

FACT SHEET

FACT SHEET FOR THE REISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, NPDES Programs Branch - WN-15J
77 West Jackson Boulevard
Chicago, Illinois 60604
(312) 886-6106

Public Notice No.: 17-04-01-A

Public Notice Issued On: April 7, 2017

Comment period ends: May 8, 2017

Permit No.: MI-0055808-4 (Reissuance)

Application No.: MI-0055808-4

Name and Address of Applicant:

Union Charter Township
2010 South Lincoln Road
Mt. Pleasant, Michigan 48858

**Name and Address of Facility
Where Discharge Occurs:**

Union Township Wastewater
Treatment Plant
4511 East River Road
Mt. Pleasant, Michigan 48858
SW1/4, SE1/4, Section 2, T14N, R4W
Union Township,
Isabella County

Receiving Water: Chippewa River

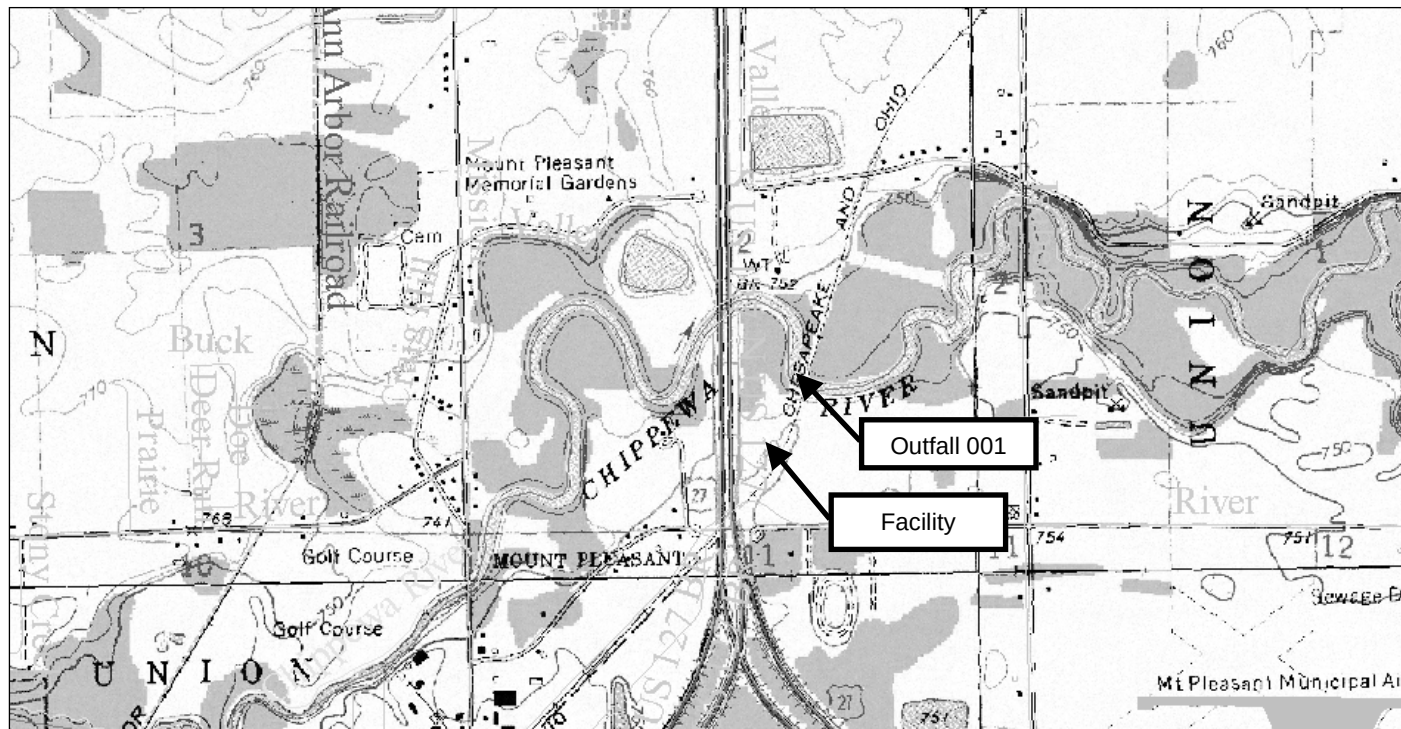
DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE

The above named applicant has applied for an NPDES Permit to discharge into the designated receiving water. The discharge is located within the exterior boundaries of the Isabella Indian Reservation. The permit will be issued by the U.S. Environmental Protection Agency.

The permittee collects and treats up to 2.4 MGD of municipal wastewater from Union Township. Influent from the collection system passes through screening and grit removal and then flows to oxidation ditches for biological treatment. Chemicals for phosphorus removal are added before the wastewater flows to clarifiers for settling. After clarification, the water flows through a tertiary filter for polishing followed by ultraviolet light disinfection, and a cascade aerator. Discharge is to the Chippewa River. Biosolids are processed through aerobic digesters and then land applied at agronomic rates.

MAP OF DISCHARGE LOCATION**Facility Coordinates**

Latitude 43.62982, Longitude -84.75517

**Receiving Water**

The Chippewa River is protected under Michigan Water Quality Standards (WQS) at the boundary of the Reservation for agricultural uses, navigation, industrial water supply, public water supply in areas with designated public water supply intakes, warm-water fish, other indigenous aquatic life and wildlife, partial body contact recreation, total body contact recreation (May through October), and fish consumption.

The receiving stream flows used to develop effluent limitations are a 95 percent exceedance flow of 79 cfs, a harmonic mean flow of 220 cfs, and a 90-day, 10-year low flow of 110 cfs.

Mixing Zone

For toxic pollutants, the volume of the Chippewa River used to ensure that effluent limitations are sufficiently stringent to meet Michigan WQS is 25 percent of the applicable design flow of the receiving stream.

For other pollutants, the volume of the Chippewa River used to ensure that effluent limitations are sufficiently stringent to meet Michigan WQS is the applicable design flow of the receiving stream.

Proposed Effluent Limitations

Monitoring Point 001A- the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Chippewa River. The design flow is 2.4 mgd.

Parameter	Date	30-Day Average	7-Day Average	Daily Maximum	Daily Minimum	Comment
Flow	All Year	Report		Report		PWJ
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	June - October	4 mg/L 80 lbs/d		10 mg/L 200 lbs/d		AWT/PWJ
	November - May	25 mg/L 500 lbs/d 85 % removal	40 mg/L 800 lbs/d			STS
Total Suspended Solids	June - October	20 mg/L 400 lbs/d	30 mg/L 600 lbs/d			PWJ
	November - May	30 mg/L 600 lbs/d 85 % removal	45 mg/L 900 lbs/d			STS
Ammonia (as N)	June - October	0.5 mg/L 10 lbs/d		2.0 mg/L 40 lbs/d		WQBEL
Dissolved Oxygen	All Year				5 mg/L	WQBEL
E.coli	All Year	126 E. coli/100ml*		410 E. coli/100 ml		EPA criteria
Total Phosphorus	All Year	1.0 mg/L 10 lbs/d	2.0 mg/L 20 lbs/d			WQBEL
Total Mercury	All Year (rolling average)	2.0 ng/L 0.00003 lbs/d				WQV
pH	All Year			9.0 S.U.	6.5 S.U.	WQS/STS

* Geometric Mean

Loading limits in the permit were calculated using the following formula:

$$2.4 \text{ mgd} \times \text{limit (mg/L)} \times 8.34 = \text{Loading (lbs/d)}.$$

Comment Key

WQBEL – Water Quality Based Effluent Limit

WQS – Water Quality Standards

WQC – Water Quality Concern

STS – Secondary Treatment Standards (40 CFR part 133)

PWJ – Permit Writer's Judgment

AWT- Advance Wastewater Treatment

Section 401 Water Quality Certification

EPA is the appropriate authority for purposes of certifying the proposed discharge under Section 401 of the Clean Water Act. Section 401 certification is not needed from the state or the

Saginaw Chippewa Indian Tribe as neither has federally approved water quality standards applicable to the receiving water at the point of discharge, however as stated above, EPA believes the effluent limitations included in the draft permit meet state water quality standards at the reservation boundary.

ESA and NHPA Compliance

EPA has satisfied its requirements under the Endangered Species Act and the National Historical Preservation Act. Since this is an existing facility with no new planned expansion or construction expected within the permit term, it is believed that the issuance of the permit and the continued operation of the facility and associated discharge will have no effect on endangered or threatened species or their critical habitat and will have no impact on historical, archeological, or cultural resources.

Basis for Permit Requirements

The limits were developed to ensure compliance with 40 CFR Parts 131 and 133 and protection of human health and EPA's water quality criteria, and protection of Michigan WQS where applicable.

In this regard, the Michigan Department of Environmental Quality (MDEQ) developed limits for this facility that would be protective of state water quality standards. Though the State's WQS are not applicable at the point of discharge, EPA believes the limits are appropriate and will use them to ensure compliance with the State's WQS at the reservation boundary. Also, permit writer's judgment is used to set the permit requirements. Information from MDEQ on the development of the limits can be found in the administrative record.

pH

The limits for pH are based on protecting Michigan WQS (Rule 53) and federal secondary treatment standards (40 CFR Part 133). Monitoring indicates the permittee is in substantial compliance with the limits.

5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅)

The limits were developed based on Michigan's Advanced Wastewater Treatment (AWT) requirements and 40 CFR Part 133. The June-October AWT effluent limits are necessary to protect the warmwater DO standard in the Chippewa River where it is applicable. Information related to the development of the limits can be found in the administrative record. Monitoring indicates the permittee is in substantial compliance with the limits.

Total Suspended Solids (TSS)

The limits in the previous permit are carried over to this permit as EPA believes they are still appropriate. For the previous permit, the limits were based on permit writer's judgement and 40 CFR Part 133. Monitoring indicates the permittee is in substantial compliance with the limits.

Dissolve Oxygen (DO)

The limit in the previous permit is carried over to this permit as we believe it is still appropriate. The limit was developed to protect Michigan's warmwater dissolved oxygen water quality standard of 5 mg/L as a daily minimum for the summer months where it is applicable. For the

winter months, a limit of 3 mg/L as a daily minimum is needed to protect against acute DO toxicity. However, since the previous permit contained a year round limit of 5 mg/L as a daily minimum and monitoring indicates the permittee is in substantial compliance with the limit anti-backsliding regulations prohibit the relaxation of the limit.

Ammonia

The limits were developed based on Michigan's Advanced Wastewater Treatment (AWT) requirements which will protect Michigan's dissolved oxygen water quality standards. Information related to the development of the limits can be found in the administrative record. Monitoring indicates the permittee is in substantial compliance with the limits.

E.coli

The limits for E. coli are based on the EPA's 2012 Recreational Water Quality Criteria. The geometric mean of samples collected over a 30-day period shall not exceed 126 E. coli per 100 milliliters (ml). The statistical threshold value of 410 E. coli per 100 ml is set as the daily maximum. The limits are applicable year round. Monitoring indicates the permittee is in substantial compliance with the limits.

Disinfection

According to the permit application, the facility utilizes an ultraviolet disinfection system. Therefore, total residual chlorine requirements have not been included in this permit.

Phosphorus

The Chippewa River is not impaired due to nutrients at the point of discharge or at the reservation boundary. To protect the receiving stream against nuisance plant growth problems and ensure that Michigan's WQS are met at the reservation boundary, the permit contains a monthly average limit for total phosphorus of 1.0 mg/l in accordance with Michigan's WQS (R.323.1060). With a large dilution ratio (see Mixing Zone above) and a minimum dissolved oxygen discharge limit of 5 mg/L, phosphorus discharges from this facility will not cause, or have reasonable potential to cause, or contribute to an excursion beyond applicable water quality standard for phosphorus (1 mg/L) and DO (5 mg/L). This permit also includes a weekly average load limit in accordance with 40 CFR § 122.45(d). Monitoring indicates the permittee is in substantial compliance with the limits. It is also recommended that the permittee take voluntary measures to reduce effluent phosphorus concentrations to the greatest extent possible to reduce possible impacts to the receiving water.

Mercury

The final limit for total mercury is the Discharge Specific Level Currently Achievable (LCA) based on a multiple discharge variance from the Michigan water quality-based effluent limit of 1.3 ng/L. EPA approved this variance and the method to calculate the LCA.

A LCA limit of 2.0 ng/L is included for total mercury in the permit as a 12-month rolling average. The LCA limit is based on existing effluent conditions. In addition, the permit also requires a Pollution Minimization Program (PMP) for mercury to be implemented. The PMP for mercury is included in the draft permit to help identify possible sources of mercury in the system.

EPA believes the use of the LCA limit is appropriate in this permit as there are no federally approved water quality standards for mercury applicable at the point of discharge. Using the LCA limit at the point of discharge will ensure that Michigan's WQS are protected at the reservation boundary.

Other Parameters

Detectable data points for Barium, Boron, Copper, Selenium, Nickel, Silver, Zinc, Available Cyanide, Methyl Bromide and Bis (2-Ethylhexyl) Phthalate were available in the monitoring reports submitted by the facility. Concentrations of these parameters in the effluent do not indicate the potential to cause or contribute to the exceedance of Michigan's WQS. These parameters will continue to be monitored four times during the permit cycle based on additional monitoring requirements in the permit and application requirements.

Scans completed for the application did not use appropriate detection limits for the following parameters: 3,3-Dichlorobenzidine, Benzidine, Hexachlorobenzene, Hexachlorobutadiene,. The permit requires sampling of these parameters using the quantification levels and methods listed below. Other approved EPA methods can be used provided the methods are sufficiently sensitive. Detection limits supplied by the facility were 10 µg/L.

Parameter	EPA approved method	Quantification Level (µg/L)
3,3-Dichlorobenzidine	605	1.5
Benzidine	605	0.7
Hexachlorobenzene	612	0.01
Hexachlorobutadiene	612	0.01

Additional Monitoring

Acute and chronic Whole Effluent Toxicity (WET) testing is required under the conditions in the current NPDES permit. Four acute and four chronic WET tests using fathead minnow and Ceriodaphnia dubia as test species were required for a total of eight tests. Data available for fathead minnow and Ceriodaphnia dubia were all 0.0 Chronic Toxicity Units (TUc) and Acute Toxicity Units (TUa). Data shows that there is not a reasonable potential for the final effluent to be acutely or chronically toxic. WET tests will continue to be monitored as an additional monitoring requirement. Also, the permittee shall monitor the discharge for the pollutants listed in Appendix D of 40 CFR Part 122. These monitoring requirements are application requirements of 40 CFR § 122.21(j) for facilities with a design flow of 1 MGD or greater, effective December 2, 1999.

Also, additional monitoring for Total Kjeldahl Nitrogen (TKN), Oil and Grease, Nitrate plus Nitrite Nitrogen and Total Dissolved Solids (TDS) is required for discharges with a design flow greater than 0.1 MGD. This monitoring is an application requirement of 40 CFR § 122.21(j).

Asset Management – Operation & Maintenance Plan

Regulations regarding proper operation and maintenance are found at 40 CFR § 122.41(e). These regulations require, "that the permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit." The treatment plant and

the collection system are included in the definition of “facilities and systems of treatment and control” and are therefore subject to the proper operation and maintenance requirements of 40 CFR § 122.41(e).

Similarly, a permittee has a “duty to mitigate” pursuant to 40 CFR §122.41(d), which requires the permittee to “take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment.”

The draft permit requirements are the first steps of an asset management program which contains goals of effective performance, adequate funding, adequate operator staffing and training. Asset management is a planning process that ensures that you get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary, and typically includes five core elements which identify: 1) the current state of the asset; 2) the desired level of service (e.g., per the permit, or for the customer); 3) the most critical asset(s) to sustain performance; 4) the best life cycle cost; and 5) the long term funding strategy to sustain service and performance.

EPA believes that requiring a certified wastewater operator and adequate staffing is also essential to ensure that the treatment facilities will be properly operated and maintained. Mapping the collection system with the service area will help the operator better identify the assets that he/she is responsible for and consider the resources needed to properly operate and maintain them. This will help in the development of a budget and a user rate structure that is necessary to sustain the operation. The development and implementation of a proactive preventive maintenance program is one reasonable step that the permittee can take to demonstrate that it is at all times, operating and maintaining all the equipment necessary to meet the effluent limitations of the permit.

Special Conditions

- The permit requires the development and implementation of an Operation & Maintenance Plan. The plan covers the use of a certified operator to oversee the facility, having adequate staff to help ensure compliance with the permit, mapping the treatment system, developing a preventive maintenance program and other items.
- The continued implementation of a pollutant minimization program for mercury.
- Additional monitoring as required for discharges with a design flow greater than 0.1 and 1 MGD. This monitoring is an application requirement of 40 CFR § 122.21(j).
- Storm water discharges associated with industrial activity shall be controlled in accordance with the applicable requirements of the *UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)* issued on June 4, 2015.
- The permit contains Industrial Waste Pretreatment Program requirements in accordance with 40 CFR Parts 122 and 403.
- Compliance with 40 CFR Part 503 (sludge use and disposal regulations) (Part III of the permit) if sludge is used or disposed within the Reservation. Part III was developed using the Part 503 Implementation Guidance for sludge and 40 CFR Parts 122, 501, and 503.

- In addition to Part III of the permit, the permit is required to comply with the following:
 - The following land application sites have been identified as potential sites to receive sewage sludge during the permit term. It is not expected additional sites will be needed, however, the permit requires notification both to EPA and locally if additional sites will be used. As new sites are identified, information on those sites will be available for inspection at the Regional Office.

Owner	Farmer	Site ID#	Acres	Latitude	Longitude
Larry Coldwell	Larry Coldwell	14N04W07-LC03	35	43:37:24	85:50:47
Bob Ervin	Bob Ervin	14N04W09-BE01	117	43:37:389	85:48:148
Bob Ervin	Richard Swindelhurst	15N04W35-RS01	100	43:58:77	84:16:25
Rodney Rapp	Rodney Rapp	15N4W02-RR01	65	43:40:29	84:48:44
Fred Fox	Fred Fox	14N05W10-FF01	68	43:36:53	84:53:25
Bob Murphy	Bob Murphy	14N05W02-BM01	248	43:36:50	84:52:25
Robert Murphy	Robert Murphy	14N04W04-RM01	75	43:37:45	84:47:59
Robert Murphy	Robert Murphy	14N04W04-RM02	35	43:37:45	84:47:40
Tom Murphy	Tom Murphy	14N05W14-TM01	30	43:36:37	84:52:28

Significant Changes from the Last Permit

Following are the significant changes in the draft permit:

- A daily maximum limit for E. coli and a weekly average limit for phosphorus has been added to be consistent with 40 CFR § 122.45(d) and EPA 2012 Recreational Water Quality Criteria.
- Additional reporting related to mercury has been added.
- The permit requires weekly observations of the outfall to look for unusual characteristics of the discharge.
- Storm water discharges associated with industrial activity shall be controlled in accordance with the applicable requirements of the *UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)* issued on June 4, 2015 (Part I.A.5).
- Electronic reporting requirements have been added (Part I.A.8).
- Requirements related to Asset Management have been added (Part I.A.9).
- The Industrial Waste Pretreatment Program language has been updated (Part I.B).
- Additional land application sites have been added (Part I.C).
- The “Standard Conditions” have been revised (Part II).
- The “Sewage Sludge Requirements” have been revised including electronic reporting (Part III).

COMMENT PROCEDURES

The determination to issue an NPDES permit is tentative. Interested persons are invited to submit written comments on the draft permit. EPA's Comment and Public Hearing procedures may be found at 40 CFR §§ 124.10, 124.11, 124.12, and 124.13. The following is a summary of those procedures:

1. The comment period during which written comments on the draft permit may be submitted extends until May 8, 2017.
2. During the comment period, any interested person may request a public hearing by filing a written request which must state the issues to be raised. The last day for filing a request for public hearing is May 8, 2017.
3. In appropriate cases, including those where there is significant public interest, the EPA Regional Administrator may hold a public hearing. A decision has not yet been made as to whether a public hearing will be held for this permit. Public notice of such a hearing will be circulated in at least one newspaper in the geographical area of the discharge and to those persons on the EPA mailing list at least 30 days prior to the hearing.
4. All comments postmarked after May 8, 2017 will not be considered in the formulation of final determinations.
5. Written comments of request for a public hearing must be delivered or mailed to: John A. Colletti, U.S. Environmental Protection Agency, Region 5, NPDES Programs Branch - WN-15J, 77 West Jackson Boulevard, Chicago, Illinois 60604

The application and Public Notice numbers should appear next to the EPA address on the envelope and on each page of any submitted comments. It is important that all viewpoints are considered before taking action. Therefore, we greatly appreciate your time and effort in participating in the public participation process.

PETITION TO REVIEW

Within 30 days following the service of notice of the Regional Administrator's final permit decisions, any person who filed comments on the draft permits or participated in a public hearing, if held, may petition the Environmental Appeals Board to review any condition of the permit decision. All documents that are sent through the U.S. Postal Service (except by Express Mail) **MUST** be sent to the following address: Clerk of the Board, U.S. Environmental Protection Agency, Environmental Appeals Board, 1200 Pennsylvania Avenue, NW, Mail Code 1103M, Washington, DC 20460-0001.

All mail sent to the Environmental Appeals Board may be delayed by a random sterilization procedure. Parties are encouraged to utilize the Board's e-filing system or hand or courier delivery when filing pleadings with the Board to avoid potential delays.

Documents that are hand-carried in person, delivered via courier, mailed by Express Mail, or delivered by a non-U.S. Postal Service carrier (e.g., Federal Express or UPS) **MUST** be delivered to: Clerk of the Board, U.S. Environmental Protection Agency, Environmental Appeals Board, 1201 Constitution Avenue, NW, U.S. EPA East Building, Room 3334, Washington, DC 20004

Documents that are hand-carried may be delivered to the Clerk of the Board between 8:30 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

AVAILABILITY OF DOCUMENTS

The application, draft permit, including proposed effluent limitations and special conditions, statement of basis, and other documents contained in the administrative record, are available for inspection and may be copied at a cost of 15 cents per page at the Chicago Regional offices of the Environmental Protection Agency anytime between 9:00 a.m. and 4:00 p.m., Monday through Friday. You may also view the public notice, statement of basis, and draft permit on Region 5's website at “ <http://www.epa.gov/region5/water/npdestek/index.htm>”. All data submitted by the applicant is available as part of the administrative record. For more information, please contact John Colletti at (312) 886-6106 or by e-mail at colletti.john@epa.gov.

Unless a public hearing is scheduled, the EPA will issue a final determination as to the reissuance of the permit in a timely manner after the expiration of the public comment period. If you would like to receive a copy of the final determination, please submit a request during the comment period to the above address. Please bring the foregoing to the attention of persons whom you know would be interested in this matter.

The permit is based on an application dated March 31, 2015 and additional supporting documents found in the administrative record.

The permit will be effective for approximately five years from the date of reissuance as allowed by 40 CFR § 122.46.

Written By: John Colletti
U.S. EPA, Region 5, WN-15J
77 West Jackson Blvd.
Chicago, IL 60604
(312) 886-6106

March 2017