

## **FACT SHEET**

PERMITTEE / SITE NAME: City of Mackinac Island / Mackinac Island WWTP

COUNTY: Mackinac

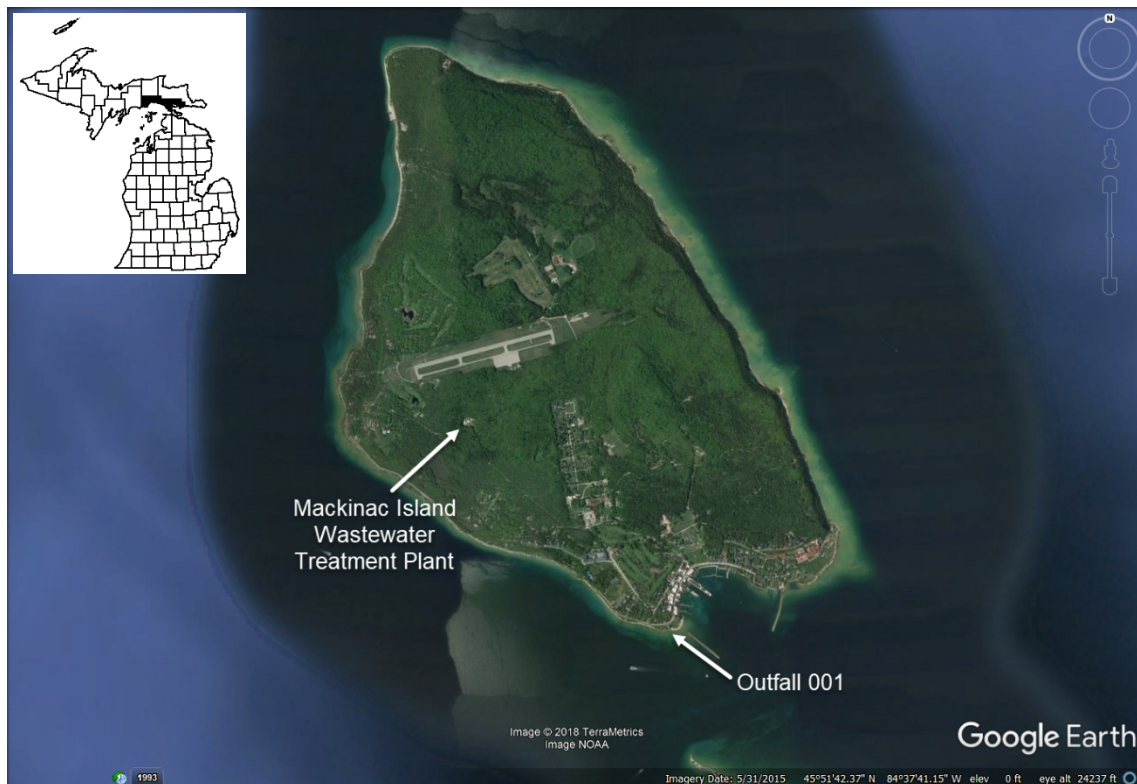
### DESCRIPTION OF EXISTING WASTEWATER TREATMENT FACILITIES

The Mackinac Island wastewater treatment plant experiences large variation in flow due to the fluctuation in tourism population. During the summer (June through August) the average daily flow is approximately 0.76 million gallons per day (MGD) where during the winter months the average daily flow is approximately 0.13 MGD. Therefore, there are two separate treatment schemes designed to account for the seasonal fluctuation. During the summer the treatment process consists of fine screen spiral auger, equalization tank, aerated grit chamber, primary clarifiers, oxidation towers, aeration tanks, final clarifiers, and chlorine contact tank. The winter treatment is slightly different and consists of fine screen filtration, equalization tank, aerated grit chamber, aeration tank, final clarifiers, and chlorine contact tank. The design flow of the facility is presently 0.96 MGD but the facility is seeking an upgrade to 1.538 MGD.

Solids treatment involves aerobic digestion followed by decanting tanks, sludge drying beds, or belt press. Dewatered sludge is sent to a landfill.

### MAP OF DISCHARGE LOCATION

Facility Coordinates: Latitude 45.8601, Longitude -84.6385



## RECEIVING WATER

The Lake Huron is protected for agricultural uses, navigation, industrial water supply, public water supply in areas with designated public water supply intakes, cold-water fish, other indigenous aquatic life and wildlife, partial body contact recreation, total body contact recreation (May through October), and fish consumption.

## MIXING ZONE

The mixing zone for this discharge used to ensure that effluent limitations are sufficiently stringent to meet Water Quality Standards in Lake Huron assumes no greater dilution than 1 part effluent to 10 parts receiving water, in accordance with R 323.1082(5).

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

<b>Parameter</b>	<b>Minimum Daily</b>	<b>Maximum Monthly Average</b>	<b>Maximum 7-Day Average</b>	<b>Maximum Daily</b>	<b>Units</b>
Flow	---	0.966	---	21.9	MGD
Biochemical Oxygen Demand	---	25	32	86.8	mg/l
Total Suspended Solids	---	34	108	134.4	mg/l
Total Phosphorus	---	1.4	---	3.1	mg/l
Fecal Coliform Bacteria	---	243	408	400	cts / 100 ml
Total Residual Chlorine	---	---	---	1.28	mg/l
pH	6	---	---	7.82	S.U,
Dissolved Oxygen	4	---	---	---	mg/l
		<b>12-Month Rolling Avg</b>			
Total Mercury	---	3.48	---	16	ng/l
	<b>Minimum % Daily</b>	<b>Minimum % Monthly</b>			
BOD5 Minimum % Removal	11.3	67	---	---	%
TSS Minimum % Removal	-15	39	---	---	%

PROPOSED EFFLUENT LIMITATIONS: (see draft permit)

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

## ADDITIONAL INFORMATION

The Department of Environment, Great Lakes, and Energy proposes that the applicant's Antidegradation Demonstration, based on information required by Subrule (4) of R 323.1098, shows that lowering of water quality is necessary to support the identified important social and economic development in the area. This determination is solely for purposes of satisfying state water quality regulations and is not intended to supplant local requirements, including land use or zoning laws. It is not, and should not be construed as, a finding by the Department of Environment, Great Lakes, and Energy that the proposed development meets local requirements or ordinances.

This permit requires that the permittee prepare an Asset Management Program and implement the program upon The Department of Environment, Great Lakes, and Energy approval. Annual reports summarizing program activity are also required to be submitted. The requirements of an Asset Management Program contain goals of effective performance, adequate funding, and adequate operator staffing and training. Asset management is a planning process that ensures gaining optimum value for each asset and providing the financial resources to rehabilitate and replace them when necessary, and typically includes five core elements that identify: the current state of the asset, the desired level of service (e.g., per the permit or for the customer), the most critical asset(s) to sustain performance, the best life-cycle cost, and the long-term funding strategy to sustain service and performance.

#### 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 and proposed decision concerning the Antidegradation Demonstration received by June 15, 2023, 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).