UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SUBJECT:	CLEAN WATER ACT INSPECTION REPORT Mt. Pleasant Wastewater Treatment Plant (WWTP)
FROM:	Jason Hewitt Water Enforcement Branch, Section 1
THRU:	Molly Smith, Section Supervisor Water Enforcement Branch, Section 1
TO:	File

JASON HEWITT
Digitally signed by JASON HEWITT
Date: 2023.11.22 07:03:54 -06'00'

MOLLY SMITH
Digitally signed by MOLLY SMITH
Date: 2023.11.17 16:14:56 -06'00'

BASIC INFORMATION

Facility Name: Mt. Pleasant Wastewater Treatment Plant (WWTP) (facility)

Facility Location: 1301 North Franklin Street Mt. Pleasant, Michigan

NPDES Permit Number: MI0023655

Facility Type: Wastewater Treatment Plant

Date of Inspection: 9/12/2023

EPA Inspector(s):
1. Jason Hewitt, EPA Region 5
2. Jennifer Bush, EPA Region 5

Other Attendees:
1. Tim Middleton, Mt. Pleasant
2. Sarah Marshall, Mt. Pleasant

Contact Email Address: smarshall@mt-pleasant.org

Inspection Type: NPDES

Facility Notification:
☐ Unannounced Inspection
☒ Announced Inspection

Regulations Relevant to Inspection: NPDES permit requirements

Arrival Time: 9:00 a.m. EST
Departure Time: 11:45 a.m. EST

OPENING CONFERENCE

☒ Presented Credentials.
☒ Stated authority and purpose of inspection.
☐ Provided Small Business Resource Information Sheet.
☒ Small Business Resource Information Sheet not provided. Reason: Not a small business.
☒ Provided CBI warning to facility.

The following information was obtained from the permit, permit application, or verbally from Tim Middleton and Sarah Marshall unless otherwise noted.

Process Description:

The Mt. Pleasant WWTP serves a community of approximately 21,600 residents, including 5,600 water connections, and one categorical industrial user (CIU) (tannery). Wastewater enters the plant through either an inline grinder or a bar screen and is pumped into an aerated grit removal chamber where it is also treated for phosphorus removal. The flow is then split and sent to five primary clarifiers. After clarification the effluent is pumped up to biotowers for the removal of soluble CBOD and is then sent through a series of rotating biological contactors for further CBOD removal and nitrogen removal. The effluent is then sent to a final clarifier and then through one of two chlorine contact tanks. Finally, the effluent is dechlorinated and discharged over a cascade to further aerate it before it enters the Chippewa River (Outfall 001). Sludge is sent through two anaerobic digesters in series. Supernatant is decanted and routed back to the headworks. The sludge is then stored until it is land applied at agronomic rates.

The WWTP also has the option to discharge from a second outfall (Outfall 002) from a retention basin. It allows, in an emergency, the retention basin to be used as a primary settling tank which can be chlorinated prior to discharge. It is constructed in such a way that wastewater can be diverted to the retention basin to provide additional settling to capture a slug load of toxic material or to completely bypass the plant.

The treatment facility has a design flow of 4.14 million gallons per day of wastewater, but sees an average daily flow of 2-2.3 million gallons.

Staff Interview(s):

EPA staff interviewed Tim Middleton, Deputy Department of Public Works Director, and Sarah Marshall, WWTP Superintendent during the opening conference from 9:05 a.m. to 9:45 a.m. The following is relevant information relating to the operation and discharges of the facility:

- The WWTP maintains typical operating hours of 7:30 a.m. to 4:00 p.m. Operators and lab personnel may run longer hours as needed. Operators remain on-call and are contacted via an auto dialer, if needed. On-call is not tied into the Supervisory Control and Data Acquisition (SCADA) system, although the plant alarms are.
- SCADA system was last upgraded in 2001, with some minor improvements. Currently the WWTP is in the process of Phase 2 of a complete upgrade.
- Mt. Pleasant employs 6 operators and will hire seasonally in the summer as needed. Five operators have Class A, two maintain Class C, and one new employee is preparing to test for Class D. Pay scale is attached to licensing.
- The on-site lab is run Monday thru Friday, with one of the six operators performing lab duties and rotating through the weekend. Mt. Pleasant does send out all testing for metals, biosolids, WET, and toxics, but can test for mercury and cyanide in addition to base regulatory sampling.
- Asset Management development is ongoing, including documenting a 20-year master plan and 7-year cumulative improvements plan.
- Mt. Pleasant has developed an Operations & Maintenance (O&M) plan as a living document.
- The WWTP is undergoing significant upgrades and is currently in Phase 1 of construction (estimated completion date of December 2023). Phase 1 includes:
    - Construction of a new septage receiving facility;
    - Repaired equalization basin liner;
    - Rehabbing both digesters; and
    - Replacing aerated grit chamber with a vortex system for grit removal.
- Phase 2 (estimated completion date of 2025 at $35M cost) of WWTP upgrades will address secondary treatment and include:
    - Moving to an activated granular sludge system;
    - Replace rotating biological contactors (RBCs) and trickling filters;
    - Convert final clarifiers to primary clarifiers to be used for septage receiving and sludge thickening.

Facility Walk-Through Occurred: Yes

Data Collected and Observations:

- Mt. Pleasant exceeded the daily minimum pH effluent limit during the monitoring period of June 2021. Mt. Pleasant stated that during this time they were installing new chemical feed systems for ferric chloride, and while attempting to diagnose issues with the pumping system, loaded too much ferric into the wastewater, lowering the pH. The operator then added soda ash to neutralize the solution. Mt. Pleasant has since fixed the issues with the pumps and ordered new pH probes.

Photos and/or Videos: were taken during the inspection.

See Attachment A: Photo Log

Field Measurements: were not taken during this inspection.

Records Review:

EPA requested, received, and reviewed the following records in advance of the inspection:

1. Electronic copy of the current Operations and Maintenance Status Report (March 2023).
2. Electronic copies of the last 4 quarters of Wastewater Discharge Monitoring Reports (July 2023, April 2023, January 2023, October 2022).
3. Electronic copy of the most recent Pollutant Minimization Program for Mercury Status Report (March 2023).
4. Electronic copy of the most recent Monitoring Reports for Volatile Organic Compounds and Whole Effluent Toxicity Testing (August 2022).
5. Electronic copy of the most recent Annual Sludge Discharge Monitoring Report (February 2023).

EPA requested the following records to be available during the inspection:

1. Copies of the last 3 years of Wastewater Discharge Monitoring Reports.
2. Copies of the last 3 years of Sludge Discharge Monitoring Reports.
3. A list of all Significant Industrial Users discharging to the WWTP.
4. Copies of the last 3 years of any Significant Industrial User Reports.
5. An electronic or hard copy system map.
6. Copies of any required training records over the last 3 years.

CLOSING CONFERENCE

☒ Provided EPA point of contact to the facility.
☒ Confirm CBI status at end of closing conference.

Areas of Concern:

None

APPENDICES AND ATTACHMENTS

1. Attachment A: Photolog