

BASIS FOR DECISION MEMO

Permit Developer: Tom Braum
 Date: November 9, 2023
 Permit No. MI0060338
 Designated Site Name: Salem Twp USD WWTP

Monitoring Point 001A: Authorization to discharge 0.84 MGD of treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to Fellows Creek.

<u>Parameter</u>	<u>Maximum Limits for Quantity or Loading</u>				<u>Maximum Limits for Quality or Concentration</u>				<u>Monitoring Frequency</u>	<u>Sample Type</u>	<u>Basis for Limits</u>
	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>			
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow	PWJ
Carbonaceous Biochemical Oxygen Demand (CBOD5)											
May – September	28	70	(report)	lbs/day	4	---	10	mg/l	5x Weekly	24-Hr Composite	AWT
October – November	130	200	(report)	lbs/day	19	---	28	mg/l	5x Weekly	24-Hr Composite	WQBEL
December – April	180	280	(report)	lbs/day	25	40	(report)	mg/l	5x Weekly	24-Hr Composite	STS
Total Suspended Solids (TSS)											
May – September	140	210	(report)	lbs/day	20	30	(report)	mg/l	5x Weekly	24-Hr Composite	PWJ
October – April	210	320	(report)	lbs/day	30	45	(report)	mg/l	5x Weekly	24-Hr Composite	PWJ/STS
Ammonia Nitrogen (as N)											
May – September	3.5	14	(report)	lbs/day	0.5	---	2.0	mg/l	5x Weekly	24-Hr Composite	AWT
October – November	13	25	(report)	lbs/day	1.8	---	3.6	mg/l	5x Weekly	24-Hr Composite	WQBEL
December – March	24	---	(report)	lbs/day	3.5	---	(report)	mg/l	5x Weekly	24-Hr Composite	WQBEL
April	15	---	(report)	lbs/day	2.2	---	(report)	mg/l	5x Weekly	24-Hr Composite	WQBEL
Total Phosphorus (as P) – See Part I.A.1.e.											
April – September	4.9	---	(report)	lbs/day	0.7	---	(report)	mg/l	Daily	24-Hr Composite	BPJ
October – March	5.6	---	(report)	lbs/day	0.8	---	(report)	mg/l	Daily	24-Hr Composite	BPJ
	Six-Month Average				Six-Month Average						
April – September	3.5	---	---	lbs/day	0.5	---	---	mg/l	Annually	Calculation	BPJ

<u>Parameter</u>	<u>Maximum Limits for Quantity or Loading</u>				<u>Maximum Limits for Quality or Concentration</u>				<u>Monitoring Frequency</u>	<u>Sample Type</u>	<u>Basis for Limits</u>
	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>			
Chloride	---	---	---	---	---	---	(report)	mg/l	Monthly	24-Hr Composite	WQC
Sulfate	---	---	---	---	---	---	(report)	mg/l	Monthly	24-Hr Composite	WQC
Fecal Coliform Bacteria	---	---	---	---	200	400	(report)	cts/ 100 ml	5x Weekly	Grab	WQS
					Minimum % Monthly		Minimum % Daily				
CBOD5 Minimum % Removal											
December – April	---	---	---	---	85	---	(report)	%	Monthly	Calculation	STS
TSS Minimum % Removal											
October – April	---	---	---	---	85	---	(report)	%	Monthly	Calculation	STS
					Minimum Daily		Maximum Daily				
pH	---	---	---	---	6.5	---	9.0	S.U.	5x Weekly	Grab	WQS
Dissolved Oxygen											
May – September	---	---	---	---	7.0	---	---	mg/l	5x Weekly	Grab	WQBEL
October – April	---	---	---	---	6.0	---	---	mg/l	5x Weekly	Grab	WQBEL

PERMIT CONDITIONS:

Final Effluent Limitations, Monitoring Point 001A

Quantification Levels and Analytical Methods for Selected Parameters

Untreated or Partially Treated Sewage Discharge Reporting and Testing Requirements

Facility Contact

Monthly Operating Reports

Continuous Monitoring

Submittal of Self-Monitoring Data

Storm Water Pollution Prevention (not required)

Industrial Waste Pretreatment Program

Residuals Management Program for Land Application of Biosolids

Limit Change Key

Normal Type = existing requirement - carried over from previous version of permit

Bold Type = new requirement - not in previous version of permit

Italic = deleted requirement - not carried over from previous version of permit

NOTES:

For information pertaining to conventional pollutants and the establishment of certain permit conditions, see the Department's document named "WQBEL - Conventional - SalemTwpUSD - 2024."

For information pertaining to the non-attainment status for certain designated uses of the receiving water and how it informed the establishment of certain permit conditions, see the Department's document named "WQBEL Biologist Recommendations_MI0060338_11-09-2023."

Monitoring requirements for chloride and sulfate have been included in the draft permit in accordance with the Department's Chloride and Sulfate Water Quality Values Implementation Plan (michigan.gov).

This permit has been developed for a proposed wastewater treatment facility in Salem Township yet to be constructed. To minimize impact to waters of the state of Michigan, regional wastewater treatment solutions are preferred to new construction of individual municipal treatment plants. Rule 1098 Antidegradation of the Part 4 Rules applies to any permitting action that will result in a new or increased loading of pollutants to the surface waters of the state. Per this rule, as part of the application package submitted for this proposed wastewater treatment facility, Salem Township was required to identify possible alternatives to the proposed new surface water discharge. Salem Township explored connection to Plymouth Township, Lyon Township, Western Townships Utility Authority, and Ypsilanti Community Utilities Authority (YCUA) Regional Wastewater Treatment Plant (WWTP). Salem Township identified that connection to the existing YCUA Regional WWTP was a feasible alternative to the proposed discharge.

An agreement was executed between Salem Township and YCUA to reserve and lease capacity at the YCUA Regional WWTP. Connection to YCUA would require sewer facilities to be constructed through Superior Township along a right-of-way but would not provide service to Superior Township. These sewer facilities were permitted under Part 41 for connection to YCUA Regional WWTP and would only allow for connection of the Salem Township Urban Service District. However, Superior Township objected to construction of these sewer facilities. Salem Township challenged this decision, and the issue was taken to Washtenaw County Circuit Court. Washtenaw County Circuit Court ruled that Superior Township could deny Salem Township from utilizing the right-of-way. The Washtenaw County Circuit Court decision was then challenged at the Michigan Court of Appeals, and this court sent the case back to Circuit Court. The Circuit Court again ruled for Superior Township. As a result, Salem Township is unable to utilize the identified and preferred regional treatment solution as a feasible alternative to this new discharge. Though this option was not allowed by the Court to proceed, the draft permit for this new discharge of treated wastewater meets all water quality standards and will protect public health and all designated uses.

The Department has developed a strategy for the additional control of Total Phosphorus from Publicly Owned Treatment Works to the Western Lake Erie Basin as part of a Collaborative Agreement with the State of Ohio and Province of Ontario. The final effluent limitations for Total Phosphorus, including the six-month growing season average, that have been included are based on this strategy.

The designated site name was updated from 81-Salem Township Urban Service District-Salem to Salem Twp USD WWTP during the permit development process.

Basis for Limits Key

WQBEL - Water Quality-Based Effluent Limit

STS - Secondary Treatment Standard

AWT - Advanced Wastewater Treatment

WQC - Water Quality Concern

WQS - Water Quality Standard

PWJ - Permit Writer's Judgment

BPJ - Best Professional Judgment of appropriate treatment technology-based effluent limits in the absence of applicable federal guidelines