

NPDES Permit No. IL0031933

Notice No. RJY: IL0031933-17.rjy

Public Notice Beginning Date: **August 8, 2018**

Public Notice Ending Date: **September 7, 2018**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

PUBLIC NOTICE/FACT SHEET
of
Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois EPA
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

Northern Moraine Wastewater Reclamation District
P.O. Box 240
Island Lake, Illinois 60042-0240

Name and Address of Facility:

Northern Moraine Wastewater Reclamation District WWTP
420 Timber Trail
Island Lake, Illinois 60042
(McHenry County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES Permit to discharge into the waters of the state and has prepared a draft Permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. All comments on the draft Permit and requests for hearing must be received by the IEPA by U.S. Mail, carrier mail or hand delivered by the Public Notice Ending Date. Interested persons are invited to submit written comments on the draft Permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the Permit applicant. The NPDES Permit and notice numbers must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft Permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft Permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final Permit is issued. For further information, please call Rong-Juan Yang at 217/782-0610.

The following water quality and effluent standards and limitations were applied to the discharge:

Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board and the Clean Water Act were applied in determining the applicable standards, limitations and conditions contained in the draft Permit.

The applicant is engaged in treating domestic wastewater for the Villages of Island Lake, Lakemoor, and Port Barrington.

The length of the Permit is approximately 5 years.

The main discharge number is 001. The seven day once in ten year low flow (7Q10) of the receiving stream, Fox River is 99.0 cfs.

The design average flow (DAF) for the existing facility is 2.0 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 5.0 MGD. Treatment consists of screening, activated sludge, final settling, chlorination/dechlorination, aerobic digestion, and belt filtration.

The design average flow (DAF) for the proposed facility is 3.0 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 6.0 MGD. Treatment consists of screening, activated sludge, final settling, phosphorus removal, chlorination/dechlorination, membrane thickening, aerobic digestion, belt filtration, and dried sludge storage.

This Reissued Permit does not increase the facility's DAF, DMF, concentration limits, and/or load limits.

The Permittee currently is participating in the Fox River Study Group (FRSG) to determine cost effective means to remove dissolved oxygen and offensive condition impairments in the Fox River to the extent feasible. Along with coordination with other watershed members of the FRSG, the Permittee shall participate in the FRSG for the completion of tasks set out in the 2015 Fox River Implementation Plan (either by the permittee or through the FRSG).

Application is made for the existing discharge(s) which is located in McHenry County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

<u>Discharge Number</u>	<u>Receiving Stream</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Stream Classification</u>	<u>Integrity Rating</u>
001	Fox River	42° 15' 45" North	88° 13' 06" West	General Use	Not Rated

To assist you further in identifying the location of the discharge(s) please see the attached map.

The stream segment(s), Waterbody segment DT-22, receiving the discharge from outfall(s) 001 is on the 303(d) list of impaired waters.

The following parameters have been identified as the pollutants causing impairment at the Fox River:

<u>Uses Impaired</u>	<u>Potential Causes</u>
Aquatic Life	Alterations in stream-side or littoral vegetative cover (non-pollutant), aquatic algae (non-pollutant), chloride, copper, other flow regime alterations (non-pollutant), and sedimentation/siltation
Fish Consumption	PCBs
Primary Contact	Fecal coliform bacteria

The discharge(s) from the facility is (are) proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 001 STP Outfall (Existing Plant)

Load limits computed based on a design average flow (DAF) of 2.0 MGD (design maximum flow (DMF) of 5.0 MGD).

The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS mg/L			Regulation
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	
CBOD ₅ **	334 (834)	667 (1668)		20	40		35 IAC 304.120 40 CFR 133.102
Suspended Solids**	417 (1043)	751 (1877)		25	45		35 IAC 304.120 40 CFR 133.102
pH	Shall be in the range of 6 to 9 Standard Units						35 IAC 304.125
Fecal Coliform	The monthly geometric mean shall not exceed 200 per 100 mL No more than 10% of the samples during the month shall exceed 400 per mL						35 IAC 304.121
Chlorine Residual						0.05	35 IAC 302.208
Ammonia Nitrogen: April-October	25 (63)		42 (104)	1.5		2.5	35 IAC 355 and 35 IAC 302
November-February	62 (154)		82 (204)	3.7		4.9	
March	25 (63)		60 (150)	1.5		3.6	
Total Nitrogen (as N)	Monitor Only						35 IAC 309.146
Dissolved Phosphorus	Monitor Only						35 IAC 309.146
Nitrate/Nitrite	Monitor Only						35 IAC 309.146
Total Kjeldahl Nitrogen (TKN)	Monitor Only						35 IAC 309.146
Alkalinity	Monitor Only						35 IAC 309.146
Temperature	Monitor Only						35 IAC 309.146
			Annual*** Average			Annual*** Average	
Total Phosphorus (as P)			17 (42)			1.0	35 IAC 309.123
				Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum	
Dissolved Oxygen March-July				N/A	6.0	5.0	35 IAC 302.206
August-February				5.5	4.0	3.5	

*Load Limits are calculated by using the formula: $8.34 \times (\text{Design Average and/or Maximum Flow in MGD}) \times (\text{Applicable Concentration in mg/L})$.

** BOD₅ and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent.

***Annual Average is defined as the 12 month rolling average (calculated monthly).

The discharge(s) from the facility is (are) proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 001 STP Outfall (Proposed Plant)

Load limits computed based on a design average flow (DAF) of 3.0 MGD (design maximum flow (DMF) of 6.0 MGD).

The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*				CONCENTRATION LIMITS mg/L				Regulation	
	Annual Avg.	Monthly Avg.	Weekly Avg.	Daily Max.	Annual Avg.	Monthly Avg.	Weekly Avg.	Daily Max.		
CBOD ₅ **	250 (500)	500 (1001)	1001 (2002)		10	20	40		35 IAC 304.120 40 CFR 133.102	
Suspended Solids**	300 (600)	600 (1201)	1126 (2252)		12	25	45		35 IAC 304.120 40 CFR 133.102	
pH	Shall be in the range of 6 to 9 Standard Units									35 IAC 304.125
Fecal Coliform	The monthly geometric mean shall not exceed 200 per 100 mL No more than 10% of the samples during the month shall exceed 400 per mL									35 IAC 304.121
Chlorine Residual								0.05	35 IAC 302.208	
Ammonia Nitrogen: April-October		38 (75)		63 (125)		1.5		2.5	35 IAC 355 and 35 IAC 302	
Nov.-Feb.		93 (185)		123 (245)		3.7		4.9		
March		38 (75)		90 (180)		1.5		3.6		
Total Phosphorus (as P)		25 (50)				1.0			35 IAC 304.123	
Total Nitrogen(as N)	Monitor Only								35 IAC 309.146	
Dissolved Phosphorus	Monitor Only								35 IAC 309.146	
Nitrate/Nitrite	Monitor Only								35 IAC 309.146	
Total Kjeldahl Nitrogen (TKN)	Monitor Only								35 IAC 309.146	
Alkalinity	Monitor Only								35 IAC 309.146	
Temperature	Monitor Only								35 IAC 309.146	
						Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum		
Dissolved Oxygen March-July						N/A	6.0	5.0	35 IAC 302.206	
August-February						5.5	4.0	3.5		

*Load Limits are calculated by using the formula: 8.34 x (Design Average and/or Maximum Flow in MGD) x (Applicable Concentration in mg/L).

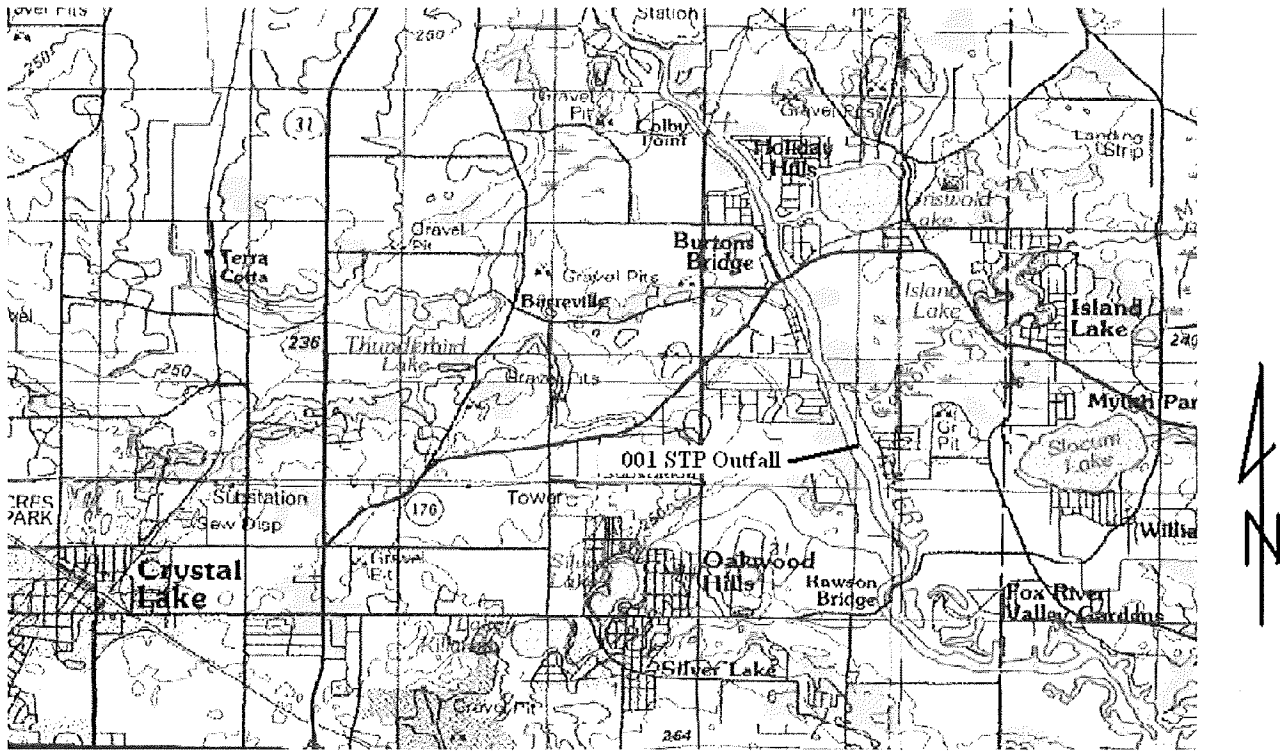
** BOD₅ and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent.

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This draft Permit also contains the following requirements as special conditions:

1. Reopening of this Permit to include different final effluent limitations.
2. Operation of the facility by or under the supervision of a certified operator.
3. Submission of the operational data in a specified form and at a required frequency at any time during the effective term of this Permit.
4. More frequent monitoring requirement without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.
5. Prohibition against causing or contributing to violations of water quality standards.
6. Recording the monitoring results on Discharge Monitoring Report Forms using one such form for each outfall each month and submitting the forms to IEPA each month.
7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.
8. Effluent sampling point location.
9. Monitoring for arsenic, barium, cadmium, hexavalent chromium, total chromium, copper, available cyanide, total cyanide, fluoride, dissolved iron, total iron, lead, manganese, mercury, nickel, oil, phenols, selenium, silver and zinc is required to be conducted semi-annually beginning 3 months from the effective date.
10. Burden reduction.
11. Submission of annual fiscal data.
12. A requirement for biomonitoring of the effluent.
13. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
14. Reopening of this Permit to include revised effluent limitations based on a Total Maximum Daily Load (TMDL) or other water quality study.
15. Optimization of biological nutrient removal (BNR) facilities.
16. A requirement for participation in the Fox River Study Group.
17. Compliance schedule for meeting 1.0 mg/L Phosphorus limit.
18. Updating the Phosphorus Removal Feasibility Study (PRFS) to achieve 0.1 mg/L Phosphorus limit.
19. Requirement to meet 0.5 mg/L Phosphorus limit by 2030.
20. Submission of a Phosphorus Discharge Optimization Plan.
21. Notify IEPA upon completion of the proposed plant.
22. Monitoring of the wastewater effluent for dissolved phosphorus, total phosphorus, nitrate/nitrite, total nitrogen, total Kjeldahl nitrogen, ammonia, total nitrogen (calculated), alkalinity and temperature once a month.
23. Capacity, Management, Operations, and Maintenance (CMOM) plan.



Northern Moraine Wastewater Reclamation District WWTP
NPDES Permit No. IL0031933
McHenry County

