 30 inch sewer main.
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate .0158 MGD from the time of report to the time SSO stopped. May have been more, we do not know exact time the Pump Stopped pumping S.S.O. started.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☐ Other (explain) 6 inch Hole in top of 30 inch sewer main.
Cause(s) of overflow	☐ Extreme weather ☒ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☒ Other blockages ☒ Line deterioration ☐ Vandalism ☐ Other (explain) 6 inch trash pump lost Prime. Self Priming vent on pump was plugged, Back up in 30 inch Sanitary Sewer Main, Switched to back up pump.

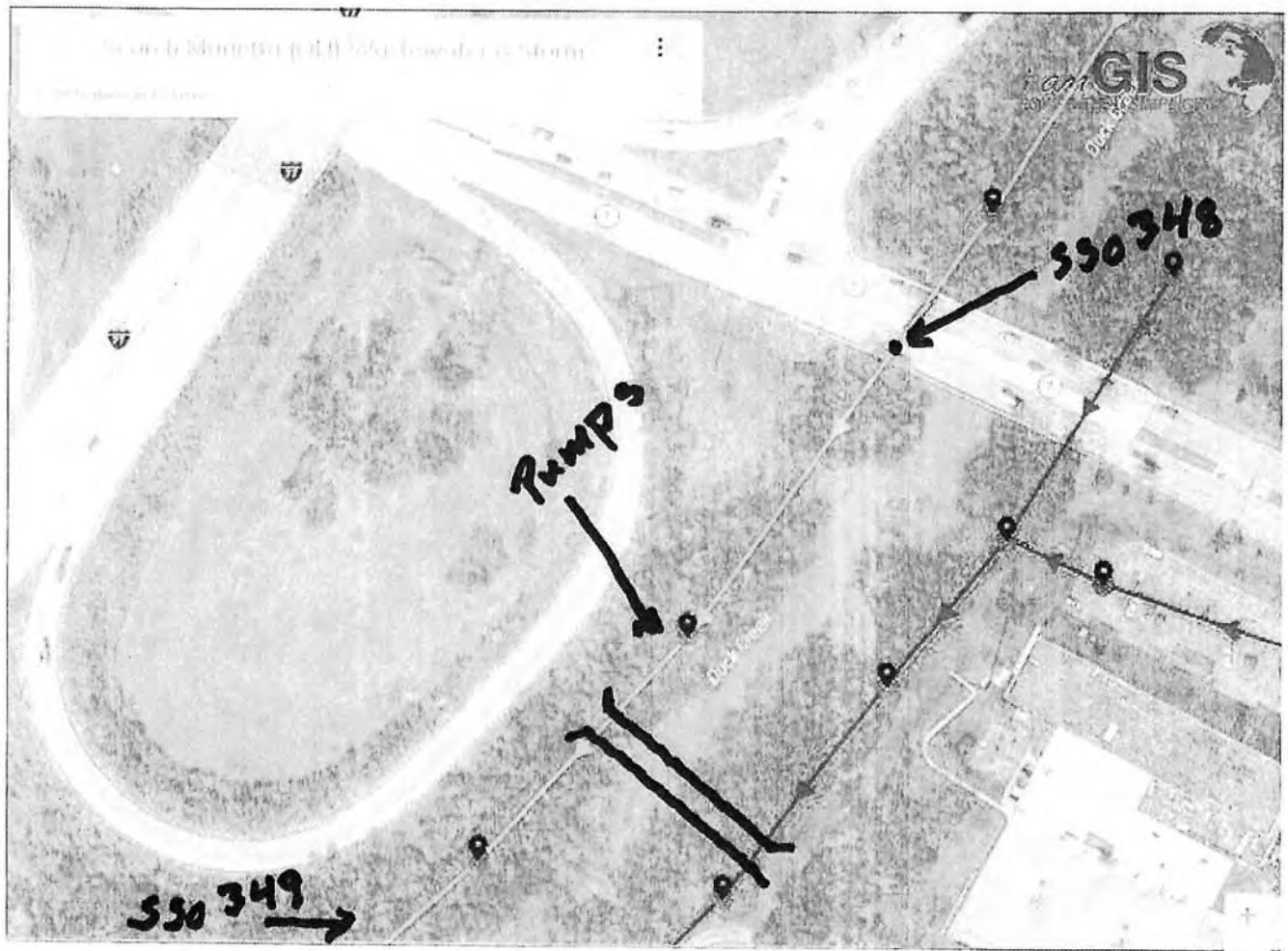
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Switched to back up pump, SSO stopped at 10:30 11/13/2020. Found pump self priming vent plugged with debris. 6 inch hole in 30 inch CMP Sewer was repaired by 13:00 on 11/13/2020
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Remote Camera installed by the City to monitor Pumps. Increase checks to daily by Wastewater personnel and City Police.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Gries
Signature Date

11-16-20

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	11/16/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	11/13/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 13:15 pm 11/13/2020
Event end date and time	Stopped November 13th 2020 @ 14:00
Location(s) the SSO – include unique ID number if one exists	SSO # 349 Cut in 6 inch Pump around Hose on River Trail 5 Slip
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate less than .001 MGD from the time of report to the time SSO stopped.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☒ Pump station ☒ Other (explain) Cut in 6 inch Pump hose
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☒ Vandalism ☐ Other (explain) Cut in 6 inch Pump hose

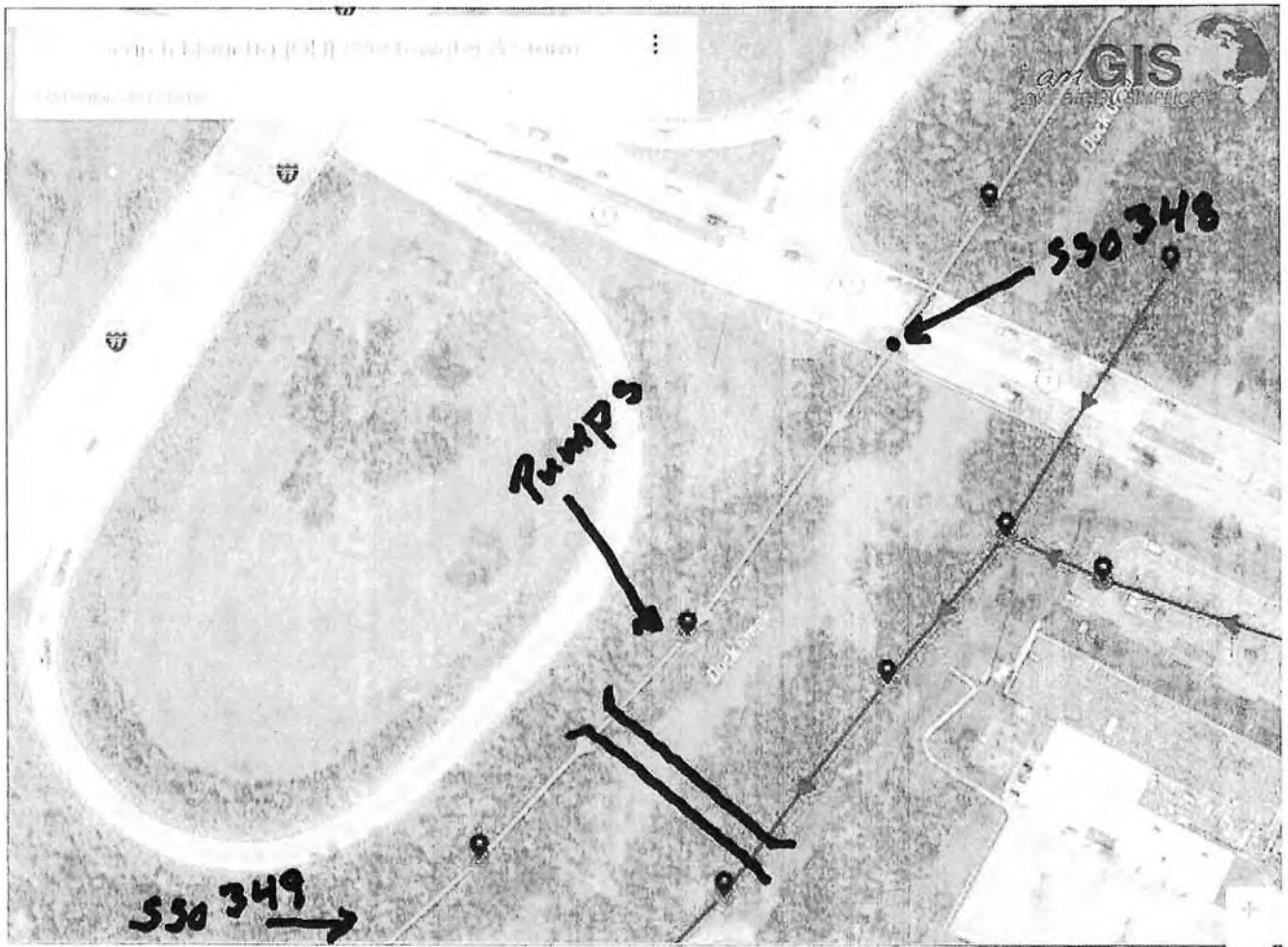
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Replaced 50 ft section of Pump hose.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Remote Camera installed by the City to monitor Pumps. Increase checks to daily by Wastewater personnel and City Police.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Mises 11-16-20
Signature Date

Assistant Wastewater Superintendent

Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	11/23/20
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	11/23/2020
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 07:50 am 11/23/2020
Event end date and time	Stopped November 23th 2020 @ 08:20 am
Location(s) the SSO – include unique ID number if one exists	SSO # 350 1.5 inch hole in 30 inch CMP at ditch Crossing
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate less than .001 MGD from the time of report to the time SSO stopped.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☐ Other (explain) 1.5 inch hole in 30 inch CMP at ditch Crossing
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☒ Other (explain) 1.5 inch hole in 30 inch CMP at ditch Crossing, Pump Float was not tripping the pump on, causing back up in 30 inch Pipe.

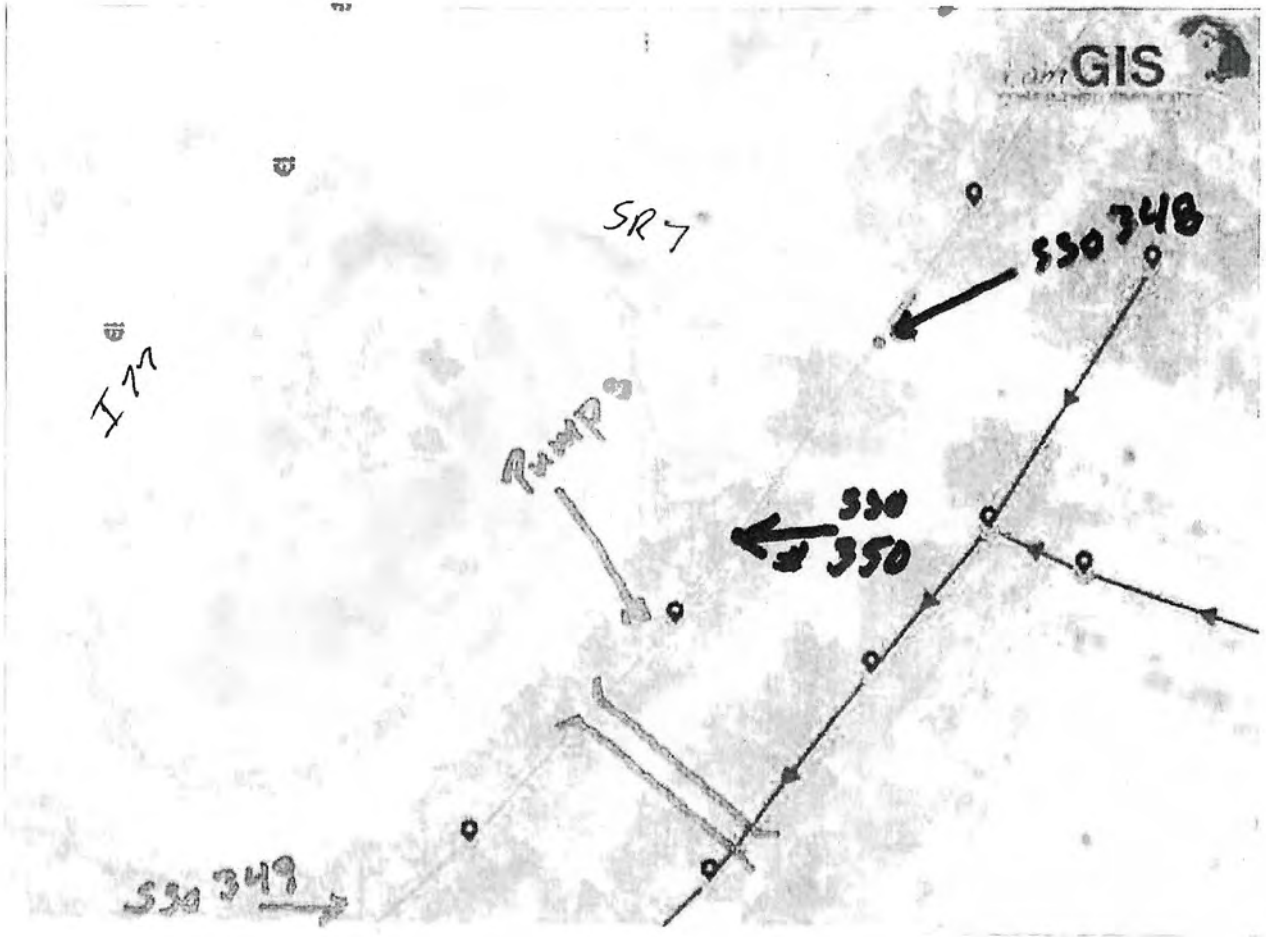
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Installed a Patch on the exposed hole in 30 inch CMP. Adjusted float to start pump sooner, keeping level in pipe lower
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue daily checks by Wastewater personnel and City Police. We are working with Pickering Assoc. Engineers for a permanent repair of the 30 inch CMP Sanitary Sewer, and currently in process of having a submersible Electric Pump with HDPE pipe installed at down stream Manhole #3-70 as an interim pump around of the slip on the River Trail.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Miser
Signature Date

11-24-20

Assistant Wastewater Superintendent
Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	01/26/21
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	01/22/2021
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

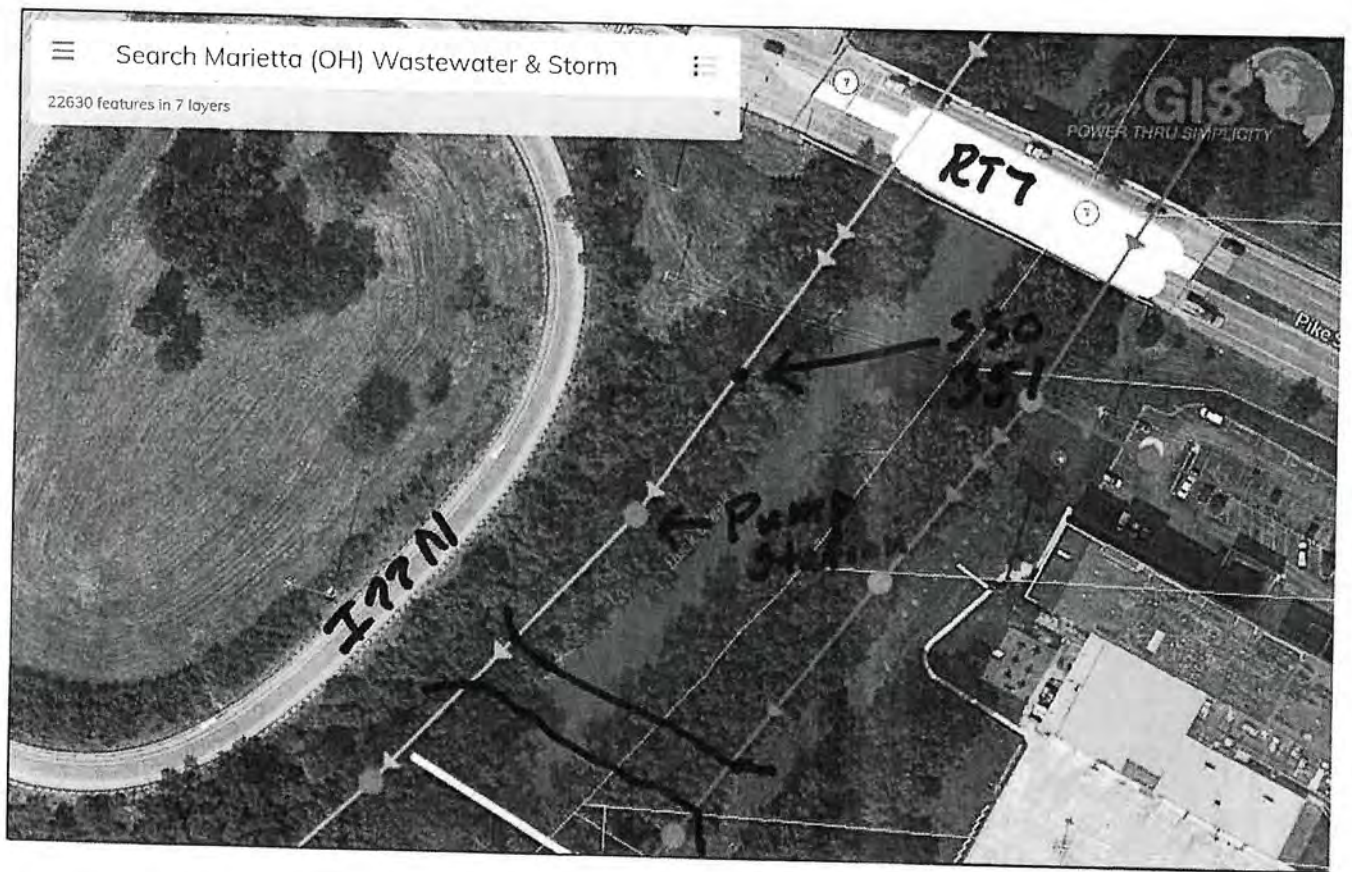
Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 13:40pm 01/22/2021
Event end date and time	Stopped January 22nd 2021 at 15:04
Location(s) the SSO – include unique ID number if one exists	SSO # 351 small pinholes in 30 inch CMP at ditch Crossing
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate less than .001 MGD from the time of report to the time SSO stopped.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☒ Other (explain) small pinholes in 30 inch CMP at ditch Crossing
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☒ Other (explain) pinholes in 30 inch CMP at ditch Crossing, Submersible pump installed at MH 3-70 not pumping due to picking up a piece of rebar, line backed up and leaked.

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Pulled Pump and cleaned. Back to pumping at 15:04. Adjusted Pump floats. The area of the leak is scheduled to be replaced in 2021, with 42 feet of 30 inch SDR 35 pipe when an access road is installed for repairs to the sanitary sewer collapse in the area of the river trail slip.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue daily checks by Wastewater personnel and City Police. We are working with Pickering Assoc. Engineers for a permanent repair of the 30 inch CMP Sanitary Sewer. also working on installation of an alarm on the pump station at MH 3-70 to alert the city operations staff of problems.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area of the over flow.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael H. Wiser 1-26-21
Signature Date

Assistant Wastewater Superintendent
Title



+
-



Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	03/01/21
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	02/28/2021
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 14:00pm 02/28/2021
Event end date and time	estimated Stopped February 28nd 2021 at 1700. 30 inch Sanitary Sewer covered with flood water at this time
Location(s) the SSO – include unique ID number if one exists	SSO # 351 small pinholes in 30 inch CMP at ditch Crossing
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	Estimate less than .005 MGD from the time of report to the time SSO stopped.
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☒ Other (explain) small pinholes in 30 inch CMP at ditch Crossing
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☒ Other (explain) pinholes in 30 inch CMP at ditch Crossing, Heavy Rain 1.37 in., line backed up and leaked.

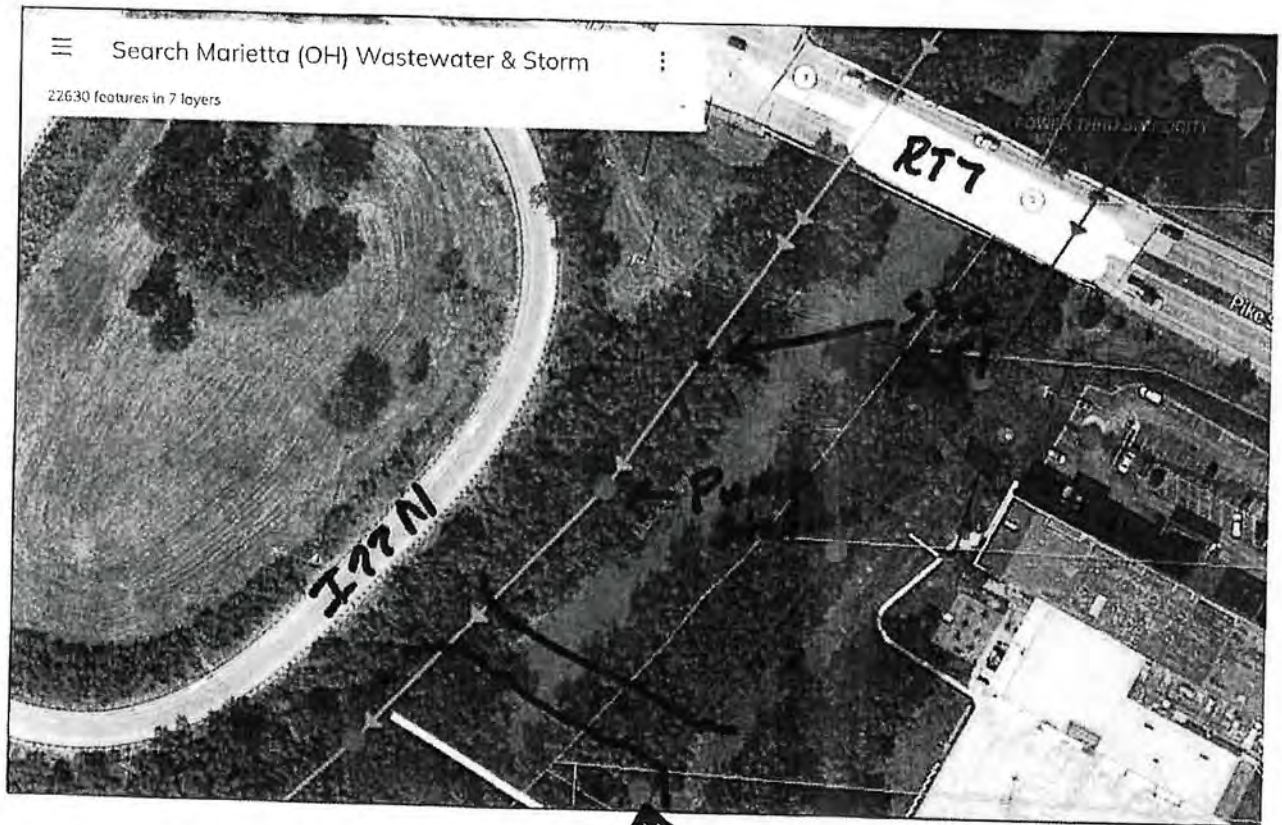
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Back flushed pump to insure that it was not plugged. Pumping full pipe to MH 2-5 on east side of Duck Creek. The area of the leak is scheduled to be replaced in 2021, with 42 feet of 30 inch SDR 35 pipe when an access road is installed for repairs to the sanitary sewer collapse in the area of the river trail slip. High level monitor has been installed at pump around MH 3-70
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue daily checks by Wastewater personnel and City Police. We are working with Pickering Assoc. Engineers for a permanent repair of the 30 inch CMP Sanitary Sewer. The city is also working on design and installation of permanent pump station Solution for the Slip at the river.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area of the SSO is currently flooded. River Level 27+ feet
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael R. Yonson
Signature Date

3-1-21

Assistant Wastewater Superintendent
Title



MH 2-5
SSO #352



Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

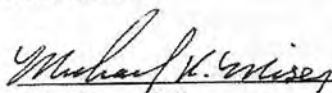
Report Submitted by:	
Date	03/01/21
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	02/28/2021
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Reported by City Employee at 14:00pm 02/28/2021
Event end date and time	estimated Stopped February 28nd 2021 at 1700. Duck Creek Station wet well below 12 feet
Location(s) the SSO – include unique ID number if one exists	SSO # 352 MH 2-5 overflowing
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Duck Creek to The Ohio River
Estimated volume (million gallons) – if multiple locations, include volume for each	12 " using 2.0 ft/sec Velocity est. 3 hours = .127MG MG Assuming full flow $1.57 \text{ cft/sec} \times 60 \times 60 = 5652 \text{ cuft/hr} \times 7.48 = 42277 \text{ gph} \times 4 \text{ hr} = .127 \text{ MG}$
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain) Flow backed up from Duck creek Lift Station 12 inch Sanitary Sewer surcharged
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☒ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) Duck Creek Station pumps plugged, Heavy Rain 1.37 in., 12 in. line backed up and overflowed.

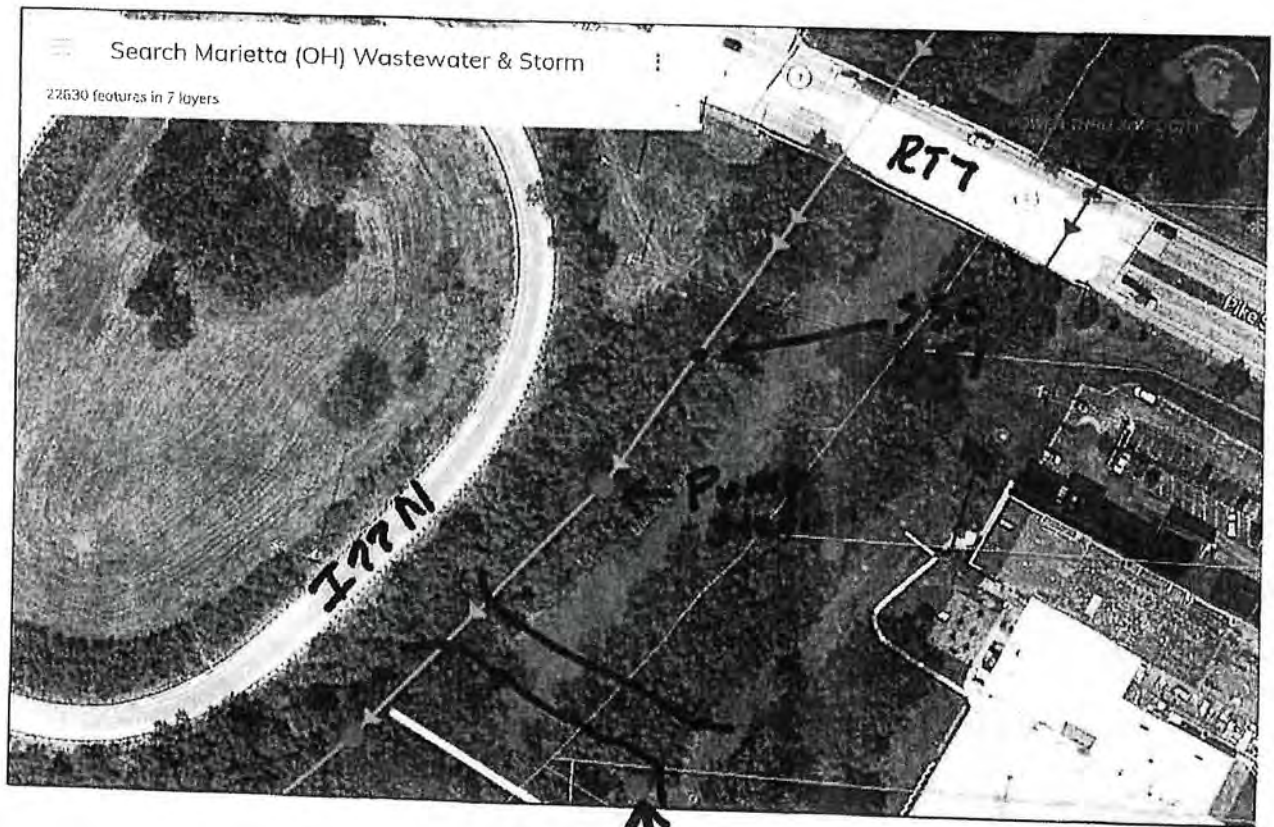
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	Unplugged both pumps to insure that they were pumping.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue daily checks by Wastewater personnel and City Police.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area of the SSO is currently flooded. River Level 27+ feet
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.


 Signature Date

3-1-2021

Assistant Wastewater Superintendent
 Title



MH 2-5
SSO #352



Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	04/30/21
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	04/29/2021
Contact Person Name	Michael K. Miser
Contact Person Title	Assistant Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 3
E-mail Address	mmiser@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found Manhole overflowing on April 29th at 1000 hrs
Event end date and time	Found Stopped at 14:30 on 4/29/21
Location(s) the SSO – include unique ID number if one exists	1402 Colegate Dr. MH 9-2 SSO # 306
Destination(s) of overflow	☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Millcreek tributary to the Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	12 " using 2.0 ft/sec Velocity est. 4.5 hours = .190 MG MG Assuming full flow $1.57 \text{ cft/sec} \times 60 \times 60 = 5652 \text{ cuft/hr} \times 7.48 = 42277 \text{ gph} \times 4.5 \text{ hr} = .190 \text{ MG}$
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) 0.52 inches rain on the 28th and 1.08 inches rain on the 29th.

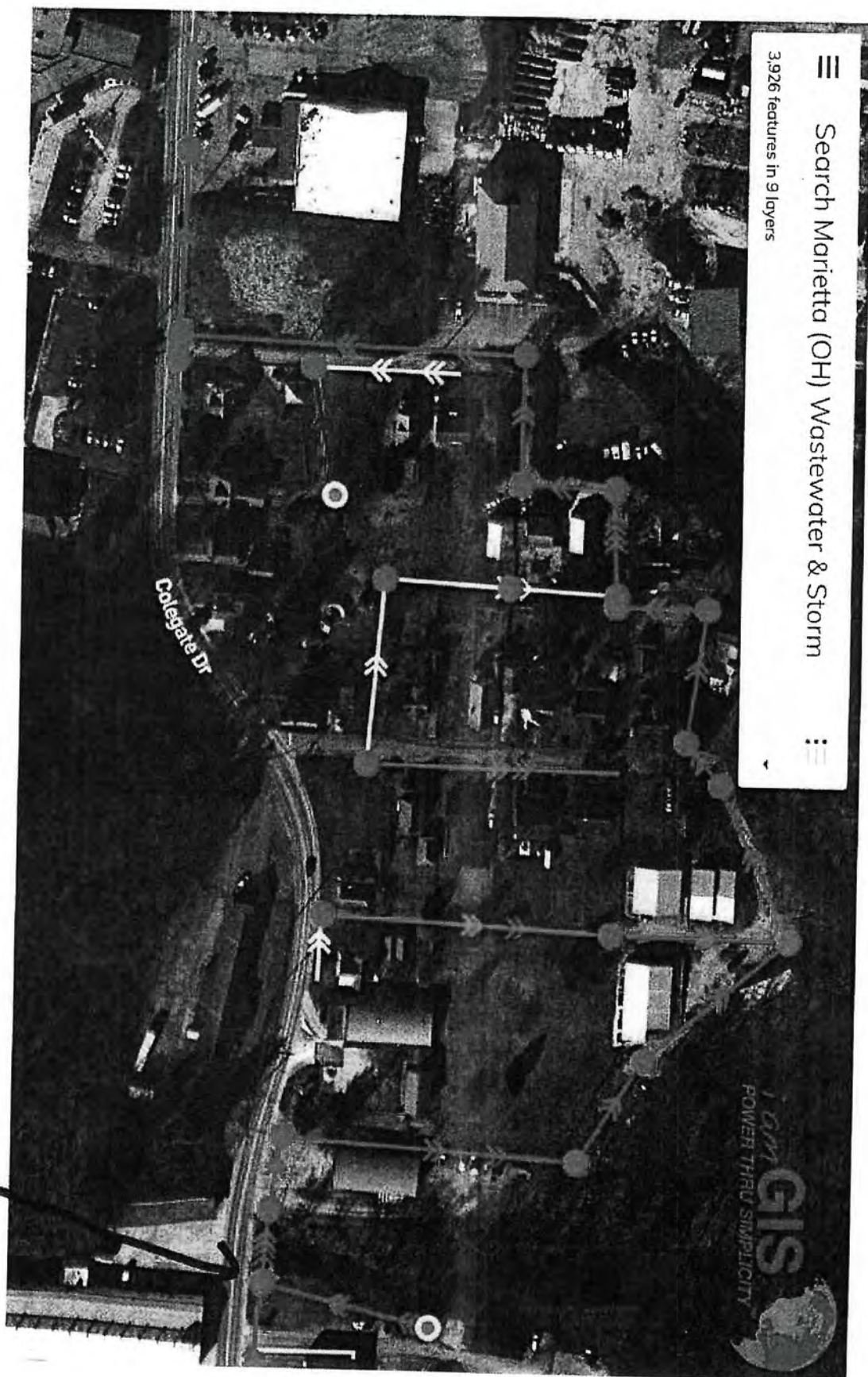
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	.52 inches of rain on evening of 04/28/2021, 1.08 inches inch rain on 04/29/2021. Localized Flash flooding was experienced at 1402 Colgate Drive on 4/29/21. This section of the collection system is being cleaned and inspected for I & I problems as weather permits. The Down stream 12 inch Sanitary Line has recently been inspected and found to be flowing with no obstructions found. The Interceptor downstream of this overflow was surcharged at the time of the SSO recent rain events,
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	The City will continue cleaning and CCTV investigations in this area to identify and plan to reduce or eliminate Inflow and Infiltration. repairs were made to four manholes upstream of the SSO. To date, I&I dishes have been installed at eight manholes up stream of the SSO and they are catching water. We are planing on smoke testing this summer as weather permits.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area was cleaned up and lime applied
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing locations

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Michael K. Widen WW3-1014691-93
Signature Date

4-30-2021

Assistant Wastewater Superintendent
Title



MH 9-2
330# 306



Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date:	3/21/2022
Facility name:	City of Marietta Wastewater Treatment Plant
Ohio NPDES permit no.:	OPD00016*SD
Period covered by report:	3/11/2022
Contact person	
Name:	Ryan Boley
Title:	Wastewater Operations Manager
Mailing address:	440 E 8 th St.
County:	Washington
Telephone:	(740)373 - 3858
Email:	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each	Reported by City Employee on 3/11/2022 @ 1555												
Event end date and time	Stopped on 3/11/2022 @ 1650												
Location(s) the SSO – include unique ID number of one exists	SSO location #351 Small hole roughly 2" long by .25" wide in 30 inch CMP at ditch crossing												
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water												
Estimated volume (million gallons) - if multiple locations, include volume for each	less than .001 mgd												
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☒ Other (explain) Small hole roughly 2" long by .25" wide in 30 inch CMP at ditch crossing												
Cause(s) of overflow	<table><tr><td>☐ Extreme weather</td><td>☐ Equipment failure</td><td>☐ Power failure</td></tr><tr><td>☐ Debris in line</td><td>☐ Roots</td><td>☐ Grease</td></tr><tr><td>☐ Other blockages</td><td>☐ Line deterioration</td><td>☐ Vandalism</td></tr><tr><td colspan="3">☒ Other (explain) patch in 30" CMP at ditch crossing failed</td></tr></table>	☐ Extreme weather	☐ Equipment failure	☐ Power failure	☐ Debris in line	☐ Roots	☐ Grease	☐ Other blockages	☐ Line deterioration	☐ Vandalism	☒ Other (explain) patch in 30" CMP at ditch crossing failed		
☐ Extreme weather	☐ Equipment failure	☐ Power failure											
☐ Debris in line	☐ Roots	☐ Grease											
☐ Other blockages	☐ Line deterioration	☐ Vandalism											
☒ Other (explain) patch in 30" CMP at ditch crossing failed													

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	City Crew patched hole in pipe with black matic roll, black matic caulking, and metal tin.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Daily checks by wastewater personnel. Contruction of East Norwood lift station is underway. When lift station is completed this section of 30" CMP will be bypassed/eliminated.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Quick response/repair after the notification of the SSO
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location
Certification: <i>I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.</i>	
Name Ryan Boley (typed): _____	Title: Wastewater Operations Manager
Signature: <u>Ryan Boley</u>	Date: <u>3/21/22</u>



SSO location #351 - red star upstream of mh: 3-70



Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date:	4/18/2022
Facility name:	City of Marietta Wastewater Treatment Plant
Ohio NPDES permit no.:	OPD00016*SD
Period covered by report:	4/13/2022 to 4/18/2022
Contact person	
Name:	Ryan Boley
Title:	Wastewater Operations Manager
Mailing address:	440 E 8 th St.
County:	Washington
Telephone:	(740)373 - 3858
Email:	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each	Reported by City Employee on 04/13/2022 @ 1520												
Event end date and time	04/18/2022 @1400												
Location(s) the SSO – include unique ID number of one exists	SSO Location # 353 Sanitary Sewer main separated in two spots on right of way behind Gates Ave. and Lancaster St. roughly 100 ft upstream of MH: 11-37 A.												
Destination(s) of overflow	☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water												
Estimated volume (million gallons) - if multiple locations, include volume for each	8 inch Sanitary Sewer using 2 fps Velocity x 120 Hrs = 2.255 MG estimated flow. .698 cfs x 60 x 60 x 7.48 = 18,796 gal/hr x 120 hr = 2,255,520												
Sewer system component(s) from which release occurred	☐ Manhole ☐ Constructed overflow ☒ Pipe crack ☐ Pump station ☐ Other (explain)												
Cause(s) of overflow	<table><tr><td>☐ Extreme weather</td><td>☐ Equipment failure</td><td>☐ Power failure</td></tr><tr><td>☐ Debris in line</td><td>☐ Roots</td><td>☐ Grease</td></tr><tr><td>☐ Other blockages</td><td>☒ Line deterioration</td><td>☐ Vandalism</td></tr><tr><td>☐ Other (explain)</td><td></td><td></td></tr></table>	☐ Extreme weather	☐ Equipment failure	☐ Power failure	☐ Debris in line	☐ Roots	☐ Grease	☐ Other blockages	☒ Line deterioration	☐ Vandalism	☐ Other (explain)		
☐ Extreme weather	☐ Equipment failure	☐ Power failure											
☐ Debris in line	☐ Roots	☐ Grease											
☐ Other blockages	☒ Line deterioration	☐ Vandalism											
☐ Other (explain)													

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	OUPS locate called in at 1605 on 04/13/2022. OUPS locate cleared on 4/115/2022 at 1605. City Crew fixed main sewer line on 4/18/2022. City Crew will check on repair monthly for the next few months to ensure repiar is stable and not leaking. The main sewer line will be checked quarterly by City Crew as completed on a normal basis.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Quartery right of way inspections completed by City Crews.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	The SSO occurred next to a stream in a wooded area. The City Crew was unable to apply lime; however due to recent rains the stream has been flushed.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

Certification:

I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.

Name Ryan Boley
(typed):

Title: Wastewater Operations Manager

Signature: Ryan Boley

Date: 4/18/22



550 location # 353.

+
-



Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date: 5/20/2022

Facility name: City of Marietta Wastewater Treatment Plant

Ohio NPDES permit no.: OPD00016*SD

Period covered by report: 5/19/2022

Contact person

Name: Ryan Boley

Title: Wastewater Operations Manager

Mailing address: 440 E 8th St.

County: Washington

Telephone: (740)373 - 3858

Email: ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each

Citizenzen reported manhole overflowing behind old Kmart building at 1350 on 5/19/2022.

Event end date and time

5/19/2022 @ 1350

Location(s) the SSO – include unique ID number of one exists

SSO Location #320

Destination(s) of overflow

☐ Basement or building ☐ Ground ☒ Storm sewer to receiving water ☒ Directly to receiving water

Estimated volume (million gallons) - if multiple locations, include volume for each

8 inch Sanitary Sewer using 2 fps Velocity x 1Hr = .019 mg estimated flow.
.698 cfs x 60 x 60 x 7.48 = 18,796 gal/hr

Sewer system component(s) from which release occurred

☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station
☐ Other (explain)

Cause(s) of overflow

☐ Extreme weather ☐ Equipment failure ☐ Power failure
☒ Debris in line ☐ Roots ☐ Grease
☒ Other blockages ☐ Line deterioration ☐ Vandalism
☒ Other (explain) Rag Ball

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	SSO Location # 320 MH: 3-83 was overflowing into street. Upon investigation there was a blockage from a rag ball downstream between MH: 3-80 and MH: 3-81. City Crew responded to MH: 3-80 at 1450 with combination jet/vac truck and unplugged the sewer 1500 hrs. SSo at MH: 3-83 stopped at 1500
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Add the location to our Quarterly Routine Cleaning List.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	The SSO occurred in the street. City crew clean up all debris in street with Vac truck. City crew scheduled to clean and vac sewer lines on E 8 th St. and Jefferson St. on 5/20/2022.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location
Certification: <i>I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.</i> Name Ryan Boley Title: Wastewater Operations Manager (typed): _____ Signature: <u>Ryan Boley</u> Date: <u>5/20/22</u>	

Search Marietta (OH) Wastewater & Storm

24,360 features in 27 layers



Legend

© Mapbox © OpenStreetMap

Need help?





Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date: 6/2/2022

Facility name: City of Marietta Wastewater Treatment Plant

Ohio NPDES permit no.: OPD00016*SD

Period covered by report: 6/1/2022

Contact person

Name: Ryan Boley

Title: Wastewater Operations Manager

Mailing address: 440 E 8th St.

County: Washington

Telephone: (740)373 - 3858

Email: ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each

City employee Randy McKenzie reported sewage on ground next to home at 109 Merryhill St.

Event end date and time

6/1/2022 @ 1045

Location(s) the SSO – include unique ID number of one exists

SSO Location #354 See attached GIS mapping locations.

Destination(s) of overflow

☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water

Estimated volume (million gallons) - if multiple locations, include volume for each

Less than 200 gallons as there is only one home serviced by this 6 inch main sewer line.

Sewer system component(s) from which release occurred

☐ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station

☒ Other (explain) Clay pipe main separation at joint

Cause(s) of overflow

☐ Extreme weather ☐ Equipment failure ☐ Power failure

☐ Debris in line ☒ Roots ☐ Grease

☐ Other blockages ☐ Line deterioration ☐ Vandalism

☐ Other (explain)

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	SSO Location # 354 City worker Randy McKenzie reported sewage on ground next to 109 Merryhill Street. City Crew responded at 1000 on 6/1/2022. City crew CCTV main line and found a blockage in sewer main. City Crew used jet truck to unplug sewer main and then CCTV sewer main. Upon investigation there was a section of sewer main roughly 15 feet down stream of SSO area where sewage was leaking out of main on to the ground. City Crew root cut and cleaned main again then CCTV to mark for OUPS. City crew put down lime over area. Main is now flowing and not leaking onto ground. City crew will repair separations in main line once OUPS locate is clear. City crew will check SSO site each day to assure no sewage is leaking until OUPS locate clears and City Crew can repair.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Repair sewer main, root cut , and add Root X to main.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Put lime down on SSO area.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

Certification:

I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.

Name Ryan Boley
(typed): _____

Title: Wastewater Operations Manager

Signature: Ryan Boley

Date: 6/2/2022





Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date:	11/23/2022
Facility name:	City of Marietta Wastewater Treatment Plant
Ohio NPDES permit no.:	OPD00016*SD
Period covered by report:	11/21/2022
Contact person	
Name:	Ryan Boley
Title:	Wastewater Operations Manager
Mailing address:	440 E 8 th St.
County:	Washington
Telephone:	(740)373 - 3858
Email:	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time – if multiple locations, include information for each	City employee Randy McKenzie reported sewage on ground behind home at 812 Glendale Rd.
---	--

Event end date and time	11/21/2022 1345
-------------------------	-----------------

Location(s) the SSO – include unique ID number of one exists	SSO Location #355 See attached GIS mapping locations.
--	---

Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☐ Directly to receiving water
----------------------------	---

Estimated volume (million gallons) - if multiple locations, include volume for each	8 inch Sanitary Sewer using 2 fps Velocity x 2Hr = .038 mg estimated flow. .698 cfs x 60 x 60 x 7.48 = 18,796 gal/hr
---	---

Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
---	---

Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☒ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain)
----------------------	--

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	SSO Location # 355 City worker Randy McKenzie reported sewage on ground next to home at 812 Glendale Rd. City Crew responded at 1400 hrs on 11/22/2022. City Crew used jet truck to unplug sewer main and stop SSO at 1550.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	11/22/2022 City crew cleaned/vac, and CCTV main line to investigate if there is additional issues that need fixed with the main sewer line. City crews removed roots from main line. City crew will add this main line to our routine cleaning / bi-annual root cutting list.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Put lime down on SSO area.
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location

Certification:

I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.

Name Ryan Boley
(typed):

Title: Wastewater Operations Manager

Signature: Ryan Boley

Date: 11/23/22





Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date: 1/5/2023
Facility name: City of Marietta WWTP
Ohio NPDES permit no.: OPD00016*SD
Period covered by report: 1/3/2023
Contact person
Name: Ryan Boley
Title: Wastewater Operation Manager
Mailing address: 440 E 8th St. Marietta, OH 45750
County: Washington
Telephone: (740)373 - 3858
Email: ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time –
if multiple locations, include
information for each

January 3rd, 2023 @ 0730

Event end date and time

January 3rd, 2023 @ 1300 estimated

Location(s) the SSO –
include unique ID number of
one exists

1103 Colegate Dr. MH: # 9-95 ID # 342

Destination(s) of overflow

☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water

Estimated volume (million
gallons) - if multiple
locations, include volume
for each

10 " using 2.0 ft/sec Velocity estimated 5.5 hours = .162915 MG

1.1 cft/sec X 60 X60 =3960cft/hr x7.48 = 29621 gph X 5.5hr =.162915 MG

Sewer system component(s)
from which release occurred

☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station
☐ Other (explain)

Cause(s) of overflow

☒ Extreme weather ☐ Equipment failure ☐ Power failure
☐ Debris in line ☐ Roots ☐ Grease
☐ Other blockages ☐ Line deterioration ☐ Vandalism
☐ Other (explain)

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	City Crew investigated down stream manholes during event. All main line was running full with flow. No blockages overed. There was also a SSO down stream at MH 9-2 during this SSO event. City crew cleaned up and debris left on ground after SSO ended.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	The City has recently received a final report for DLZ 3 rd party contractor of a wet weather study completed by DLZ. The City will continue to monitor the area and also is planning to work with engineers in the coming months on a plan to resolve the SSO's in this area.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	See above regarding future plans to work with engineers in the coming months.
Additional information (attach additional pages, maps, etc. as needed)	N/A
Certification: <i>I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.</i> Name Ryan Boley Title: Wastewater Operation Manager (typed): Signature: <u>Ryan Boley</u> Date: <u>1/5/23</u>	



Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date:	1/5/2023
Facility name:	City of Marietta WWTP
Ohio NPDES permit no.:	OPD00016*SD
Period covered by report:	1/3/2023
Contact person	
Name:	Ryan Boley
Title:	Wastewater Operation Manager
Mailing address:	440 E 8 th St. Marietta, OH 45750
County:	Washington
Telephone:	(740)373 - 3858
Email:	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time –
if multiple locations, include
information for each

January 3rd, 2023 @ 0810

Event end date and time

January 3rd, 2023 @ 1630 estimated

Location(s) the SSO –
include unique ID number of
one exists

1402 Colegate Dr. MH: # 9-2 ID # 306

Destination(s) of overflow

☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water

Estimated volume (million
gallons) - if multiple
locations, include volume
for each

12 " using 2.0 ft/sec Velocity estimated 8.5 hours = .359354 MG

1.57 cft/sec X 60 X60 =5652cft/hr x7.48 = 42277.96 gph X 8.5hr =.359354 MG

Sewer system component(s)
from which release occurred

☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station
☐ Other (explain)

Cause(s) of overflow

☒ Extreme weather	☐ Equipment failure	☐ Power failure
☐ Debris in line	☐ Roots	☐ Grease
☐ Other blockages	☐ Line deterioration	☐ Vandalism
☐ Other (explain)		



Sanitary Sewer Overflow 5-Day Follow Up Report

Division of Surface Water

Report Submitted By

Date:	1/5/2023
Facility name:	City of Marietta WWTP
Ohio NPDES permit no.:	OPD00016*SD
Period covered by report:	1/3/2023
Contact person	
Name:	Ryan Boley
Title:	Wastewater Operation Manager
Mailing address:	440 E 8 th St. Marietta, OH 45750
County:	Washington
Telephone:	(740)373 - 3858
Email:	ryanboley@mariettaoh.net

Signature required at end of form

Overflow Information

Event start date and time –
if multiple locations, include
information for each

January 3rd, 2023 @ 0806

Event end date and time

January 3rd, 2023 @ 1530 estimated

Location(s) the SSO –
include unique ID number of
one exists

959 Gilman Ave. MH: # 11-16 ID # 304

Destination(s) of overflow

☐ Basement or building ☐ Ground ☒ Storm sewer to receiving water ☐ Directly to receiving water

Estimated volume (million
gallons) - if multiple
locations, include volume
for each

15 " using 2.0 ft/sec Velocity estimated 7.5 hours = .496821 MG

2.46 cft/sec X 60 X60 =8856cft/hr x7.48 = 66242 gph X 7.5hr =.496821 MG

Sewer system component(s)
from which release occurred

☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station
☐ Other (explain)

Cause(s) of overflow

☒ Extreme weather	☐ Equipment failure	☐ Power failure
☐ Debris in line	☐ Roots	☐ Grease
☐ Other blockages	☐ Line deterioration	☐ Vandalism
☐ Other (explain)		

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	City Crew investigated down stream manholes during event. All main line was running full with flow to Harmar Lift Station. No blockages overed. Down receiving lift station (Harmar) was inspected by City Crew. All pumps were pumping normal capacity. City crew cleaned up and debris left on ground after SSO ended.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	City crew will clean and CCTV main line to assure no blockages had caused the SSO. City crew was unable to complete this during the SSO event due to the flow being so instense and main line running at capacity.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	After CCTV and cleaning main line City will fix and issues found with main line.
Additional information (attach additional pages, maps, etc. as needed)	N/A

Certification:

I certify that I have personally examined and am familiar with the information in this report and all attachments. I believe that the information is true, accurate, and complete.

Name Ryan Boley
(typed):

Title: Wastewater Operation Manager

Signature: Ryan Boley

Date: 1/5/23

2019
7-1-19 to 12-31



Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

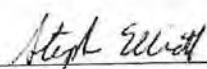
Report Submitted by:	
Date	11/01/19
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *RD
Period Covered by Report	10/31/2019
Contact Person Name	Steve Elliott
Contact Person Title	Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 2
E-mail Address	steveelliott@mariettaoh.net

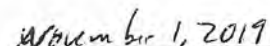
Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Found October 31st, 2019 at 1500 pm
Event end date and time	Found stopped November 1st, 2019 at 0630 am
Location(s) the SSO – include unique ID number if one exists	1402 Colegate Dr. MH 9-2 SSO # 306
Destination(s) of overflow	☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Millcreek tributary to the Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	12 " using 2.0 ft/sec Velocity est. 15.5 hours = .655 MG Assuming full flow $1.57 \text{ cft/sec} \times 60 \times 60 = 5652 \text{ cuft/hr} \times 7.48 = 42277 \text{ gph} \times 15.5 \text{ hr} = .655 \text{ MG est.}$
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) 0.7 inches rain on evening of 10/30 and 1.48 inches rain on 10/31, 2.18 inch Total

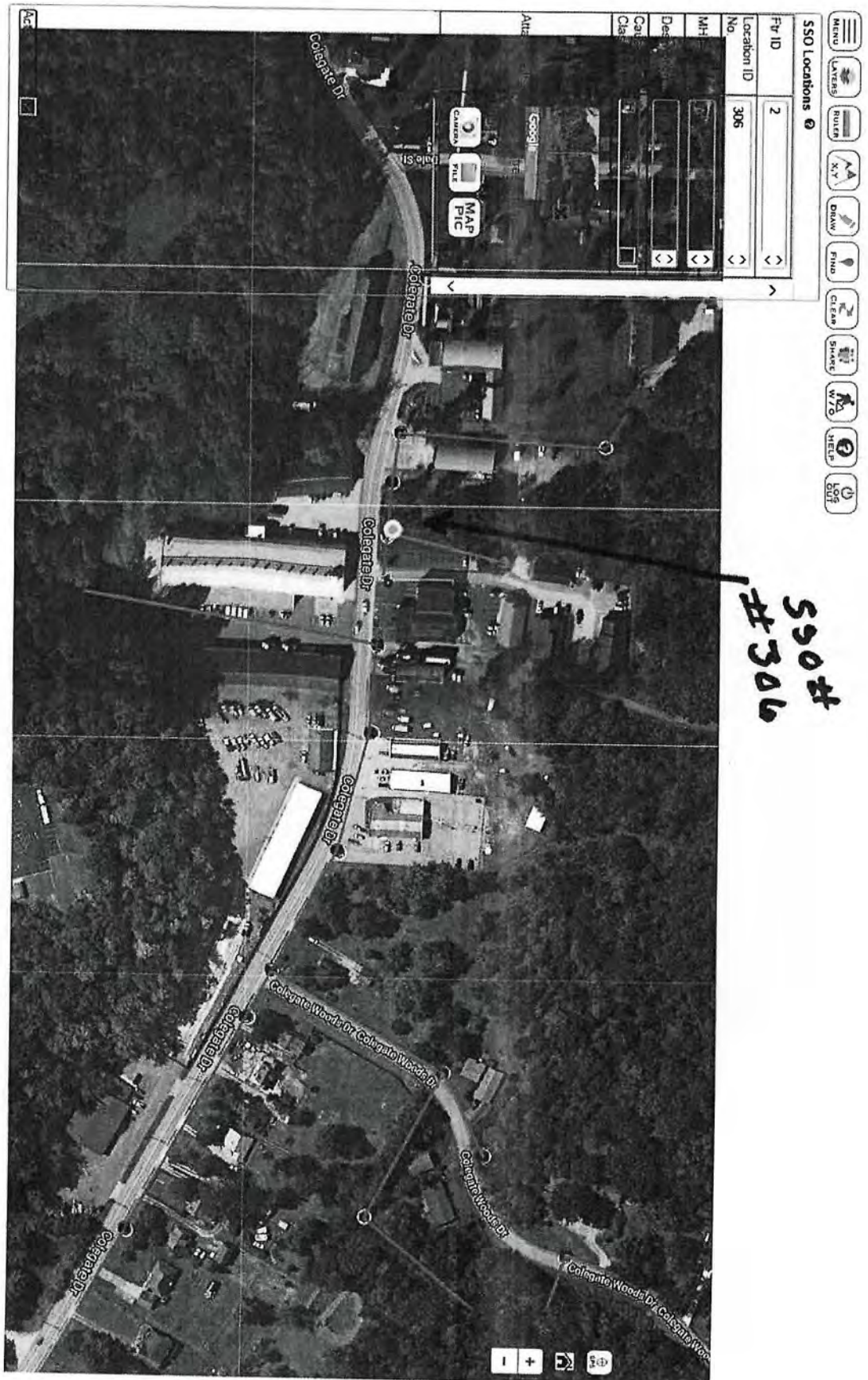
Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	2.18 inch rain last two days, most occurred between 1300 and 1430 on the 31st. very heavy down pour. SSO found while responding to a sewer complaint at 1500. This section and downstream had been cleaned on 10/24/2019 with high pressure cleaning equipment
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	Continue cleaning and camera inspections to find I & I and make the necessary repairs when found. A possible area of I and I identified on 02/06/2019 on Colgate Drive (wash out beside MH 9-144 along a stream) Repair was made on 09/10/2019. The area of Colgate Drive was being visually inspected for inflow sources during this rain event. The source or sources of inflow could not be determined at this time. We are currently inspecting Manholes on Colgate drive to obtain measurements for Inflow dishes.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area was cleaned up and lime applied
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing locations

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.


 Signature Date


 Date

Wastewater Superintendent
 Title





Sanitary Sewer Overflow 5-Day Follow Up Report

Ohio EPA Form 4237
Revised 11/12

Report Submitted by:	
Date	12/18/19
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *RD
Period Covered by Report	12/17/19
Contact Person Name	Steve Elliott
Contact Person Title	Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 2
E-mail Address	steveelliott@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Unknown Start Time, A Caller reported to the WWTP plant at 09:40 12/18/19 that it had been overflowing.
Event end date and time	Unknown stop time, was not over flowing upon inspection at 10:00 12/17/19. Did see evidence of overflow a person had posted on "Facebook", which was noticed by plant staff and reported
Location(s) the SSO – include unique ID number if one exists	1402 Colegate Dr. MH 9-2 SSO # 306
Destination(s) of overflow	☐ Basement or building ☐ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Millcreek tributary to the Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	Unknown Volume , unable to calculate without start and stop times
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☒ Extreme weather ☐ Equipment failure ☐ Power failure ☐ Debris in line ☐ Roots ☐ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) 2 inches precipitation on December 16th and 17th resulted in high flows with peak flows exceeding hydraulic design at times.

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	A call was received on December 17th at 0940 that the sewer was overflowing. Inspection at 1000 revealed evidence of an overflow but it was not overflowing at that time. There was a "Facebook" post of the overflow found by city employees. This section of the collections system was last cleaned on October 23 2019. There have been six inflow dishes installed in manholes above the overflow location since October 23rd.
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	The City will continue cleaning and CCTV investigations in this area to identify and plan to reduce or eliminate Inflow and Infiltration. A repair was made on Sept. 10th at MH 9-144 to eliminate a possible source of inflow into the system. On December 17th this area was visually inspected to determine any areas of I and I, however the system was surcharged and nothing was discovered.
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Area was cleaned up and lime applied
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing locations

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.



 Signature Date

 December 19, 2019

 Wastewater Superintendent
 Title



Ohio EPA Form 4237
Revised 11/12

Sanitary Sewer Overflow 5-Day Follow Up Report

Report Submitted by:	
Date	09/23/19
Facility Name	City of Marietta Wastewater Treatment Plant
Ohio NPDES Permit No.	OPD 00016 *SD
Period Covered by Report	09/20/19
Contact Person Name	Steve Elliott
Contact Person Title	Wastewater Superintendent
Mailing Address	440 East Eighth Street
City, State, Zip	Marietta Ohio 45750
County	Washington
Telephone No.	740-323-3858 ext 2
E-mail Address	steveelliott@mariettaoh.net

Signature required at end of form

Overflow Information	
Event start date and time – if multiple locations, include information for each	Notified September 20th 2019 @ 0848
Event end date and time	Stopped September 20th 2019 @ 1030
Location(s) the SSO – include unique ID number if one exists	MH 12-26 on Flintwood Right of Way behind 1317 Lancaster (SR 676) SSO # 323
Destination(s) of overflow	☐ Basement or building ☒ Ground ☐ Storm sewer to receiving water ☒ Directly to receiving water
Specific receiving water(s) (if applicable)	Unnamed Tributary to Muskingum River
Estimated volume (million gallons) – if multiple locations, include volume for each	8 " using 2.0 ft/sec Velocity est. 102 minutes = .051 MG Est. based on full pipe flow $1.33 \text{ cft/sec} \times 60 = 66.67 \text{ cf/min} \times 102 \times 7.48 = 50,867 \text{ gallon} = .051 \text{ MG}$
Sewer system component(s) from which release occurred	☒ Manhole ☐ Constructed overflow ☐ Pipe crack ☐ Pump station ☐ Other (explain)
Cause(s) of overflow	☐ Extreme weather ☐ Equipment failure ☐ Power failure ☒ Debris in line ☐ Roots ☒ Grease ☐ Other blockages ☐ Line deterioration ☐ Vandalism ☐ Other (explain) Sanitary sewer line down stream of manhole plugged with grease and other debris, causing back up.

Steps taken or planned to eliminate and/or reduce the overflow – include schedule of major milestones	High Pressure sewer cleaning equipment used to clear Plugged sanitary line on right of way. Used Sewer Cleaning Vacuum to remove debris at MH 12-24 downstream of SSO. Continue right of way inspections and cleaning on a more frequent basis
Steps taken or planned to prevent reoccurrence of the overflow(s) – include schedule of major milestones	increase inspection and cleaning frequency of this section of right of way
Steps taken or planned to mitigate the impact(s) of the overflow(s) – include schedule of major milestones	Applied lime to the area around the Manhole
Additional information (attach additional pages, maps, etc. as needed)	GIS Map showing location Complaint sheet

I CERTIFY THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION IN THIS REPORT AND ALL ATTACHMENTS. I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

Stephen Ellis
Signature Date

September 24, 2019

Wastewater Superintendent
Title

Michael Miser

From: Nancy Johnson
Sent: Friday, September 20, 2019 8:48 AM
To: Michael Miser
Subject: 1317 LANCASTER ST

SSO ID 323

Mike,

Today, September 20, 2019, Roy Stark of 1317 came into the office to report a broken sewer line at the rear of his property. He stated the sewer line ran along the top of the ground there and it had to be broken because of the excessive bad odor. His phone number is 740 374-2876 if you need to contact him.

Please follow up on his report.....

Thanks,
Nancy

848-1030

9:30 on site ¹²⁻²⁶ MH seen SSO 0940

Vac & Hox on way

Hox arrive 1005
& Vac.

Ran from MH 12-24 thru 12-25 to 12-26

Emptied 10:30 Full of Grease & other Debris at elevated crossing
Applied Lime to Area.



Complaint Number: 83-19

\$50.

WASTEWATER COMPLAINT SHEET

Date: 9-20-19 Time: 0848
Person Receiving Complaint: Miser
Person Calling in Complaint: Water Office For Roy Stark
Phone Number: 740-374-2876 Address: 1317 Lancaster
Reason for Complaint: Report Broken Sewer in woods Behind his House (on Westview R.O.W.)

1. Is water backing up ONLY when you use water or flush toilet etc. Yes / No
If YES inform them that it is possibly their service line and they need to contact a plumber. If the plumber says it's the City's main, have the Plumber contact the City.
Plumber's Name: _____
Inform caller that we will have someone to check the City's Sewer Main, however if it is determined that the problem is not the City's there may be a charge for all costs incurred. informed / not informed
2. Or is water coming in non-stop? Yes / No
If YES inform them that we will check the City's Sewer Main.

RESOLUTION OF PROBLEM:

Person (s) checking complaint: Miser, Hill, Schultheis, Wittelkind, Jones, Zimmerman
Main plugged: Yes / No Date: 9-20-19 Time: 9:30 Arrived on site
Main cleaned: Yes / No Date: 9-20-19 Time: 11:30 Opened up
Service line plugged: Yes / No / Unknown Date: _____ Time: _____
Service line cleaned by City Crew: N/A
Yes / No Date: ____ / ____ / ____ Time: _____

HSTS (Home sewage treatment system)

- Failing: Yes / No (Reported to Health Department: Yes / No)

Water Line

- Break: Yes / No (Reported to Water Treatment Plant: Yes / No)

PLEASE COMPLETE THE BACK SIDE OF THIS FORM

Street and/or Storm Drain

- Possibility of illegal dumping: Yes / No (Reported to Street Department: Yes / No)
- Possibility of uncontained spill entering: Yes / No (Reported to Street Dept.: Yes / No)

SSO (Sanitary Sewer Overflow) Yes / No Date: ____/____/____ Time: ____

- Main overflowing: Yes / No;
- Sample collected for lab Yes / No
- Lateral overflowing: Yes / No ; Reported to City's Health Department Yes / No

Sewer Line Maintenance BMP's

- Gravity system- sewage to next accessible manhole: Yes / No
- Forced main – valves closed- deters flooding: Yes / No
- Inlet protection – absorbent socks – protects storm drains: Yes / No
- Sewage water – vacuumed & discharged to plant influent: Yes / No

Further Comments if needed:

Found MH #12-26 overflowing. Had Crew go way with Jet
Vac. & Hov. Cleared weeds to get to MH 12-24. Run Jet
to MH 12-26 unplugged. Vacuumed Full Tank From MH 12-24
line. Plugged with Grease & other Debris. Applied Lime to Area.

~~Found on~~ Reported 8:48, Found 0930, Stopped SSO 1030
Lime Applied 1230

Notified A. Pennington OEPA @ 1450
Wendy K. Miller

*NOTE: LABEL SAMPLE COLLECTED FROM OVERFLOWING MAIN WITH THE COMPLAINT
SHEET NUMBER

Signature of person who completed this form

City of Marietta
Duck Creek Interceptor Renewal Project
DRAFT Scope of Services and Project Schedule
6/1/ 2023

Subject to the Contract for Professional Services between the City of Marietta, Ohio (OWNER) and Hazen and Sawyer (CONSULTANT), the CONSULTANT will provide engineering services to the OWNER for the detailed design, permitting assistance, bidding assistance and construction services of the Duck Creek Interceptor Renewal Project (PROJECT). The PROJECT scope will be implemented to design the rehabilitation of project CMP sewers and manholes as defined in the Duck Creek Sewershed Evaluation and Rehabilitation Project Technical Memorandum dated November 30, 2022.

Anticipated Services and improvements include the following:

- Design of approximately 14,400 LF of sanitary sewer renewal via slip-lining for the existing 21-inch, 30-inch to 36-inch corrugated metal pipe (CMP) East Norwood Interceptor, Sperry Road Trunk Sewer and all required excavation pits.
- Design of approximately 1,600 LF of 12-inch CIPP lining of the sewer between E. Norwood and Duck Creek Lift Stations
- Design of Manhole Rehabilitation of a variable quantity for a bid alternative
- Support services will include:
 - Project Management
 - Topographical and Utility Survey
 - Temporary Construction Easement
- Permitting Assistance
- Bidding Services

The PROJECT basic scope of services includes, but are not limited to, the following:

TASK 1 – PROJECT ADMINISTRATION, COORDINATION AND MEETINGS

CONSULTANT will provide project management services throughout the project duration; coordinate with the OWNER, utility companies, permitting agencies, survey subconsultant and geotechnical subconsultant as necessary to execute project scope; facilitate kickoff and submittal review meetings, including the preparation of agenda and meeting minutes; and perform quality reviews of drawings and specifications as part of each design submittal. A total of six meetings are assumed and include the project kickoff meeting, four design review meetings, and a pre-bid meeting.

Survey Coordination

CONSULTANT will subcontract with a registered professional surveyor to develop a site survey for the area of improvements. The subconsultant will perform the necessary land surveying services and document research required to prepare base map information, which shall include all existing utilities, roadways (including locations of all concrete driveway joints), structures, vegetation (including drip lines of specimen and shade trees 12" Ø and larger), watercourses, and property lines of all affected parcels identified with the respective property owner, parcel identification number, and full address shown. Land surveying horizontal control shall be North American Datum (NAD) 83 and vertical control shall be North American Vertical Datum (NAVD) 88.

TASK 2 – DETAILED DESIGN

CONSULTANT will develop Contract Documents based on the Preliminary Duck Creek Sewer Evaluation and Rehabilitation Project Technical Memorandum recommendation for renewal of the deteriorated CMP project pipes that will include drawings and technical specifications for the PROJECT. OWNER shall provide front-end bidding documents for CONSULTANT to incorporate into the PROJECT. Design drawings will be developed in 22 x 34 sheet size format in the latest version of AutoCAD / Civil 3D. Specifications will be developed using CONSULTANTS Standard Technical Specifications.

CONSULTANT will develop 30%, 60%, 90% and 100% design submittals and an opinion of probable construction cost and submit to the OWNER for review and comment. CONSULTANT will coordinate and hold design submittal meetings with OWNER to discuss comments on 30%, 60%, 90% and 100% design submittals and document decisions with meeting minutes. CONSULTANT will provide 3 full size and 2 half size paper copies and 1 electronic copy of the Drawings for each design submittal. A specifications table of contents will be submitted with the 30% submittal and complete technical specifications will be submitted for review with the 60%, 90% and 100% submittals. CONSULTANT will provide a final 100 % design submittal incorporating comments from the 90% design review. The 100% submittal shall include 2 full size and 1 half size paper copies and 1 electronic copy of the Bidding Documents for the OWNER to use in advertising and distributing Bidding Documents. CONSULTANT also will submit a signed and sealed 100% opinion of probable construction cost, a copy of the drawings in AutoCAD format, a copy of comments from utilities, a copy of design calculations and bid quantity calculations, and a copy of field notes and surveying notes for the 100% design submittal.

1. Prepare detailed plans including title sheet, plans, profiles, elevations, sections, and miscellaneous details for all work required for the proposed improvements. The location of the necessary erosion and sedimentation control devices shall be indicated on the plan sheets. CONSULTANT will provide all standard details required for the project. In addition, provide a revision block and a print date stamp on all plans submitted to the OWNER. Bid ready plans shall include a Professional Engineer stamp and corresponding signature.
2. Prepare all technical specifications using CONSULTANT standard Technical Specifications modified as appropriate for the project and in a format consistent with the OWNERs front end documents. Technical specifications shall be provided in Microsoft Word.
3. Prepare Engineer's opinion of probable construction costs (AACE Levels 5, 4, and 3). Each item in the construction cost estimate should coincide with an item in the work and material section of the specifications. CONSULTANT will submit bid quantity calculations in Microsoft Excel format with the 60%, 90% and 100% design submittals.
4. Contract Documents (plans, specifications, and cost estimates) must be in a format that can be approved by the OWNER, the Ohio Environmental Protection Agency, and all other affected utilities, entities, and governmental agencies.
5. CONSULTANT will provide QA/QC services for deliverables prior to submittal to OWNER. CONSULTANT will perform QA/QC reviews of 30%, 60%, 90% and 100% detailed design submittals, including a constructability review and review of the Engineer's Opinion of Probable Construction Cost.
6. Prepare all permit applications required for construction of the project. Permits required for the PROJECT are anticipated to include, but are not necessarily limited to, the following: Ohio EPA Permit to Install, ODNR, Right of Way permits, and US Army Corps of Engineers permits. All permitting comments shall be addressed in the 100% design submittal. No face-to-face meetings are anticipated with permitting agencies. OWNER is responsible for payment of fees associated with permit applications.
7. Distribute preliminary (30%) and final (100%) designs to all utility companies and local authorities for comment on existing and proposed utility locations, copying OWNER on all correspondence.

8. Design deliverables will be submitted in accordance with the schedule presented below. Note: 90% drawings will be used to prepare and negotiate construction easements (if necessary) and make applications for necessary permits; therefore, they should include sufficient information for such purposes.
9. Upon incorporating 100% review comments to the design, provide the OWNER with three (3) sets of final contract documents and plans (two (2) full size and one (1) half size), a copy of drawings in AutoCad format, a copy of all text files on electronic media in Microsoft Word format, one copy of comments from utilities, one copy of design calculations, one copy of field notes and surveying notes, and the required copies of permit applications at the time the OWNER goes to bid. The permit applications must also include the appropriate copies of plans and specifications required for application. Note: 100% comments will include comments/corrections from the appropriate permitting authorities and conditions of the necessary construction easements.
10. CONSULTANT to provide on the last business day of each month a written report on project status that includes contract date executed, contract date authorization, contract completion date, and contract percent completed.
11. CONSULTANT to identify any temporary construction easements as required, on the design plans.

TASK 3 – Bidding Assistance

CONSULTANT will assist in bidding the PROJECT by providing the following tasks:

- Attend pre-bid meeting (virtually), prepare meeting minutes and respond to bidder questions.
- Prepare up to two addenda.
- Review bids and prepare bid tabulation.
- Provide a bid recommendation letter.
- Conformed drawings and specifications

OWNER is responsible for coordinating pre-bid meeting, distribution of bidding materials (plans, specifications, addenda) to potential bidders, and issuing bid recommendation and award to Contractor.

Tasks not included with Design and Bid Phase Scope and Fee:

- A. Geotechnical Investigation
- B. Preparation of easement documents and exhibits new permanent sewer easements
- C. Any evaluations of the performance or necessary improvements at the existing Duck Creek Lift Station or the East Norwood Lift Station
- D. Additional Studies to locate I&I in the upstream collector sewers
- E. Onsite construction inspection services.
- F. Preparation of Record Drawings based on as-builts.
- G. Construction Services
- H. No more than 1 site visit

SCHEDULE

The anticipated schedule for the scope of work outlined herein is shown in the following table. A more detailed task schedule will be developed and used for monthly reporting after the notice to proceed. It is assumed that a notice to proceed will be issued in June 2023.

Event	Time to Complete from NTP (weeks)
Notice to Proceed	0
Kickoff Meeting	2
Survey	12
30% Design Submittal	20
30% Design Review Meeting	22
60% Design Submittal	30
60% Design Review Meeting	32
90% Design and Permit Submittal	36
90% Design Review Meeting	38
100% Design Submittal	40
Bidding Complete	46
Construction Complete	9 Months after Notice of Award

April 21, 2022

Mr. Stephen Elliot
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 45750

Re: Duck Creek Sewershed Evaluation and Rehabilitation Project

Dear Mr. Elliot:

Hazen and Sawyer (Hazen) is pleased to submit to for your review a proposal to evaluate the sewer infrastructure in the Duck Creek sewershed. This evaluation will include the interceptor sewers, and the Duck Creek Lift Station. It will also include the corrugated metal pipes (CMP) that discharge directly into the treatment plant and a 12-in clay sewer. Our proposal is based on the assumptions listed below.

The City's largest concerns for this sewershed and CMPs are the following:

- River water is infiltrating into the sewers. The interceptor sewers are constructed of corrugated metal pipe (CMP) or reinforced concrete pipe (RCP) built in the 1960s. Part of the East Norwood Interceptor has been replaced with ductile iron pipe (DIP). All three of these pipe materials can be subject to corrosion, and infiltration when used in gravity flow sanitary sewers.
- The temporary bypass of the collapsed East Norwood Interceptor is currently flowing into a 12-in clay sewer that conveys it to the Duck Creek Lift Station. The proposed East Norwood Lift Station, once completed, will continue to pump flow into this 12-in clay line. The condition and hydraulic capacity of this 12-in clay sewer is not fully known. It is located in a wooded area. Tree root intrusion in clay pipe can cause reduced hydraulic capacity and breakage.
- There is the potential for future development and therefore additional flows that could occur east of the City in Reno and northeast of the Marietta Country Club.
- The Duck Creek Lift Station was constructed in the 1970s and upgraded in the 1980s. The pumping capacity of this lift station is not fully known. The City would like to determine if this lift station is in need of renovation and upgrades to convey the potential future flows.

To address these concerns, Hazen proposes to complete four tasks as described in more detail along with an associated fee and schedule in Exhibits A, B, and C. Hazen proposes to complete work this for a not-to-exceed fee of \$52,910.

Thank you for your consideration.

Very truly yours,



Sean O'Rourke, P.E.

hazenandsawyer.com

Exhibit A

Scope of Services

Duck Creek Sewershed Evaluation and Rehabilitation Project

The following tasks will be completed by Hazen to meet the objectives of the Duck Creek Sewershed Evaluation and Rehabilitation Project. It should be noted that this is preliminary based on the currently available information. If, during the evaluation, it is found that additional effort is needed on a certain task, Hazen will communicate with the City to determine if an adjustment to the proposed task's scope, fee, and schedule is needed.

There is no separate task for project management. The project manager (PM) and deputy PM will be performing engineering tasks on this project. All PM functions (invoices, meetings, etc.) will be absorbed in these four tasks.

Task 1 - Review of Existing Information: The following information will be reviewed in detail to provide Hazen with a thorough understanding of the infrastructure in this evaluation. This information will be reviewed to determine the asset's physical condition, operating conditions, and what construction methods were used.

1. Record plans – in particular, the 1960s East Norwood and Sperry Rand Interceptor plans will be reviewed.
2. Interceptor CCTV files – there are 18 inspection files from 2018 and 2 files from 2020 that will be reviewed.
3. ADS flow monitoring study – data from 5 flow meters and 2 rain gauges from May to October 2021 will be reviewed.
4. Miscellaneous Data – the GIS, Duck Creek pump curves, site photos, and the NOAA river level data at Willow Island Lock, Marietta Pump House, and Parkersburg will be reviewed.

Task 2 - System Capacity Evaluation: The ADS monitoring data and NOAA River level data will serve as the basis for the system capacity evaluation.

1. Flow and Rainfall Data Analysis - Hazen will utilize its in-house flow data analysis software (HazenQ) to manage, analyze, and utilize the flow, rainfall and river level data in the project area. Flow data will be disaggregated into the following four components: dry weather sanitary flow, base groundwater infiltration, rainfall derived inflow/infiltration, and high river level based on available data (i.e., the three NOAA river level gauges).
2. Base Hydraulic Model - Hazen will develop a base hydraulic model using PCSWMM modeling software from available GIS data. The base hydraulic model will include infrastructure in the Duck Creek sewershed, including sanitary gravity sewers (12-inch and larger) and critical pump stations with force mains. Data gaps in the GIS will be addressed through review of available record drawings and engineering judgement. The City will provide information on pumps, including pump curves and operational controls (on/off levels), to represent lift station operations. After development of the base hydraulic model, Hazen will simulate the model for the monitoring period to verify model flows with the monitored flows.
3. Existing Capacity Evaluation – Hazen will conduct a capacity assessment of the existing collection system through a series of design storm simulations using the base hydraulic model. Hazen will run two design storms with depths and hyetograph distributions from the Rainfall Frequency Atlas of the Midwest. Hazen will prepare thematic maps based on the model design storm results. This information will be used to inform potential remedial measures in the Alternatives Analysis in Task 4.

Exhibit A
Scope of Services
Duck Creek Sewershed Evaluation and Rehabilitation Project

4. Future Development Evaluation – Hazen will coordinate with the City to identify areas for potential development. These areas will be added to the hydraulic model, along with applicable flows, to create a Future Development Model. The Future Development Model simulation will be conducted with two design storms to assess the impacts on the collection system capacity. This information will be used to inform potential remedial measures in the alternatives analysis in Task 4.

Task 3 - Condition Assessment: Beyond the information that already exists, Hazen will coordinate with the City to collect additional data that could be used to determine the condition of the assets in the project area and the impacts of river water intrusion.

1. Additional CCTV data - Hazen will work with the City to collect additional CCTV inspection data. At a minimum this will include the 12-in clay pipe upstream of the Duck Creek Lift Station. Depending on the findings of the review of the existing CCTV information in Task 1, there may be a need for reinspection or the inspection of additional CMP pipes and interceptors.
2. Lift Station condition assessment and draw down testing - Hazen will perform a draw down test on the Duck Creek Lift Station. The results from the draw down test can be used to determine if the pumps are pumping consistent with their nameplate and pump curve, if the pumps are operating in a healthy spot on their curve, and if the head loss created by the force main is consistent with a pipe of that size and age. The result of from the draw down test will also be used in the hydraulic model described in Task 3. It is assumed the City will assist Hazen with this task providing personnel to operate the pumps in hand mode and install a pressure gauge (if feasible) on the discharge piping.

Task 4 - Alternatives Evaluation: Upon completion of the first three tasks, Hazen will utilize the findings from the hydraulic model and condition assessment to develop a list of alternatives for evaluation to reduce or eliminate the identified areas of concern.

1. Alternative Evaluation - The alternatives could include upgrades to pumps or lift stations, rehabilitation of pipes to reduce infiltration, trenchless replacement of the interceptor using sliplining, force main renewal, rehabilitation of the manholes to reduce river water and rainfall inflow, and other methods. These mitigation alternatives will be evaluated based on history of success, longevity, capital and life-cycle cost, constructability, and general advantages and disadvantages. It is assumed the City will provide input during this task based on their preferences and institutional knowledge of the project area. Possible sources of funding utilizing state and/or federal grants and low interest loans will be evaluated. Major impacts on the treatment plant from the alternatives will be evaluated as well.
2. Draft Technical Memorandum – This will be developed and submitted electronically for review and comments. This memo will summarize the findings of Tasks 1, 2, and 3 and go into detail about the alternative evaluation and Hazen's initial recommendations. It is anticipated that this memo will be approximately 10 to 20 pages, not including appendices. After the City has had a chance to review the memo, a Teams meeting will be held to discuss any issues needing follow-up.
3. Final Technical Memorandum – After the City has provided their feedback and comments, a final version of the memo will be submitted electronically with Hazen's recommendations of the next steps for the project area.



City of Marietta, Ohio
Exhibit B - Fee Estimate
Duck Creek Sewershed Evaluation and Rehabilitation Project

Hourly Rates		QC	PM	SPE	ENG	Total Hours	Fee Labor
- Raw labor		\$ 89	\$ 55	\$ 46	\$ 35		
- With a 3.2x multiplier		\$ 283	\$ 176	\$ 147	\$ 112		
- With inflation based June salary adjustments		\$ 300	\$ 187	\$ 156	\$ 119		
Task 1 - Review of Existing Information		0	8	14	40	62	\$ 8,426
Record plans (East Norwood and Sperry Rand Interceptor)			2	4	12	18	\$ 2,422
CCTV files (18 from 2018 and 2 from 2020)			2	4	8	14	\$ 1,947
ADS flow study (7 months at 5 meters)			2	4	12	18	\$ 2,422
Miscellaneous data (GIS, NOAA river levels, pump curves)			2	2	8	12	\$ 1,635
Task 2 - System Capacity Evaluation		0	12	28	68	108	\$ 14,681
Flow and Rainfall data analysis			4	6	10	20	\$ 2,870
Develop Base Hydraulic Model			4	10	36	50	\$ 6,580
Existing System Capacity Evaluation			2	6	12	20	\$ 2,734
Future Development Capacity Impacts			2	6	10	18	\$ 2,497
Task 3 - Condition Assessment		0	10	10	20	40	\$ 6,064
Additional sewer CCTV data collected by the City			2	2	12	16	\$ 2,110
Lift Station condition assessment and draw down testing			8	8	8	24	\$ 3,690
Expenses (450 miles at \$0.585 / mile)							\$ 263
Task 4 - Alternatives Evaluation		5	34	44	76	159	\$ 23,732
Alternatives Analysis			12	20	36	68	\$ 9,633
Draft Technical Memorandum		4	16	16	32	68	\$ 10,481
Follow-up Teams call			2	2		4	\$ 685
Final Technical Memorandum		1	4	6	8	19	\$ 2,932
TOTAL =		5	64	96	204	369	\$ 52,902

Labor Classifications

QC - Quality Control - Sean FitzGerald
PM - Project Manager - Sean O'Rourke / Chris Reichle
SPE - Senior Project Engineer
ENG - Project Engineer

Grand Total \$ 52,910



City of Marietta, Ohio
Exhibit C - Schedule
Duck Creek Sewershed Evaluation and
Rehabilitation Project

	April	May	June	July	Aug	Sept	Oct
Notice to Proceed	X						
Task 1 - Review of Existing Information							
Task 2 - System Capacity Evaluation							
Task 3 - Condition Assessment							
Task 4 - Alternatives Evaluation							
Alternatives Analysis							
Draft Technical Memorandum							
Final Technical Memorandum							

Notes:

- This schedule is preliminary. If, during the evaluation, it is found that additional effort is needed on a certain task, Hazen will communicate with the City.

February 16, 2023

Mr. Robert Heady, P.E., P.S., ENV SP, City Engineer
Mr. Stephen Elliott, Wastewater Superintendent
City of Marietta
304 Putnam Street
Marietta, Ohio 45750

**Re: Colgate Drive I/I Improvements
Scope of Services and Fee Proposal for
Professional Engineering Services**

Dear Mr. Heady & Mr. Elliot:

CT Consultants, Inc. ("CT" or "Engineer") is grateful to submit this proposal pertaining to the Colgate Drive Sewershed Study and Design Project to the City of Marietta ("City" or "Owner").

BACKGROUND

The City of Marietta has completed an initial analysis of SSES impacts on the Colgate Drive sewer area district. The project concluded that 4 of 20 sewershed areas within the district experience "high" or "very high" infiltration and inflow with Total RDII (wet weather volumes) in the 8%-17% range and peak flow (wet weather peak flows) in the 5,500 to 23,500 gpd/idm range.

The City has applied for a \$260,000 WPCLF DEFA design loan to develop system improvements to reduce sanitary sewer overflow (SSO) in the district. The initial analysis provides insight on which subareas have excessive I/I, but did not identify the I/I sources. In order to develop a design to reduce SSO occurrences, further investigation into the infiltration and inflow (I/I) sources is required to determine the most cost-effective options to remove I/I and reduce SSO occurrences. Improvement options within the district may include both source removal and possible capacity improvements to the system.



SCOPE

In order to make the best use of available funding, CT proposes targeting the highest priority areas first. Concept plan development requires individual sewershed study and design. The study will include smoke testing and pre-construction flow monitoring, at a minimum. Based upon study results for the single highest priority sewershed, the project team will add sewersheds to the study phase as proposed budget allows, while preserving budget for detailed design.

Since there has not been any smoke or dye testing in this area yet, the effectiveness of these I/I source identification methods in the subject sewersheds are unknown, but we believe could be effective.

With the consideration of district improvements possibly occurring in phases and the City's desire to quantify improvement impacts, CT will include pre-flow monitoring as a part of the project. The budget cost below includes renting meters from CT for this purpose, however, CT will further discuss future flow monitoring needs the City is considering to identify possible cost savings by purchasing their own flow meters.

CT proposes the following Tasks to complete this project:

Task 1: Evaluate Existing Data

- 1) Existing Data Review. CT will evaluate mapping, reports, flow data, SSO & complaint data, any provided tacit knowledge, and drawings.
- 2) Project Kick-off Meeting. After our review of the initial data review, CT will meet with the City to confirm approach.

Task 2: Pre-Flow Monitoring Program

- 1) Develop a Flow Monitoring Program. CT will review the City's pre and post monitoring project improvement requirements and identify flow monitoring locations within the district to show the impact of system improvements over time.
- 2) Perform Pre-Project Flow Monitoring. CT will provide 3 months of pre-improvement flow monitoring assuming 2 flow meter locations and 1 rain gauge. Monitoring includes hardware, a site install visit, installation and maintenance, data downloads, and removal and cleaning of hardware.

Task 3: Field Study

- 1) Determine Study Approach. The approach will be based upon highest prioritized sewershed first, performing study, and reviewing results. Prior to concept plans, budget will be reviewed and additional sewersheds may be included. This approach assumes smoke testing is an effective I/I source investigation method. Additional investigative methods such as dye testing, CCTV, and manhole inspections may be utilized where appropriate.



- 2) Field Investigation. Begin the field investigation and then review initial field investigation results for effectiveness and determine if investigation services require dye testing or CCTV services to identify I/I sources. Modify plan and adjust budgets to include additional investigative services as needed.
- 3) Capacity Analysis. Provide a tabletop capacity analysis of the sewer upstream of the SSO location on Colgate Drive based on flow meter data and possible downstream 90-degree bend impacts.
- 4) Summary of Findings and Recommendations. Provide a brief summary of findings and recommendations of the field study.

Task 4: Concept Plan

- 1) Develop Improvement Concept Plans. Based upon field study data collected, develop concept improvement plans for the prioritized sewersheds investigated utilizing GIS background information. The scope of this task is subject to change based on the improvements that the City would like to implement. Additional budget may be required for this task in which case the remaining budgets will be adjusted accordingly. Concepts may include:
 - a) Private property I/I removal
 - b) Public right-of-way I/I removal and/or improvements
 - c) Capacity or sewer headloss improvements
- 2) Review Meeting. Review concept plans with City at workshop style meeting.
- 3) Preliminary Opinion of Probable Construction Cost. Develop a preliminary opinion of probable construction cost based the concept plans. This cost opinion will include a 30% contingency.

Task 5: Detailed Design

The design team will initiate this phase of work utilizing the concept plan prepared in Task 4. The scope of work for this task is unknown at this time. The scope of work will be adjusted for the budget available. This may result in only being able to perform some of detailed design on projects which are identified in Task 4. Therefore, there could be projects identified in Task 4, which are not able to be designed due to budget limitations.

- 1) Design Development (25% to 60% Design)
 - a) General: In general, this task will involve the detailed design and the preparation of the drawings, details and specifications for the bidding and construction of the improvements or rehabilitation proposed.
 - b) Field Survey: CT will perform a topographic survey for project(s) selected, which shall include the subject project area(s) for design purposes. CT will gather horizontal and vertical data at strategic locations, and at approximate 100 ft. station intervals, to create a one (1) foot contour interval map. Natural and man-made features will be located, to generally include but not limited to, above and below ground utilities,



- power or light poles, private and public drives. If sanitary or storm sewer systems are observed, CT will attempt to gain access by way of manholes, to assess size and depth of sewer lines. A base map will be prepared in AutoCAD format from the collected field data that will be used as the basis of engineering design.
- c) Geotechnical Investigation: An allowance for a geotechnical investigation program is recommended with all excavation projects. This is not included in our fee at this time. These services can be provided as requested.
 - d) Permits / Easements: Any required permits and/or easements needed to complete the project will be identified. Easement preparation is not included, but can be provided as needed.
 - e) Technical Specifications: An initial draft of detailed material and installation specifications for the bidding and construction for this project in CT's CSI 48 Division format is to be completed for the 60% design submittal.
 - f) Preliminary Opinion of Probable Construction Cost: An updated opinion will be performed utilizing the 60% design. This cost opinion will include a 20% contingency.
 - g) Design Review Meeting: The Engineer will review the design drawings and draft technical specifications with the Owner.
 - h) General / Misc. Items: Notations for the Contractor related to general conditions of construction and project specific issues such as utility construction, landscaping, staging areas, traffic control and construction sequencing will be provided in the plans or general project notes/conditions. A cover title sheet will be prepared identifying the project, project location, and City Officials.
- 2) Final Design (60% to 100% Design)
- a) General: The final design segment consists of completing the construction documents. Work sessions will continue throughout the project and will provide a forum to minimize major revisions to the project as a result of milestone reviews.
 - b) Permitting: Any required permit applications will be drafted for review with the Owner and then submitted to the applicable regulatory agency. Comments from each entity will be appropriately incorporated.
 - c) Final Opinion of Probable Construction Cost: A final opinion of probable construction cost will be completed. This cost opinion will include a 10% contingency.
 - d) Utility Coordination: Final drawings will be provided to any private utility impacted by the project.
 - e) 90% Submission: 90% submittal and detailed design review meeting. Technical materials and installation specifications will be substantially completed and included as part of this submittal.
 - f) Final Design Submission: Subsequent to the final design segment, any final review comments from the Owner will be incorporated and final quality assurance reviews will be made by the Engineer to bring the drawings to 100%. The Engineer will administer and secure any regulatory permits associated with this improvement. The Engineer will also provide Project Manual with Contract Documents developed with EJCDC General Conditions including current Ohio EPA required documents for WPCLF funding.



FEE AND INVOICING

Based on the scope of services as written and presented, the Engineer proposes to be compensated for a Lump Sum Fee of \$260,000. Based on the information we have at this time, a breakdown of this fee is provided below:

Task	Budget
Task 1: Evaluate Existing Data	\$10,000
Task 2: Pre-Flow Monitoring Program	\$24,000
Task 3: Field Study	\$81,000
Task 4: Concept Plan	\$10,000
Task 5: Detailed Design	\$135,000
Total Lump Sum Fee	\$260,000

The Engineer reserves the option to alter budgets between phases without exceeding the total fee authorized by the Owner. No additional services or fee shall be provided without prior written authorization from the Owner.

Invoices will be submitted monthly based on the percentage amount of work that the Engineer estimates to have been completed during that period. Invoices are due within 30 days of receipt.

ASSUMPTIONS AND EXCLUSIONS

The following assumptions and exclusions are provided for the benefit of both the Engineer and the Owner in better understanding the limitations and expectations with respect to the proposed scope of services and the obligations of each party. These items were considered while defining our proposed scope and fee.

- 1) Owner will provide engineering and surveying data and other existing information in the Owner's possession or readily available to the Owner to the Engineer that may be useful in the performance of the professional services described in the proposal.
- 2) Owner will make all provisions for Engineer's personnel to enter upon public and private lands as required to perform the described services.
- 3) The following services are not included, but can be provided as a supplemental service as requested:
 - a) Preparation of temporary or permanent easements.
 - b) Subsurface Utility Engineering and location services.
 - c) Geotechnical subsurface investigations.
 - d) Research on subsurface conditions (rock, etc.).
 - e) Fees to governmental agencies for permits or other costs.
 - f) Bidding, construction administration and observation services.



g) Post-construction flow monitoring.

SCHEDULE

CT proposes to review and set a project schedule with the City after our Field Study has been completed.

STANDARD TERMS AND CONDITIONS

The attached Exhibit A - CT Consultants, Inc. Standard Terms and Conditions is a part of this agreement and is binding on the Owner and the Engineer.

CLOSURE

Please contact us if you have any questions regarding this proposal. We appreciate the opportunity to provide professional services to the City of Marietta.

Respectfully,

CT CONSULTANTS, INC.

Christopher P. Rybak

Christopher P. Rybak, P.E.
Senior Project Engineer

cc: Wes Hall, P.E., Vice President
Mark Delisio, P.E., Senior Project Engineer

Attachments

ACCEPTED BY:

By: _____
City of Marietta

Date

Name: _____

Title: _____

M:\PROPOSAL\2023\Marietta, City Of\Colgate Drive II Improvements\Proposal\20230215 Proposal Colgate Drive I-I Improvements_DRAFT.Docx

7965 N. High St. Ste. 340 | Columbus, OH 43235 | 614.885.1700 | www.ctconsultants.com

August 12, 2022

Attention: Steve Elliott, Wastewater Superintendent
City of Marietta
440 E. 8th Street
Marietta, Ohio 45750

Dear Mr. Elliott,

Reference: Colgate Dr Focused SSES Study Summary of Findings

SUMMARY OF FINDINGS

The City of Marietta contracted DLZ to conduct a focused SSES study of a sewershed in City of Marietta located on Colgate Drive and adjacent areas comprised primarily of commercial and residential properties. This area consists of approximately 75,000' of sewer pipe with one pump station to the North of the project area. The City has been experiencing I/I issues in this area and other related problems. Hence, the City would like to determine where the sources are located using a focused SSES study.

DLZ subcontracted Stantec to perform micromonitoring in the spring of 2022 using twenty (20) monitoring locations in one (1) phase with one rain gauge pair. Phase 1 meters were installed the week of March 15th and removed on May 11th. There were four (4) rainfall events with a significant response during the monitoring period. Stantec conducted analysis and produced a report which has been provided to the City, however, this letter submits additional analysis and recommendations for the City to further use in considerations of next steps.

Figure 1 below illustrates the I/I ranking for the study area. The sub-basins marked in red indicate areas with Excessive or High I/I and need additional investigation to narrow down the I/I source(s) and prioritize rehabilitation projects in these areas. The areas with Moderate I/I are marked yellow and may be considered for additional investigation if funding should allow. The areas in green indicating Low I/I should not be interpreted as having no I/I, but rather as a lower percentage of the total I/I generated and not a priority for investigation at this time. This figure provides a systematic approach to rehabilitation for maximizing the City's return on investment.

The I/I classifications in Figure 1 are based off a culmination of Stantec's findings along with additional analysis of flow balance graphs. Though meter math of some sites returned negative flow balances, graphical interpretation of the flow balances can provide qualitative clues of RDII presence in these areas. As such sites 01,02,03,05,06,09,12, and 16 have been ranked by flow balance analysis. Though this approach cannot provide a quantitative value of I/I, it can provide direction for further investigation and rehabilitation.

Reference: Colgate Dr Focused SSES Findings Summary



Figure 1: I/I Ranking in micromonitoring sub-basins
Green is Low I/I. Yellow is Moderate I/I. Red is Excessive I/I.

Reference: Colgate Dr Focused SSES Findings Summary

Additionally, Table 1 provides a tabular summary of both Stantec and DLZ analysis.

Table 1: Analysis Summary

Site Name	Sub Basin Length (ft)	Dry GWI Rank	RDII Rank	Qualitative Review Rank	Final Ranking	Recommendations
MM-01	3,990	N/A	N/A	Low	Low	After Qualitative review of flow balances, no investigation suggested. RDII appears to be upstream.
MM-02	4,021	N/A	N/A	Low	Low	After Qualitative review of flow balances, no investigation suggested. RDII appears to be upstream.
MM-03	1,785	N/A	N/A	Low	Low	After Qualitative review of flow balances, no investigation suggested. RDII appears to be upstream.
MM-04	2,241	Low	Low / Moderate	N/A	Low	No investigation suggested.
MM-05	5,990	N/A	N/A	Low	Low	After Qualitative review of flow balances, no investigation suggested. RDII appears to be upstream.
MM-06	3,242	N/A	N/A	Low	Low	After Qualitative review of flow balances, no investigation suggested. RDII appears to be upstream.
MM-07	5,726	Moderate	Low	N/A	Low	No investigation suggested. RDII seems to be upstream.
MM-08	5,428	Low / Moderate	High	N/A	High	Suggest wet weather CCTV
MM-09	3,958	N/A	N/A	Moderate	Moderate	Qualitative review of flow balances show signs of I/I. Suggest wet weather CCTV
MM-10	2,970	High	Moderate	N/A	High	High DWI and Mod RDII. Suggest wet weather CCTV
MM-11	3,464	High	High	N/A	High	Suggest wet weather CCTV
MM-12	2,230	N/A	N/A	Moderate	Moderate	Qualitative review of flow balances show signs of I/I. Suggest wet weather CCTV
MM-13	4,087	Moderate	Moderate	N/A	Moderate	Consider wet weather CCTV
MM-14	3,826	Low / Moderate	High	N/A	High	Suggest wet weather CCTV
MM-15	3,958	High	Low / Moderate	N/A	High	Suggest CCTV to look for Dry weather infiltration.
MM-16	2,066	N/A	N/A	Low	Low	Qualitative review of flow balances suggest no significant I/I is present. No investigation suggested.
MM-17	2,996	High	Moderate	N/A	High	Suggest wet weather CCTV
MM-18	4,456	Moderate	Low	N/A	Low	No investigation suggested.
MM-19	6,326	Moderate	Low	N/A	Moderate	Consider further investigation for GWI sources.
MM-20	4,788	High	Moderate	N/A	High	Suggest CCTV to look for Dry weather infiltration.

The goal of this study was to isolate major I/I contributing areas. Primary analysis was conducted using Total R values based off what is known as RTK analysis as conducted by Stantec. The additional flow balance analysis helps to further isolate significant I/I contributors. As a result of the above analysis, approximately 43% of the sewershed has been classified as low I/I contributors, or approximately 33,500' that can be removed from targeted investigations. This represents a cost savings of approximately \$134,000 at current CCTV rates of \$4.00 / ft for third party CCTV services. Moderate I/I contributors accounted for approximately 21% of the I/I or 16,600' of pipe. Lastly, and most importantly, approximately 35% of the project area has been classified as high I/I contributors, or around 27,400' of pipe. It is recommended that the City perform wet weather CCTV of high I/I areas and if funds allow, consider moderate I/I contributors.

Reference: Colgate Dr Focused SSES Findings Summary

Flow Balance Example

1. Upstream-Downstream Flow Balance: Figure 2 shows the flow balance between the meters 09 and upstream meters 14 and 15. MM09 is the downstream meter (blue and magenta line) and MM14 is upstream meter (black line) and MM15 (red line) or (sum of both 14 and 15 is red line of second graph). The middle panel in the graph shows that the storm responses differ significantly in shape during the rain responses, yet are reasonably similar in shape during dry weather. As a result of this, the data suggests I/I is present between the upstream and downstream meters and thus has been qualitatively determined as a moderate I/I contributor.

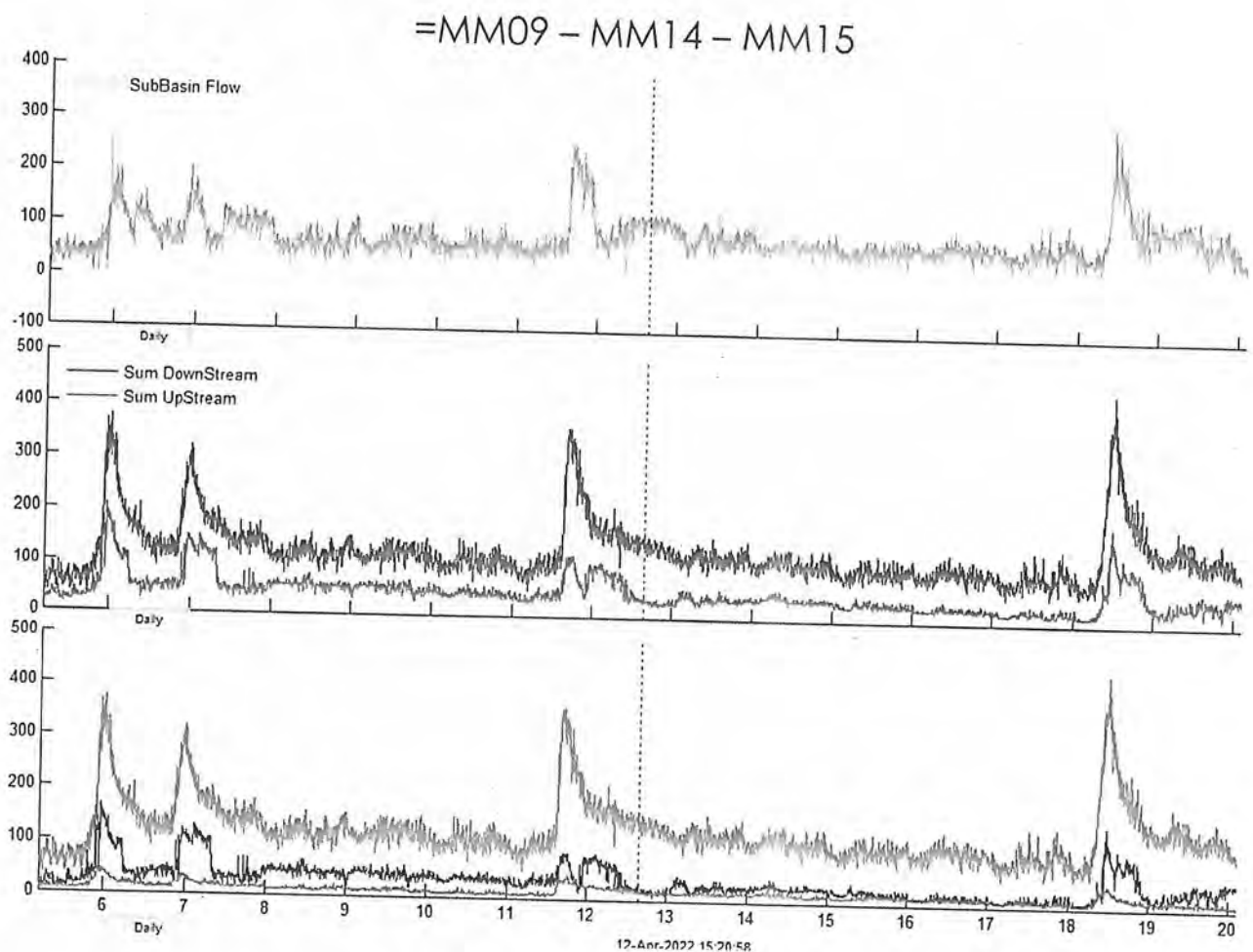


Figure 2: Flow balance for sub-basin MM09

Reference: Colgate Dr Focused SSES Findings Summary

SSES RECOMMENDATIONS

Rainfall was adequate to successfully narrow down the major sources of I/I in the system and eliminate 33,500 feet of pipe from the total 75,500 feet of pipe in the study area, or 43 percent of the collection system. This reflects a cost savings of at least \$134,000 for CCTV inspections at a cost of \$4.00/ft. The remaining approximately 44,000 feet of pipe footage was further split into lengths of 16,600' and 27,400' for Moderate and Excessive I/I respectively.

Further investigation in the problem areas using smoke testing along with wet weather CCTV are the next steps in further isolating problem areas. Wet weather CCTV would be a cost-effective investigation in areas with excessive I/I, especially with suspected infiltration.

The investigative work should proceed after a significant rainfall event in late winter or early spring when the ground is most saturated. Saturated ground conditions produce the most reactive inflow and infiltration flows as both inflow and infiltration can be tempered by dry ground conditions. Table 1 above provides a summary of the recommended actions to be taken for SSES investigations. Sewer rehabilitation projects should be planned based on the results of the SSES investigations, which DLZ can review and make recommendations for if desired.

The recommended SSES activities are elaborated as follows:

- I. Wet-Weather CCTV: The CCTV inspection should concentrate on structural issues, condition of pipe joints, sources of clean water, offset joints, etc. The CCTV inspection should be performed after a storm passes using the following suggested guidelines:
 - i. Allow faster than 2 fps CCTV rate (PACP is only 2 fps),
 - ii. Only stop and pan obvious significant defects,
 - iii. Only code basic locations of noticeable defects in the field for quick completion of field work.
 - iv. Code I/I sources in the office later, and,
 - v. Operator should note if structural deficiencies warrant using conventional dry weather CCTV for complete PACP coding.

It is preferred for the CCTV inspection to be performed during or immediately after a storm event. This will allow for a quick scan of inflow sources and many times will find rapid infiltration. The primary difficulty with wet weather CCTV is the ability to react quickly enough to dispatch a CCTV crew to the site and the camera into the collection system to capture the inflow and rapid infiltration during the storm event.

Reference: Colgate Dr Focused SSES Findings Summary

2. **Smoke Test:** Smoke testing of private property downspouts, yard drains, driveway drains, etc. is a quick and inexpensive investigative tool to help with obvious inflow connections and occasional infiltration sources. It is recommended that testing occur when the soil conditions are very dry to allow the smoke to rise through the soil and better show defects. Due to its relatively low cost, smoke testing of moderate and high I/I contributors is generally recommended.
3. **Cross-Connections:** A very common source of inflow and infiltration is the cross connection between the storm sewer collection system and the sanitary collection system either via mainline segments or storm water entering through sanitary laterals. Once the CCTV and smoke testing work has been completed, we would suggest dye testing of the storm collection system if further investigation is desired. The storm sewers would be plugged and flooded with dye water with a camera placed in the parallel sanitary collection system. Locations of cross connections would be noted for future repair and/or replacement.
4. **Private Laterals:** Finally, another investigative tool for private property sources of inflow and infiltration is to CCTV private laterals. While effective, it can be difficult to access private laterals from either the street side or the structure end of the lateral. The use of CCTV can help identify specific and focused sources of inflow and infiltration, which many times help to reduce the overall cost of repair to eliminate the inflow and/or infiltration source.

Lastly, while the remaining sub-basins are labeled as Low I/I Sub-basins, there is still some inflow and infiltration entering the collection system in these areas. While even the EPA acknowledges I/I will always be a part of a sanitary collection system, it is important to continue to monitor these sub-basins as I/I will likely increase as the system ages. The industry recommended standard for a sanitary collection system is that the entire system should be cleaned over a three-year period and televised over a five-year period. By maintaining the collection system in this manner, the City can actively monitor the system and identify deficiencies that can be addressed and corrected before they become a larger source of inflow and infiltration.

Reference: Colgate Dr Focused SSES Findings Summary

CLOSURE

The focused SSES study conducted during the spring of 2022 in the Colgate Dr sewershed area shows about 35% of the sewer pipes to have excessive I/I, 21% having moderate I/I and 43% have low I/I. The overarching I/I problem in the study area appears to be at MM-08, 10, 11, 14, 15, 17, and 20.

It has been a pleasure to complete this study for the City of Marietta. We would be happy to work with you to help further identify the sources of I/I and rehabilitate the sanitary sewer system. Please do not hesitate to contact us if you have any questions or if you need additional information.

Sincerely,

DLZ Ohio INC.



Gary D. Silcott Jr., PE, ENV SP
Director



Robert A. Fuller, PE
Project Engineer

Steve Elliott

From: Steve Elliott
Sent: Monday, February 1, 2021 10:49 AM
To: Jack.Knapp@epa.ohio.gov
Cc: Steve Elliott
Subject: RE: City of Marietta Wastewater Treatment Plant

Jack,

Not yet. If you recall I had requested more time to do this and the Optimization Report as I feel the changes in our plant blowers, diffusers, instruments, controls and air lines which are going to be renovated this year may make a difference in the outcome. I failed to receive a response to the requests which were made in 2020. I did place some funding in this year's budget for a Professional Engineering firm to help with this in 2021.

One thing I already know is that to place this plant in a contact stabilization mode will limit the amount of flow that we can successfully treat as the opening between aeration basin #1 and #2 is too small and creates a hydraulic restriction at high flows. I know from operating experience the best way to maximize flows and conserve treatment up to 12 mgd appears to be with a parallel flow mode through the activated sludge tanks rather than any form of series flow. I suspect the same with step feed option. Stantec Consulting did agree with this operating experience and witnessed the flow restrictions with series operation in high flows when they were involved with previous plant renovations. We have been using this parallel operational strategy with high flows and have no problems to date with it. Due to lack of loadings and lower than design flows we typically operate below 6.0 mgd flows with two aerations tanks in parallel mode. I do have an operational plan for high flows currently for my plant operators and am actively working with Pickering Associates on the development of a new plan operations and maintenance book.

Do I need to move forward more quickly on this? My thought process is that it is better for the City and the agency to evaluate and optimize once the aeration basin renovation is completed in order to have a relevant study and fully develop a good optimization plan. The current renovation construction project schedule calls for completion in September of 2021. I was planning to develop a scope for the study plan and optimization report early this summer so hopefully once the renovation is complete we will have chosen a firm and they are ready to move forward once construction is complete. I do need to get it completed within this year's budget cycle so I am motivated to move forward. I do want to make sure our funds are spent wisely and believe this is best if held until after we have the renovation so we have a much better plan and strategy based upon the equipment we will be using and not what is being replaced.

Stephen Elliott
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 45750
740-373-3858 extension 2
740-373-8214

From: Jack.Knapp@epa.ohio.gov <Jack.Knapp@epa.ohio.gov>
Sent: Monday, February 1, 2021 10:13 AM
To: Steve Elliott <steveelliott@mariettaoh.net>
Subject: RE: City of Marietta Wastewater Treatment Plant

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Hey Steve:

Did you guys develop the Study Plan Outlined in Part I.C.C.1?

From: Steve Elliott <steveelliott@mariettaoh.net>
Sent: Thursday, January 28, 2021 12:55 PM
To: Knapp, Jack <Jack.Knapp@epa.ohio.gov>
Cc: Steve Elliott <steveelliott@mariettaoh.net>
Subject: City of Marietta Wastewater Treatment Plant

Re: City of Marietta Wastewater Treatment Plant
OPD00016*SD
Washington County

Part I.B-Bypass Monitoring Limitations and Monitoring Requirements
Station OPD00016002 Plant Bypass Prior to Influent Wet Well

Dear Mr. Knapp,
A manhole monitoring system has been installed into this manhole and the information is now on the plant Wonderware SCADA system to meet the permit requirements. The attachment provides additional details. Due to the need to contract for professional engineering services, professional integration services and issues related to COVID 19 this project took longer than anticipated however is complete now. Please let me know if you require any additional information with regard to this matter.
Thank you,
Steve

Stephen Elliott
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 45750
740-373-3858 extension 2
740-373-8214

From: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Sent: Thursday, January 28, 2021 12:27 PM
To: Steve Elliott <steveelliott@mariettaoh.net>
Subject: FW: Manhole #9

Steve,
Attached is the letter from Pickering on MH-9 overflow completion. I added to Dave's original letter. He checked it and approved it. Look it over and if it will work for the EPA submission its finished. If we need to add something to it please send it back to me and I'll get with Dave and have it changed. Let me know either way.

Adam McKenzie
Electrician / Maintenance
City of Marietta WWTP
440 East Eighth Street
Marietta, OH 45750

740-373-3858 Ext. 101
740-373-8214 Fax
adam.mckenzie@mariettaoh.net

From: Dave Greathouse <dgreathouse@pickeringusa.com>
Sent: Thursday, January 28, 2021 11:00 AM
To: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Subject: RE: Manhole #9

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Adam,

Good job. You added the language that needed to be there! Thanks for covering up my weakness!

It looks great. I changed the red to black, and will attach it to this email..

Send it on and let me know if anything else needs changed.

Dave

Dave Greathouse
Sr. Controls System Engineer



Pickering Associates
11283 Emerson Ave.
Parkersburg, WV 26104
p: 304.464.5305 Ext. 1204 | 800.954.5305
m: 304.210.8539
f: 304.464.4428
e: dgreathouse@pickeringusa.com

www.pickeringusa.com



error please delete and notify the sender.

any attachments. If you have received this email in

From: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Sent: Thursday, January 28, 2021 10:21 AM
To: Dave Greathouse <dgreathouse@pickeringusa.com>
Subject: RE: Manhole #9

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Dave,

I have attached the description. My additions/modifications are in red. I believe this will work. Take a look change what needs to be changed. When your happy with it send it back to me and Ill send it to Steve. He may have some requests at that point. Thank You

Adam McKenzie
Electrician / Maintenance
City of Marietta WWTP
440 East Eighth Street
Marietta, OH 45750
740-373-3858 Ext. 101
740-373-8214 Fax
adammmckenzie@mariettaoh.net

From: Dave Greathouse <dgreathouse@pickeringusa.com>
Sent: Wednesday, January 27, 2021 1:28 PM
To: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Subject: RE: Manhole #9

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Adam,

I took a stab at the big picture description.... If you could mark this up to your satisfaction...

Thanks!

Dave

Dave Greathouse
Sr. Controls System Engineer



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m: 304.210.8539
f: 304.464.4428
e: dgreathouse@pickeringusa.com

www.pickeringusa.com



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any attachments. If you have received this email in

From: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Sent: Wednesday, January 27, 2021 10:51 AM
To: Dave Greathouse <dgreathouse@pickeringusa.com>
Subject: RE: Manhole #9

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Dave,

I don't think it needs to be too detailed. If you don't mind, send me what you can I'll add to it and send it back to you. That way it can all be on one official form.

Adam McKenzie
Electrician / Maintenance
City of Marietta WWTP
440 East Eighth Street
Marietta, OH 45750
740-373-3858 Ext. 101
740-373-8214 Fax
adamcmckenzie@mariettaoh.net

From: Dave Greathouse <dgreathouse@pickeringusa.com>
Sent: Wednesday, January 27, 2021 10:19 AM
To: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Subject: RE: Manhole #9

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Will do. Do we need a description of how the SCADA screens work? I do not have an understanding about the reports, I know what the PLC is collecting and acting on, but I do not know how the reports work. Maybe that is not needed at this level. I will leave that up to you. If you want that included, could you supply a short description? Otherwise, I will just include the alarms, and the tags that Todd is using.

Dave

Dave Greathouse
Sr. Controls System Engineer



Architects • Engineers • Surveyors

Pickering Associates
11283 Emerson Ave.
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f: 304.464.4428
e: dgreathouse@pickeringusa.com
www.pickeringusa.com



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error please delete and notify the sender.

From: Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Sent: Wednesday, January 27, 2021 10:14 AM
To: Dave Greathouse <dgreathouse@pickeringusa.com>
Cc: steveelliott@mariettaoh.net
Subject: RE: Manhole #9

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Dave,

Can you send me an official email on a Pickering letter head that sums up the job on MH-9. Steve is needing to report to the EPA that the job is complete. A brief description of what was installed and how it operates should be sufficient. Thank you

Adam McKenzie
Electrician / Maintenance
City of Marietta WWTP
440 East Eighth Street
Marietta, OH 45750
740-373-3858 Ext. 101
740-373-8214 Fax
adammckenzie@mariettaoh.net

From: Dave Greathouse <dgreathouse@pickeringusa.com>
Sent: Wednesday, January 27, 2021 9:59 AM
To: Todd Noel <tnoel@djeinc.com>; Adam McKenzie <AdamMcKenzie@mariettaoh.net>
Cc: Shawn Bishop <sbishop@pickeringusa.com>; Steve Elliott <steveelliott@mariettaoh.net>
Subject: RE: Manhole #9

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Thanks Todd!

Dave

Dave Greathouse
Sr. Controls System Engineer



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11283 Emerson Ave.
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m: 304.210.8539
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From: Todd Noel <tnoel@djeinc.com>
Sent: Wednesday, January 27, 2021 9:52 AM
To: Dave Greathouse <dgreathouse@pickeringusa.com>; Scott Steinel <adammckenzie@mariettaoh.net>
Cc: Shawn Bishop <sbishop@pickeringusa.com>; steveelliott@mariettaoh.net
Subject: RE: Manhole #9

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Dave,

I worked with Adam yesterday and today and I think all the loose ends are tied up for this project on the Wonderware end. Report looks accurate and screens have been modified to Adam's approval. Let me know if you need anything else from me.

Take Care,
Todd Noel
DJE

From: Dave Greathouse <dgreathouse@pickeringusa.com>
Sent: Monday, January 25, 2021 11:34 AM
To: Scott Steinel <adammckenzie@mariettaoh.net>; Todd Noel <tnoel@djeinc.com>
Cc: Shawn Bishop <sbishop@pickeringusa.com>; steveelliott@mariettaoh.net
Subject: Manhole #9

All,

Shawn and I found a bug in the logic that accumulates and handles the event hours and minutes. We think we have this corrected.

We also tested the SCADA communications to the PLC regarding those particular tags. We placed a number in each register. We then went to the control room and looked at the report on NODE1. The numbers appeared in the correct places. We initially tried to look at the report from the UV building but that node has apparently not been updated with the latest report screen.

The numbers in the registers are as follows: Current day event time totals: 03:04 (three hours, four minutes)
Previous day totals: 01:02 (one hour, 2 minutes)

After midnight tonight, the current day time should reset, and the previous day total: should become 03:04.

Let me know if this does not happen, we simulated this as best we could without causing overflow alarms.

Dave

Dave Greathouse
Sr. Controls System Engineer



Pickering Associates
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Parkersburg, WV 26104
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Ryan Boley

From: Steve Elliott
Sent: Wednesday, February 23, 2022 8:01 AM
To: 'Jack.Knapp@epa.ohio.gov'
Cc: Steve Elliott; Ryan Boley
Subject: Study Plan

City of Marietta Wastewater Treatment Plant, Washington County Ohio
OPD00016*SD

Mr. Knapp,

The City is attempting to take advantage of the weather and high river levels in order to conduct the plant stress testing. The most recent event we lost our UV system and were unable to use that event however another event appears to be approaching later this week according to the forecasts. We have however ran into a problem that I am uncertain how to avoid.

Our study plan called out for CBOD samples every six hours as well as other analysis and calculations. When we devised the Study Plan we were doing CBOD in our plant laboratory. We no longer do this and contract those analysis out. The BOD has a five day hold time as you are aware and then it is a five day work cycle. The contract lab will not do the analysis if collected on Fridays, Saturdays, Sundays or Mondays. Therefore the City would like to modify the Study Plan to omit the CBOD/BOD analysis. During the river influenced high flow events which would be in effect with the Study Plan it is likely the CBOD/BOD would be dilute to the large amount of river and rain water the plant would be processing.

The City would plan to observe the rest of the plan and would be collecting SVI, OUR, TSS and ammonia nitrogen samples which would hopefully be considered as sufficient indicators of treatment during high flow events. We would also continue to plan to supply calculated data as called out in the original Study Plan such as MCRT, Surface Overflow Rate, Solids Loading Rate, Detention Times, TSS loading and removal efficiency.

Please let me know if this is acceptable to the agency.

Furthermore I continue to remain concerned with placing the aeration system in a series mode with contact stabilization, and series flow mode as we are aware we experience hydraulic restrictions of flow between aeration basin #1 and #2 between 8-9 MGD and the most recent event last weekend we were experiencing sustained flows in the 12-MGD range. Operation in these modes may greatly increase sanitary sewer overflows or basements backups which we ultimately wish to deliberately avoid, not create. It may be interesting to compare the parallel flow and step feed modes as they may be less restricted hydraulically. Please verify that you wish us to proceed with what we perceive as a risk to the public health and environment with the series aeration flow mode and contact stabilization flow mode.

Thank you,
Steve

Stephen Elliott
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 45750
740-373-3858 extension 2

Ryan Boley

From: Steve Elliott
Sent: Wednesday, February 22, 2023 8:01 AM
To: 'Jack Knapp@opwrd.org';
Cc: Steve Elliott; Ryan Boley
Subject: Study Plan

City of Marietta Wastewater Treatment Plant, Washington County Ohio
OPW0018-20

Mr. Knapp,

The City is attempting to take advantage of the weather and high river levels in order to conduct the plant stress testing. The most recent event we lost our UV system and were unable to use that event however another event appears to be approaching later this week according to the forecasts. We have however run into a problem that I am uncertain how to avoid.

Our study plan called out for CBOD samples every six hours as well as other analysis and calculations. When we devised the study plan we were doing CBOD in our plant laboratory. We no longer do this and contact those analysis out. The BOD has a five day hold time as you are aware and then it is a five day work cycle. The contact job will not do the analysis it collected on Friday, Saturday, Sunday or Monday. Therefore the City would like to modify the study plan to omit the CBOD/BOD analysis. During the river influenced high flow events which would be in effect with the study plan it is likely the CBOD/BOD would be diluted to the large amount of river and rain water the plant would be processing.

The City would plan to observe the rest of the plan and would be collecting SVI, OUR, TSS and ammonia nitrogen samples which would potentially be considered as sufficient indicators of treatment during high flow events. We would also continue to plan to supply calculated data as called out in the original Study Plan such as MCHL, Surface Overflow Rate, Solids Loading Rate, Detention Time, TSS loading and removal efficiency.

Please let me know if this is acceptable to the agency.

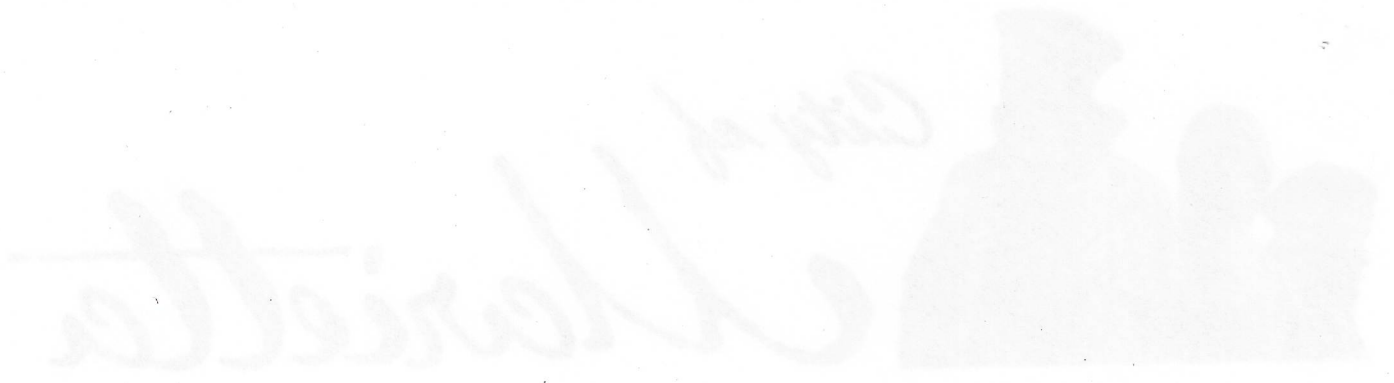
Furthermore I continue to remain concerned with placing the retention system in a series mode with contact stabilization and series flow mode as we are aware we experience hydraulic restrictions of flow between retention basin #2 and #3 between 5-9 MGD and the most recent event last weekend we were experiencing sustained flows in the 11-15 MGD range. Operation in these modes may greatly increase sanitary sewer overflows or basement backups which we ultimately wish to deliberately avoid, not create. It may be interesting to compare the parallel flow and step feed modes as they may be less restricted hydraulically. Please verify that you wish us to proceed with what we perceive as a risk to the public health and environment with the series retention flow mode and contact stabilization flow mode.

Thank you,
Steve

Stephen Elliott
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 43750
740-373-3828 extension 2



City of *Marietta*





September 17, 2020

Mr. Jack Knapp
OH EPA Div. of Surface Water
2195 Front Street
Logan, Ohio 43138

Re: City of Marietta Ohio, Washington County
Application No. OHOO25344; OPD00016*SD
Permit Part I. C, Schedule of Compliance
Section C. High Flow Treatment, 2. Optimization Report

Dear Mr. Knapp,

The City of Marietta would like to request a 12-month extension to the time frame for the Optimization Report referenced above. The original date is February 1, 2022 and the City would like to extend that to February 1, 2023. The Optimization Report is requesting the City to supply a report detailing the results of the Study Plan and the recommended implementation actions. Under separate correspondence the City is also requesting an extension of the time frame for the Study Plan.

The City is currently under contract with Pickering Associates and Kirk Brothers Construction for an Aeration Systems Upgrade Project. This project includes the replacement of the activated sludge aeration air blowers, controls, air piping and diffusers in the aeration basins with new improved and energy efficient equipment. This renovation is necessary as the existing buried air lines have holes in the piping allowing air to escape to the environment. The blowers were installed in 1987 and have been rebuilt once already and are energy inefficient with current standards and the diffusers are also energy inefficient and will be replaced with new fine bubble diffusers to enhance energy and treatment efficiency. This project is scheduled for completion by July 21, 2021 however it has been the past experience of the City that these projects are rarely completed in time and once completed this will be in the dry season of the year which is not best suited to evaluation during high flow events.

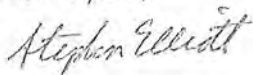
The City does not believe it is in the best interest of the agency or the City to submit an Optimization Report on aeration until the renovation is complete as that report would not likely be representative of our final product and its full potential. In

addition, due to construction and renovation it will not be possible to switch from conventional activated sludge treatment to change to step feed or contact stabilization from conventional treatment at all times to complete the study plan during construction on time as one tank will be out of service while being renovated during the project schedule. The study plan is required prior to the Optimization Report and the City would like more time to provide accurate data representative of the plant operations.

The extension should allow the project to be completed and allow more sufficient time for the study and optimization report with the newly renovated equipment. This will be more likely to be representative of the system full potential under hydraulic stress under different modes of operation than if the study is completed prior to the renovation.

Please contact me with any questions or let me know if I need to direct this request to someone else. The City would appreciate the understanding of the agency in this request to allow more a more representative study to be performed and submitted.

Thank you,



Stephen Elliott
Wastewater Superintendent
WW4-1011000-04

Cc: Steve Wetz, Director of Public Safety and Service
Joe Tucker, Marietta City Engineer
Paul Bertram III, Marietta Law Director
Tina Lones, Engineering Office Manager
File



City of Marietta WWTP
Washington County, Ohio
OPD00016*SD

STUDY PLAN

In Part 1.C.C.1. of the permit OPD00016*SD the City is to submit a study plan with an objective of identifying operational modes for optimizing hydraulic capacity during high flow events. At a minimum the City is to consider using stress tests to evaluate aeration tank adjustments for conventional activated sludge, step feed aeration and contact stabilization modes of operation during high flow events.

The City plans to conduct a desk top analysis of the hydraulic capacity of the final clarifiers and the activated sludge process. There will be a desktop analysis of the biological capacity of the aeration tanks also. This information will be reviewed to determine if there are any existing systems limitations.

For the purposes of this study plan determination of a failure rate is necessary. The failure rate for total suspended solids will be set at 40.5 mg/L concentration or 614 kg/day loading. The failure rate for CBOD5 will be set at 35.9 mg/L concentration based or 544 kg/day loading based. The failure rate for fecal coliform will be set for 2000 colonies per 100 mL. The failure rate for e. coli will be set for 284 colonies per 100 mL. The City will either do fecal coliform or e. coli depending upon the time of the year and the parameter that is required in the permit for that time of year. Failure rates are based upon the NPDES permit weekly averages since anything above these values would result in NPDES permit limit exceedances. Additional failure rates will be less than 85% removal efficiency for TSS or CBOD5.

Currently on an average day the City operates below the average daily design flow. In order to optimize treatment the City under current flow conditions utilizes two aeration tanks in parallel mode and only one secondary clarifier. The desk top analysis will explain why the City chooses to operate in this manner. As the purpose of this study plan is to optimize hydraulic capacity during high flow events, the flow during the study needs to be a sustained, not peak flow, of 6-mgd. When the flow exceeds 6.0 mgd the City standard operating procedure is to place the third

aeration tank and the second final clarifier on line with the aeration tanks in a parallel flow mode. Flow is a major consideration of this study.

Operational considerations for this study are based upon the known operational modes. For this study plan the City plans to evaluate high flow treatment for conventional activated sludge with aeration tanks 1, 2 and 3 in parallel mode, conventional activated sludge with aeration tanks 1, 2 and 3 in series mode, step feed activated sludge and contact stabilization activated sludge modes.

In addition to the parameters being used to determine failure rate the City will be monitoring 30- minute settleability, SVI, OUR and ammonia nitrogen. These will be done every 6-hours during the study for each operational mode of operation during each trial mode. The City will utilize this data to further evaluate the effectiveness of each mode under study.

The City also plans to use various collected data in calculations to further quantify results or determine effectiveness of each mode of operation studied. The City plans to calculate and track MCRT, Surface Overflow Rate, Solids Loading Rate, Detention Times, total suspended solids and biochemical oxidation demand loadings and removal efficiencies.

Once each mode of operation has been studied the City will evaluate the results by comparison of the actual data and consider the desktop analysis. A report will then be sent to Ohio EPA documenting the study.

IMPLEMENTATION

Primary influent flows must reach 6.0-mgd prior to implementation of the study protocols. Once the influent flow reaches 6.0-MGD, both final clarifiers need placed in operation. All aeration basins must also be placed into operation as well as all three primary sedimentation basins.

Once all tanks and processes are fully on line the study may begin. The time and date is to be notated and the sampling is to begin and repeated every six hours until the high flow event ends with flows below the 6.0-MGD amount. There will be chain of custody forms in the lab and the sample bottles should be prepared in advance by the Chemist.

The plant operators are to obtain grab samples of the analytes. The date and time of the grab samples needs to be marked on the sample bottles and recorded on the chain of custody forms. It is very important to note that this is separate of all other routine sampling and it is for the purpose of the study so there is no confusion.

Plant operators are to grab the samples and do the 30-minute settleability, the SVI and the OUR (when the Chemist is absent). The Chemist is to analyze the CBOD, Ammonia Nitrogen, TSS and the OUR. Samples are to be preserved as appropriate and stored as per the requirements of Standard Methods. The plant operators are to grab samples every six hours until the flows drop below 6.0-MGD which is when the study ends. The time the study ends needs to be properly documented.

All of these samples are to be separate of our routine daily sampling which is to continue as normal during the study plan timeframe.

On the chain of custody forms there are some calculations to be completed by the plant operators. The formulas are included on the form so it is clear what needs to be done. The same form may be used for all phases of the Study Plan and each phase is to be noted in the appropriate location on all forms.

Primary Settling Tank Operation 3 Tanks In Service

-Primary Settling Tank #1, #2, & #3 drain valves need to be shut before opening Influent Valves. These valves require a valve key to open and close them as they are located in the ground or under walkway grates. Primary Settling Tank #1 drain valve is located at the effluent end of the primary settling tank #1 next to the walkway grate. Primary Settling Tank #2 drain valve is located at the effluent end of the primary settling tank #2 under walkway grate. The grate has a hole cut in it to allow access to this valve without removing the grate. Primary Settling Tank #3 drain valve is located at the effluent end of the primary settling tank #3 in the grass area. See pictures below of the location of these three valves.

Primary Settling Tank #1
Drain Valve



Primary Settling Tank #2
Drain Valve



Primary Settling Tank #3
Drain Valve



-Primary Settling Tank Influent Valves are shown in pictures below. All three tanks have two influent valves. Primary Tank #1 & #2 valves are in the basement of Bldg. L (Admin. Bldg.). Primary Tank #3 valves are located in the ground between the pre aeration tank and the Influent side of Primary Tank #3. Primary Tank #3 requires a valve key to open and close them. When putting a Primary tank in service both valves should be opened to that tank.

Primary Settling Tank #1 & #2
Influent Valves



Primary Settling Tank #3
Influent Valves



Primary Settling Tank Longitudinal/Cross Collector Operation

-Once the Primary Settling tanks have reached full capacity the Longitudinal/Cross Collectors can be turned to the on position. These controls are located at the influent end of the Primary Settling tanks by the Raw Sludge Pits.

Splitter Box Operation

3 Aeration Tanks In Service

Series Flow Mode In Aeration

Series Flow Mode gates to be opened and closed on Splitter Box are listed below. G6 will be closed but will over flow to 30 In bypass line during high flow. This will allow for Aeration #1 & #2 to retain as much activated sludge as possible and allow the "rain water" to flow thru Aeration #3 without removing solids from the Aeration Tanks.

OPEN CLOSED

G4	G5
	G6

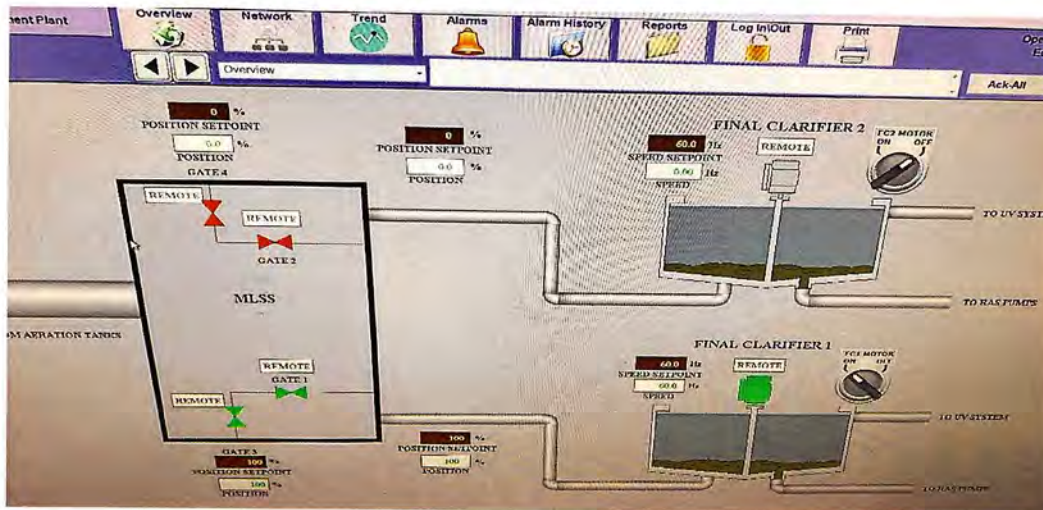


Final Clarifiers Operation

2 Tanks in Service

On SCADA select Overview at top of page. Then select MLS (Mixed Liquor Splitter). Gate 1 & 3 feed from the Aeration Tanks to Final Clarifier # 1. To put Final Clarifier # 1 in service gate 1 & 3 need opened to 100%. Gate 2 & 4 feed from the Aeration Tanks to Final Clarifier # 2. To put Final Clarifier # 2 in service gate 2 & 4 need opened to 100%.

Once the Final Clarifiers are in service the Skimmer Arm/Tow-Bro needs turned on. The Skimmer Arm is used to remove the floating solids such as scum and grease from the secondary clarifier. The Tow- Bro provides quick removal of activated sludge settling to the bottom of the Final Clarifier. FC1 motor operates Final Clarifier #1 and FC2 operates Final Clarifier #2.



Aeration Tank Operation

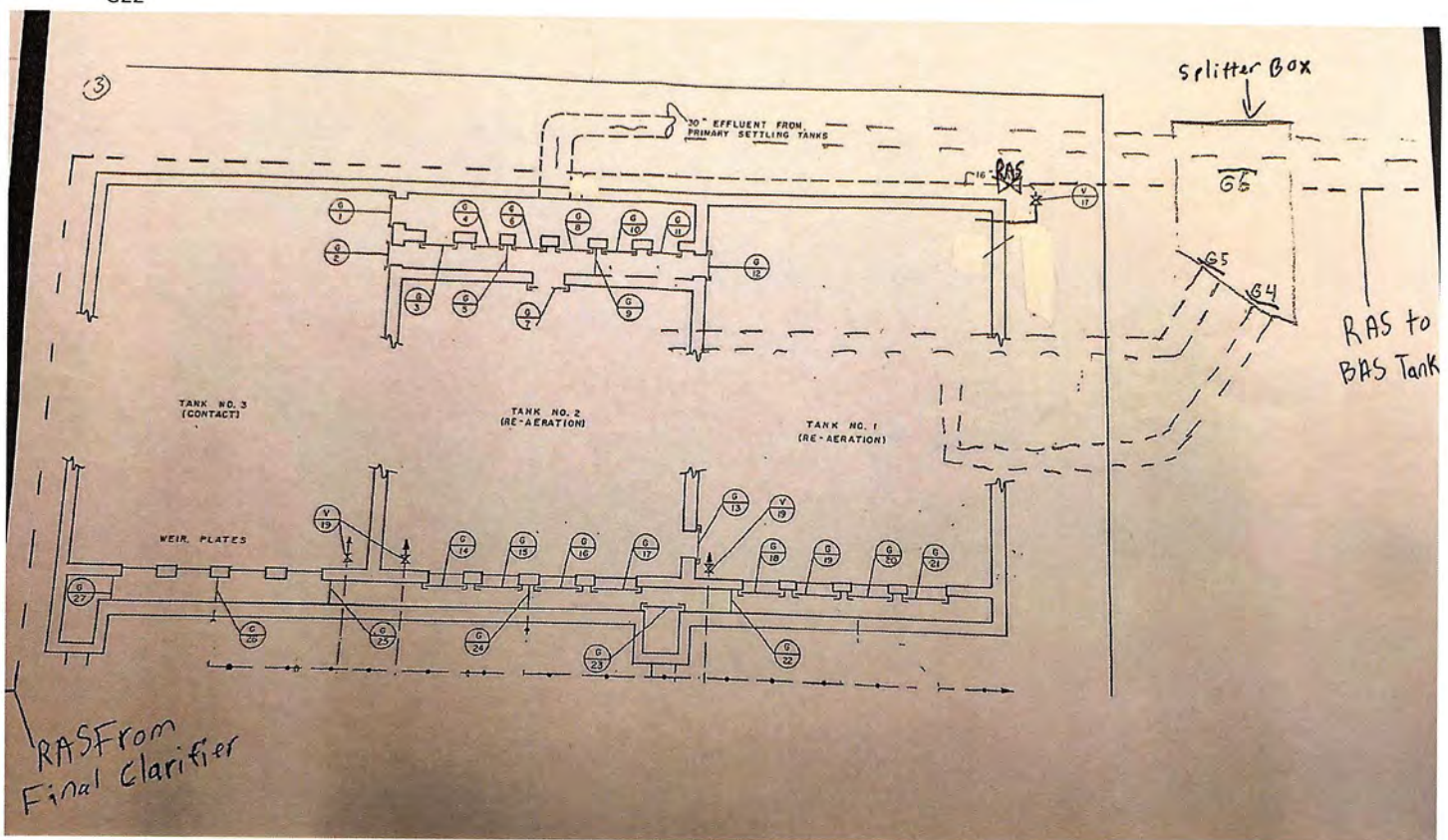
3 Tanks In Service

Series Flow Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN CLOSED

G1	G4
G2	G6
G3	G8
G5	G10
G7	G11
G9	G14
G12	G15
G13	G16
G23	G17
G24	G18
G25	G19
G26	G20
G27	G21
	G22



Aeration Tank Sampling

Series Flow Mode

Series Flow Mode- Samples are taken at effluent end of each Aeration Tank #3.

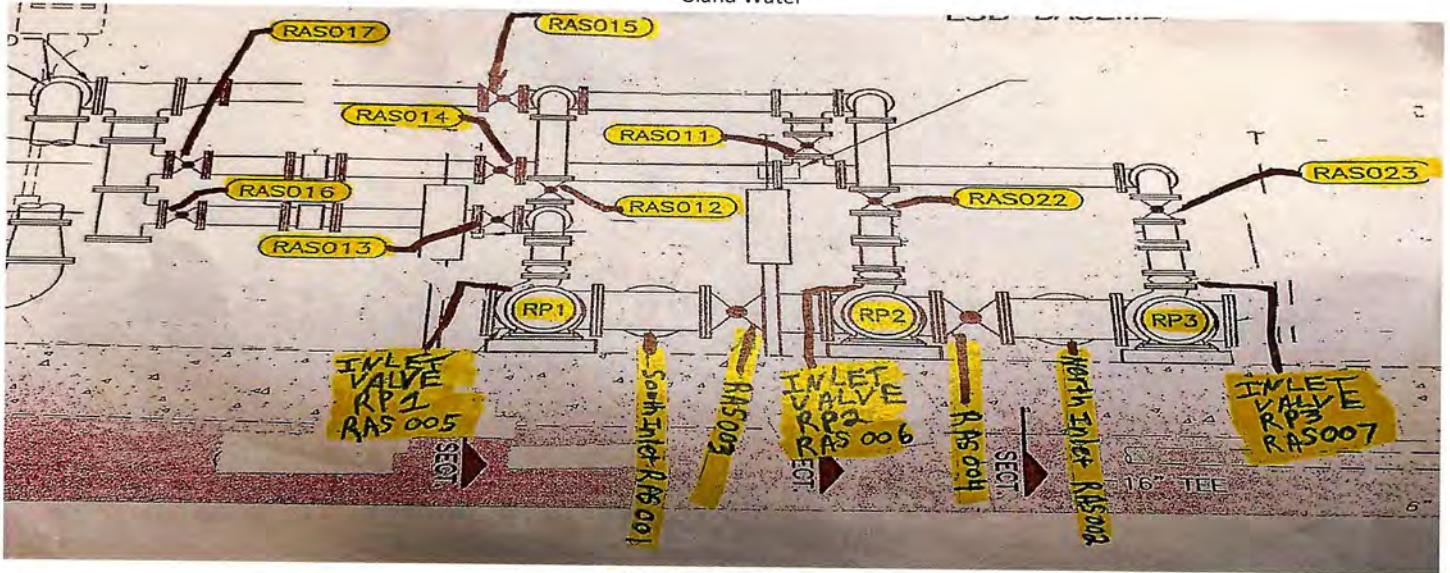
RAS Pump Valve Positions 2 Final Clarifiers in Service

Final Clarifier #2 In Operation

Open Valves	Shut Valves
001	003
005	012
013	015
016	
Gland Water	

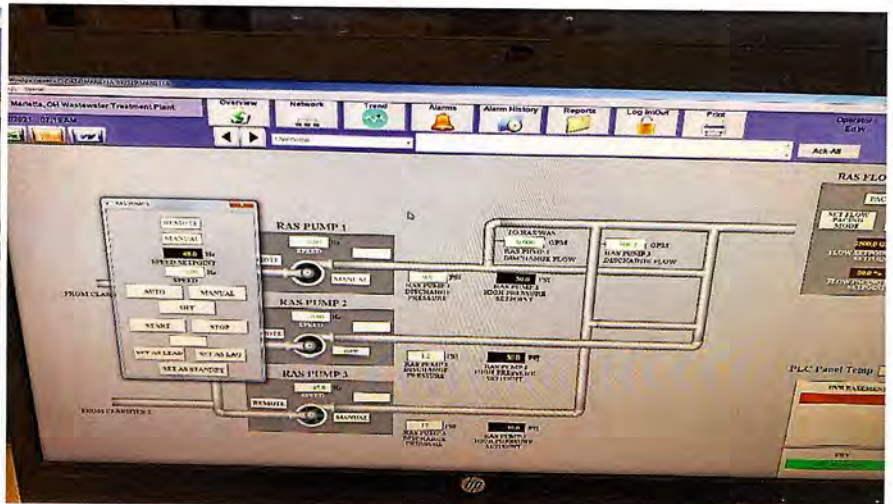
Final Clarifier #1 In Operation

Open Valves	Shut Valves
002	004
007	011
014	015
017	016
023	
Gland Water	



RAS Pump Operations 2 Final Clarifiers In Service

Once RAS valves are in proper position RAS Pump #1 & RAS Pump #3 can be put in service. During normal operation one of these RAS pumps will already be in service. To put the other RAS put in service on SCADA screen select Overview then select UVB. Once on the UVB screen all 3 RAS pumps will be shown. Select remote and manual on desired pump to put in service then change the Hz to desired speed. Then select start and the pump will turn green/rotate to show the pump is running. It should be noted that when running two RAS pumps the Hz will need adjusted down on the RAS pump that is already in service and the Hz will need to be turned up on the RAS pump being put into service to overcome the head pressure and allow the RAS pump being started to equalize with the RAS pump that's already in service. It should also be noted that the RAS pumps have a tendency to become air locked and the air may need released when starting the RAS pump. The valve to bleed the RAS pumps are under the discharge lines of the RAS pumps over the drain in the floor. Once both pumps are running the Hz can be adjusted along with the RAS valve (ACS-002) to achieve desired GPM pumping rate. See pictures below of mentioned SCADA screens.



Primary Settling Tank Operation 3 Tanks In Service

-Primary Settling Tank #1, #2, & #3 drain valves need to be shut before opening Influent Valves. These valves require a valve key to open and close them as they are located in the ground or under walkway grates. Primary Settling Tank #1 drain valve is located at the effluent end of the primary settling tank #1 next to the walkway grate. Primary Settling Tank #2 drain valve is located at the effluent end of the primary settling tank #2 under walkway grate. The grate has a hole cut in it to allow access to this valve without removing the grate. Primary Settling Tank #3 drain valve is located at the effluent end of the primary settling tank #3 in the grass area. See pictures below of the location of these three valves.

Primary Settling Tank #1

Drain Valve



Primary Settling Tank #2

Drain Valve



Primary Settling Tank #3

Drain Valve



-Primary Settling Tank Influent Valves are shown in pictures below. All three tanks have two influent valves. Primary Tank #1 & #2 valves are in the basement of Bldg. L (Admin. Bldg.). Primary Tank #3 valves are located in the ground between the pre aeration tank and the Influent side of Primary Tank #3. Primary Tank #3 requires a valve key to open and close them. When putting a Primary tank in service both valves should be opened to that tank.

Primary Settling Tank #1 & #2

Influent Valves



Primary Settling Tank #3

Influent Valves



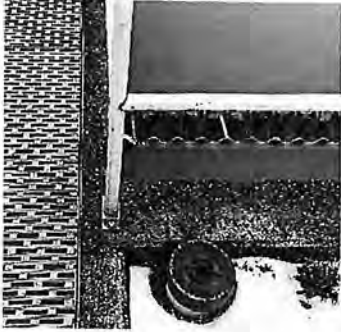
Primary Settling Tank Longitudinal/Cross Collector Operation

-Once the Primary Settling tanks have reached full capacity the Longitudinal/Cross Collectors can be turned to the on position. These controls are located at the influent end of the Primary Settling tanks by the Raw Sludge Pits.

Primary Settling Tank Operation 3 Tanks In Service

-Primary Settling Tank #1, #2, & #3 drain valves need to be shut before opening Influent Valves. These valves require a valve key to open and close them as they are located in the ground or under walkway grates. Primary Settling Tank #1 drain valve is located at the effluent end of the primary settling tank #1 next to the walkway grate. Primary Settling Tank #2 drain valve is located at the effluent end of the primary settling tank #2 under walkway grate. The grate has a hole cut in it to allow access to this valve without removing the grate. Primary Settling Tank #3 drain valve is located at the effluent end of the primary settling tank #3 in the grass area. See pictures below of the location of these three valves.

Primary Settling Tank #1
Drain Valve



Primary Settling Tank #2
Drain Valve



Primary Settling Tank #3
Drain Valve



-Primary Settling Tank Influent Valves are shown in pictures below. All three tanks have two influent valves. Primary Tank #1 & #2 valves are in the basement of Bldg. L (Admin. Bldg.). Primary Tank #3 valves are located in the ground between the pre aeration tank and the Influent side of Primary Tank #3. Primary Tank #3 requires a valve key to open and close them. When putting a Primary tank in service both valves should be opened to that tank.

Primary Settling Tank #1 & #2
Influent Valves



Primary Settling Tank #3
Influent Valves



Primary Settling Tank Longitudinal/Cross Collector Operation

-Once the Primary Settling tanks have reached full capacity the Longitudinal/Cross Collectors can be turned to the on position. These controls are located at the influent end of the Primary Settling tanks by the Raw Sludge Pits.

Study Plan 2021

Mode: _____
 Date: _____
 Start Time: _____
 End Time: _____

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L ml/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:										
Time Sample Taken :										
Date Analyzed:										
Result:										

	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day
Result:								

Flow in mgd needed at the time of each sample for loading rates.

MCRT Formula=

(Aeration Tank Vol. MG + Final Clarifier Vol. MG)
 (Was MG x RAS mg/l x 8.34 lb/gal) + (Eff MG x l

Detention Time Formula = hr

(Tank Vol. ft³) (7.48 gal/ ft³) (24hrs/day)
 Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =

Flow mgd x TSS mg/l x 8.34 lb/gal
 3.14 x radius, ft²

Surface Overflow Rate= gpd/sqft

Flow, gpd
 3.14 x radius, ft²

Final Clarifier

Organic loading rate= lbs/day BOD/cuft

Flow mgd x CBOD mg/l x 8.34

3.14 x radius, ft² x depth, ft x 7.48 gal/cuft

So
Flow

- Need COC'S for
NH3 to allow way

- Need TSS, MLSS
Bottle

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

nk Volumes

3 MG Final Clarifier #1= .670 MG

3 MG #2= .670 MG

#3= .513 MG

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____

Samples - TSS \$35
NH3 \$35
CBOD \$35

- Need PO for Micro

- COC + Bottles done by
Chris

email Michael for
Bottles

• BOD's can't sample
on Fri Sat or Sun due to
5 day analysis time

Worth noting as well that the study does not begin until all
tanks are full and online. Not when we are over 6 MGD.

- Order of study plan

- Parallel - finish over

Step feed - switch to parallel Tues or Wed.

Series Mode

Contact Stabilization

WAS: .036883
 Ebb: 6.866 mgd
 Study Plan 2021

Mode: Parallel

Date: 2-28-21

Start Time: 1100

End Time: 0000

Flow: 6.732 mgd int

2FA in service

AT in service

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L ml/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:	68	X	X	2450	X	190 100	8900	8	X	X
Time Sample Taken:										
Date Analyzed:										
Result:										

	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day
Result:								

MCRT Formula=

(Aeration Tank Vol. MG + Final Clarifier Vol. MG) x MLSS mg/l x 8.34 lb/gal
 (Was MG x RASS mg/l x 8.34 lb/gal) + (Eff MG x EFFSS mg/l x 8.34 lb/gal)

Detention Time Formula = hr

(Tank Vol. ft³) (7.48 gal/ ft³) (24hrs/day)
 Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =
 Flow mgd x TSS mg/l x 8.34 lb/gal
 3.14 x radius, ft²

Aeration

Solids Loading, lbs/day/ft² =
 Flow mgd x TSS mg/l x 8.34 lb/gal
 length, ft x width, ft

Surface Overflow Rate= gpd/sqft

Flow, gpd
 3.14 x radius, ft²

Final Clarifier

Organic loading rate= lbs/day BOD/cuft
 Flow mgd x CBOD mg/l x 8.34
 3.14 x radius, ft² x depth, ft x 7.48 gal/cuft

Aeration

Organic Loading rate=lb/dayBOD
 Flow mgd x CBOD mg/l x8.34lb/gal
 length, ft x width, ft x depth, ft x7.48 gal/cuft

Tank Volumes

Aeration Tank #1= .513 MG Final Clarifier #1= .670 MG
 #2= .513 MG #2= .670 MG
 #3= .513 MG

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____
 Signature: _____ Date: _____

Flow: 8.99 Lrt
WWS: 028806

Study Plan 2021

Mode: parallel
Date: 3-1-21
Start Time: 0000
End Time: 0000

Flow: 8.99 Lrt

2 FC in service

2 AT in service

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L ml/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:	40	19.5	X	2050	6	200 82	13500	2	.65	X
Time Sample Taken :										
Date Analyzed:										
Result:										

	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day
Result:								

MCRT Formula=

(Aeration Tank Vol. MG + Final Clarifier Vol. MG) x MLSS mg/l x 8.34 lb/gal
(Was MG x RASS mg/l x 8.34 lb/gal) + (Eff MG x EFFSS mg/l x 8.34 lb/gal)

Detention Time Formula = hr

(Tank Vol. ft³) (7.48 gal/ ft³) (24hrs/day)
Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =
Flow mgd x TSS mg/l x 8.34 lb/gal
3.14 x radius, ft²

Aeration

Solids Loading, lbs/day/ft² =
Flow mgd x TSS mg/l x 8.34 lb/gal
length, ft x width, ft

Surface Overflow Rate= gpd/sqft

Flow, gpd
3.14 x radius, ft²

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

Final Clarifier

Organic loading rate= lbs/day BOD/cuft
Flow mgd x CBOD mg/l x 8.34
3.14 x radius, ft² x depth, ft x 7.48 gal/cuft

Aeration

Organic Loading rate=lb/dayBOD
Flow mgd x CBOD mg/l x 8.34lb/gal
length, ft x width, ft x depth, ft x 7.48 gal/cuft

Tank Volumes

Aeration Tank #1= .513 MG Final Clarifier #1= .670 MG
#2= .513 MG #2= .670 MG
#3= .513 MG

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____

WFL: 103499/
 EFL: 10.461

Study Plan 2021

HRPS in summer 1270
 RL = 31.5 ft

Mode: Parallel
 Date: 3-2-21
 Start Time: 0000
 End Time: 0000

Flow: 10-337

2 FC 3 AT in.

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L ml/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:	32	42.5	X	2000	4	140 70	11950	2	.1	X
Time Sample Taken :										
Date Analyzed:										
Result:										

	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day
Result:								

MCRT Formula=

(Aeration Tank Vol. MG + Final Clarifier Vol. MG) x MLSS mg/l x 8.34 lb/gal
 (Was MG x RAS mg/l x 8.34 lb/gal) + (Eff MG x EFFSS mg/l x 8.34 lb/gal)

Detention Time Formula = hr

(Tank Vol. ft³) (7.48 gal/ ft³) (24hrs/day)
 Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =
 Flow mgd x TSS mg/l x 8.34 lb/gal
 3.14 x radius, ft²

Aeration

Solids Loading, lbs/day/ft² =
 Flow mgd x TSS mg/l x 8.34 lb/gal
 length, ft x width, ft

Surface Overflow Rate= gpd/sqft

Flow, gpd
 3.14 x radius, ft²

Final Clarifier

Organic loading rate= lbs/day BOD/cuft
 Flow mgd x CBOD mg/l x 8.34
 3.14 x radius, ft² x depth, ft x 7.48 gal/cuft

Aeration

Organic Loading rate=lb/dayBOD
 Flow mgd x CBOD mg/l x 8.34lb/gal
 length, ft x width, ft x depth, ft x 7.48 gal/cuft

Tank Volumes

Aeration Tank #1= .513 MG Final Clarifier #1= .670 MG
 #2= .513 MG #2= .670 MG
 #3= .513 MG

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____

Mode: panels
 Date: 3-3-21
 Start Time: 0000
 End Time: 0000

W45. 040000
 EPR: 10.600

Study Plan 2021

005
 HRP5 service 1230
 power lead 30.93 ft

Flaw: 10-373
 2 FC + 3 AT in service

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L mL/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:	12	7.5	AE	3840	8	100 26	1440	3	.09	AE
Time Sample Taken :										
Date Analyzed:										
Result:										
	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day		
Result:										

MCRT Formula=

$(\text{Aeration Tank Vol. MG} + \text{Final Clarifier Vol. MG}) \times \text{MLSS mg/l} \times 8.34 \text{ lb/gal}$
 $(\text{Was MG} \times \text{RAS mg/l} \times 8.34 \text{ lb/gal}) + (\text{Eff MG} \times \text{EFFSS mg/l} \times 8.34 \text{ lb/gal})$

Detention Time Formula = hr

$(\text{Tank Vol. ft}^3) (7.48 \text{ gal/ft}^3) (24\text{hrs/day})$
 Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =

$\text{Flow mgd} \times \text{TSS mg/l} \times 8.34 \text{ lb/gal}$
 $3.14 \times \text{radius, ft}^2$

Aeration

Solids Loading, lbs/day/ft² =

$\text{Flow mgd} \times \text{TSS mg/l} \times 8.34 \text{ lb/gal}$
 length, ft x width, ft

Surface Overflow Rate= gpd/sqft

Flow, gpd

$3.14 \times \text{radius, ft}^2$

Final Clarifier

Organic loading rate= lbs/day BOD/cuft

Flow mgd x CBOD mg/l x 8.34

$3.14 \times \text{radius, ft}^2 \times \text{depth, ft} \times 7.48 \text{ gal/cuft}$

Aeration

Organic Loading rate=lb/dayBOD

Flow mgd x CBOD mg/l x 8.34lb/gal

length, ft x width, ft x depth, ft x 7.48 gal/cuft

Tank Volumes

Aeration Tank #1= .513 MG

#2= .513 MG

#3= .513 MG

Final Clarifier #1= .670 MG

#2= .670 MG

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

WAS: .04000e
 Ebb: 3.618

Study Plan 2021

Mode: Parallel

Date: 3-4-21

Start Time: 0000

End Time: 0000

Flow: 3.232

1-FC

2#T in series

	PE TSS mg/l	PE NH3 mg/l	PE CBOD mg/l	Aeration MLSS mg/l	Aeration OUR: mg/l O2/per hr	Aeration 30Min./SVI ml/L mL/g	RAS TSS mg/l	FE TSS mg/l	FE NH3 mg/l	FE CBOD mg/l
Date of Sample:	16	7	92.5	2960	28	180	11400	2	.36	AE
Time Sample Taken :										
Date Analyzed:										
Result:										

	MCRT: Days	Final Clarifier SOR: gpd/sqft	Aeration Detention Time: Hr	Final Clarifier Detention Time: Hr	TSS Loading Aeration: lbs/day	CBOD Loading Aeration: lbs/day	TSS Loading Final Clarifier: lbs/day	CBOD Loading Final Clarifier: lbs/day
Result:								

MCRT Formula=

$(\text{Aeration Tank Vol. MG} + \text{Final Clarifier Vol. MG}) \times \text{MLSS mg/l} \times 8.34 \text{ lb/gal}$
 $(\text{Was MG} \times \text{RAS mg/l} \times 8.34 \text{ lb/gal}) + (\text{Eff MG} \times \text{EFFSS mg/l} \times 8.34 \text{ lb/gal})$

Detention Time Formula = hr

$(\text{Tank Vol. ft}^3) (7.48 \text{ gal/ft}^3) (24\text{hrs/day})$
 Flow (gpd)

Final Clarifier

Solids Loading, lbs/day/ft² =

$\text{Flow mgd} \times \text{TSS mg/l} \times 8.34 \text{ lb/gal}$
 $3.14 \times \text{radius, ft}^2$

Aeration

Solids Loading, lbs/day/ft² =

$\text{Flow mgd} \times \text{TSS mg/l} \times 8.34 \text{ lb/gal}$
 length, ft x width, ft

Surface Overflow Rate= gpd/sqft

Flow, gpd
 $3.14 \times \text{radius, ft}^2$

Final Clarifier

Organic loading rate= lbs/day BOD/cuft

$\text{Flow mgd} \times \text{CBOD mg/l} \times 8.34$
 $3.14 \times \text{radius, ft}^2 \times \text{depth, ft} \times 7.48 \text{ gal/cuft}$

Aeration

Organic Loading rate=lb/dayBOD

$\text{Flow mgd} \times \text{CBOD mg/l} \times 8.34 \text{ lb/gal}$
 length, ft x width, ft x depth, ft x 7.48 gal/cuft

Tank Volumes

Aeration Tank #1= .513 MG Final Clarifier #1= .670 MG
 #2= .513 MG #2= .670 MG
 #3= .513 MG

Min.	1000 m/l	50/50
2		
5		
10		
15		
20		
25		
30		
40		
50		
60		
120		
180		

"I certify under the penalty of law that the information submitted is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____
Signature: _____	Date: _____

Splitter Box Operation 3 Aeration Tanks In Service Parallel Mode In Aeration Tanks

Gates to be opened on Splitter Box are listed below. Equalize flow to Aeration Tanks by adjusting these valves open or closed to assure equal flow to all 3 Aerations Tanks.

OPEN CLOSED

G4 None

G5

G6

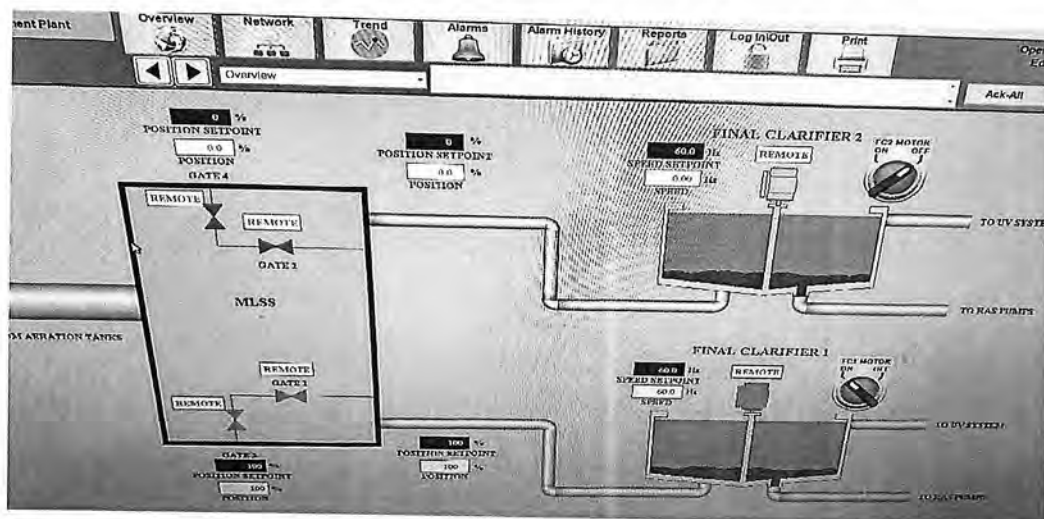


Final Clarifiers Operation

2 Tanks in Service

On SCADA select Overview at top of page. Then select MLS (Mixed Liquor Splitter). Gate 1 & 3 feed from the Aeration Tanks to Final Clarifier # 1. To put Final Clarifier # 1 in service gate 1 & 3 need opened to 100%. Gate 2 & 4 feed from the Aeration Tanks to Final Clarifier # 2. To put Final Clarifier # 2 in service gate 2 & 4 need opened to 100%.

Once the Final Clarifiers are in service the Skimmer Arm/Tow-Bro needs turned on. The Skimmer Arm is used to remove the floating solids such as scum and grease from the secondary clarifier. The Tow- Bro provides quick removal of activated sludge settling to the bottom of the Final Clarifier. FC1 motor operates Final Clarifier #1 and FC2 operates Final Clarifier #2.



Aeration Tank Operation

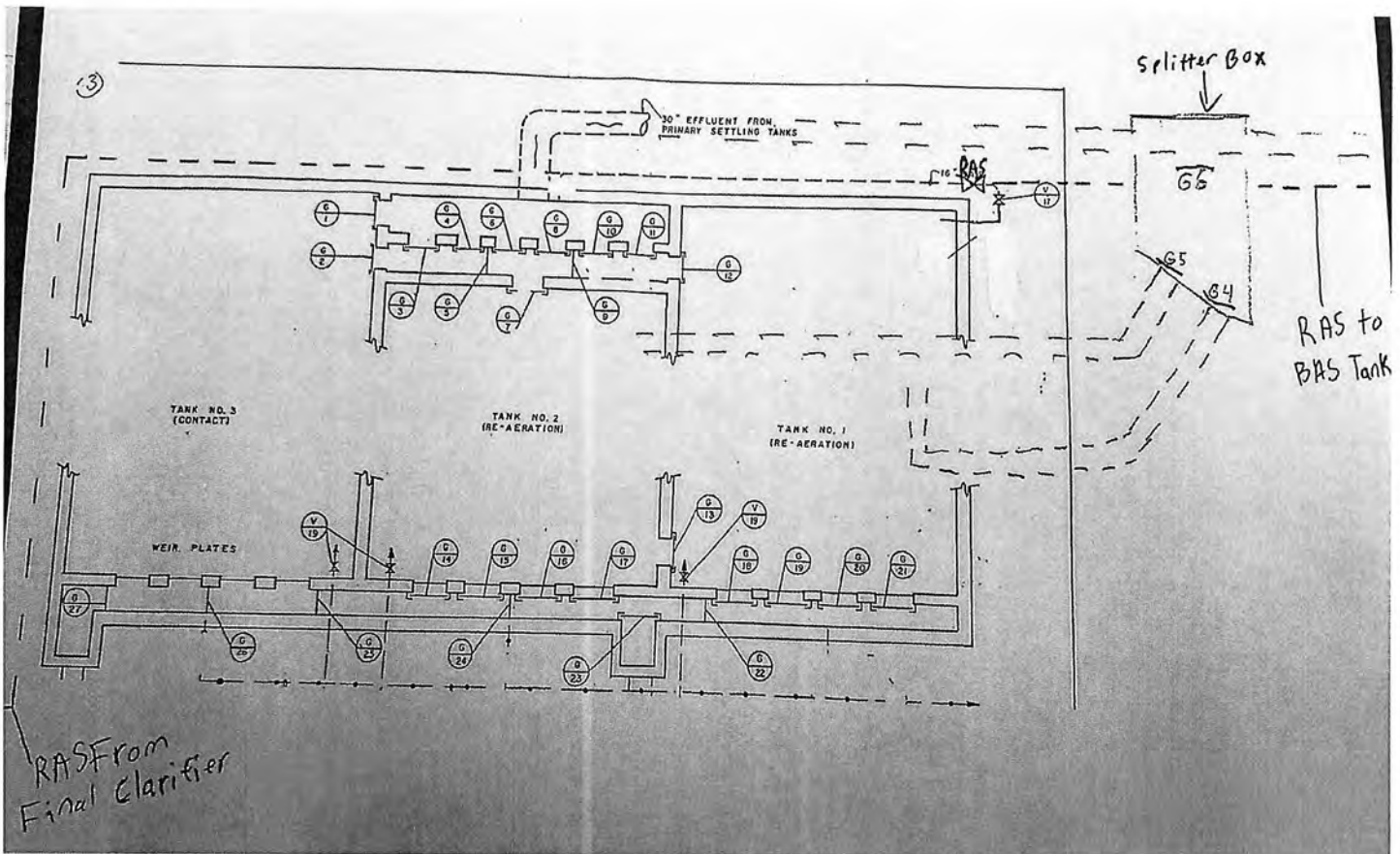
3 Tanks In Service

Parallel Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN CLOSED

G1	G2
G5	G3
G7	G4
G9	G6
G14	G8
G15	G10
G16	G11
G17	G12
G18	G13
G19	
G20	
G21	
G22	
G23	
G24	
G25	
G26	
G27	



Aeration Tank Sampling

Parallel Flow Mode

Parallel Flow Mode- Individual grab samples taken at effluent end of each Aeration Tank and composited together to make one sample.

RAS Pump Valve Positions 2 Final Clarifiers in Service

Final Clarifier #2 In Operation

Open Valves Shut Valves

001	003
005	012
013	015
016	

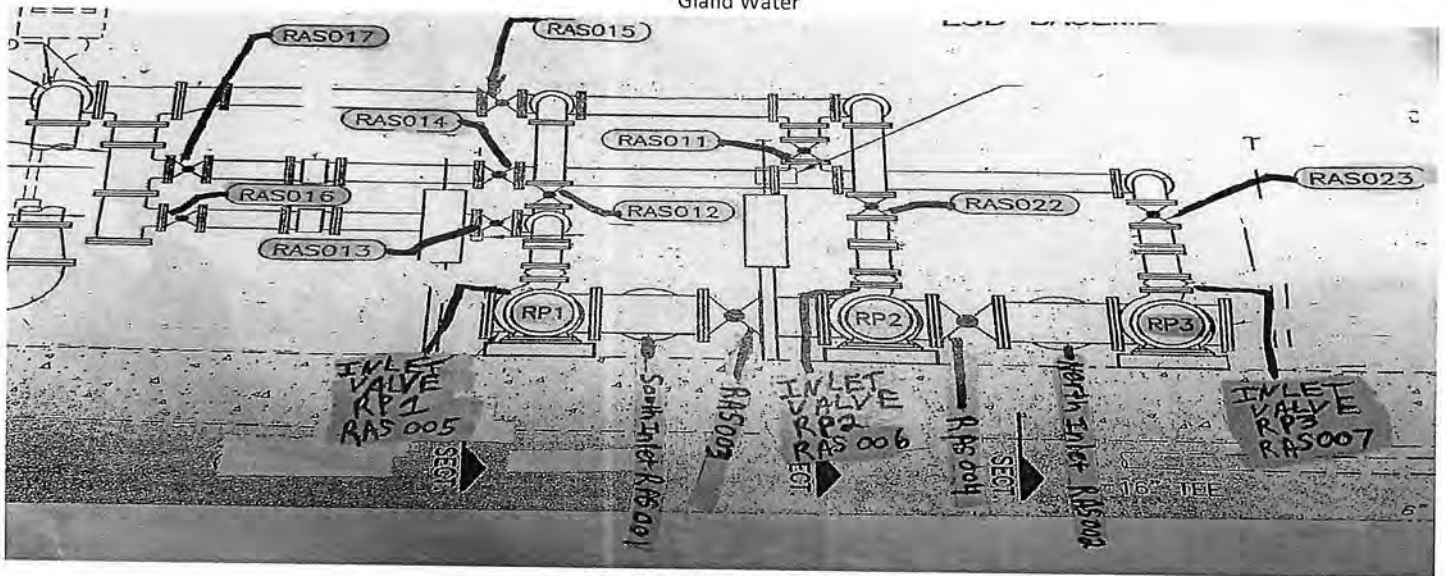
Gland Water

Final Clarifier #1 In Operation

Open Valves Shut Valves

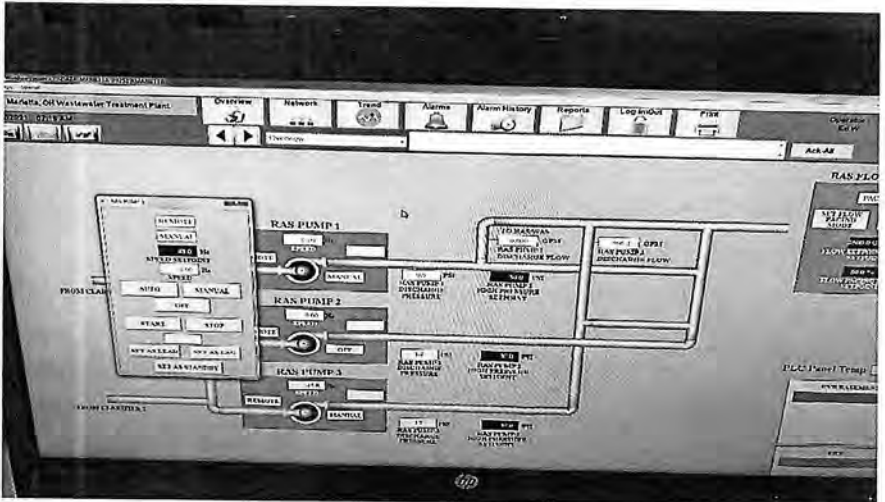
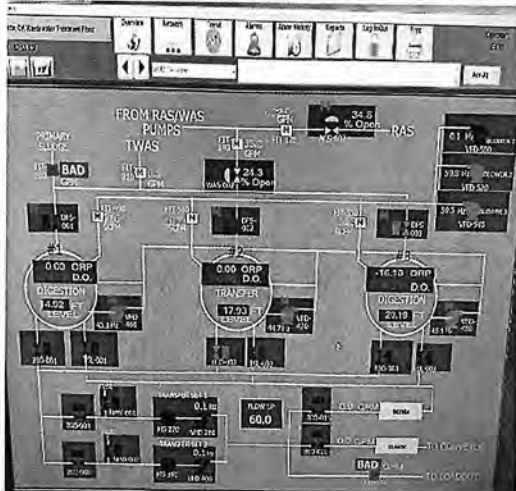
002	004
007	011
014	015
017	016
023	

Gland Water



RAS Pump Operations 2 Final Clarifiers In Service

Once RAS valves are in proper position RAS Pump #1 & RAS Pump #3 can be put in service. During normal operation one of these RAS pumps will already be in service. To put the other RAS put in service on SCADA screen select Overview then select UVB. Once on the UVB screen all 3 RAS pumps will be shown. Select remote and manual on desired pump to put in service then change the Hz to desired speed. Then select start and the pump will turn green/rotate to show the pump is running. It should be noted that when running two RAS pumps the Hz will need adjusted down on the RAS pump that is already in service and the Hz will need to be turned up on the RAS pump being put into service to overcome the head pressure and allow the RAS pump being started to equalize with the RAS pump that's already in service. It should also be noted that the RAS pumps have a tendency to become air locked and the air may need released when starting the RAS pump. The valve to bleed the RAS pumps are under the discharge lines of the RAS pumps over the drain in the floor. Once both pumps are running the Hz can be adjusted along with the RAS valve (ACS-002) to achieve desired GPM pumping rate. See pictures below of mentioned SCADA screens.



Splitter Box Operation 3 Aeration Tanks In Service Step Feed Mode In Aeration Tanks

Gates to be opened and closed on Splitter Box are listed below. G6 will be closed but will over flow to 30 In bypass line during high flow. This will allow for Aeration #1 & #2 to retain as much activated sludge as possible and allow the "rain water" to flow thru Aeration #3 without removing solids from the Aeration Tanks.

OPEN CLOSED

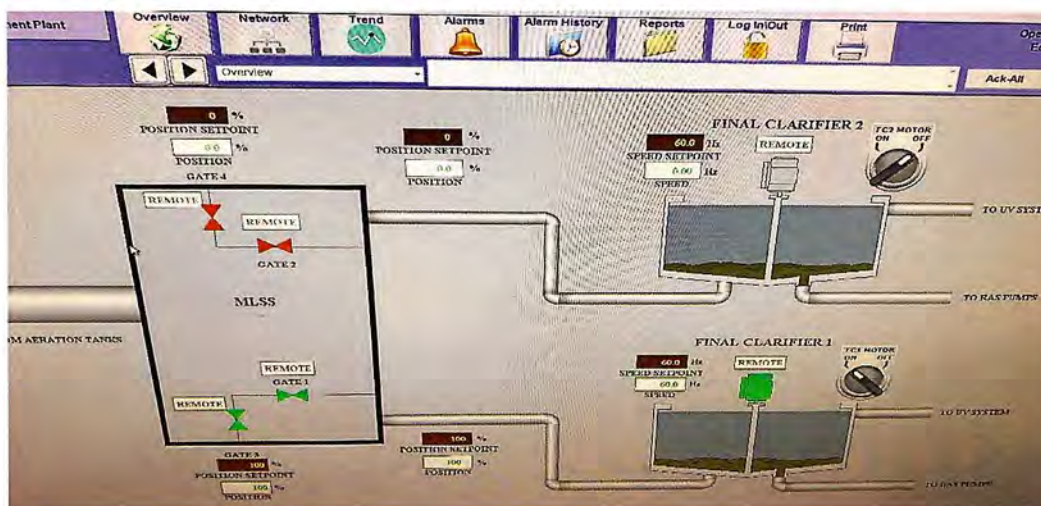
G4 G6
G5



Final Clarifiers Operation 2 Tanks in Service

On SCADA select Overview at top of page. Then select MLS (Mixed Liquor Splitter). Gate 1 & 3 feed from the Aeration Tanks to Final Clarifier # 1. To put Final Clarifier # 1 in service gate 1 & 3 need opened to 100%. Gate 2 & 4 feed from the Aeration Tanks to Final Clarifier # 2. To put Final Clarifier # 2 in service gate 2 & 4 need opened to 100%.

Once the Final Clarifiers are in service the Skimmer Arm/Tow-Bro needs turned on. The Skimmer Arm is used to remove the floating solids such as scum and grease from the secondary clarifier. The Tow- Bro provides quick removal of activated sludge settling to the bottom of the Final Clarifier. FC1 motor operates Final Clarifier #1 and FC2 operates Final Clarifier #2.



Aeration Tank Operation

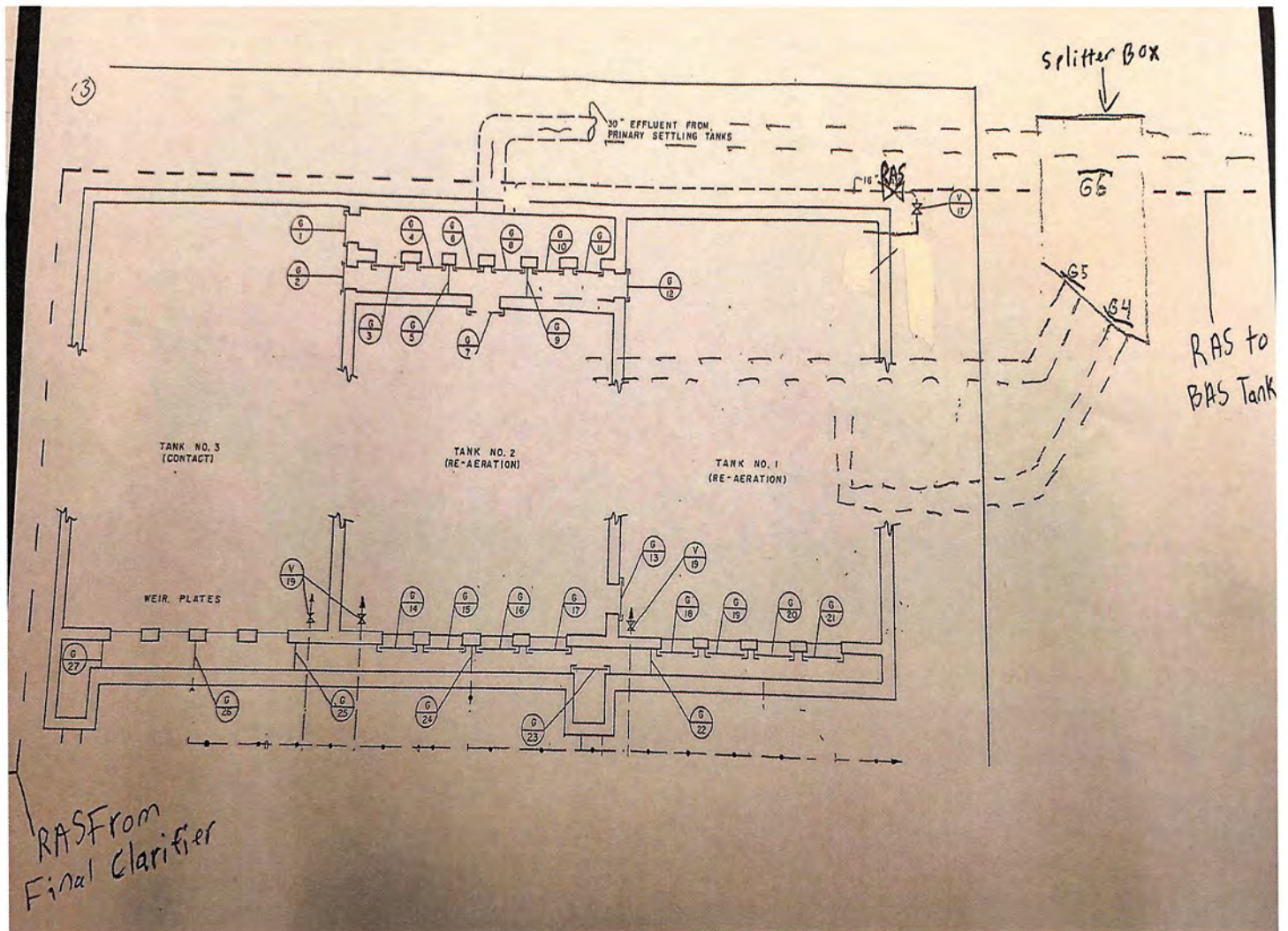
3 Tanks In Service

Step Feed Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN CLOSED

G1	G3	G16
G2	G4	G17
G5	G6	G18
G7	G8	G19
G13	G9	G20
G23	G10	G21
G24	G11	G22
G25	G12	
G26	G14	
G27	G15	



Aeration Tank Sampling

Step Feed Flow Mode

Step Feed Flow Mode- Samples are taken at effluent end of each Aeration Tank #3.

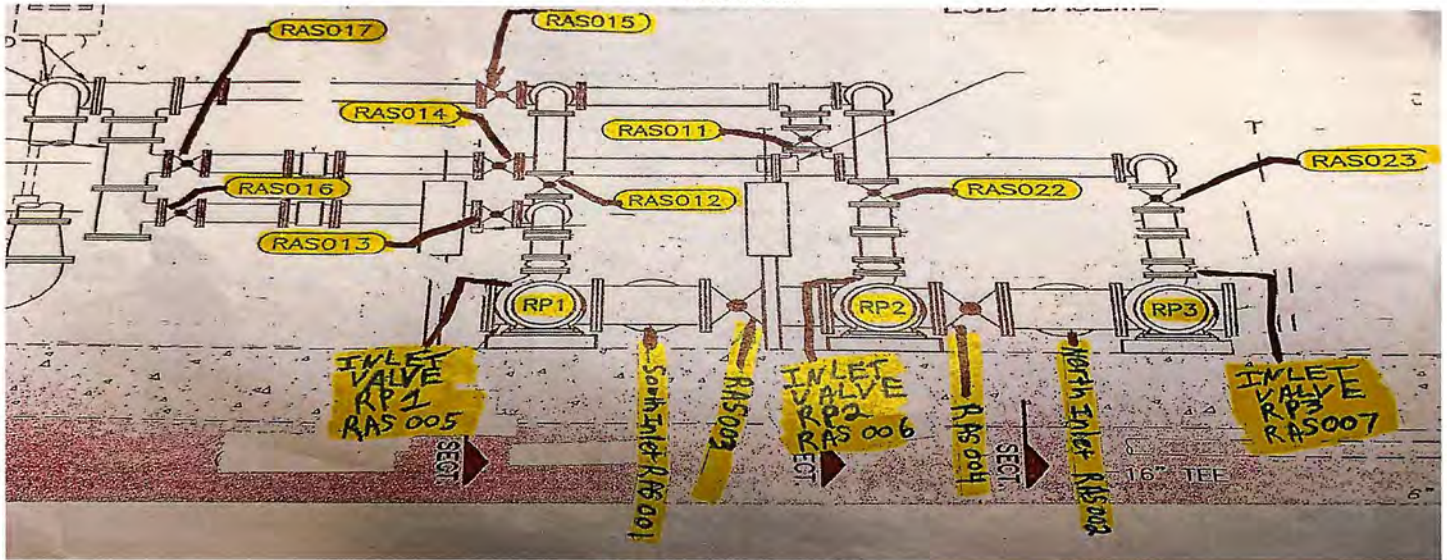
RAS Pump Valve Positions 2 Final Clarifiers in Service

Final Clarifier #2 In Operation

Open Valves	Shut Valves
001	003
005	012
013	015
016	
Gland Water	

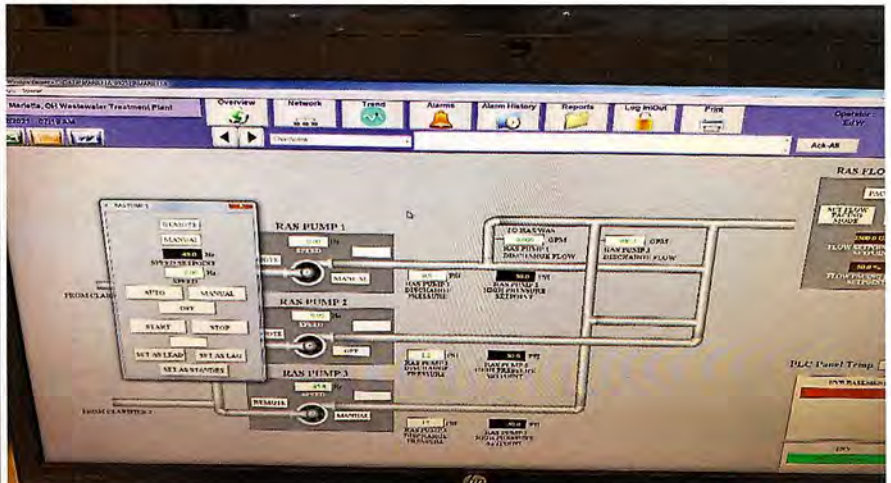
Final Clarifier #1 In Operation

Open Valves	Shut Valves
002	004
007	011
014	015
017	016
023	
Gland Water	

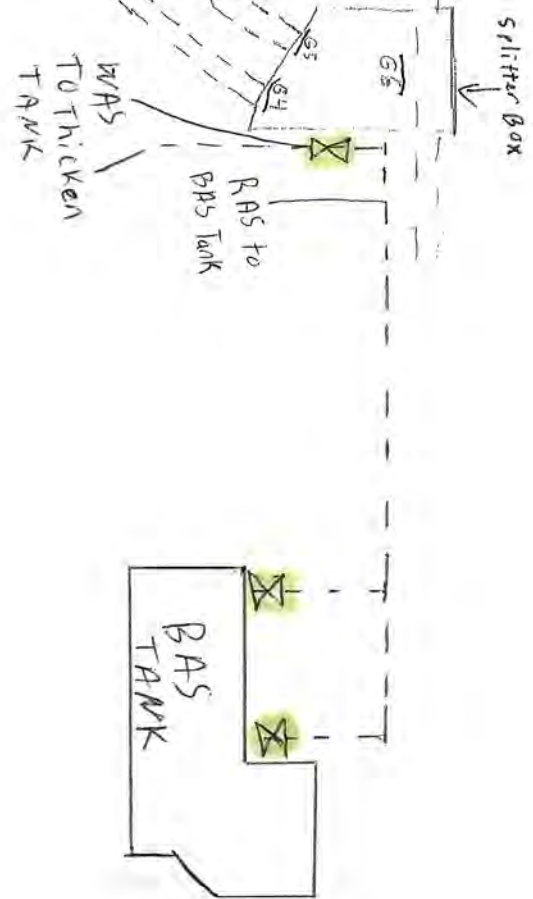
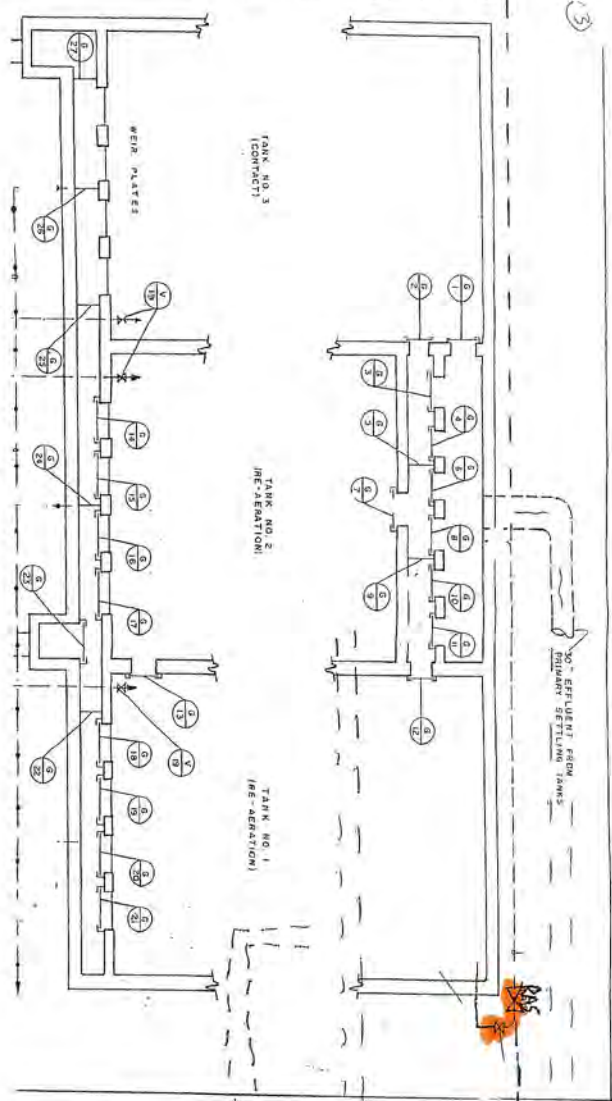


RAS Pump Operations 2 Final Clarifiers In Service

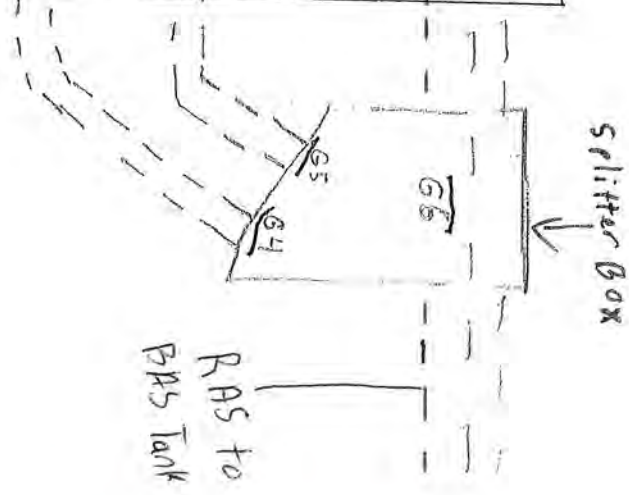
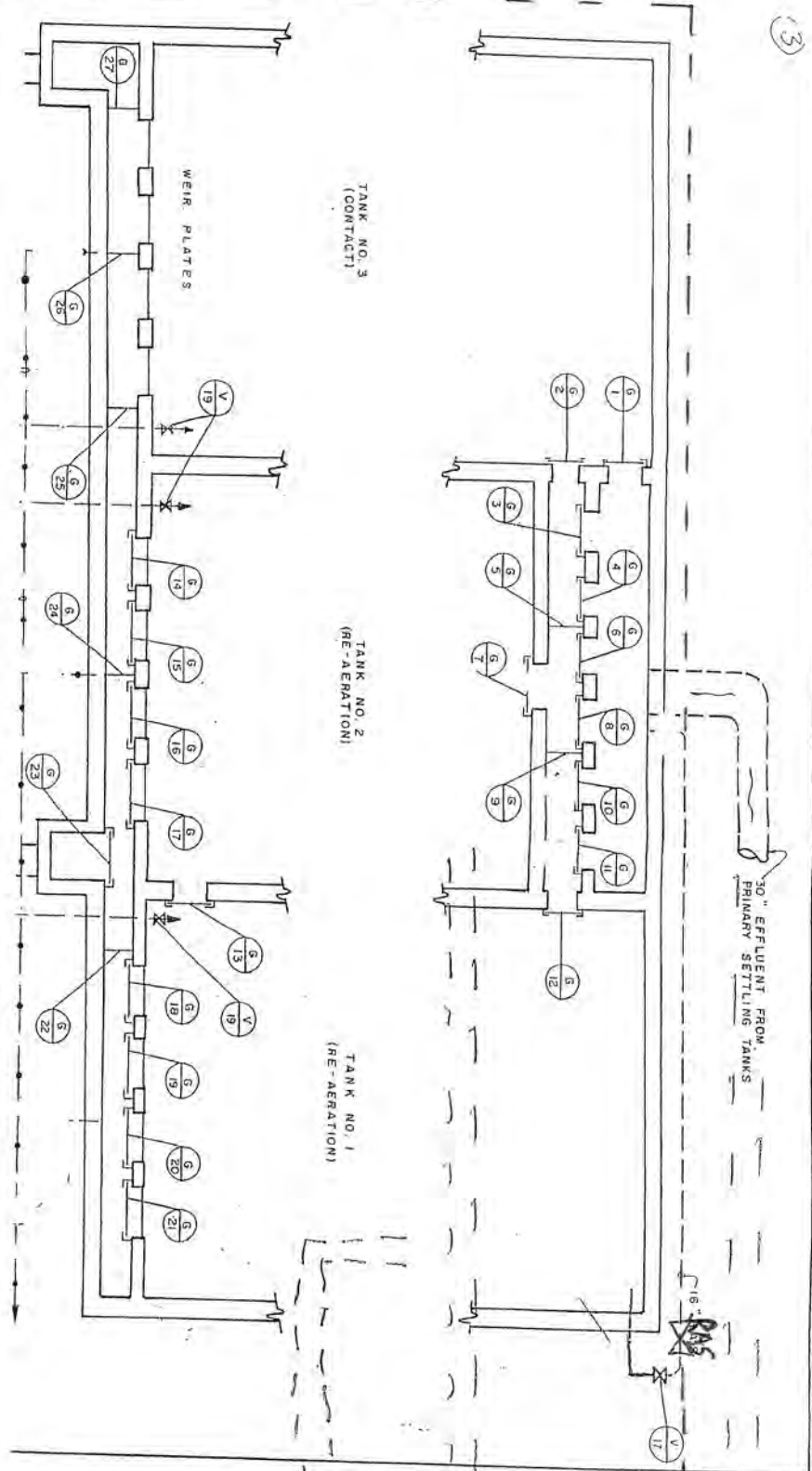
Once RAS valves are in proper position RAS Pump #1 & RAS Pump #3 can be put in service. During normal operation one of these RAS pumps will already be in service. To put the other RAS put in service on SCADA screen select Overview then select UVB. Once on the UVB screen all 3 RAS pumps will be shown. Select remote and manual on desired pump to put in service then change the Hz to desired speed. Then select start and the pump will turn green/rotate to show the pump is running. It should be noted that when running two RAS pumps the Hz will need adjusted down on the RAS pump that is already in service and the Hz will need to be turned up on the RAS pump being put into service to overcome the head pressure and allow the RAS pump being started to equalize with the RAS pump that's already in service. It should also be noted that the RAS pumps have a tendency to become air locked and the air may need released when starting the RAS pump. The valve to bleed the RAS pumps are under the discharge lines of the RAS pumps over the drain in the floor. Once both pumps are running the Hz can be adjusted along with the RAS valve (ACS-002) to achieve desired GPM pumping rate. See pictures below of mentioned SCADA screens.

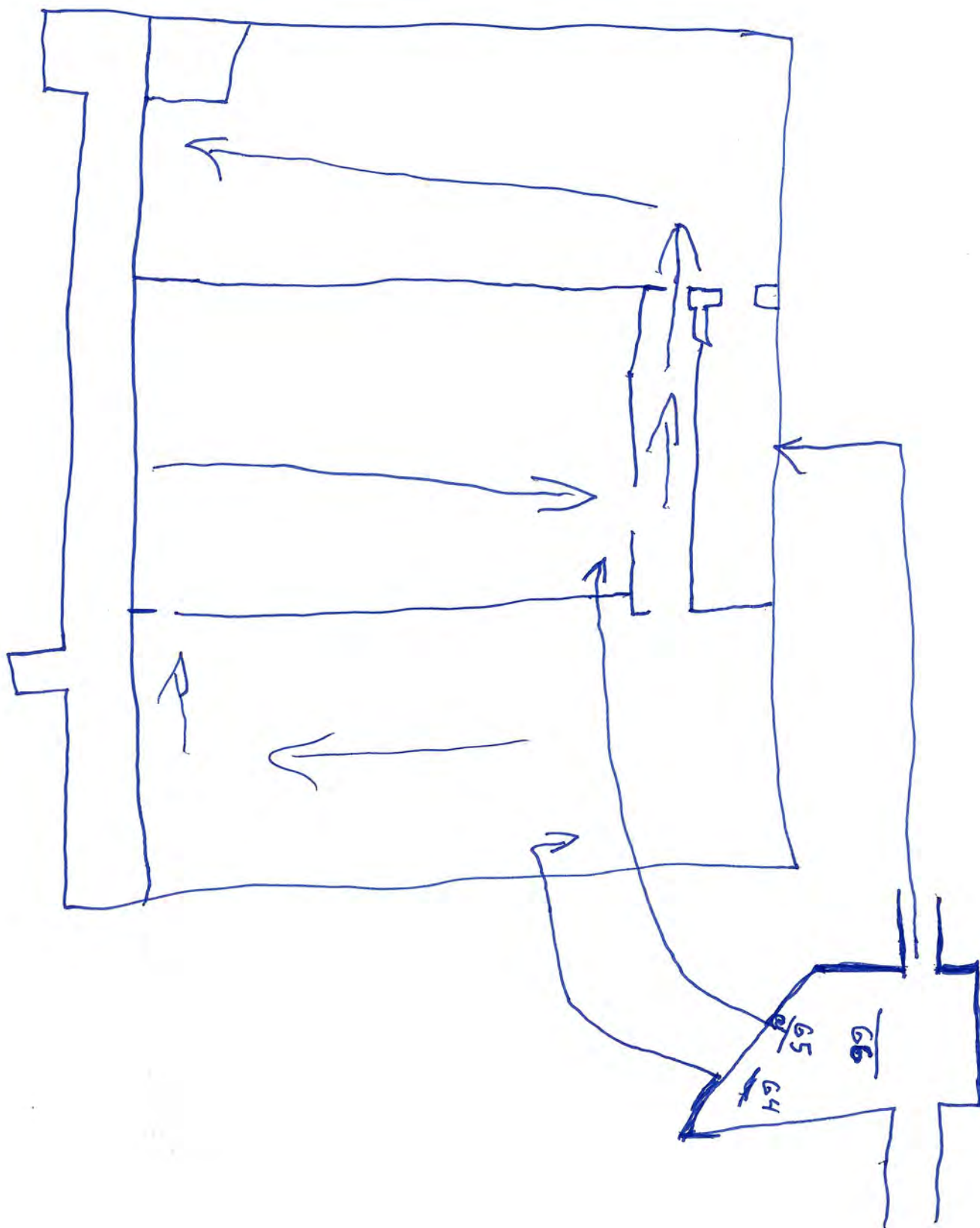


RAS from
Final Clarifier



RAS from
Final clarifier





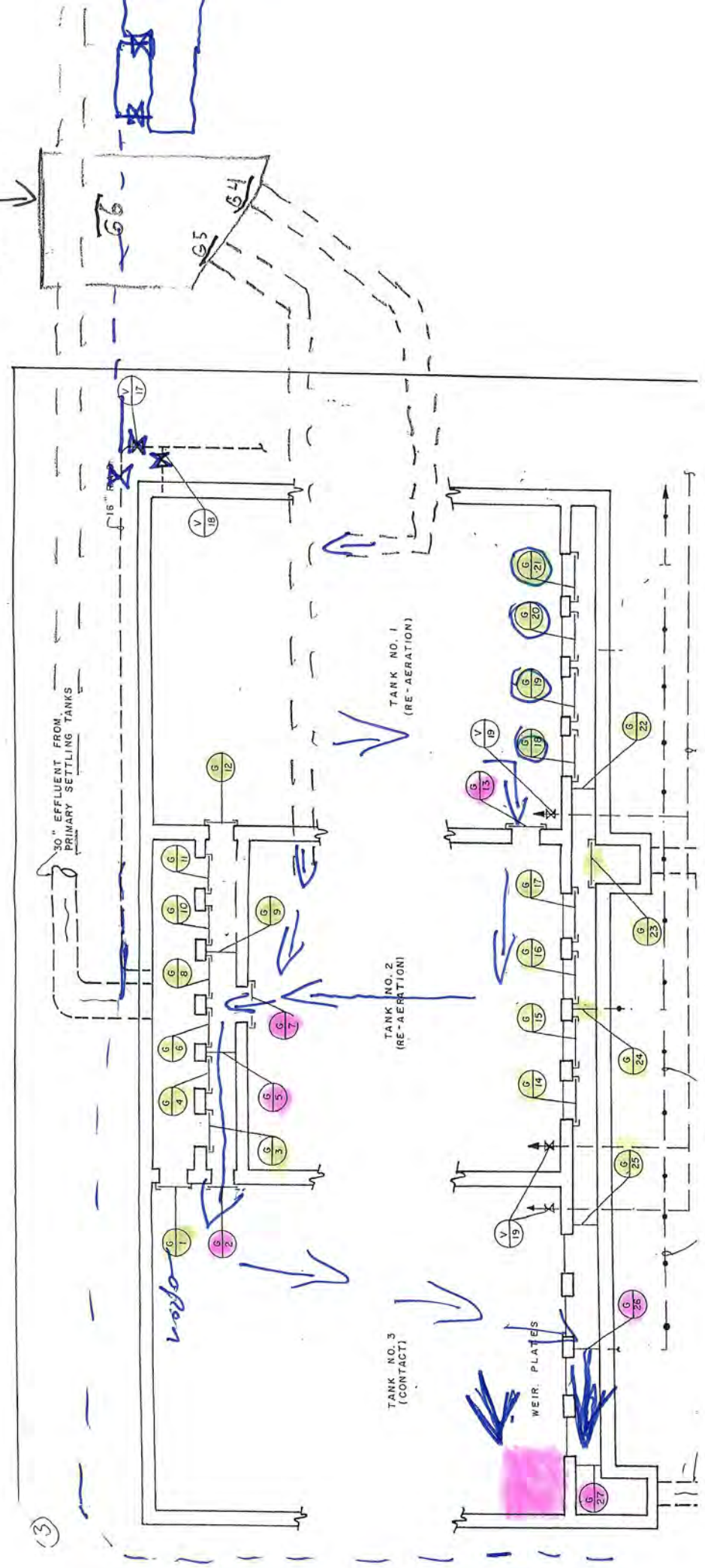
open closed

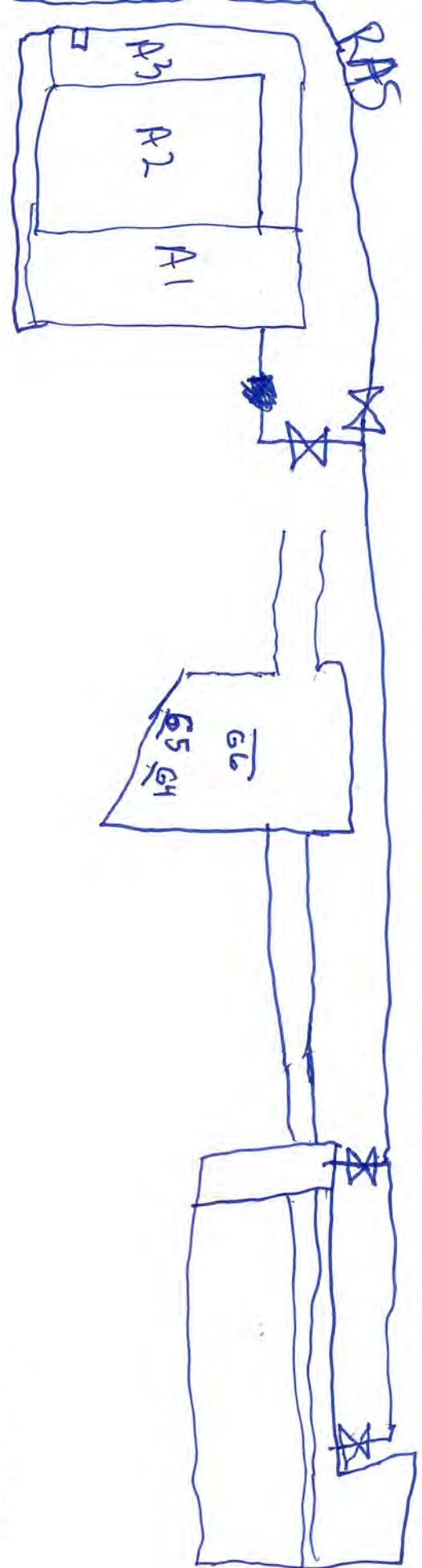
RAS valves
open closed

open closed
G4 ~~A~~
G5 ~~B~~
G6 ~~C~~

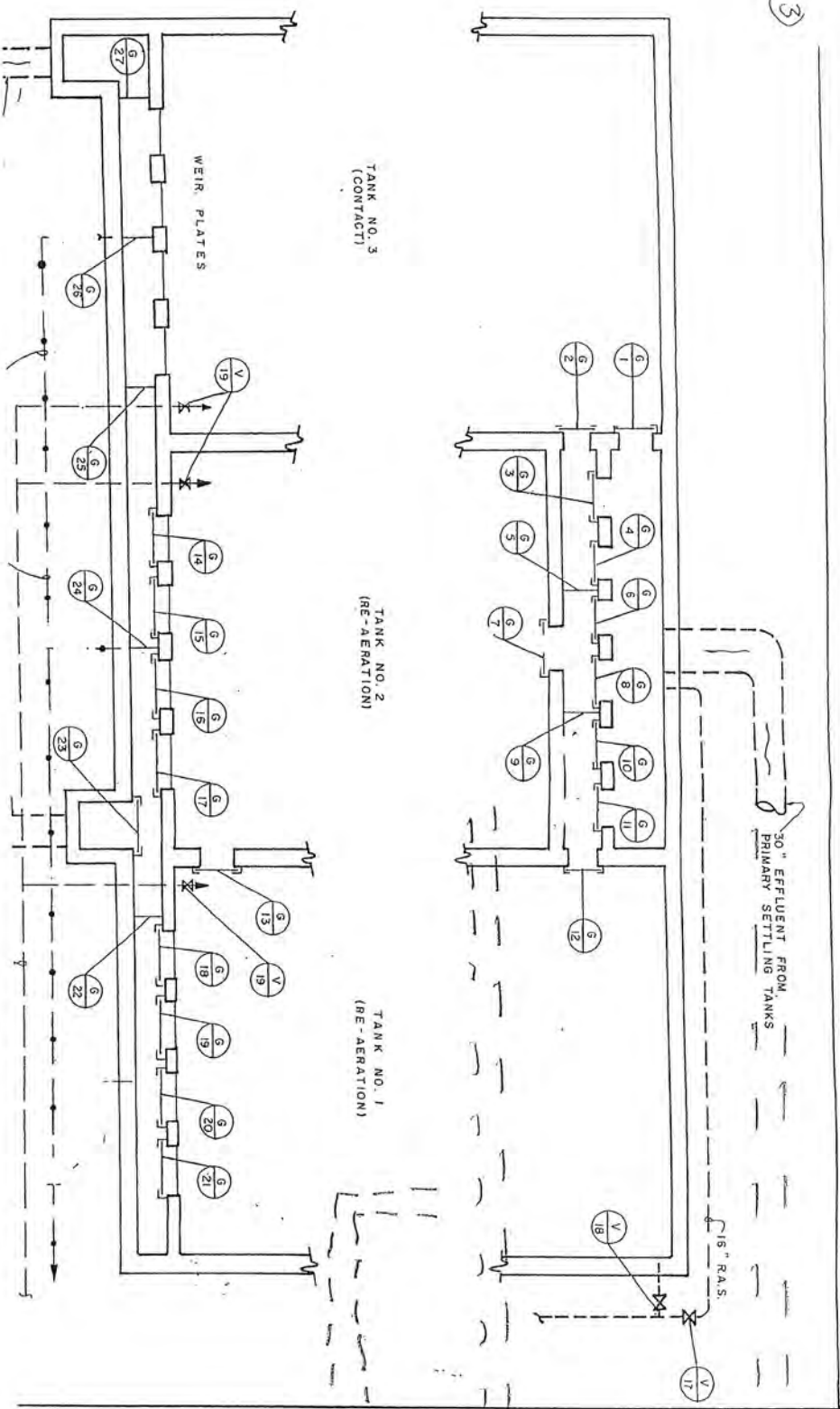
open G6
high flow

splitter box





3



TANK NO. 3
(CONTACT)

TANK NO. 2
(RE-AERATION)

TANK NO. 1
(RE-AERATION)

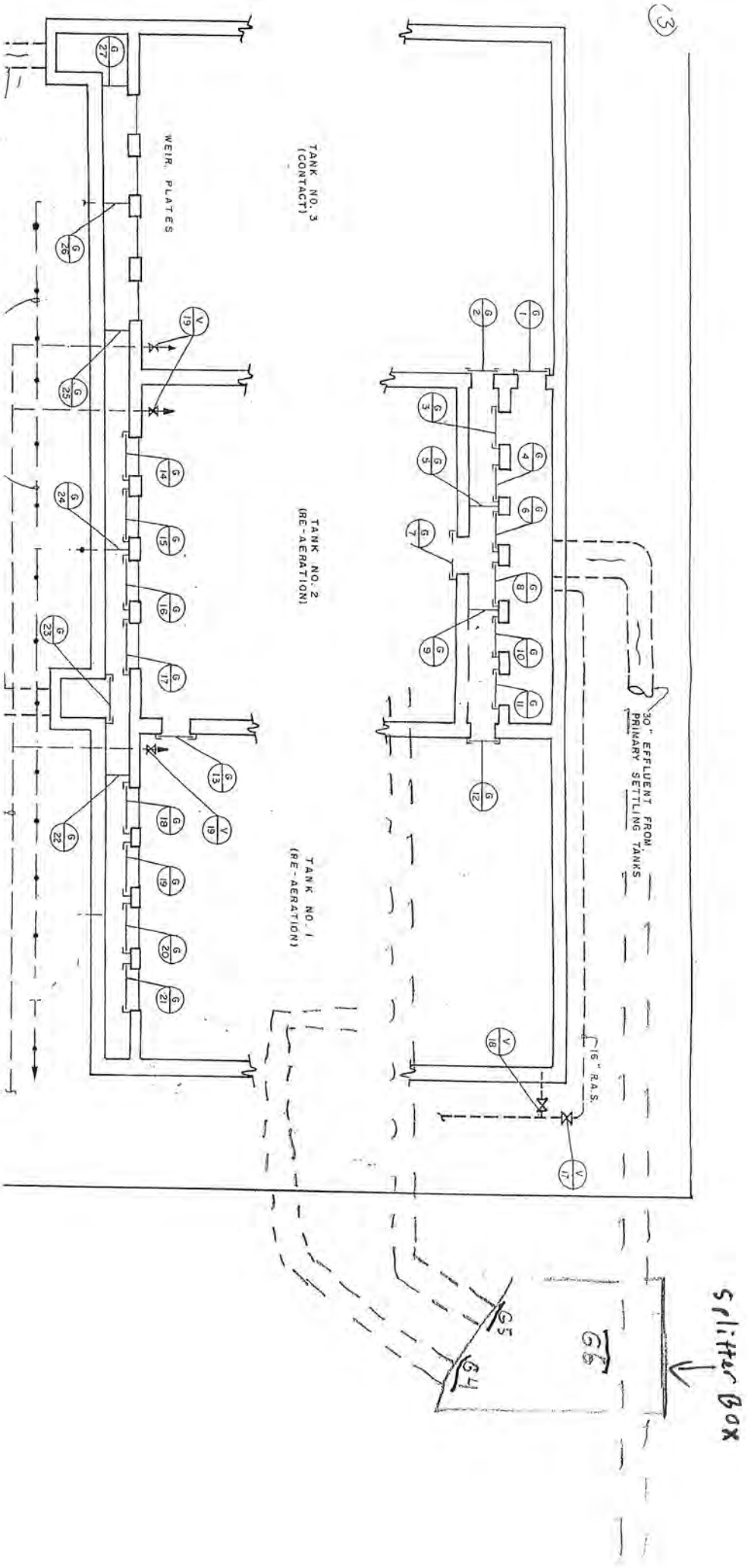
WEIR PLATES

30" EFFLUENT FROM
PRIMARY SETTLING TANKS

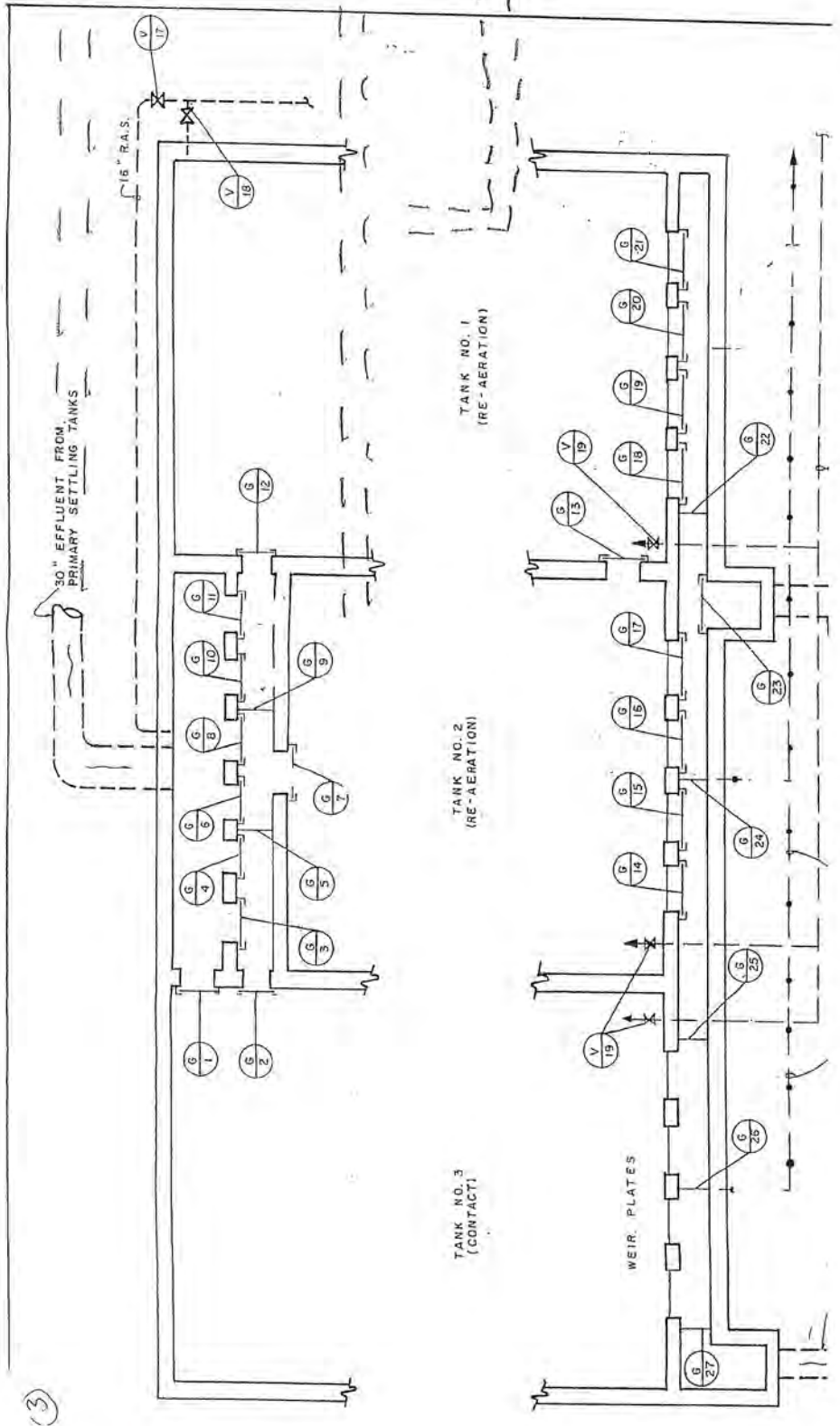
18" R.A.S.

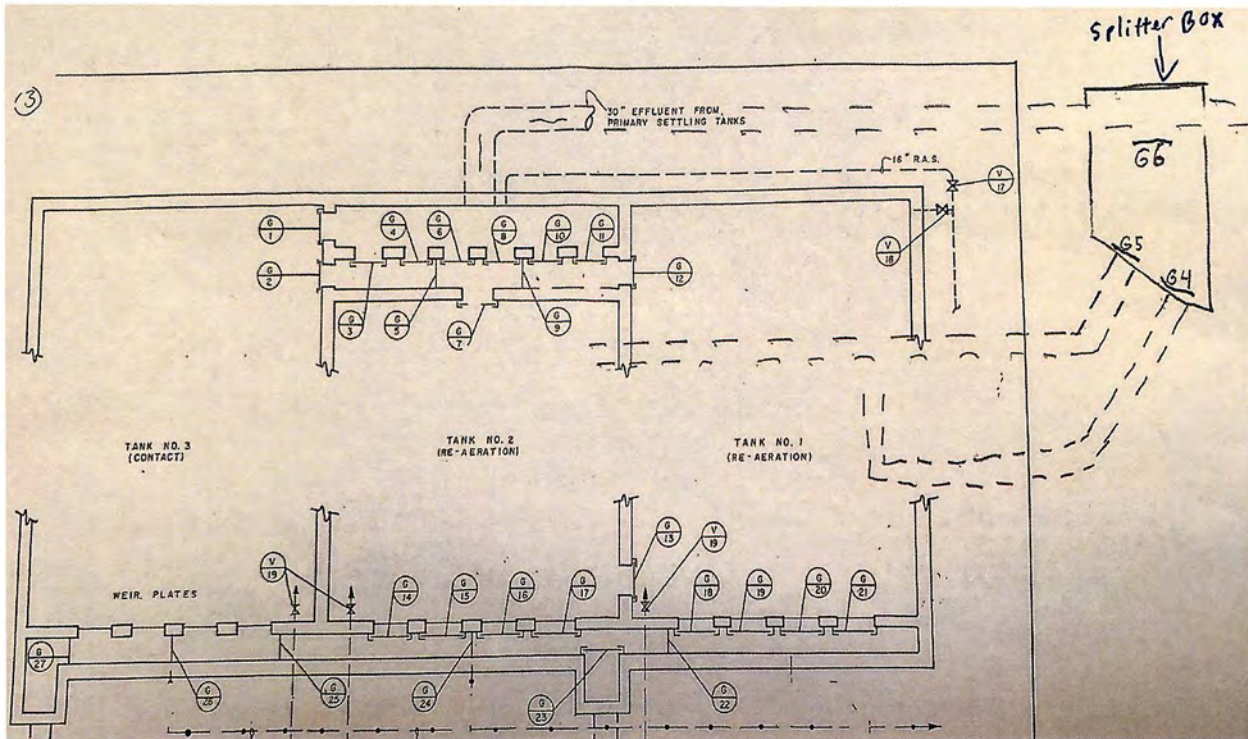
Splitter Box

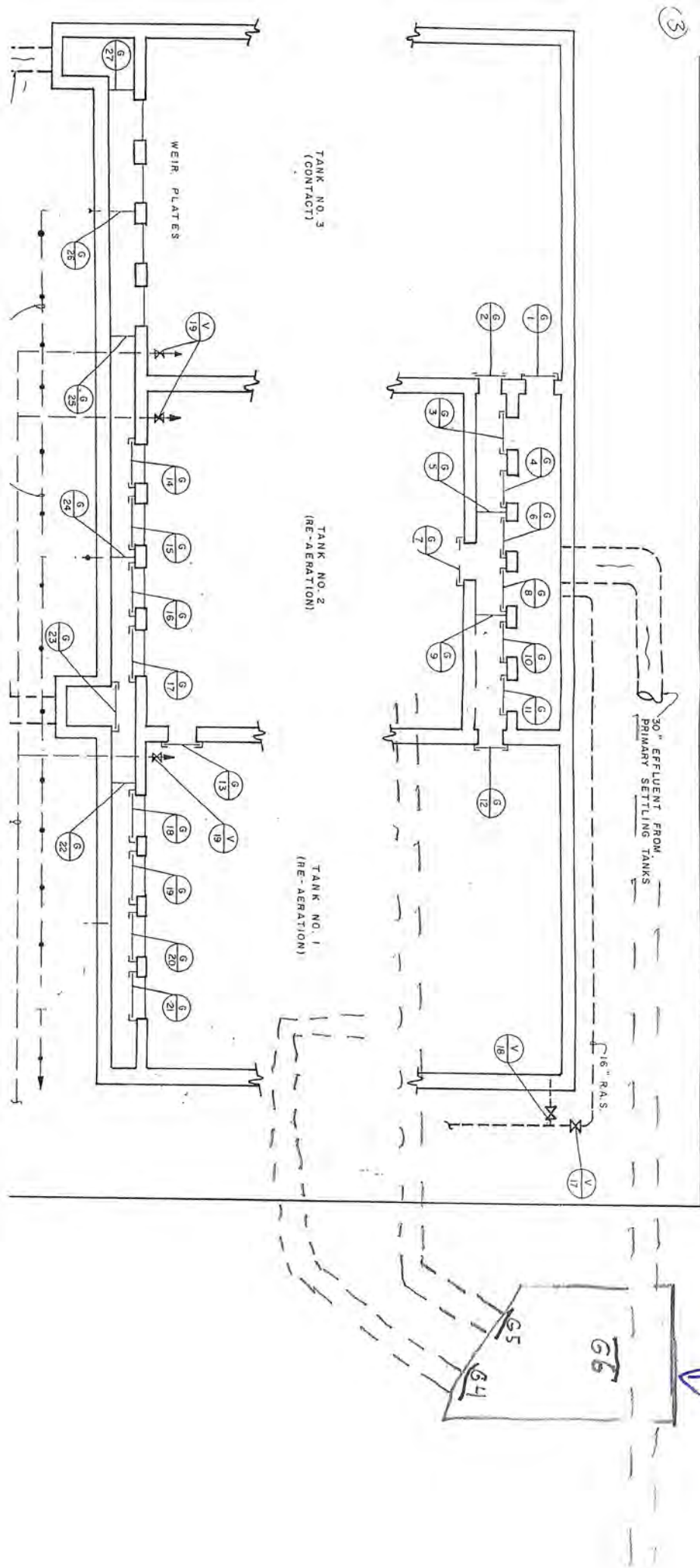
get bed
RAS tanks
OK



splitter box







Ryan - FYI

We also need to review and re-issue the Study Plan to our operators should conditions arise when we may make an attempt to implement
SE

Steve Elliott

To: Jack.Knapp@epa.ohio.gov
Cc: Steve Elliott; Steve Wetz
Subject: Schedule of Compliance Deadline

Re: City of Marietta Wastewater Treatment Plant, Washington County Ohio
Application NO. OH0026344; OPD00016*SD
Part I, C- Schedule of Compliance
C. High Flow Treatment Optimization
2. Optimization Report

Dear Mr. Knapp,

The City of Marietta has been unable to meet the February 1, 2022 deadline for submission of the Optimization Report. The City did submit the Study Plan under Part I,C.C,1. During the compliance schedule period the City was in construction of the Ohio EPA approved Aeration Basin Renovation Project. During this construction time period the City did not have the ability to operate more than two aeration basins on line at one time which made it impossible to implement the Study Plan as submitted to Ohio EPA. Final Completion has not been met however substantial completion by the contractor was met on September 20, 2021. Since that date the City has been able to operate all aeration basins on line at one time however the peak flows and durations have not been great enough to allow implementation of the Study Plan. The City does plan to implement the Study plan when conditions required, such as sustained high flows and of a sufficient time period allow the operating changes to be made and changes tracked to occur. Those conditions have yet to be reached and you may verify that by review of the eDMR reports since substantial completion. It may take a rise in the Ohio River and heavy rains over some days to allow the conditions required by the Study Plan to be met. In addition, the plant has been renovated from a Peak Flow of 8.25 mgd to 12 mgd and we have been working on the elimination of Inflow and Infiltration with what appears to initially be some success however may make the ability to meet the Study Plan requirements more difficult.

Please advise if the City should submit for a revised compliance schedule to allow sufficient time for the conditions required for the high flow stress testing to arise. This is the time of year that these conditions are most likely to be met however only time will tell.

Please contact me with any questions or concerns you may have or if you need some other information or correspondence regarding this matter. Thank you,
Steve

Stephen Elliott
Wastewater Superintendent
City of Marietta Wastewater Treatment Plant
440 E. Eighth Street
Marietta, Ohio 45750
740-373-3858 extension 2



Aeration Tank Operation

3 Tanks In Service

Series Flow Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN CLOSED

G1	G4
G2	G6
G5	G3
G7	G8
G9	G10
G12	G11
G13	G14
G23	G15
G24	G16
G25	G17
G26	G18
G27	G19
	G20
	G21
	G22

Aeration Tank Sampling

Series Flow Mode

Series Flow Mode- Samples are taken at effluent end of each Aeration Tank #3.

Aeration Tank Operation

3 Tanks In Service

Parallel Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN CLOSED

G1	G2
G5	G3
G7	G4
G9	G6
G14	G8
G15	G10
G16	G11
G17	G12
G18	G13
G19	
G20	
G21	
G22	
G23	
G24	
G25	
G26	
G27	

Aeration Tank Sampling

Parallel Flow Mode

Parallel Flow Mode- Individual grab samples taken at effluent end of each Aeration Tank and composited together to make one sample.

Aeration Tank Operation

3 Tanks In Service

Step Feed Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

OPEN **CLOSED**

G1	G3	G16
G2	G4	G17
G5	G6	G18
G7	G8	G19
G13	G9	G20
G23	G10	G21
G24	G11	G22
G25	G12	
G26	G14	
G27	G15	

Aeration Tank Sampling

Step Feed Flow Mode

Step Feed Flow Mode- Samples are taken at effluent end of each Aeration Tank #3

Aeration Tank Operation

3 Tanks In Service

Contact Stabilization Flow Mode

Gate to be opened and closed in Aeration tanks are listed below. See attached diagram for location of gates.

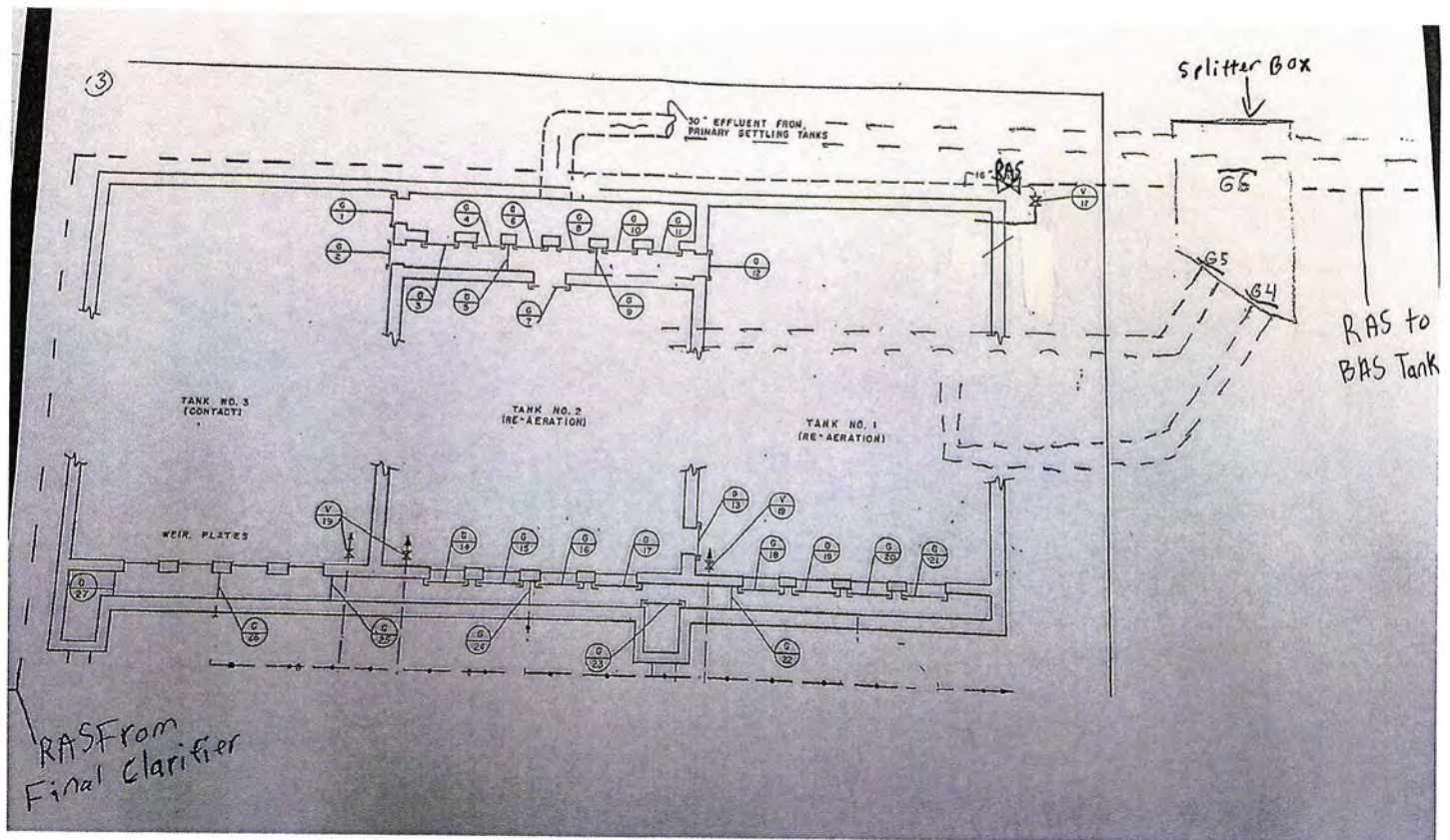
OPEN **CLOSED**

G1	G4
G2	G6
G5	G3
G7	G8
G9	G10
G12	G11
G13	G14
G23	G15
G24	G16
G25	G17
G26	G18
G27	G19
	G20
	G21
	G22

Aeration Tank Sampling

Contact Stabilization Flow Mode

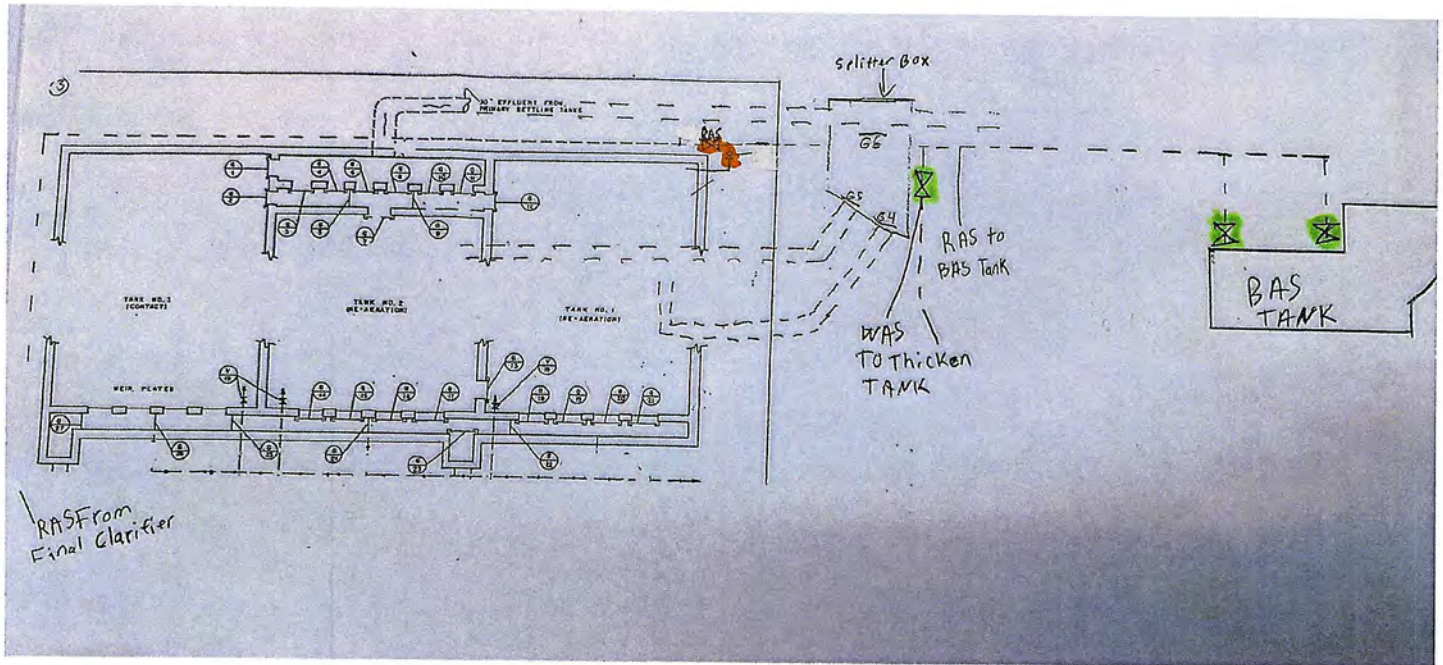
Contact Stabilization Flow Mode - Samples are taken at effluent end of each Aeration Tank #3.



RAS Valve Positioning

Contact Stabilization Mode

RAS valves that need opened for Contact Stabilization are highlighted in orange and RAS Valves to be Closed are highlighted in green. Placing the RAS valves in this position will allow the RAS to be pumped from the Final Clarifiers to Aeration Tank #1 for reaeration in AT-1 and AT-2 before contact stabilization which will occur in AT-3 where the Primary Effluent flow will be feeding from the BAS tank.



Splitter Box Operation

3 Aeration Tanks In Service Series Flow Mode In Aeration

Series Flow Mode gates to be opened and closed on Splitter Box are listed below. G6 will be closed but will over flow to 30 inch bypass line during high flow. This will allow for Aeration #1 & #2 to retain as much activated sludge as possible and allow the "rain water" to flow thru Aeration #3 without removing solids from the Aeration Tanks.

OPEN	CLOSED
------	--------

G4	G5
	G6

3 Aeration Tanks In Service Parallel Mode In Aeration Tanks

Gates to be opened on Splitter Box are listed below. Equalize flow to Aeration Tanks by adjusting these valves open or closed to assure equal flow to all 3 Aerations Tanks.

OPEN	CLOSED
------	--------

G4	None
G5	
G6	

3 Aeration Tanks In Service Storm Flow Mode

Gates to be opened and closed on Splitter Box are listed below. G6 will be open and will over flow to 30 inch bypass line during high flow. G4 and G5 will need closed to hold flow back to Aeration #1 & #2 to prevent from the good quality activated sludge from being flushed by the "rain water". Storm flow mode is recommended by the engineers; however, when the plant is running with good quality sludge this may not be needed as the plant has been stress tested with 12 MGD flow and minimal negative effect was noted on the effluent parameters. Storm flow mode may be necessary if the sludge quality is inadequate.

OPEN	CLOSED
------	--------

G6	G4
	G5

3 Aeration Tanks In Service Step Feed Mode In Aeration

Gates to be opened and closed on Splitter Box are listed below. G6 will be closed but will over flow to 30 inch bypass line during high flow.

OPEN	CLOSED
------	--------

G4	G6
G5	

3 Aeration Tanks In Service Contact Stabilization Mode In Aeration

Gates to be opened and closed on Splitter Box are listed below.

OPEN	CLOSED
------	--------

G6	G4
	G5

Under Design Flow Aeration/Splitter Box Operations Parallel mode when under design flow

2 Aeration Tanks In Service Parallel Mode Operation

AT-2 & AT-3 In Service
Open Closed
 G5 G4
 G6

AT-1 & AT-3 In Service
Open Closed
 G4 G5
 G6

AT-1 & AT-2 in service
Open Closed
 G4 G6
 G5

1 Aeration Tank In Service Parallel Mode

AT-1 In Service
Open Closed
 G4 G5
 G6

AT-2 In Service
Open Closed
 G5 G4
 G6

Use AT-3 for high flow option only and open G-6 to put AT-3 in service when operating 1 tank operation.
 -Adjust G-4, G-5, G-6 manually to achieve equal flow over effluent weirs of Aeration Tanks.





**DIVISION OF SURFACE WATER
PRETREATMENT PROGRAM ANNUAL REPORT CERTIFICATION**

Ohio NPDES Permit Number: OPD00016*SD

Date: 04/06/2023

Facility Name: Marietta WWTP *

Sewer Authority Name: City of Marietta WWTP

Period Covered by Report: 04/01/2022 - 03/31/2023

Does this Permit have significant industrial users? Yes

Contact Person

Name: Craig Johnson

Title: Pretreatment Coordinator/Operator

Mailing Address: 440 E 8th St

City: Marietta

State: OH

Zip Code: 45750

Country: USA

Telephone number: (740) 373-3858

Fax number:

Email address: craigjohnson@mariettaoh.net

PRIORITY POLLUTANT REPORTING FORM

Would you also like to submit a Priority Pollutant Reporting Form?

Yes

Certification Statement

I certify under penalty of law that I have personally examined and am familiar with the information in this report and all attachments. Based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Electronic Signature:

Craig Johnson (User ID: cj0hns0nO6)

Submission Date:

04/06/2023

Printed Name:

Craig Johnson

Title:

Wastewater Operator

Craig Johnson

4-6-23

PRETREATMENT PERFORMANCE SUMMARY

Facility Name: Marietta WWTP *

Ohio NPDES Permit Number: 0PD00016*SD

Reporting Period: 04/01/2022 - 03/31/2023

Total Significant Industrial Users(SIU's):	2
Total Significant Categorical Industrial Users:	1
Total Significant Non-Categorical Industrial Users:	1
Total Non-Significant Categorical Industrial Users:	0

COMPLIANCE MONITORING PROGRAM

Number of Effective Control Documents:	142
Number of SIU's Inspected:	2
Number of SIU's Sampled	2
Number of SIU's Subject to Local Limits:	2

SIGNIFICANT NONCOMPLIANCE ASSESSMENT (SNC)

Number of SIU's in SNC (Categorical/Non-Categorical):	0/0
Number of SIU's in SNC for Sampling Violations:	0
Number of SIU's in SNC for Reporting Violations:	0
Number of SIU's in SNC for Compliance Schedule Violations:	0
Number of SIU's Non Significant IU's in SNC:	0

ENFORCEMENT ACTIVITY

Number of Show-Cause Hearings:	0
Number of Compliance Schedules Issued:	0
Number of Administrative Orders Issued:	0
Number of Civil Suits Filed:	0
Number of Criminal Suits Filed:	0
Amount of Penalties Collected (Total dollars/# IU's assessed):	\$0.00
Number of Facilities in SNC Published (Attach news paper listing):	0

NEWSPAPER LISTINGS/HYPERLINKS

Newspaper Listings:	No attachment
Hyperlinks to Newspaper Listings:	

UPSETS, INTERFERENCE AND PASS-THROUGH INCIDENTS

Type of Incident	Start Date	End Date	Explanation/Reasons	Corrective Action(s) Taken
Upsets, Interference and Pass-Through Incidents data				

SPREADSHEET UPLOAD

Pretreatment Information Spreadsheet:	Pretreatment Annual Inventory List 2023.xlsm
---------------------------------------	--

PROGRAM EVALUATION

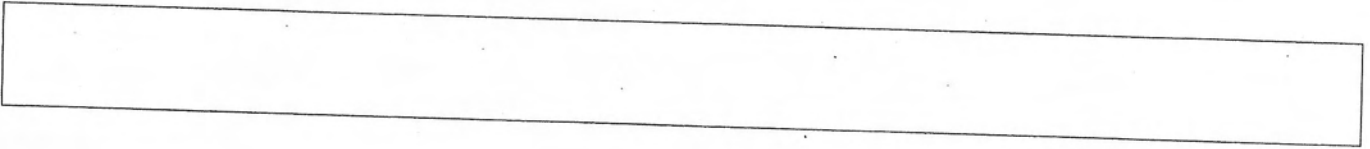
Program Evaluation Attached Filename:

Pretreatment Program Evaluation 2023.docx



Pretreatment Program - Priority Pollutant Reporting Form

Facility Information					
Ohio NPDES Permit Number: 0PD00016*SD					
Facility Name: Marietta WWTP *					
Laboratory Name: Alloway					
Laboratory Contact First Name: Julie			Laboratory Contact Last Name: Bigford		
Laboratory Contact Title: Customer Service Manager					
Laboratory Contact Email: julie.bigford@alloway.com			Laboratory Contact Phone: (740) 389-5991		
SAMPLING					
Monitoring Station	Start Date/Time	Stop Date/Time	Location	Disposal Method	Percent Sludge Solids
901	09/13/2022 08:15 AM	09/13/2022 08:15 AM	Downstream of Outfall in Ohio River	Ohio River	
801	09/13/2022 08:25 AM	09/13/2022 08:25 AM	Upstream of Outfall in Ohio River	Ohio River	
001	09/12/2022 00:00 AM	09/13/2022 00:00 AM	Final Effluent After UV Disinfection	Discharge to Ohio River	
601	09/12/2022 00:00 AM	09/13/2022 00:00 AM	Influent Before Fine Screen	Discharges to Pre-Aeration Tank	
586	07/01/2022 00:00 AM	09/13/2022 07:30 AM	Discharge of Dewatering Centrifuge	Landfill	27
Is influent and effluent monitored based on detention time?				Yes	
POTW Pretreatment Contact					
First Name: Craig			Last Name: Johnson		
Title: Pretreatment Coordinator/Operator					
Email: marietapretreatment@mariettaoh.net			Phone: (740) 373-3858		
Testing/Sampling Method for Type of Samples					
Heavy Metals:	Influent and Effluent Composite - Method EPA 200.8				
Volatiles:	Influent and Effluent Grab - Method EPA 624.1				
Base Neutrals:	Influent and Effluent Composite - Method EPA 625.1				
Pesticides:	Influent and Effluent Composite - Method EPA 608.3				
Comments:					
ATTACHMENTS					
Priority Pollutant Reporting Spreadsheet:	Priority Pollutant Reporting 2023 - Data Entry Spreadsheet.xlsm				
Laboratory Report :	Priority Pollutant and Actue Toxicity Lab Results 2023.pdf				
ADDITIONAL INFORMATION					
Please add any additional comments or attachments below.					



* Categorical Industrial Users and Non-Significant Categorical Users – enter the code of federal regulations associated with this facility (example – metal finishers are 40 CFR 433). Be as specific as possible. Non-Categorical Significant Industrial Users and Non-Significant Industrial Users – leave blank

[illegible]

PROGRAM EVALUATION

1) Approved Program Components:

- a) Review of changes to State and/or Federal pretreatment regulations during the past year.
- b) Review of the adequacy of the sewer use ordinance.
- c) Review of operating procedures of the pretreatment program.
- d) Discussion of method of funding the pretreatment program and annual budget.
- e) Review of adequacy of local limits.

2) Accomplishments: All industrial users in compliance. Inspections/Sampling completed on all SIU'S. All Food Service Facilities inspected to stay in compliance with the FOG program.

3) Problems: None at this time

4) Program Modifications: None

5) Promoted Craig Johnson to Pretreatment Coordinator August 1, 2022 from a Plant Operator – OEPA WW2-1137958-16

6) Previous Pretreatment Coordinator Ryan Boley the Operations Manager will train and oversee Craig Johnson as the new Pretreatment Coordinator.

Jan 2023

Ohio EPA - Daily Discharge Monitoring Report - Form 4500

SUBMISSION ID:
FACILITY:
LOCATION:1215710
Marietta WWTP *
440 E Eighth and Jefferson St
Marietta, OH 45750
Washington
SEDOSTATUS:
PERMIT NUMBER:
STATION CODE:
MONITORING PERIOD :Original
OPD00016*SD
002COUNTY:
DISTRICT:REPORTING LAB:
ANALYST:
NO DISCHARGE INDICATOR:2023-01-01 To: 2023-01-31
Various
various personnel

PARAMETER	Bypass Occurrence	Bypass Total Hours Per Day	Bypass Volume				
PARAMETER CODE	00051	00052	51428				
UNITS	No./Day	Hrs/Day	MGAL				
FREQUENCY	When Disch.	When Disch.	When Disch.				
SAMPLING TYPE	24hr Total	24hr Total	24hr Total				
2023-01-01							
2023-01-02							
2023-01-03	1	.09	0.017				
2023-01-04							
2023-01-05							
2023-01-06							
2023-01-07							
2023-01-08							
2023-01-09							
2023-01-10							
2023-01-11							
2023-01-12							
2023-01-13							
2023-01-14							
2023-01-15							
2023-01-16							
2023-01-17							
2023-01-18							
2023-01-19							
2023-01-20							
2023-01-21							
2023-01-22							
2023-01-23							
2023-01-24							
2023-01-25							
2023-01-26							
2023-01-27							
2023-01-28							
2023-01-29							
2023-01-30							
2023-01-31							
Minimum	1.0	0.09	0.017				
Maximum	1.0	0.09	0.017				
Average	1	0.09	0.017				
Count	1	1	1				

Name of Responsible Official or Authorized Representative	I certify under the penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.	Signature of Responsible Official or Authorized Representative	Submission Date/Time
			Certification Version Date 2023-02-10 13:02

2022

Ohio EPA - Daily Discharge Monitoring Report - Form 4500

SUBMISSION ID:
FACILITY:
LOCATION:

1128570
Marietta WWTP *
440 E Eighth and Jefferson St
Marietta, OH 45750
Washington
SEDO

STATUS:
PERMIT NUMBER:
STATION CODE:
MONITORING PERIOD :

Original
OPD00016*SD
002

COUNTY:
DISTRICT:

REPORTING LAB:
ANALYST:
NO DISCHARGE INDICATOR:

2022-02-01 To: 2022-02-28
City of Marietta WWTP
various

PARAMETER	Bypass Occurrence	Bypass Total Hours Per Day	Bypass Volume				
PARAMETER CODE	00051	00052	51428				
UNITS	No./Day	Hrs/Day	MGAL				
FREQUENCY	When Disch.	When Disch.	When Disch.				
SAMPLING TYPE	24hr Total	24hr Total	24hr Total				
2022-02-01							
2022-02-02							
2022-02-03							
2022-02-04							
2022-02-05							
2022-02-06							
2022-02-07							
2022-02-08							
2022-02-09							
2022-02-10							
2022-02-11							
2022-02-12							
2022-02-13							
2022-02-14							
2022-02-15							
2022-02-16							
2022-02-17							
2022-02-18	8	0.25	0.01				
2022-02-19	99	7	0.396				
2022-02-20	62	14	2.909				
2022-02-21							
2022-02-22							
2022-02-23							
2022-02-24							
2022-02-25							
2022-02-26	32	1	0.122				
2022-02-27							
2022-02-28							
Minimum	8.0	0.25	0.01				
Maximum	99.0	14.0	2.909				
Average	50.25	5.5625	0.85925				
Count	4	4	4				

Name of Responsible Official or Authorized Representative	I certify under the penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.	Signature of Responsible Official or Authorized Representative	Submission Date/Time
		Stephen Elliott	Certification Version Date 2022-03-11 07:03

Ohio EPA - Daily Discharge Monitoring Report - Form 4500

SUBMISSION ID:
FACILITY:
LOCATION:

1152791
Marietta WWTP *
440 E Eighth and Jefferson St
Marietta, OH 45750
Washington
SEDO

STATUS:
PERMIT NUMBER:
STATION CODE:
MONITORING PERIOD :

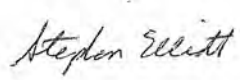
Revision
OPD00016*SD
002

COUNTY:
DISTRICT:

REPORTING LAB:
ANALYST:
NO DISCHARGE INDICATOR:

2022-05-01 To: 2022-05-31
City of Marietta WWTP
various personnel

PARAMETER	Bypass Occurrence	Bypass Total Hours Per Day	Bypass Volume				
PARAMETER CODE	00051	00052	51428				
UNITS	No./Day	Hrs/Day	MGAL				
FREQUENCY	When Disch.	When Disch.	When Disch.				
SAMPLING TYPE	24hr Total	24hr Total	24hr Total				
2022-05-01							
2022-05-02							
2022-05-03							
2022-05-04							
2022-05-05							
2022-05-06							
2022-05-07	26	3.25	0.303				
2022-05-08	3	9.25	2.653				
2022-05-09	17	10.25	2.382				
2022-05-10							
2022-05-11							
2022-05-12							
2022-05-13							
2022-05-14							
2022-05-15							
2022-05-16							
2022-05-17							
2022-05-18							
2022-05-19							
2022-05-20							
2022-05-21							
2022-05-22							
2022-05-23							
2022-05-24							
2022-05-25							
2022-05-26							
2022-05-27							
2022-05-28							
2022-05-29							
2022-05-30							
2022-05-31							
Minimum	3.0	3.25	0.303				
Maximum	26.0	10.25	2.653				
Average	15.33333	7.58333	1.77933				
Count	3	3	3				

Name of Responsible Official or Authorized Representative	I certify under the penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.	Signature of Responsible Official or Authorized Representative	Submission Date/Time
			Certification Version Date 2022-06-15 10:06

Ohio EPA - Daily Discharge Monitoring Report - Form 4500

JBMISSION ID:
FACILITY:
LOCATION:

1161644
Marietta WWTP *
440 E Eighth and Jefferson St
Marietta, OH 45750
Washington
SEDO

COUNTY:
DISTRICT:

STATUS:
PERMIT NUMBER:
STATION CODE:
MONITORING PERIOD :

Original
OPD00016*SD
002

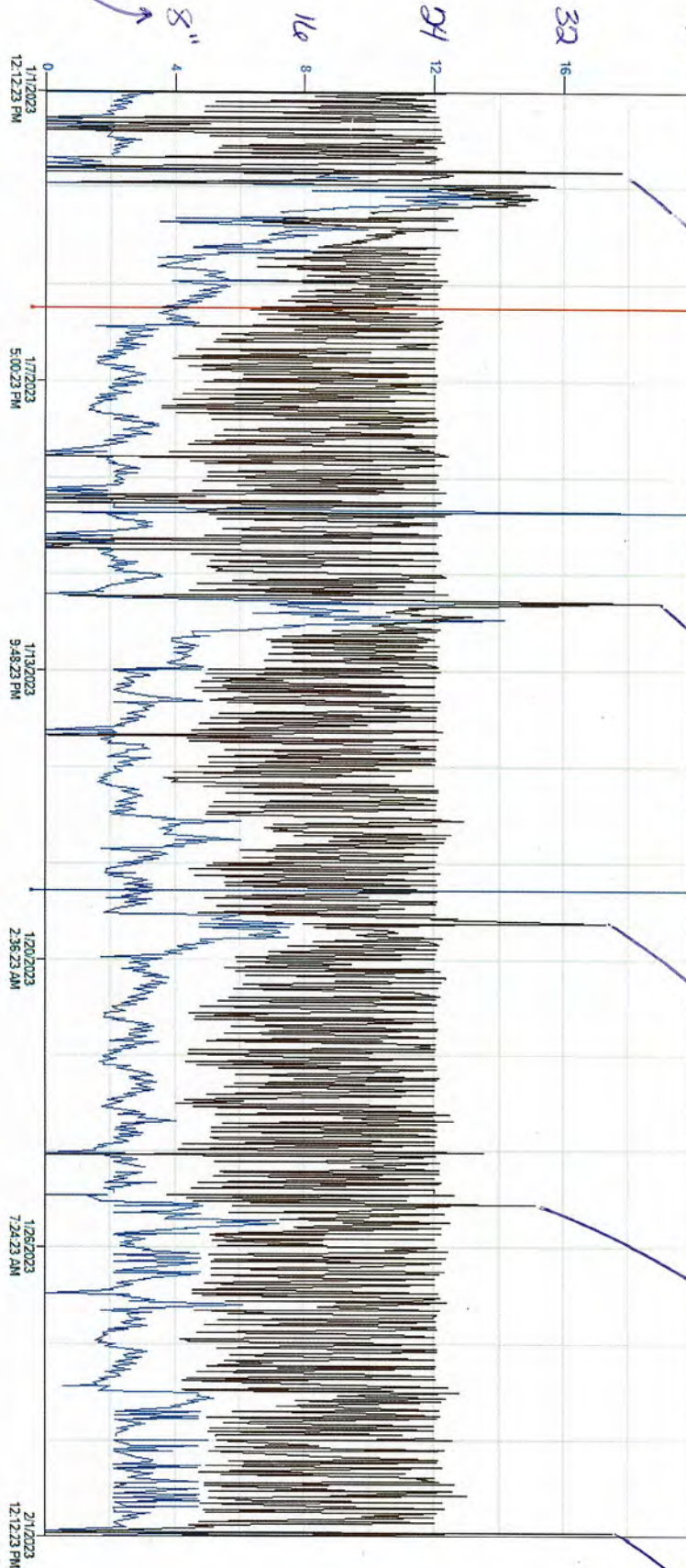
REPORTING LAB:
ANALYST:
NO DISCHARGE INDICATOR:

2022-06-01 To: 2022-06-30
City of Marietta WWTP
various

PARAMETER	Bypass Occurrence	Bypass Total Hours Per Day	Bypass Volume				
PARAMETER CODE	00051	00052	51428				
UNITS	No./Day	Hrs/Day	MGAL				
FREQUENCY	When Disch.	When Disch.	When Disch.				
SAMPLING TYPE	24hr Total	24hr Total	24hr Total				
2022-06-01							
2022-06-02							
2022-06-03							
2022-06-04							
2022-06-05							
2022-06-06							
2022-06-07							
2022-06-08							
2022-06-09							
2022-06-10							
2022-06-11							
2022-06-12							
2022-06-13							
2022-06-14	1	0.033	0.001				
2022-06-15							
2022-06-16							
2022-06-17							
2022-06-18							
2022-06-19							
2022-06-20							
2022-06-21							
2022-06-22							
2022-06-23							
2022-06-24							
2022-06-25							
2022-06-26							
2022-06-27							
2022-06-28							
2022-06-29							
2022-06-30							
Minimum	1.0	0.033	0.001				
Maximum	1.0	0.033	0.001				
Average	1	0.033	0.001				
Count	1	1	1				
Name of Responsible Official or Authorized Representative	I certify under the penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.			Signature of Responsible Official or Authorized Representative		Submission Date/Time	
Stephen Elliott				Stephen Elliott		Certification Version Date 2022-07-18 13:07	

Internal Hydraulic Relief - to BAS Tank

Tag Name	Description	Number	Server	Maximum	Color	IO Address	Time O...	Min Raw	Max Raw	Precision	Source Tag	Sc
☒ RSP_TOT...	Raw Sewage Total Foremain Flow	1	NODE3	20		\Node1...	0:00:00...	0	20	0		
☒ SRB_MS_...	Mechanical Screen Upstream Level	2	NODE3	40		\Node...	0:00:00...	0	40	0		



40
 32
 24
 16
 8
 0
 11/12/2023 12:12:23 PM
 11/17/2023 5:00:23 PM
 11/19/2023 9:48:23 PM
 11/20/2023 2:36:23 AM
 11/26/2023 7:24:23 AM
 12/1/2023 12:12:23 PM

3/1/2023
 @ 10:33

Blank
 11/12/2023 @ 11:05

11/19/2023 @ 08:08

11/25/2023 @ 10:13

Chad Johnson

MGD

Inlets

(2/12/2023 7:18:02 PM) 10 None
(2/27/2023 5:21:01 AM) 0 None

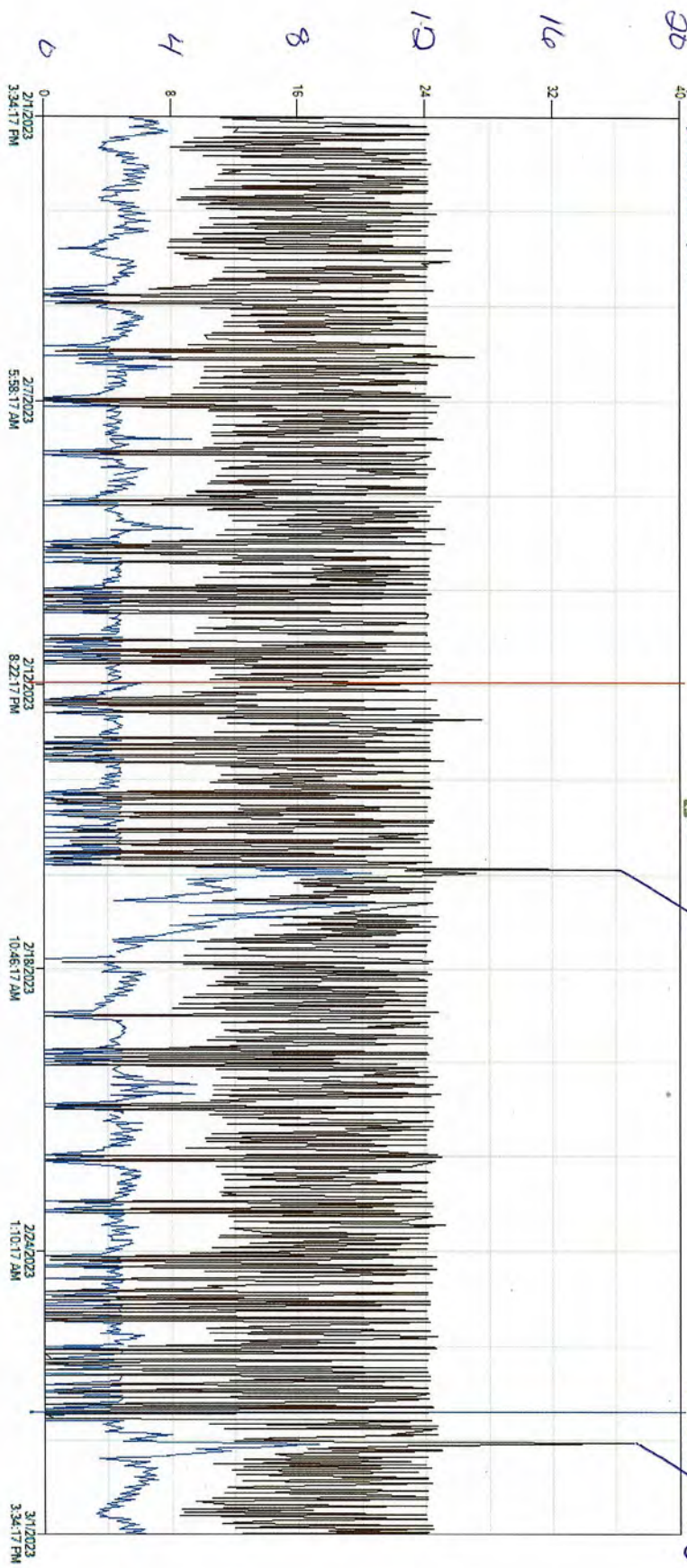
Blank

2 x 1

ceat/m/c @ 11:36

ceat/m/c @ 20:13

-10 None (14 days 10:02:59)



Tag Name	Description	Number	Server	Maximum	Color	ID Address	Time O...	Min Row	Max Row	Precision	Source Tag	Sd
☒ RSP_TOT ...	Raw Sewage Total Foreman Flow	1	NODE3	20		\node1...	0:00:00...	0	20	0		
☒ SRB_MS_...	Mechanical Screen Upstream Level	2	NODE3	40		\node...	0:00:00...	0	40	0		

NODE3 SRB_MS_UPSTREAM_LVL [BeaFlt - 00 02:34:50.351]

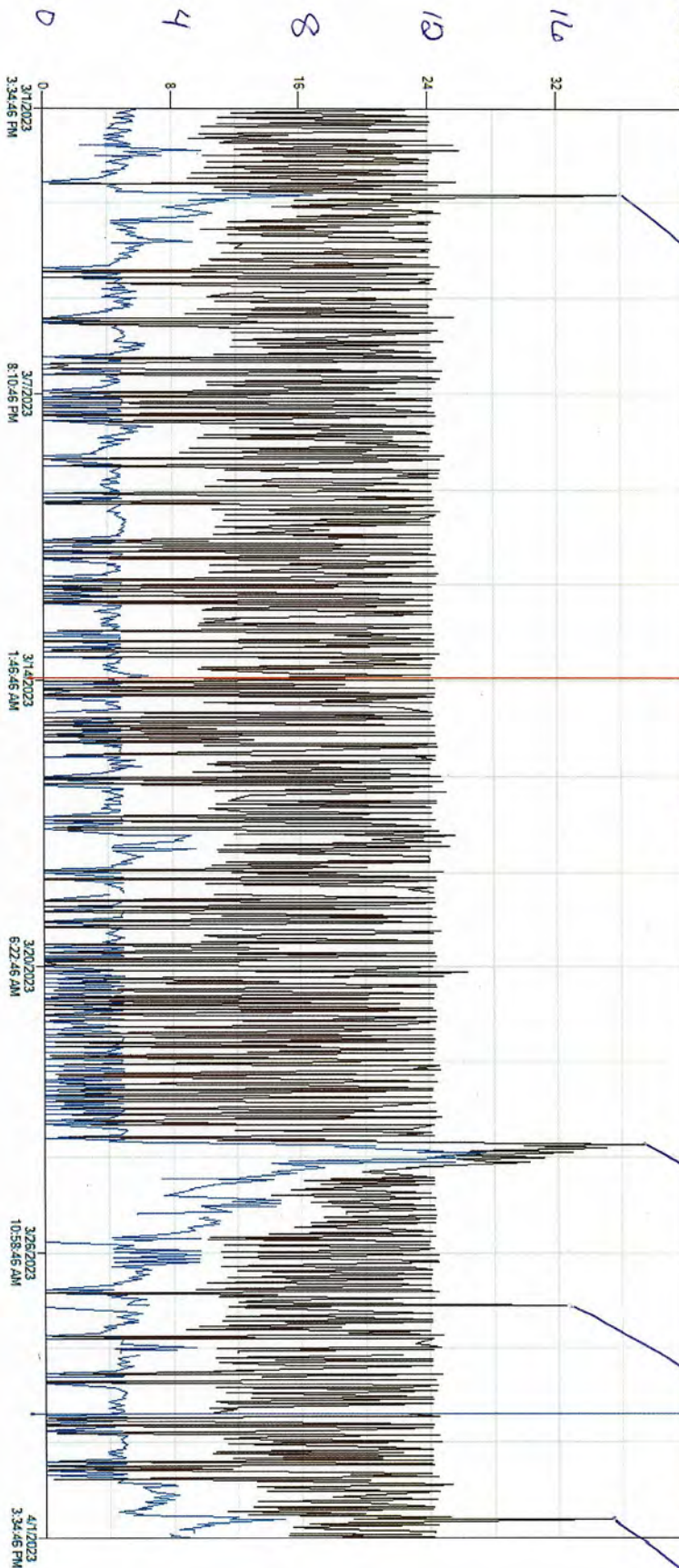
WWT Index

Blank

3/14/2023 12:35:43 AM 24 None
(3/28/2023 11:12:25 PM) 1 None

2 x 1

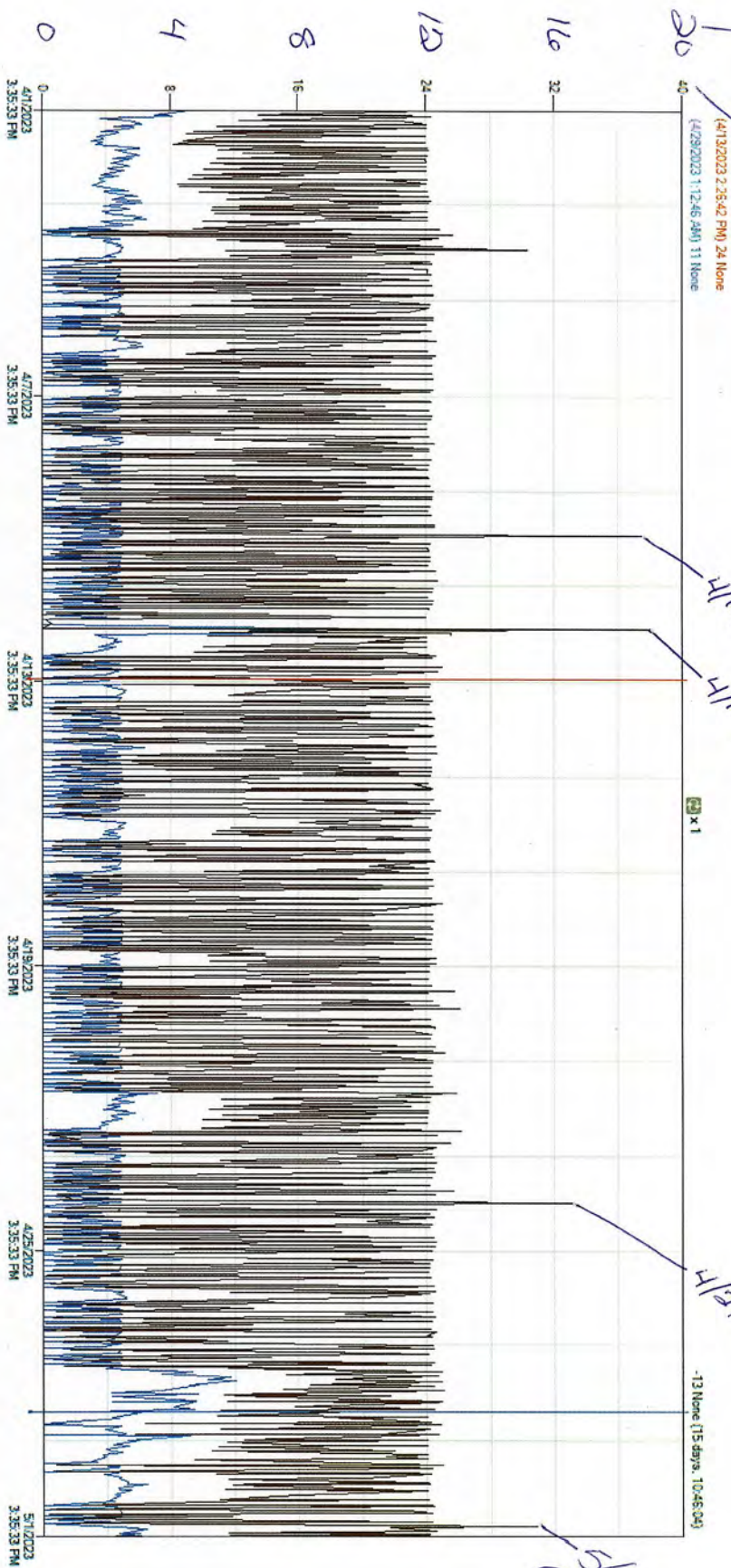
3/28/2023 10:58:46 AM
22 None (15 days, 22:35:42)



Tag Name	Description	Number	Server	Medium	Color	ID Address	Time O...	Min Row	Max Row	Precision	Source Tag	Sd
☒ RSP_TOT...	Raw Sewage Total Foreman Flow	1	NODE3		20	\\node1...	0:00:00...	0	20	0		
☒ SRB_MS...	Mechanical Screen Upstream Level	2	NODE3		40	\\node...	0:00:00...	0	40	0		

NODE3SRB_MS_UPSTREAM_LVL [BaseFlt - 00 02:51:11 927]

NGD Index



Tag Name	Description	Number	Server	Medium	Color	IO Address	Time O...	Min Row	Max Row	Precision	Source Tag	So
☒ RSP_TOT...	Raw Sewage Total Foreman Row	1	NODE3	20	Blue	\\node1...	0:00:00...	0	20	0		
☒ SRB_MS...	Mechanical Screen Upstream Level	2	NODE3	40	Brown	\\node...	0:00:00...	0	40	0		

NODE3SRB_MS_UPSTREAM_LVL [BestFit - 00:02:45:53.948]

MSD Index

20
(5/14/2023 12:00:54 AM) 25 None
(5/29/2023 11:08:29 PM) 1 None

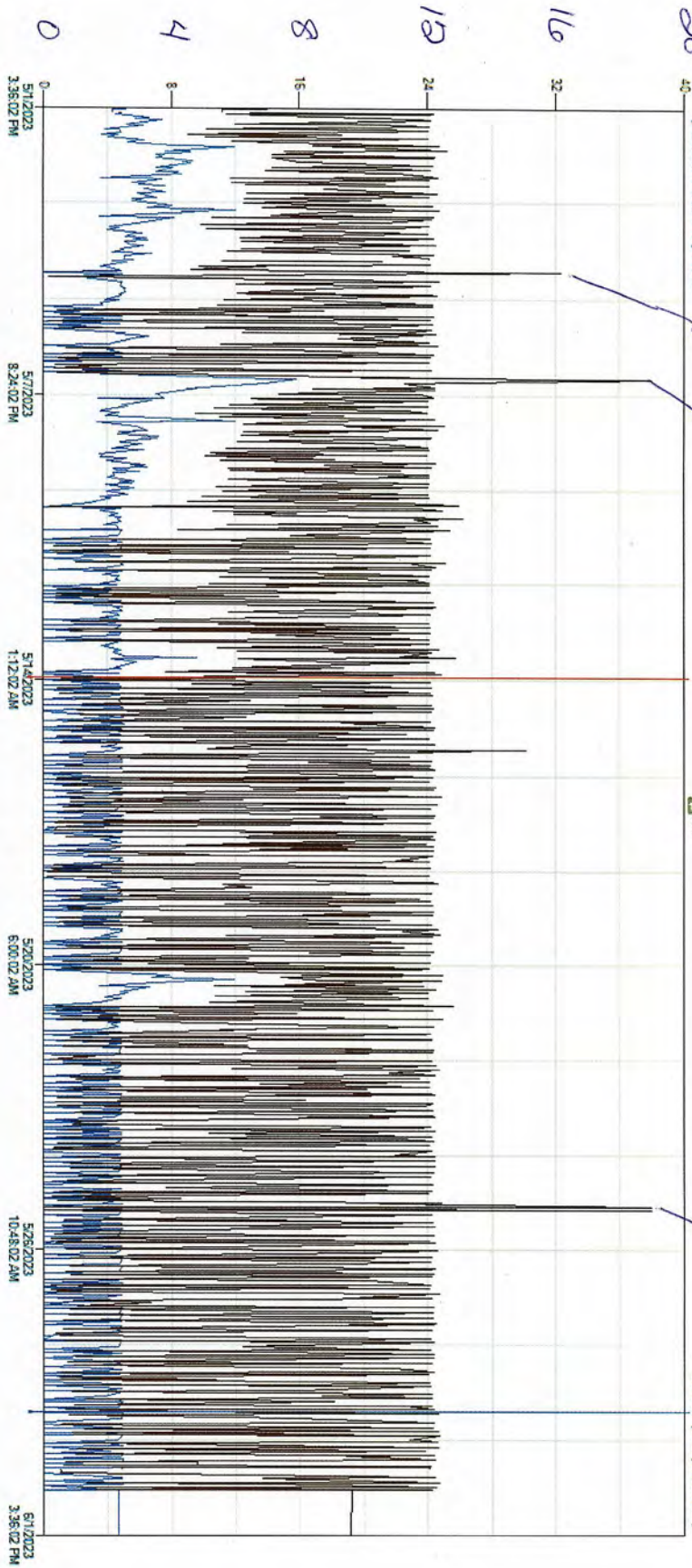
5/5/2023 @ 05:19
5/7/2023 @ 11:57

Blank

2 x 1

5/25/2023 @ 12:31

-23 None (15 days, 23:07:35)



Tag Name	Description	Number	Server	Medium	Color	ID Address	Time O...	Min Row	Max Row	Precision	Source Tag	So
☒ RSP_TOT...	Raw Sewage Total Foremain Flow	1	NODE3		20	\\node1...	0:00:00...	0	20	0		
☒ SRB_MS...	Mechanical Screen Upstream Level	2	NODE3		40	\\node...	0:00:00...	0	40	0		

NODE3 SRB_MS_UPSTREAM_LVL [Base/FH - 00:02:51.25 746]

MSD Inlets

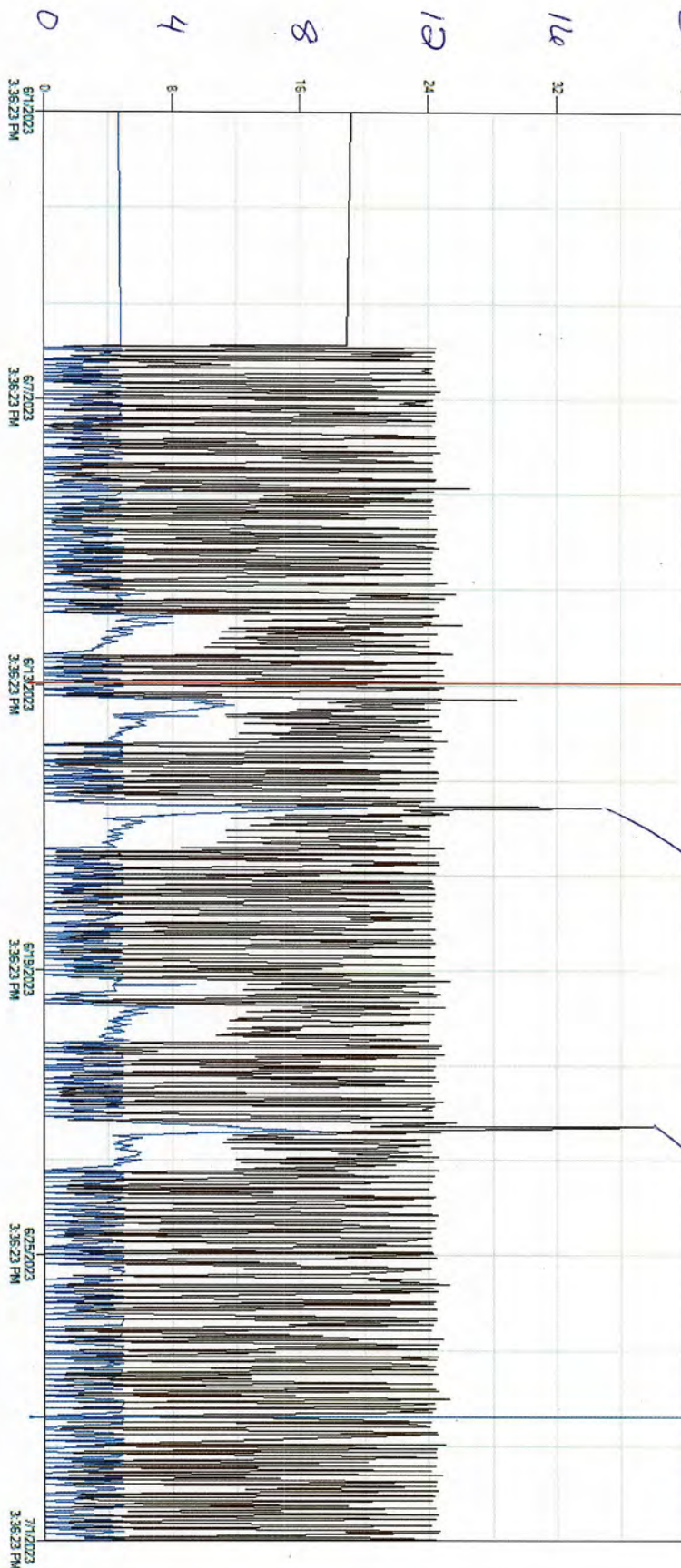
20
(6/13/2023 2:27:32 PM) 24 None
(6/29/2023 1:13:35 AM) 1 None

Blank

6/11/2023 @ 05:37

6/29/2023 @ 23:18

-23 None (15 days, 10:45:03)



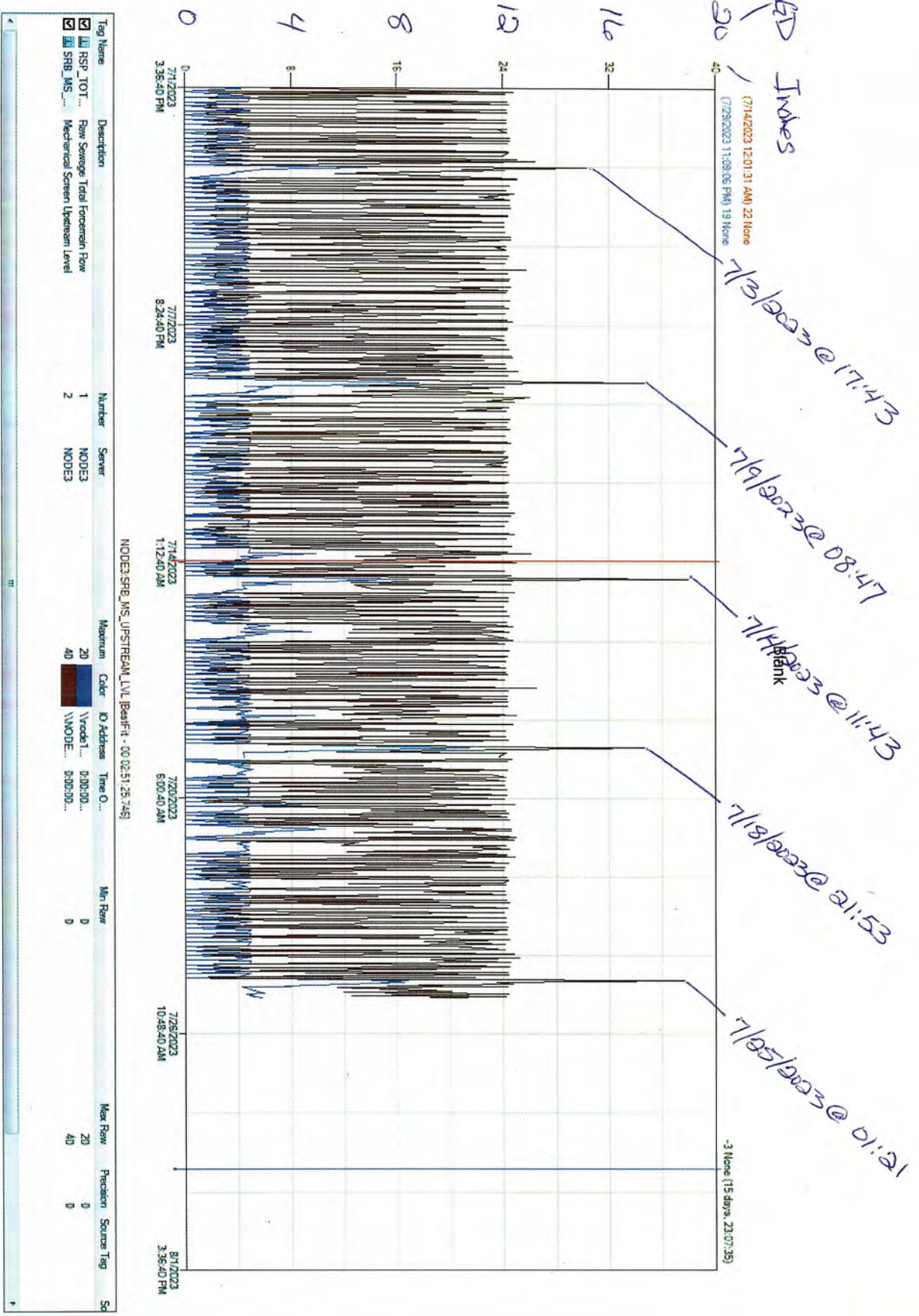
NODE3 SRB_MS_UF5TREAM_LVL [Basin F] - 00:02:45:53 948

Tag Name	Description	Number	Server	Medium	Color	IO Address	Time O...	Min Row	Max Row	Preceden	Source Tag	Se
☒ RSP_TOT...	Raw Storage Total Foreman Flow	1	NODE3	20	Blue	\\node1...	0:00:00...	0	20	0		
☒ SRB_MS...	Mechanical Screen Upstream Level	2	NODE3	40	Brown	\\node...	0:00:00...	0	40	0		

7/25/2023 12:10:53 PM

C:\Users\Operator\Documents\Trends\Blank.aaTrend

MSD Index



BALANCE CALIBRATION PROCEDURE

1. Make sure balance is level
2. Close all doors
3. Press {-> CAL/MENU key until Cal...int appears on the screen
4. Wait until balance reads CAL done
5. CALIBRATION COMPLETE

TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C

- Record weight from pre-weigh filter (pre-washed and weighed)
- Remove filter from pan apply to filtration apparatus
- Wet filter with a small volume of water to seat it
- Apply vacuum
- Stir samples with a magnetic stirrer
- While stirring, pipet a measured volume onto the seated filter
- Rinse with 3 successive 10 ml. volumes of DI water (allowing drainage between washings)
- Carefully remove filter from filtration apparatus with tweezers and transfer to the aluminum plate
- Dry for at 1 hr. (constant weight) in the drying oven @ 103-105 degrees C
- Cool in dessicator
- Weigh and record results

IF VOLATILE SOLIDS ARE TO BE DETERMINED

- Place filters in evaporating dish and put in the muffle furnace @ 500 degrees C for 30 minutes.
- Cool in drying oven for 30 min.
- Cool in dessicator until a constant weight
- Remove from evaporating dish weigh filter and record results

CALCULATION

$$\text{mg. volatile solids/L} = (A-B) \times 1000 / \text{sample volume, ml.}$$

$$\text{mg. fixed solids /L} = (B-C) \times 1000 / \text{sample volume, ml.}$$

Where:

A = Weight of residue + filter before ignition, mg

B = Weight of residue + filter after ignition mg, and

C= Weight of filter, mg.

Colilert®-18 Test Kit

Introduction

Colilert®-18 either simultaneously detects total coliforms and *E. coli*, or fecal coliforms in water. It is based on IDEXX's proprietary Defined Substrate Technology®. When total or fecal coliforms metabolize Colilert-18's DST® nutrient-indicator, ONPG, the sample turns yellow. When *E. coli* metabolize Colilert-18's DST® nutrient-indicator, MUG, the sample also fluoresces. Colilert-18 can simultaneously detect these bacteria at 1 cfu/100 mL within 18 hours even with as many as 2 million heterotrophic bacteria per 100 mL present.

Storage

Store at 2–25°C away from light.

Presence/Absence (P/A) Procedure

1. Add contents of one pack to a 100 mL sample in a sterile, transparent, nonfluorescing vessel.
2. Cap vessel and shake.
3. If sample is not already at 33–38°C, then place vessel in a 35°C waterbath for 20 minutes or, alternatively, a 44.5°C waterbath for 7–10 minutes.
4. Incubate at 35±0.5°C for the remainder of the 18 hours.
5. Read results according to Result Interpretation table below.



Quanti-Tray® Enumeration Procedure

1. Add contents of one pack to a 100 mL room temperature water sample in a sterile vessel.
2. Cap vessel and shake until dissolved.
3. Pour sample/reagent mixture into a Quanti-Tray® or Quanti-Tray®/2000 and seal in an IDEXX Quanti-Tray® Sealer.
4. Place the sealed tray in a 35±0.5°C* (or 44.5±0.2°C for fecal coliforms) incubator for 18 hours (prewarming to 35°C is not required). For incubation in a water bath, submerge the Quanti-Tray, as is, below the water level using a weighted ring.
5. Read results according to the Result Interpretation table below. Count the number of positive wells and refer to the MPN table provided with the trays to obtain a Most Probable Number.

Result Interpretation

Appearance	Result
Less yellow than the comparator ¹ when incubated at 35±0.5°C or 44.5±0.2°C	Negative for total coliforms and <i>E. coli</i> ; Negative for fecal coliforms
Yellow equal to or greater than the comparator when incubated at 35±0.5°C	Positive for total coliforms
Yellow equal to or greater than the comparator when incubated at 44.5±0.2°C	Positive for fecal coliforms
Yellow and fluorescence equal to or greater than the comparator when incubated at 35±0.5°C	Positive for <i>E. coli</i>

- Look for fluorescence with a 6-watt, 365-nm UV light within 5 inches of the sample in a dark environment. Face light away from your eyes and towards the sample.
- Colilert-18 results are to be read after 18 hours of incubation.
- However, if the results are ambiguous to the analyst based on the initial reading, incubate up to an additional four hours (but not to exceed 22 hours total) to allow the color and/or fluorescence to intensify.
- Positives observed before 18 hours and negatives observed after 22 hours are also valid.
- In addition, laboratories may incubate samples for additional time (up to 22 hours total) for their convenience.

Procedural Notes

- A slight tinge may be observed when Colilert-18 is added to the sample.
- If excess foam causes problems while using Quanti-Tray, you may choose to use IDEXX Antifoam Solution (Catalog# WAFDB) or IDEXX 120 mL vessels with Antifoam (Catalog# WV120SBAF-200).
- This insert may not reflect your local regulations. For compliance testing, be sure to follow appropriate regulatory procedures. For example, samples run in other countries should be incubated at 36±2°C for 18–22 hours.
- Colilert-18 can be run in any multiple tube format. *Standard Methods for the Examination of Water and Wastewater*² MPN tables should be used to find Most Probable Numbers (MPNs).
- If a water sample has some background color, compare inoculated Colilert-18 sample to a control blank of the same water sample.
- Colilert-18 can be used for *E. coli* detection (but not coliforms) in marine water. Samples must be diluted at least tenfold. Multiply the MPN value by the dilution factor to obtain the proper quantitative result.
- Use only sterile, nonbuffered, oxidant-free water for dilutions.
- Colilert-18 is a primary water test. Colilert-18 performance characteristics do not apply to samples altered by any pre-enrichment or concentration.
- In samples with excessive chlorine, a blue flash may be seen when adding Colilert-18. If this is seen, consider sample invalid and discontinue testing.
- Aseptic technique should always be followed when using Colilert-18. Dispose of in accordance with Good Laboratory Practices.

Quality Control Procedures—Total Coliform and *E. coli*

1. One of the following quality control procedures is recommended for each lot of Colilert-18:
 - A. IDEXX-QC Coliform and *E. coli*®: *Escherichia coli*, *Klebsiella varicola*®, and *Pseudomonas aeruginosa*.
 - B. Quanti-Cult® *Escherichia coli*, *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*.
 - C. Fill three sterile vessels with 100 mL of sterile non-buffered oxidant-free water and inoculate with a sterile loop of ATCC® strains, *Escherichia coli* ATCC 25922/ WDCM 00013 or ATCC 11775/WDCM 00090, *Klebsiella varicola*® ATCC 31488/WDCM 00206 or *Klebsiella aerogenes* ATCC 13048/WDCM 00175, and *Pseudomonas aeruginosa* ATCC 10145/WDCM 00024 or ATCC 27853.
2. Follow the P/A Procedure or Quanti-Tray Enumeration Procedure above.
3. Results should match the Result Interpretation table above.

NOTE: IDEXX internal quality control testing is performed in accordance with ISO 11133:2014. Quality Control Certificates are available at idexx.com/water.

Quality Control Procedures—Fecal Coliform

1. One of the following quality control procedures is recommended for each lot of Colilert-18:
 - A. IDEXX-QC Fecal Coliform®: *Escherichia coli* and *Pseudomonas aeruginosa*.
 - B. Quanti-Cult® *Escherichia coli* (fecal coliform), *Klebsiella pneumoniae* (fecal coliform) and *Pseudomonas aeruginosa* (non-fecal).
 - C. Fill two sterile vessels with 100 mL of sterile non-buffered oxidant-free water and inoculate with a sterile loop of ATCC® strains, *Escherichia coli* ATCC 11775 (fecal coliform) and *Pseudomonas aeruginosa* ATCC 10145 or 27853 (non-fecal coliform).
2. Follow the Quanti-Tray Enumeration Procedure above.
3. Results should match the Result Interpretation table above.

1. IDEXX P/A Comparator, catalog # WP104; Quanti-Tray Comparator #WQTC, or Quanti-Tray/2000 Comparator #WQ2K6

2. Eaton, AD, Cluskey, LS, Greenberg, AE, Rice, EN. *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, 2015 (Washington, DC).

3. IDEXX-QC Coliform and *E. coli*, IDEXX Catalog #UN3373-WUC-QC-C.

4. Quanti-Cult coliforms—IDEXX catalog # WK1-1001

5. American Type Culture Collection 1-100-639-6597 accuracy

6. IDEXX-QC Fecal Coliform—IDEXX Catalog #UN3373-WUC-FC

7. When following AFNOR validated method for drinking water bathing water testing, place the sealed tray in a 36±2°C incubator for 18 hours (prewarming to 35°C is not required)

8. *Klebsiella pneumoniae* (ATCC 31488/WDCM 00006) has been reclassified to *Klebsiella varicola*.

*Colilert, Defined Substrate Technology, DST and Quanti-Tray are trademarks or registered trademarks of IDEXX Laboratories, Inc. or its affiliates in the United States and/or other countries.

Quanti-Cult is a trademark or registered trademark of Remel, Inc.

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Operator Calibration of PH and DO Meters

Lab PH Bench Meter

- Stir 7 PH Buffer
- Remove Blue Cap from side of Probe and insert into 7 Buffer
- Press Cal.- Once 7 is displayed (little 7 above actual reading) Rinse Probe
- Hit Cal
- Stir 4 Buffer and insert into 4 Buffer
- Once 4&7 are displayed (little 4&7 above actual reading) Hit Enter
- Slope % will display for a short period of time
- Record date, time, initials, 7&4 Buffer, & % Slope on Lab Worksheet

Handheld pH Meter

- Turn Meter on
- Rinse probe with DI water
- Stir 7 pH Buffer
- Put probe in 7 pH buffer
- Press and hold stand until it beeps and wait flashes in top left hand corner of screen once it beeps and slope flashes in the bottom left hand corner you can pull from pH buffer 7
- Rinse probe with DI water once pulled from pH buffer 7
- Place probe in pH buffer 4 and wait 20 seconds then press slope once wait in the top left hand corner stops flashing and it beeps and Hold shows up in the top left center of the screen
- You can pull probe from pH buffer 4 and press and hold the Meas./Effic. It will beep and flash the slope of the meter this needs recorded on monthly calibration sheet

The slope of the pH meters should be between 92%-102%

Collecting pH Samples in Plant for Analysis

- The collection and analysis is the same at all location PI, PE, FE as well as Aeration Basins.
- Collect the sample with the dipper at the location.
- Stick pH probe into sample immediately upon collection.
- Hit the Meas./Effic. Button once in the sample.
- Wait for the meter to display hold at the top of the display then record the pH off of the display.

Operator's Handheld Portable DO Meter Calibration

- Turn Meter On select Calibrate
- Select Enter
- Select Enter
- Select Enter
- Record Date, Time, Initials, Temp. from meter, mmHG from meter on Lab Worksheet

Fecal Coliform/E. Coli Collection

- Grab the clean stored dipper from Lab as well as sterile bottle.
- Go to UV Channels.
- Bleach the dipper and triple rinse the dipper on the effluent side of the UV Reactor.
- Collect Sample with clean dipper.
- Pour Sample in Sterile Collection Bottle.
- Put time and date of collection on the bottle.
- Put sample in Lab Fridge to cool to less than 6 degrees Celsius.
- Remove Sample Bottle from fridge place in Microbac Cooler with icepacks.
- Deliver Sample to Microbac
- Hold time for E. Coli/Fecal Coliform is 8 hours

City of Marietta Operations Lab Sheet

<u>Month</u>	<u>Day</u>	<u>Year</u>	<u>Day of Week</u>

<u>OUR DO/MIN</u>						<u>Result</u>
1-	2-	3-	4-	5-	6-	

<u>Total Suspended Solids</u>			
Sample ID	Primary Influent (PI)	Primary Effluent (PE)	Final Effluent (FE)
Sample Volume			
Final Weight			
Initial Weight			
Result mg/L			
Sample ID	Mixed Liquor Suspended Solids (MLSS)	Return Activated Sludge (RAS)	Other
Sample Volume			
Final Weight			
Initial Weight			
Result mg/L			
		<u>Please initial beside each analytical data you completed and sign this form.</u>	
Burnt Weight			
% Volatile			
Volatile Results mg/L			

PE (Alkalinity)	FE (Alkalinity)	RAS (Alkalinity)	WE (NH ₃)	PI (NH ₃)	FE (NH ₃)	Nitrite (NO ₂)	Nitrate (NO ₃)

"I certify under the penalty of law that the information submitted in true, accurate, and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Operator #1 _____ Operator #2 _____ Operator #3 _____

Operator #4 _____ Operator #5 _____ Operator #6 _____

Other# _____

City of Marietta WWTP Operator Daily Log

Operator #1					Certification #1				
Operator #2					Certification #2				
Operator #3					Certification #3				
Operator #1 Signature					Date M/D/Y				
Operator #2 Signature					Weekday				
Operator #3 Signature					Grit Box Level				
					Rag Box Level				
INF / EFF Temp	/		/		Weather Data Collected		12 AM	Yes	No
Main Gate % Open					EOM Data Done		0100	0600	1800
RWW Pumps In Service 1 2 3 4 5					Primaries Inspected		Y / N	Y / N	Y / N
Pump #1 Priority		Auto			Primaries Scummed		Y / N	Y / N	Y / N
Pump #2 Priority		Auto			Scum Feed Line		Y / N	Y / N	Y / N
Pump #3 Priority		Auto			Scum Screens Insp.		Y / N	Y / N	Y / N
Pump #4 Priority		Auto			Scum Pumps Insp.		Y / N	Y / N	Y / N
Pump #5 Priority		Auto			Aeration Basin Insp.		Y / N	Y / N	Y / N
Raw Sludge Gallons/Tank					Sump Pumps Insp.		Y / N	Y / N	Y / N
Raw Sludge Start/Stop					RWWP's Insp.		Y / N	Y / N	Y / N
Primary Clarifier # 1 Sludge Blanket					Final Clarifiers Insp.		Y / N	Y / N	Y / N
Primary Clarifier # 2 Sludge Blanket					UV Channels Insp.		Y / N	Y / N	Y / N
Primary Clarifier # 3 Sludge Blanket					Dumpster Lid Closed		Y / N	Y / N	Y / N
					Diesel Tank Insp.		Y / N	Y / N	Y / N
Aeration Tanks In Service 1 2 3					Leaks		Y / N	Y / N	Y / N
Aeration Basin DO Per Round					Polymer Totes Insp.		Y / N	Y / N	Y / N
East (1)					Used Oil Insp.		Y / N	Y / N	Y / N
Center (2)					Cleaning Supplies Insp.		Y / N	Y / N	Y / N
West (3)					Herbicide Insp.		Y / N	Y / N	Y / N
Aeration Blowers in Service 1 2 3					Anti-freeze		Y / N	Y / N	Y / N
AB Blower #1 CFM/Time		/		/	Used Anti-freeze		Y / N	Y / N	Y / N
AB Blower #2 CFM/Time		/		/	UV Cleaner		Y / N	Y / N	Y / N
AB Blower #3 CFM/Time		/		/	Water Lines Insp.		Y / N	Y / N	Y / N
Secondary Clarifiers In Service 1 2					Oils		Y / N	Y / N	Y / N
North 1									
South 2							PI	PE	FE
Centrifuge In Operation		Thickening		Dewatering	Sampler AM				
EQ Basin Pump Hours In Operation					Sampler PM				
EQ Basin Flow Returning				YES / NO	FE DO/Temp X4				
Hours Returned							0100	0600	1800
WAS Target		WAS Actual			PI PH-				
RAW Target		RAW Actual			PE PH-				
Total					FE PH-				
Comments:					ML East PH				
					ML Center PH				
					ML West PH				

I certify under the penalty of law that the information submitted is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment." Signed Above

Daily Settleometer			Time:	MLSS Protozoa	Sample Collection Log		
Minutes	1000mL	50/50 mL			AM	PM	
2				Flagellates	PI Composite		
5				Free Swimming Ciliates	PE Composite		
10				Crawling Ciliates	FE Composite		
15				Stalked Ciliates	MLSS East Grab		
20				Rotifers	MLSS Center Grab		
25				Nematode	MLSS West Grab		
30				Bristle Worm	RAS North Grab		
40				Filaments	RAS South Grab		
50				Water Bear	PI PH Grab		
60				Other	PE PH Grab		
120					FE PH Grab		
180					Raw Sludge Composite		
SSC=(Aeration % Spin x1000)/30min SSV					Sludge Feed Comp.		
East	Sample	West			Sludge Centrate Comp.		
	1 Aeration 4				Sludge Cake Comp.		
	2 RAS 5				FEDO/Temp X 2		
	4 Final Clarifier 6			Digester Settlometer	Digester Composite Samples		
	%X.668=CSU		Min.	Digester# 1,2,3	Digester #1		
	%X.77=ASU		30		Digester #2		
	CSU+ASU=TSU		60		Digester #3		
	TSU/ MCRT		120		Daily/Weekly Contract Lab Samples		
	WSU/ %RAS		180		Oil/Grease Grab		
	X 1,000,000				Fecal/Ecoli Grab		
Total Gallons to Waste =					CBOD PI,PE,FE Comp.		
TSU Total	RAS Rate	ASU Total			NH3 Grab		
					Phos. Grab		
CSU Total	SVI	WSU Total			Residue,Total Filt. Grab		
					Covid Comp		
30 Min SSV	SSC Avg.	CR Avg.			Monthly Contract Lab Samples		
					TKN, NO2+NO3 Comp		
CR Avg.=1000/30 Min. SSV					LLHg Grab		
SVI=30 Min. SSVx1000/MLSS					Ortho Phosphate Filt. Grab		
Lift Stations time					Quarterly Contract Lab Samples		
Gilman					Cyanide Total Grab		
Pine Meadows					Cyanide Free Grab		
Harmar					Metals Grab		
Manchester					Hex Chromium Grab		
Commerce					Dewater Sludge Comp		
Devola					Septic Hauler Comp		
Coventry				Comments:			
Faye							
Oakview							
Cullen Grinder							
Cullen							
Sunset							
Duck Creek							
East Norwood					*-----SYSTEM ALARM		

Division of Surface Water

Non-compliance Notification for Exceedance of a Daily Maximum Discharge Limit

Use this form to report non-compliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in your NPDES permit (see Part III, Section 12 of your NPDES permit for details). The form should be completed and e-mailed to the appropriate Ohio EPA inspector, or Ohio EPA office using one of the following addresses:

Permittee Information

NPDES Permit Number: 0PD00016*SD

Contact name for permittee: Ryan Boley

mail Address: ryanboley@mariettaoh.net

Contact Telephone: (740) 373-3858

Exceeded Limits

Parameter		Permit Limit		Measured exceedance	Comments
Code	Name	Type	Value	(include units)	
1616	Fecal Coliform	30 day concentration average	1000 #/100 ml	2419.6 #/100 ml	AK >2419.6 on 12/27/2022

Description of Exceedance

Provide a description of the permit limit exceedance:	Fecal Coliform sample taken at 0857 on 12/27/2022 analytical results were > 2419.6. The next Fecal Coliform sample that was analyzed was taken on 12/28/2022. Results for sample collected on 12/28/2022 was 5.2 colonies/100.
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Cause of Exceedance

Provide an explanation for the cause of the permit limit exceedance:	Malfunction in UV reactors
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Period of Exceedance

Exact time period of exceedance (include times and dates):	1 hrs 12/27/2022 08:57:00
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If uncorrected, expected duration

If the exceedance is not yet corrected, provide the expected time period during which it is anticipated to continue:	
--	--

Steps to address exceedance

Describe all the steps taken to reduce, eliminate, or prevent future occurrence of the exceedance(s):	At this time, we are continuing daily UVT readings and investigation of our UV reactors. All other plant operating parameters are indicating very good treatment. The City's Maintenance Manager and Operations Manager both emailed the UV manufacturers today 1/18/2023 to request an update on their availability to be on site and investigate/correct the issues with our UV reactors.
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ADDITIONAL INFORMATION

Please add any additional comments or attachments below.

Division of Surface Water Non-compliance Notification for Exceedance of a Daily Maximum Discharge Limit

Use this form to report non-compliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in your NPDES permit (see Part III, Section 12 of your NPDES permit for details). The form should be completed and e-mailed to the appropriate Ohio EPA inspector, or Ohio EPA office using one of the following addresses:

Permittee Information

PDES Permit Number: OPD00016*SD

Contact name for permittee: Ryan Boley

mail Address: ryanboley@mariettaoh.net

Contact Telephone: (740) 373-3858

Exceeded Limits

Parameter		Permit Limit		Measured exceedance	Comments
Code	Name	Type	Value	(include units)	
1616	Fecal Coliform	30 day concentration average	1000 #/100 ml	2419.6 #/100 ml	AK .2419.6 on 1/17/2023

Description of Exceedance

Provide a description of the permit limit exceedance:

Fecal Coliform sample taken on 1/17/2023. The analytical results were > 2419.6. UV reactor #1 and #2 in service. Both reactors had major alarms with multiple UV bulbs not working. Plant operator reset alarms and reset UV reactor units. UV #1 and #2 were then showing that all UV Bulbs were on; however, UV #1 rack 7 and UV #2 rack #7 bulbs were not actually on. This was verified by the Plant Operators and pictures were taken and provided to the UV manufacture technicians.

Cause of Exceedance

Provide an explanation for the cause of the permit limit exceedance:

Malfunction of UV reactors.

Period of Exceedance

Exact time period of exceedance (include times and dates):

1 hrs
01/17/2023 08:45:00

If uncorrected, expected duration

If the exceedance is not yet corrected, provide the expected time period during which it is anticipated to continue:

Steps to address exceedance

Describe all the steps taken to reduce, eliminate, or prevent future occurrence of the exceedance(s):

The Marietta WWTP has continued to have ongoing technical issues with the Enaqua UV system. The plant operations and maintenance staff have continued to diagnose the ongoing issues with the UV reactors to gain as much data/information as possible to aid the manufacture in correcting the current issues. On 2/2/2023 an Enaqua employee was on site at the WWTP to begin the process of fully diagnosing the UV reactor issues. The Enaqua employee was able to change 4 LRC boards in UV reactor #1 on UV racks 3,5,7,9. At this time Enaqua has asked the City to continue to monitor the reactors and in two weeks report back to them with an update as to whether the changes made on 2/2/2023 has corrected any of the current issues. At that time Enaqua will work with the City to decide what path will need be taken to resolve the current issues with the UV system. The Marietta WWTP have continued to complete UVT readings as well as document any discrepancies with the UV reactors and our SCADA system. As of 2/14/2023 the City will stop completing the UVT readings as the UVT transmittance meter is owned the compliance assistance team and they are in need of this meter. The City has been completing the UVT reading since November 22nd, 2022. At this time the UVT data collected doesn't show that the UVT could be causing an interference with the ability for the UV reactors to treat the effluent water properly.

ADDITIONAL INFORMATION

Division of Surface Water

Non-compliance Notification for Exceedance of a Daily Maximum Discharge Limit

Use this form to report non-compliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in your NPDES permit (see Part III, Section 12 of your NPDES permit for details). The form should be completed and e-mailed to the appropriate Ohio EPA inspector, or Ohio EPA office using one of the following addresses:

Permittee Information

NPDES Permit Number: OPD00016*SD

Contact name for permittee: RYAN BOLEY

mail Address: ryanboley@mariettaoh.net

Contact Telephone: (740) 373-3858

Exceeded Limits

Parameter		Permit Limit		Measured exceedance	Comments
Code	Name	Type	Value	(include units)	

0 records found

Description of Exceedance

Provide a description of the permit limit exceedance: Fecal Coliform sample taken on 3/8/2023. The analytical results were >2419.6. The WWTP is still experiencing issues with the UV reactors. Plant operators are continuing to reset alarms daily on both reactors. All other parameters in effluent samples show good quality treatment.

Cause of Exceedance

Provide an explanation for the cause of the permit limit exceedance: Malfunction in UV reactors

Period of Exceedance

Exact time period of exceedance (include times and dates): 24 hrs
03/22/2023 09:57:00

If uncorrected, expected duration

If the exceedance is not yet corrected, provide the expected time period during which it is anticipated to continue:

Steps to address exceedance

Division of Surface Water

Non-compliance Notification for Exceedance of a Daily Maximum Discharge Limit

Use this form to report non-compliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in your NPDES permit (see Part III, Section 12 of your NPDES permit for details). The form should be completed and e-mailed to the appropriate Ohio EPA inspector, or Ohio EPA office using one of the following addresses:

Permittee Information

PDES Permit Number: 0PD00016*SD

Contact name for permittee: RYAN BOLEY

mail Address: ryanboley@mariettaoh.net

Contact Telephone: (740) 373-3858

Exceeded Limits

Parameter		Permit Limit		Measured exceedance	Comments
Code	Name	Type	Value	(Include units)	
1616	Fecal Coliform	30 day concentration average	1000 #/100 ml	2419.6 #/100 ml	>2419.6

Description of Exceedance

Provide a description of the permit limit exceedance: The biological fecal coliform sample analyzed was too numerous to count. All other permit parameters were in compliance.

Cause of Exceedance

Provide an explanation for the cause of the permit limit exceedance: The City believes the contract lab technician was unaware of the need to dilute the sample from a yellow tint to clear prior to analyzing as recommended by Idexx . The City contacted the contract lab to discuss the need for the samples to be diluted due to a background interference with the sample causing the sample to be more yellow than the color comparator prior to analyzing. The contract lab discussed this with the lab technician per Idexx recommendations. There has only been one, much lower exceedance since the interference to the procedure was removed.

Period of Exceedance

Exact time period of exceedance (include times and dates): 24 hrs
04/18/2023 08:00:00

If uncorrected, expected duration

If the exceedance is not yet corrected, provide the expected time period during which it is anticipated to continue:

Steps to address exceedance

Describe all the steps taken to reduce, eliminate, or prevent future occurrence of the exceedance(s): The City checked UV system for defects. City cleaned final clarifiers and UV system. City split samples with the contract lab. City researched fecal coliform sampling, analysis, and procedures. City discussed problems with Idexx technicians. Idexx suspected definite background interference due to a yellow tint from the plants final effluent and recommended dilutions until initial yellow tint became clear, then analyze. City also consulted with the OEPA compliance assistance unit and conducted UV transmitting testing to rule out a UV transmittance problem.

ADDITIONAL INFORMATION

S.S.O. LOCATION LIST

ID #	Location Description	Yr. assign	
301	MH 9-37	2012	
302	MMH Sample Site #3	2012	
303	MH 11-53	2012	
304	MH 11-16 Gilman Ave	2012	
305	MH 11-17 Gilman Ave	2012	
306	MH 9-3 1401 Colegate Dr.	2012	
307	MH 2-36 County House Lane	2012	
308	Private Sewer 240 Hillcrest	2012	
309	MH 5-166	2012	
310	Lamp hole 200 Block Colegate Dr.	2012	
311	MH 11-18 Gilman Ave	2012	
312	MH 5-108D 200 Blk Colegate Dr.	2012	
313	600 Block Montgomery St.	2012	
314	MH 7-25 813 fifth St.	2012	
315	MH 11-179 111 Dye Circle	2012	
316	MH 8-12 Muskingum Dr. and Colegate Dr.	2013	
317	LH at E Cutler and Gross	2013	
318	MH 12-12 Westview R.O.W.	2013	
319	MH 9-27 behind 907 Colegate Dr.	2013	
320	MH 3-83 500 BLK. E 8 th St.	2013	
321	MH 11-110 310 Lancaster St.	2013	
322	LH 105 407 Fearing St.	2014	
323	MH 12-26 Flintwood ROW 1317 Lancaster	2014	
324	MH 12-17 Westview ROW	2014	
325	MH 6-116 Behind 315 Gross (Old TSC)	2014	
326	LH 12-18 Westview ROW	2014	
327	Broken Sewer 103 Manchester	2014	
328	Broken Sewer 100 Spring St.	2015	
329	MH 5-42 Hart and Pike	2015	
330	MH 4-06C (MMH #2) 323 S 7 th st.	2015	
331	MH 8-86 275 Front St.	2015	

S.S.O. LOCATION LIST

332	MH 11-33 Leland ROW	2015	
333	Broken Sewer 315 Gross St.	2015	
334	MH 12-1 1101 Gilman Ave	2015	
335	Hole in 30" Pipe E Norwood INT.	2016	
336	MH 6-108 315 rear Gross St.	2016	
337	Broken Main 301 Lancaster	2016	
338	MH 1-86A 26910 SR 7 Reno	2016	
339	MH 8-60 E. Musk. Int. 829 Front St. rear	2017	
340	MH 6-127 747 Glendale Rd.	2017	
341	MH 5-2 Hart and S 6th	2018	
342	MH 9-95 1103 Colegate Dr.	2018	
343	MH 4-19 Post St. and Butler St.	2019	
344	MH 8-76 713 Allen St Boat Club	2019	
345	MH 8-85B NW Cnr. P.O. Parking Lot	2019	
346	Sewer Main 116 Riverview	2020	
347	Manchester Lift Station	2020	
348	Hole in Pipe E Norwood Interceptor Under Rt. 7 Brdg.	2020	
349	6 inch hose damage RTV	2020	
350	1.5 in hole in 30 in. Sewer E Norwood Int. Crossing	2020	
351	Pinholes in 30 in. Sewer E Norwood Int. Crossing	2021	
352	MH 2-5 12 in. east side of duck Creek at RTV Brdg.	2021	
353	Broken Sewer behind 967 Lancaster Btwn. MH 11-37A and MH 11-38	2022	
354	6 in. Sewer Btwn. Merryhill and Marigold	2022	
355	MH 6-136 Glendale Rd	2022	

Steve Elliott

From: Kimberly D Nohe
Sent: Tuesday, July 25, 2023 9:44 AM
To: Steve Elliott
Subject: SEWER CUSTOMER BREAKDOWN

Steve,

Here is the breakdown of sewer customers you requested.

Residential	5075 plus 8 flat accounts
Commercial	725
Industry	13
Schools	53
Government	24

Have a great day! 😊

Kimberly D. Nohe
Utility Adminsitrator
City of Marietta
P.O. Box 774
Marietta, OH 45750

Effluent Limit Exceedances Report
 OH0026344: MARIETTA WWTP, MARIETTA, OH 45750
 Monitoring Period Date Range: 07/01/2018 to 05/31/2023

Exceedance Details

Monitoring Period Date	Outfall	Parameter Description	Limit Type	DMR Value	dmr_value_q ualifier	DMR Value Unit	Limit Value	% Exceedance
1/31/2019	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
1/31/2019	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
2/28/2019	1	Solids, total suspended	WKLY MAX	780	=	kg/d	614	27
8/31/2019	1	E. coli, MTEC-MF	MO GEOMN		T	MPN/100mL	126	Limit Violation
8/31/2019	1	E. coli, MTEC-MF	WK GEOMN		T	MPN/100mL	284	Limit Violation
10/31/2020	1	E. coli, MTEC-MF	MO GEOMN		T	MPN/100mL	126	Limit Violation
10/31/2020	1	E. coli, MTEC-MF	WK GEOMN		T	MPN/100mL	284	Limit Violation
11/30/2021	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
11/30/2021	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
12/31/2021	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
12/31/2021	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
2/28/2022	1	Solids, total suspended	MO AVG	444	=	kg/d	411	8
2/28/2022	1	Solids, total suspended	WKLY MAX	1130	=	kg/d	614	84
2/28/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
2/28/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
3/31/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
3/31/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
4/30/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
4/30/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
5/31/2022	1	E. coli, MTEC-MF	WK GEOMN		T	MPN/100mL	284	Limit Violation
5/31/2022	1	E. coli, MTEC-MF	MO GEOMN		T	MPN/100mL	126	Limit Violation
6/30/2022	1	E. coli, MTEC-MF	WK GEOMN		T	MPN/100mL	284	Limit Violation
6/30/2022	1	E. coli, MTEC-MF	MO GEOMN		T	MPN/100mL	126	Limit Violation
10/31/2022	1	E. coli, MTEC-MF	WK GEOMN	1087	=	MPN/100mL	284	283
12/31/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
12/31/2022	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
1/31/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
1/31/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
3/31/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
3/31/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
4/30/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	MO GEOMN		T	#/100mL	1000	Limit Violation
4/30/2023	1	Coliform, fecal MF, MFC broth, 44.5 C	WK GEOMN		T	#/100mL	2000	Limit Violation
5/31/2023	1	E. coli, MTEC-MF	WK GEOMN	313.7	=	MPN/100mL	284	10