

**Permit No. MI0020729**

## FACT SHEET

PERMITTEE / SITE NAME: City of Bronson / Bronson WWTP

COUNTY: Branch

### DESCRIPTION OF EXISTING WASTEWATER TREATMENT FACILITIES

As the wastewater enters the facility, it is sampled and then passed through a mechanical grinder. The mechanical grinder reduces the size of the debris before flowing into the raw wet-well. A bar screen exists as a backup for the grinder. A vortex-style grit chamber follows the screening operation for the separation of the heavy inert solids. The wastewater leaving the grit chamber is metered by a Parshall Flume as it flows to the oxidation ditch for secondary treatment. The oxidation ditch has a detention time of 15 hours and is equipped with rotary brush aerators for oxygen transfer. The ditch is designed to treat ammonia, carbonaceous biochemical oxygen demand, total suspended solids, and phosphorus. When the wastewater leaves the oxidation ditch it is then directed to two final clarifiers.

Effluent from the two final clarifiers flows into two tertiary sand filters. The sand filters treat the water as it flows through a mixed media bed of sand, gravel, and anthracite. From the sand filter, the wastewater flows into a wet-well where three centrifugal pumps transport the wastewater through a Parshall Flume for measurement and sampling prior to disinfection. Disinfection is provided through two banks of low-pressure mercury arc lamps which generate ultraviolet radiation. An automatic level controller ensures that the effluent is uniformly treated. The effluent then flows to County Drain # 30 and eventually enters into Big Swan Creek.

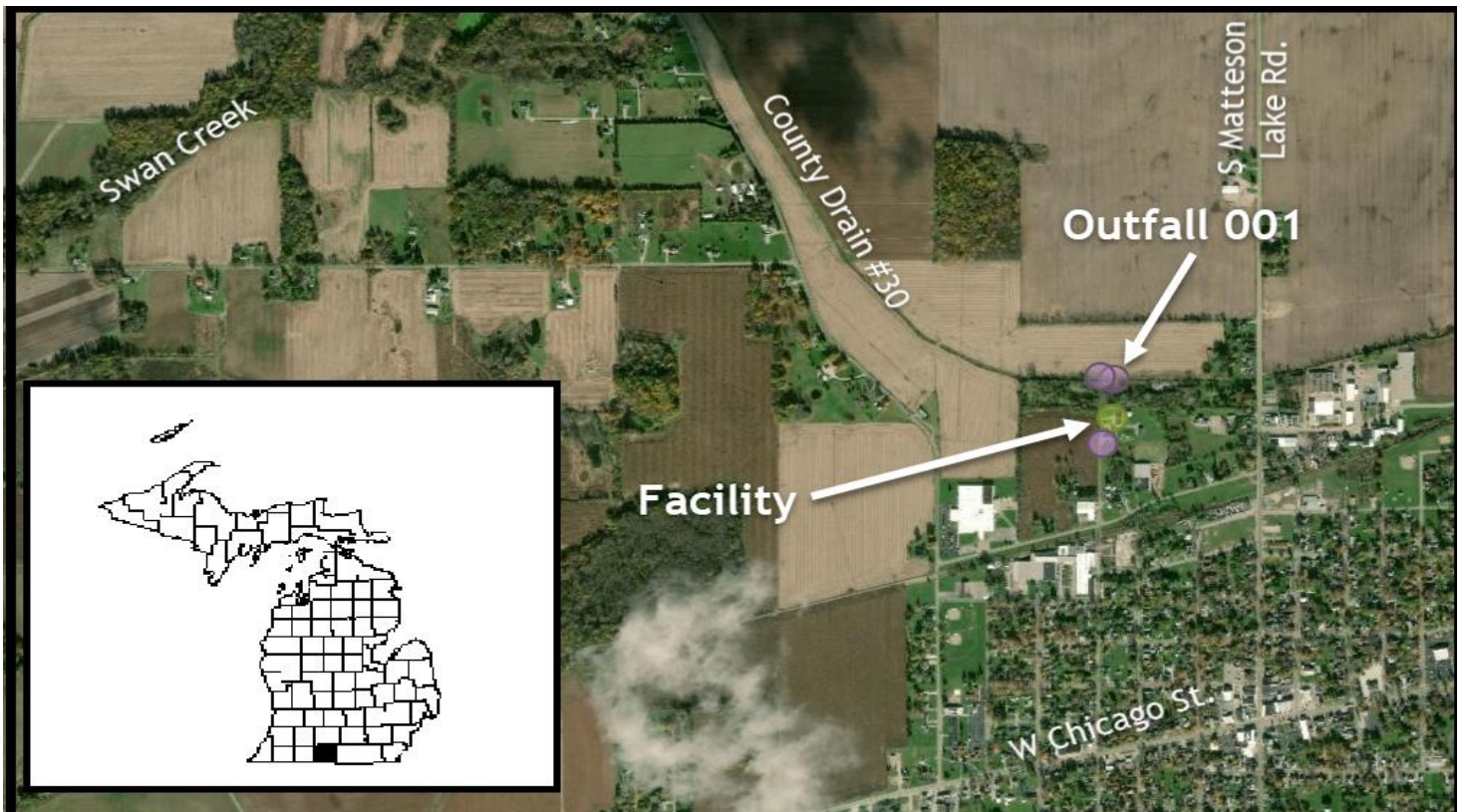
Waste activated sludge collected from the wastewater treatment process is sent to the sludge thickener where the sludge is thickened to about 4 percent total solids. The solids are then pumped to a storage digester for further thickening and then to an anaerobic digester for complete digestion. The digested sludge is then kept in a storage digester until it is land applied by injection in the fall. The WWTP has enough sludge storage capacity to last for two years. If land application is not possible, the biosolids will be further dewatered or bulked and then disposed of in an approved landfill.

### MAP OF DISCHARGE LOCATION

#### Facility Coordinates

Latitude 41.8798062539098

Longitude -85.1990853290772



RECEIVING WATER

County Drain #30 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 0.2 cfs, a harmonic mean flow of 0.7 cfs, and a 90-day, 10-year low flow of 0.3 cfs.

MIXING ZONE

For toxic pollutants, the volume of County Drain #30 used to ensure that effluent limitations are sufficiently stringent to meet Water Quality Standards is 25 percent of the applicable design flow of the receiving stream.

For other pollutants, the volume of County Drain #30 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 June 2013 to June 2018)

Parameter	Minimum Daily	Maximum Monthly	Maximum 7-Day	Maximum Daily	Units
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )					
May – September	---	2.2	4.7	---	mg/l
October – November	---	2.2	2.5	---	mg/l
December – March	---	2.9	5.2	---	mg/l
April	---	2.3	2.8	---	mg/l
Total Suspended Solids (TSS)					
April – September	---	5	8.8	---	mg/l
October – November	---	3.04	6.08	---	mg/l
December – March	---	4.1	5.6	---	mg/l
Ammonia Nitrogen (as N)					
May – September	---	0.39	---	1.46	mg/l
October – November	---	---	---	7.61	mg/l
December – March	---	---	---	0.85	mg/l
April	---	---	---	3.6	mg/l
Fecal Coliform Bacteria	---	52	141	---	cts/100 ml
Total Phosphorus (as P)	---	0.47	---	0.62	mg/l
pH	5.89	---	---	8.92	S.U.
Dissolved Oxygen					
May – November	5	---	---	---	mg/l
December – April	5	---	---	---	mg/l
	<b>Minimum Monthly</b>				
TSS Minimum % Removal					
December – March	83	---	---	---	%

Designated Name: **Bronson WWTP**

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PROPOSED EFFLUENT LIMITATIONS: (see draft permit)

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

#### ADDITIONAL INFORMATION

The permittee shall implement the Michigan Industrial Pretreatment Program approved on July 15, 2002, and any subsequent modifications approved up to the issuance of this permit, in accordance with R 323.231 through R 323.2317 of the Michigan Administrative Code (Part 23 Rules) and the approved Michigan Industrial Pretreatment Program.

The permittee is authorized to land-apply bulk biosolids or prepare bulk biosolids for land application in accordance with the permittee's approved Residuals Management Program (RMP) approved on January 3, 2001, and approved modifications thereto, in accordance with the requirements established in R 323.2401 through R 323.2418 of the Michigan Administrative Code (Part 24 Rules).

#### REGISTER OF INTERESTED PERSONS

Any person interested in receiving notification by e-mail of National Pollutant Discharge Elimination System (NPDES) permitting actions may register with the Permits Section of the Department of Environmental Quality (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 NPDES permitting action in the state unless/until you ask to be removed from the list.

#### PUBLIC COMMENT

Persons wishing to submit comments or request a public hearing should go to <https://miwaters.deq.state.mi.us>, select 'Public Notice Search,' search for this public notice by entering the permit number or site name 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 between January 25, 2019, and February 24, 2019, will be considered in the final decision to issue the permit.

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

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. The Department will consider comments made at the hearing when making its final determinations on the permit. Inquiries should be directed to Bradley Popovich, Permits Section, Water Resources Division, Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan 48909-7958; telephone: 517-284-6656; or e-mail: [PopovichB@michigan.gov](mailto:PopovichB@michigan.gov).