

**Permit No. MI0022489**

## **FACT SHEET**

PERMITTEE / SITE NAME: Buchanan WWTP / Buchanan WWTP

COUNTY: Berrien

### DESCRIPTION OF EXISTING WASTEWATER TREATMENT FACILITIES

The Buchanan Wastewater Treatment Plant (WWTP) is designed for an average flow of 1.5 MGD, which is unchanged from the previous permit cycle. The treatment process consists of primary treatment, activated sludge, secondary treatment and ultraviolet (UV) disinfection.

Influent enters the headworks through an open top concrete channel. In headworks the wastewater flows through a mechanical fine screen unit and then through a vortex grit separator for pretreatment. After headworks the wastewater enters a wet well that functions as a lift station to lift the wastewater to the secondary treatment process. The secondary treatment process is two oxidation ditches followed by the mixed liquor box and two final clarifiers. After the clarifiers the wastewater is disinfected using UV before entering a gravity discharge main that leads to the St. Joseph River.

Solids are held in a sludge storage tank and processed through a filter press before disposal.

### MAP OF DISCHARGE LOCATION

Facility Coordinates: Latitude 41.8323, Longitude -86.3520



RECEIVING WATER

The St. Joseph River is protected 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 1100 cfs, a harmonic mean flow of 2860 cfs, and a 90-day, 10-year low flow of 1400 cfs.

MIXING ZONE

For toxic pollutants, the volume of the St. Joseph River used to ensure that effluent limitations are sufficiently stringent to meet Water Quality Standards is not more than 25 percent of the receiving water design flow for lotic systems, in accordance with R 323.1090(2).

For other pollutants, the volume of the St. Joseph River used to ensure that effluent limitations are sufficiently stringent to meet Water Quality Standards is the applicable design flow of the receiving stream.

EXISTING EFFLUENT QUALITY: (from DMR data from October 1, 2017, to October 1, 2022)

Parameter	Minimum Daily	Maximum Monthly Average	Maximum 7-Day Average	Maximum Daily	Units
Flow	---	1.39	---	1.98	MGD
CBOD5	---	7.4	9.7	122.8	mg/l
Total Suspended Solids	---	12.2	16.1	26.5	mg/l
Ammonia Nitrogen	---	3.25	---	6.44	mg/l
Total Phosphorus	---	0.98	---	1.87	mg/l
Fecal Coliform Bacteria	---	179	474	474	Cts/ 100 ml
Total Copper	---	---	---	22.7	ug/l
PFOS	---	9.3	---	10	ng/l
PFOA	---	89	---	89	ug/l
pH	7.2	---	---	8.3	S.U.
Dissolved Oxygen	3.4	---	---	---	mg/l
		<b>12-Month Rolling Avg</b>			
Total Mercury	---	1.79	---	3.52	ng/l
		<b>Minimum % Monthly</b>			
CBOD5 % removal	72.6	92.7	---	---	%
TSS % removal	58.9	86.8	---	---	%

PROPOSED EFFLUENT LIMITATIONS: (see draft permit)

BASIS FOR PROPOSED EFFLUENT LIMITATIONS: (see Basis for Decision Memo)

## REGISTER OF INTERESTED PERSONS

Any person interested in receiving notification by e-mail of National Pollutant Discharge Elimination System (NPDES) or state surface water discharge permitting actions may register with the Permits Section of the Department of Environment, Great Lakes, and Energy (Department). To register, e-mail the contact identified below with your full name and the request that you be added to the Department's Public Notice Notification List. Once you are added to the list, you will receive an e-mail notification for every public-noticed NPDES or state surface water discharge permitting action in the state (or only those for which you've expressed a specific interest) unless/until you ask to be removed from the list.

## PUBLIC COMMENT

**Persons wishing to submit comments or request a public hearing should do so through MiEnviro Portal.** Go to <https://miwaters.deq.state.mi.us>, select 'Public Notice Search,' search for this public notice by entering the permit number into the search field, click 'Search', click 'View,' click 'Add Comment,' enter information into the fields, and then click 'Submit.' Comments or objections to the draft permit received by September 15, 2024, will be considered in the final decision to issue the permit, as will comments made at a public hearing should one be held by the Department on the draft permit.

Any person may request the Department to hold a public hearing on the draft permit. The request should include specific reasons for the request, indicating which portions of the draft permit constitute the need for a hearing. If submitted comments indicate significant public interest in the draft permit or if useful information may be produced, the Department may, at its discretion, hold a public hearing on the draft permit.

If a public hearing is scheduled, public notice of the hearing will be provided at least 30 days in advance. The hearing will normally be held in the vicinity of the discharge. Inquiries should be directed to Thomas Miller, Permits Section, Water Resources Division, Department of Environment, Great Lakes, and Energy, P.O. Box 30458, Lansing, Michigan 48909-7958; telephone: 517-899-2960; or e-mail: [MillerT45@michigan.gov](mailto:MillerT45@michigan.gov).