

**National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit Program Fact Sheet
Wastewater Pond General Permit
Permit Issuance
MNG585000**

Current permit expiration date: August 31, 2015

Public comment period begins: September 17, 2018

Public comment period ends: November 16, 2018

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Table of Contents

	Page
Purpose and public participation	3
Applicable statutes.....	3
Purpose	3
Public participation	3
Facility information	4
General permit eligibility criteria:	4
Location information and map of permitted facilities.....	5
Components and treatment technology	5
Description of facilities	5
Changes to facilities or operations	6
Significant Industrial Users (SIUs)	6
Receiving water(s).....	6
Use classification.....	6
Impairments.....	6
Existing permit effluent limits.....	6
Technology based effluent limits (TBELs)	9
Water quality based effluent limits (WQBELs)	9
State discharge restrictions.....	9
Proposed permit effluent limits.....	9
Technology based effluent limits	12
Water quality based effluent limits	12
State discharge restrictions.....	13
Acceptable discharge periods	13
Pollutants of concern	13
Nitrogen	13
Phosphorus	14
Salty discharge monitoring	14
Mercury.....	15
Additional requirements	15
Leaking Pond Evaluation Plan	15
Inflow and Infiltration (I/I) Evaluation Plan	15
Antidegradation and anti-backsliding.....	16

Purpose and public participation

Applicable statutes

This fact sheet has been prepared according to the 40 CFR § 124.8 and 124.56 and Minn. R. 7001.0100, subp. 3 in regards to a draft National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit to construct and/or operate wastewater treatment facilities and to discharge into waters of the State of Minnesota.

Purpose

This fact sheet outlines the principal issues related to the preparation of this draft permit and documents the decisions that were made in the determination of the effluent limitations and conditions of this permit.

Public participation

You may submit written comments on the terms of the draft permit or on the Commissioner's preliminary determination. Your written comments must include the following:

1. A statement of your interest in the permit application or the draft permit.
2. A statement of the action you wish the Minnesota Pollution Control Agency (MPCA) to take, including specific references to sections of the draft permit that you believe should be changed.
3. The reasons supporting your position, stated with sufficient specificity as to allow the Commissioner to investigate the merits of your position.

You may also request that the MPCA Commissioner hold a public informational meeting. A public informational meeting is an informal meeting which the MPCA may hold to help clarify and resolve issues.

In accordance with Minn. R. 7000.0650 and Minn. R. 7001.0110, your petition requesting a public informational meeting must identify the matter of concern and must include the following: items one through three identified above; a statement of the reasons the MPCA should hold the meeting; and the issues you would like the MPCA to address at the meeting.

In addition, you may submit a petition for a contested case hearing. A contested case hearing is a formal hearing before an administrative law judge. Your petition requesting a contested case hearing must include a statement of reasons or proposed findings supporting the MPCA decision to hold a contested case hearing pursuant to the criteria identified in Minn. R. 7000.1900, subp. 1 and a statement of the issues proposed to be addressed by a contested case hearing and the specific relief requested. To the extent known, your petition should include a proposed list of witnesses to be presented at the hearing, a proposed list of publications, references or studies to be introduced at the hearing, and an estimate of time required for you to present the matter at hearing.

You must submit all comments, requests, and petitions during the public comment period identified on page one of this notice. All written comments, requests, and petitions received during the public comment period will be considered in the final decisions regarding the permit. If the MPCA does not receive any written comments, requests, or petitions during the public comment period, the Commissioner or other MPCA staff as authorized by the Commissioner will make the final decision concerning the draft permit.

Comments, petitions, and/or requests must be submitted by the last day of the public comment to:

Stephanie Lyons
525 Lake Avenue South
Duluth, Minnesota 55802
218-302-6643

The permit will be issued if the MPCA determines that the proposed Permittee or Permittees will, with respect to the facility or activity to be permitted, comply or undertake a schedule to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the MPCA and the conditions of the permit and that all applicable requirements of Minn. Stat. ch. 116D and the rules promulgated thereunder have been fulfilled.

More detail on all requirements placed on the facility may be found in the Permit document and the Individual Notices of Coverage issued to each Permittee.

Facility information

The MPCA has reviewed data to determine if a category, or categories, of discharge facilities in Minnesota met the stipulated criteria for development of a Stabilization Pond Wastewater Treatment Facility NPDES/SDS General Permit MNG585000 (General Permit) for stabilization pond wastewater treatment facilities (Facilities).

Permittees are authorized to discharge wastewater in accordance with the General Permit only after:

- a. The Permittee seeking authorization to discharge under the General Permit has submitted all necessary application forms to be covered under the General Permit;
- b. The Permittee meets all the eligibility criteria listed in the following section; and
- c. The Permittee has received a Notice of Coverage (NOC) from the MPCA indicating coverage has been granted.

General permit eligibility criteria:

- i. The Permittee's facility (facility) is an existing stabilization and/or aerated pond system with controlled surface water discharge that treats domestic-strength wastewater and is MPCA-classified as a Class D facility. Facilities that have land disposal activities (e.g. spray irrigation, rapid infiltration basins) or additional treatment components (e.g. septic tanks) are ineligible for the Permit.
- ii. The facility has an average wet weather (AWW) design flow of less than one million gallons per day (mgd).
- iii. The facility does not require additional limits and/or monitoring beyond what the Permit lists in the limits and monitoring table. In addition, the facility does not require additions to the Permit's narrative requirements, such as a compliance or construction schedule.
- iv. New discharges to surface water require coverage under an individual permit until completion of construction of the facility prior to qualification under the Permit.
- v. The Permittee does not propose a facility upgrade or expansion that would trigger an antidegradation review.
- vi. The Permittee is not proposing a new discharge to an Outstanding Resource Value Water (ORVW).
- vii. The facility does not have significant compliance issues as determined by MPCA staff.
- viii. The facility does not receive excessive flows that result in upsets, permit violations, or unauthorized discharges/bypassing from the collection system or facility, or result in regular discharges outside the designated discharge period. The MPCA may allow coverage under the Permit for facilities that are experiencing excessive flows provided the NOC contains Inflow and Infiltration Evaluation Plan requirements to investigate and address

the excessive flows (see Inflow and Infiltration (I/I) Evaluation Plan heading in the Permit). The MPCA may not grant coverage under the Permit if a facility completed an Inflow and Infiltration Plan and the facility is still receiving excessive flows.

- ix. The facility has at least 180 days of storage if located south of the 46 degrees 25 minutes north latitude (approximately the latitude of Brainerd) and 210 days of storage for facilities north of this line unless previously approved by the MPCA for something less. If design capacity is less than 180 days and 210 days respectively, Permittees may show that actual flows allow for 180 days and 210 days respectively. The MPCA may also be require Permittees submit additional documentation demonstrating what the predicted flow conditions are for the life of the permit.
- x. The facility's ponds do not exceed the allowable seepage rate of 500 gallons per acre per day if the facility built the pond on or after May 16, 1975 and 3,500 gallons per acre per day if the facility built the pond before May 16, 1975. The MPCA may allow coverage under the Permit for facilities suspected to be leaking excessively provided the NOC contains a Leaking Pond Evaluation requirement to investigate the leakage rate (see Leaking Pond Evaluation Plan heading). The MPCA may not grant coverage under the Permit if a facility completed a Leaking Pond Evaluation and the facility is still leaking excessively.
- xi. The facility was not subject to the 1993 MPCA Administrative Order requiring the preparation of a contingency plan. Wastewater treatment facilities in southeastern Minnesota are at risk of failure because of sinkholes developing beneath the facility. Karst geology presents a potential risk to surface storage ponds or basins because the limestone and dolomite often contain numerous horizontal and vertical fractures and sometimes crevices and caves. The following criteria were used to determine risk potential:
 - a. first bedrock is either limestone, dolomite and sometimes sandstone;
 - b. the thickness of subsurface sediments are less than 50 feet thick with an elevated risk if sediments range from 50 to 100 feet thick; and
 - c. the wastewater treatment facility is located in an area that has a history of sinkhole formation.
- xii. The facility does not hold a NPDES permit issued by the United States Environmental Protection Agency (EPA).

Location information and map of permitted facilities

Please see the Notice of Coverage issued to each Permittee for specific location information. A copy of this can be obtained by filling out an Information Request form located on the MPCA internet page at;

<https://www.pca.state.mn.us/about-mPCA/information-requests>

Components and treatment technology

Description of facilities

The wastewater treatment facilities that will be covered under this General Permit consist of controlled discharge pond systems. Treatment in a controlled discharge pond is accomplished through natural biological processes that include bacteria, oxygen, algae, and sunlight to reduce pollutants. Wastewater is stored at least 180 days, unless previously approved by the MPCA for something less, before adequate treatment is attained. Discharge only occurs during allowable windows in the spring and fall. No discharge shall occur outside accepted discharge windows.

Controlled discharge pond systems consist of multiple ponds to provide the storage capacity for treatment. The following terms are used to describe the location and function of a pond within the treatment process. This terminology is not always absolute and a single pond may be referred to as more than one type.

- i. "Primary" stabilization ponds receive the influent wastewater and provide the initial treatment through sedimentation and solids settling and preliminary biological treatment.
- ii. "Secondary" stabilization ponds receive wastewater that has been treated in the primary pond and provide biological treatment and disinfection by UV light from the sun.
- iii. "Aerated" stabilization ponds are mechanically aerated to provide additional oxygen supplement the natural transfer of oxygen to the water.
- iv. "Polishing" ponds are usually in addition the minimum primary and secondary ponds and provide additional storage and treatment capacity.
- v. "Tile Line Discharges" are tile lines used to lower local groundwater elevations. Stabilization ponds in Minnesota are required to have 4' of separation from pond bottom to high ground water levels. If this cannot be met, a system of groundwater tiling can be used to lower it. The GW stations included in the permit allow for sampling of this groundwater prior to discharge. Drain tile under a clay-lined pond is not allowed. Fecal monitoring is included to determine if the pond is potentially leaking.

Changes to facilities or operations

Facilities with significant changes to the system or operations are not eligible for the Wastewater Pond General Permit.

Significant Industrial Users (SIUs)

Facilities with significant industrial users that require special monitoring by the Permittee are not eligible for the General Permit.

Receiving water(s)

Use classification

A list of the receiving water for each Permittee's surface water discharge can be found in the cover page of the individual Notice of Coverage issued. Each facility's receiving water use class is also identified in the spreadsheet titled "2018 MNG585000 Public Notice Spreadsheet." A detailed definition of the use classes can be found on the Revisor of Statutes' website at: <https://www.revisor.mn.gov/rules/?id=7050.0140>

Impairments

All facilities covered under the MNG585000 have been or will be evaluated for downstream water impairments. Site-specific impairments are listed on the State of Minnesota's Impaired Waters list, which can be found by accessing the MPCA's website at <https://www.pca.state.mn.us/water/total-maximum-daily-load-tmdl-projects>

Existing permit effluent limits

The limits and monitoring requirements contained in Tables 1 through 3 outline the existing effluent limitations and station monitoring requirements in the MNG580000 Stabilization Pond General I Permit. These limitations were applied based on two scenarios: Mandatory Limits and Monitoring & Facility Specific Limits and Monitoring. The Mandatory Limits and Monitoring are applicable to every facility covered under the MNG580000 Stabilization Pond General Permit. Mandatory Limits for loading were calculated based on a maximum six-inch drawdown rate of the secondary cells. Facility specific limits were assigned to facilities on a case-by-case basis and are listed in the facility's NOC.

Limitations for each category are summarized in the following tables:

Table 1: Existing permit mandatory limits and monitoring

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	As specified in NOC	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	As specified in NOC	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x week
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100mL	Calendar Month Geometric Mean	Apr-Oct or May-Oct or Jan-Dec	Grab	2 x week
Flow	0	MG	Calendar Month Total Intervention	Jan-Feb, Jul, Aug	Measurement, Continuous	1 x day
Flow	Monitor Only	MG	Calendar Month Total	Mar-Jun, Sep-Dec	Measurement, Continuous	1 x day
Flow	Monitor Only	mgd	Calendar Month Average	Mar-Jun, Sep-Dec	Measurement, Continuous	1 x day
Oxygen, Dissolved	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	2 x week
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	2 x week
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	2 x week
Phosphorus	As specified in NOC or Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x week
Phosphorus	As specified in NOC or Monitor Only	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	As specified in NOC	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	As specified in NOC	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x week

Table 2: Existing permit facility specific limits and monitoring

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Mercury, Total (as Hg)	Monitor Only, as Specified in the NOC	ng/L	Calendar Month Maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Nitrite Plus Nitrate, Total (as N)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month Average	Jan-Jun, Jul-Dec	Grab	1 x half year
Nitrogen, Ammonia, Total (as N)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month Average	Jan-Jun, Jul-Dec	Grab	1 x half year
Nitrogen, Kjeldahl, Total	Monitor Only, as Specified in the NOC	mg/L	Calendar Month Average	Jan-Jun, Jul-Dec	Grab	1 x half year
Solids, Total Dissolved (TDS)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month Average	Jan-Jun, Jul-Dec	Grab	1 x half year
Bicarbonates	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Calcium, Total (as Ca)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Chloride, Total	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Hardness, Calcium & Magnesium, Calculated (as CaCO ₃)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Magnesium, Total (as Mg)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Potassium, Total (as K)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Sodium, Total (as Na)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Specific Conductance	Monitor Only, as Specified in the NOC	uhm/cm	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year
Sulfate, Total (as SO ₄)	Monitor Only, as Specified in the NOC	mg/L	Calendar Month maximum	Jan-Jun, Jul-Dec	Grab	1 x half year

Table 3: Existing permit tile line limits and monitoring requirements

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Specific Conductance	Monitor Only	uhm/cm	Single Value	Apr, Jul, Oct	Grab	As Specified in the NOC
Chloride, Total	Monitor Only	mg/L	Single Value	Apr, Jul, Oct	Grab	As Specified in the NOC
Fecal Coliform MPN or Membrane Filter 44.5 C	Monitor Only	# 100 mL	Single Value	Apr, Jul, Oct	Grab	As Specified in the NOC

Technology based effluent limits (TBELs)

Limits are applied pursuant to Minn. R. 7053.0215, subp. 1 for five-day carbonaceous biological oxygen demand (CBOD₅), total suspended solids (TSS), and potential of hydrogen (pH).

Water quality based effluent limits (WQBELs)

Certain toxics, Mercury, Dissolved Oxygen, Temperature and alternate or seasonal limits for Phosphorus are WQBELs as applied according to Minn. R. 7053.0205 and 7050.0222.

State discharge restrictions

The 1.0 mg/L Total Phosphorus and the 200 organisms per 100 milliliter (#100ml) Fecal Coliform limits are State Discharge Restrictions applied according Minn. R. 7053.0255 subp. 3 and 7053.0215 subp. 1.

Proposed permit effluent limits

The proposed limits and monitoring requirements in the Tables 4 through 5 below are required for all facilities covered under the MNG585000 Wastewater Pond General Permit unless otherwise noted. For parameters with the "As specified in NOC" note, limits and/or monitoring requirements will be specified individually in each NOC, as applicable. Each Permittee that obtains coverage under this general permit will be issued a NOC that includes a limits and monitoring table specific to that facility. The GW00X Tile Line Monitoring requirements are applicable only to facilities with tile line discharges.

Table 4: Proposed mandatory limits and monitoring requirements

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	As Specified in the NOC	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
BOD, Carbonaceous 05 Day (20 Deg C)	As Specified in the NOC	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x week

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100mL	Calendar Month Geometric Mean	Apr-Oct or May-Oct or Jan-Dec	Grab	2 x week
Flow	0	MG MGD	Calendar Month Total Intervention Calendar Month Average Intervention Calendar Month Maximum Intervention	As specified in NOC	Measurement, Continuous	1 x day
Flow	Monitor Only	MG MGD	Calendar Month Total Calendar Month Average Calendar Month Maximum	As specified in NOC	Measurement, Continuous	1 x day
Oxygen, Dissolved	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	2 x week
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Calendar Month Average	As Specified in the NOC	Grab	As Specified in the NOC
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	As Specified in the NOC	Grab	As Specified in the NOC
Nitrogen, Total (as N)	Monitor Only	mg/L	Calendar Month Average	As Specified in the NOC	Grab	As Specified in the NOC
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Calendar Month Average	As Specified in the NOC	Grab	As Specified in the NOC
Phosphorus	As Specified in the NOC	mg/L	Calendar Month Average	As specified in the NOC	Grab	2 x week
Phosphorus	As Specified in the NOC	kg/day	Calendar Month Average	As Specified in the NOC	Grab	2 x week
Phosphorus	As Specified in the NOC	kg/year	12-month moving total	Jan-Dec	Calculation	1 x Month
Phosphorus	As Specified in the NOC	mg/L	12-month moving average	Jan-Dec	Calculation	1 x Month
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	2 x week
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	As Specified in the NOC	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x week
Solids, Total Suspended (TSS)	As Specified in the NOC	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x week

Table 5: Proposed facility specific limits and monitoring requirements – Limits and/or monitoring for the following parameters are assigned to facilities based on region, watershed, Reasonable Potential analysis, receiving water and/or flows. The NOC for each facility will contain that facility's requirements. Not all facilities are required to monitor for each parameter.

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Bicarbonates	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Calcium, Total (as Ca)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Hardness, Calcium & Magnesium, Calculated (as CaCO ₃)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Magnesium, Total (as Mg)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Mercury, Dissolved (as Hg)	Monitor Only	ng/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year
Mercury, Total (as Hg)	Monitor Only	ng/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year
Potassium, Total (as K)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Sodium, Total (as Na)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	As Specified in the NOC
Solids, Total Suspended (TSS), grab mercury	Monitor Only	mg/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year
Specific Conductance	Monitor Only	uhm/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year
Sulfate, Total (as SO ₄)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Half year

Table 6: Proposed tile line limits and monitoring requirements

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month
Fecal Coliform MPN or Membrane Filter 44.5 C	Monitor Only	# 100 mL	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month
Specific Conductance	Monitor Only	uhm/cm	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month

Technology based effluent limits

Limits are applied pursuant to Minn. R. 7053.0215, subp. 1 for CBOD₅, TSS, and pH. The decision to not require percent removal from pond facilities was made because comparing quarterly influent to seasonally discharged effluent provides inaccurate information of pond performance.

Water quality based effluent limits

Minn. R. 7053.0205, subp. 8 authorizes the MPCA to develop water quality based effluent limitations for point source discharges to waters of the state of Minnesota to protect receiving waters for the applicable use classifications.

A WQBEL is required when it is determined necessary to protect the use classification of the receiving water [40 CFR Part 122.44(d)]. For toxic pollutants, determination of reasonable potential (RP) and limit derivation methods are consistent with applicable federal guidance (Technical Support Document for Water Quality-based Toxics Control, EPA, 1991). For phosphorus, determination of RP and the limit development process are defined in Agency guidance (Procedures for Implementing River Eutrophication Standards in NPDES Wastewater Permits in Minnesota, November 2015 or the most recent version). If a WQBEL is needed to protect a waterbody and a total maximum daily load (TMDL) has not yet been completed, a TMDL-like water quality analysis is completed to ensure limits are derived from the applicable water quality standard. The results of each analysis can be found in a completed total phosphorus effluent limit review memorandum associated with each major watershed. Methods and results from the analysis will be provided to TMDL developers to ensure consistency between the current WQBEL and future TMDL waste load allocations (WLA).

If a downstream water has a completed TMDL study, a WQBEL is derived from and is consistent with the assumptions of the TMDL WLA. Procedures for the implementation of a TMDL WLA for phosphorus are defined in Agency guidance (Procedures for Implementing River Eutrophication Standards in NPDES Wastewater Permits in Minnesota, November 2015 or the most recent version).

Eutrophication WQBELs are typically derived from an analysis that identifies the pollution reductions necessary to meet water quality standards; often through a combination of reductions from multiple sources. Ponds, while discharging at levels far above eutrophication standards, typically represent a minor pollutant load source to downstream waters. Pond phosphorus loading is small, relative to other sources, primarily because flow is limited. Ponds generally serve smaller communities, and therefore receive small volumes of influent wastewater. As well, ponds are prohibited from discharging during much of the summer period (July 1 – August 31). Even during the two summer months that ponds are allowed to discharge, June and September, statewide records indicate that pond discharge is infrequent and much lower in volume than permitted levels. Statewide, only 25% of actual pond flow is discharged during the summer period, and the total volume of actual summer discharge is 31% of average wet weather design flow (AWWDF). Phosphorus WQBELs for stabilization ponds may be required in specific circumstances, but the overall potential impact on downstream waters is generally limited, in comparison to other sources.

Nonetheless, Agency guidance (Procedures for Implementing River Eutrophication Standards in NPDES Wastewater Permits in Minnesota, November 2015 or the most recent version) requires Facilities found to have RP to be assigned a WQBEL. Subsequently, federal regulations [40 CFR § 122.44 (d)] require that Facilities with RP receive a WQBEL. Stabilization ponds are not continuous discharges; and therefore, Federal Law does not require that limits be expressed as maximum daily or average weekly values (40 CFR 122.45(d)).

The complete "*Total phosphorus effluent limit review memorandum*" for each major watershed for each Permittee listed in the Public Notice Spreadsheet of the draft general permit is available upon request from the MPCA. The memorandum provides additional information on any TP WQBELs that were assigned to Permittees to ensure eutrophication water quality standards are met.

State discharge restrictions

State Discharge Restrictions are not considered water quality based effluent limits. However, these restrictions were designed to protect water quality and maintain in-stream water quality standards. Therefore, the restrictions are strict enough to protect water quality standards. The 1.0 mg/L Total Phosphorus is based on Minn. R. 7053.0255, subp. 3. Facilities required to meet the 1.0 mg/L Total Phosphorus effluent limit will be notified in their NOC. The 200 organisms per 100 mL Calendar Month Geometric Mean limit for Fecal Coliform is based on Minn. R. 7053.0215, subp. 1. The MPCA decided it was cost-effective and reasonable to retain the fecal coliform effluent limit in Minn. R. 7053.0215. A more detailed explanation can be found in the Statement of Need and Reasonableness (SONAR) for this rulemaking.

Acceptable discharge periods

Acceptable discharge periods for facilities located in the Detroit Lakes, Brainerd and Duluth regions, are March 1 through June 30 and September 1 through December 31. For facilities located in the Marshall, Rochester, Willmar, Mankato and Metropolitan regions, acceptable discharge periods are March 1 through June 15 and September 15 through December 31. For new or expanded facilities located in the Minnesota River Basin, acceptable discharge periods are March 1 through May 31 and October 1 through December 31. Some facilities may have a more restrictive discharge period to avoid the June-September discharge period. Those restricted discharge periods will be listed in the limits and monitoring table in the Permittee's Notice of Coverage.

Pollutants of concern

Nitrogen

Nitrogen is a pollutant that can negatively impact the quality of Minnesota's water resources, including water used for drinking. Studies have shown that nitrogen in lakes and streams has a toxic effect on aquatic life such as fish. Like phosphorus, nitrogen is a nutrient that promotes algae and aquatic plant growth often resulting in decreased water clarity and oxygen levels. In September 2014, the MPCA completed the final draft of the [Statewide Nutrient Reduction Strategy](http://www.pca.state.mn.us/zihy1146) (<http://www.pca.state.mn.us/zihy1146>) which identifies goals and milestones for nitrogen reductions for both point and non-point nitrogen sources within Minnesota. To gain a better understanding of the current nitrogen concentrations and loadings received by and discharged from facilities additional effluent nitrogen monitoring has been added to the Permit. This monitoring has been added in accordance with Minnesota Statutes Chapter 115.03.

Nitrogen monitoring at both the influent and effluent stations for Nitrite plus Nitrate-Nitrogen, Total Kjeldahl Nitrogen and Total Nitrogen will be added to NOCs at differing frequencies based on the Average Wet Weather Design Flow of the facility. Additionally, facilities with design flows greater than or equal to 0.1 mgd are required to monitor ammonia and total dissolved solids at the effluent station.

This additional monitoring will provide the data necessary to develop a better understanding of the total nitrogen concentrations and loadings that is currently being received and discharged from municipal and industrial wastewater treatment plants. Once a more extensive total nitrogen data set is established nitrogen reduction work can begin to achieve the necessary reductions to meet the goal of a 20% reduction in total nitrogen loads from point source dischargers by 2025. The changes and/or increases in total nitrogen monitoring in wastewater Permits as a result of the Statewide Nutrient Reduction Strategy is outlined in the Minnesota NPDES Wastewater Permit Nitrogen Monitoring Implementation Plan document located on the MPCA wastewater Permits webpage at:

<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/wastewater/wastewater-permits/index.html>.

Phosphorus

Phosphorus is a common constituent in many wastewater discharges and a pollutant that has the potential to negatively impact the quality of Minnesota's lakes, wetlands, rivers, and streams. Phosphorus promotes algae and aquatic plant growth often resulting in decreased water clarity and oxygen levels. In addition to creating general aesthetic problems, these conditions can also impact a water body's ability to support healthy fish and other aquatic species. Therefore, phosphorus discharges are being carefully evaluated throughout the state.

Some facilities covered by the MNG585000 will be required to meet a phosphorus limit as specified in the limits and monitoring section of the Permittee's NOC.

All phosphorus samples must be analyzed by a certified laboratory and the data submitted to the MPCA. If your laboratory would like more information about becoming certified, please call the Environmental Laboratory Certification Unit at 612-676-5200. Samples must be collected in a clean bottle (preferably cleaned by a certified laboratory) that was not washed with phosphate detergent. Also, a sulfuric acid preservative must be added immediately after the sample is collected, and it must be stored at four degrees Celsius until analysis. If a contract laboratory is used, the bottle and preservative would typically be provided by the laboratory analyzing the sample.

Phosphorus Management Plan

Phosphorus Management Plans (PMPs) will be required for facilities that do not have a phosphorus limit and will be due 180 days after permit issuance. Elimination or reduction of phosphorus at the source will decrease the influent load to the wastewater treatment facility and has the potential to improve treatment efficiency and reduce treatment costs. The MPCA strongly encourages all Permittees covered under the MNG585000 to identify and eliminate/reduce sources of phosphorus to, and optimize phosphorus management within wastewater treatment facilities.

Guidance for considering phosphorus in your wastewater treatment system and preparing a PMP can be found on the web at: <https://www.pca.state.mn.us/water/phosphorus-management-plans> or <http://www.mntap.umn.edu/greenbusiness/water/phosphorus.htm>. For additional information about completing the PMP, please contact the MPCA at 651-282-6143 or 800-657-3864.

Sulfate monitoring

Professional judgement is used in determining whether effluent monitoring will be required, based on the specific characteristics of the wastewater discharge and of the receiving water.

Salty discharge monitoring

Facilities that receive salty waste streams from concentrating treatment technologies (e.g. reverse osmosis, ion exchange, etc.) or that have food processing industries using density based (saline) sorting processes are required to monitor for the following salty discharge parameters: chloride, calcium and magnesium hardness as CaCO₃, specific conductance, total dissolved solids (salts), sulfates as SO₄, bicarbonates (HCO₃), sodium, calcium, magnesium, and potassium. These analyses are required once per month during discharge.

Mercury

Mercury limits and/or monitoring assignments are based on average wet weather design flow, geographical location and the facility's reasonable potential to exceed the water quality standard. These requirements were added in response to the U.S. Environmental Protection Agency's approval of the Minnesota state-wide Mercury TMDL plan. More information on the TMDL can be found on the MPCA internet site at <http://www.pca.state.mn.us/wfhy9ef>.

Mercury Minimization Plan

Mercury Pollutant Minimization Plans (MMPs) or updated MMPs will be required of facilities based on regional location, Average Wet Weather Design Flow and Reasonable Potential to exceed water quality standards. MMPs will be required to be submitted 180 days after permit issuance. This requirement complies with the U.S. Environmental Protection Agency's approval of the Minnesota state-wide Mercury TMDL plan. Guidance for completing the MMP is available on the MPCA internet site at <http://www.pca.state.mn.us/gp0rb25>.

If the Permittee is required to submit a MMP or an updated MMP the requirement will be listed in the Submittal Action Summary table at the end of the Notice of Coverage issued to the individual facility. Guidance for completing the MMP is available on the MPCA internet site at <http://www.pca.state.mn.us>

Additional requirements

Leaking Pond Evaluation Plan

If a desktop water balance conducted by the MPCA indicates unaccounted for (missing) gallons in excess of maximum allowed seepage rate, (500 gallons per acre per day if the pond was built after May 16, 1975, and 3,500 gallons per acre per day if the pond was built before May 16, 1975) the Permittee is required to investigate the unaccounted for gallons through a Leaking Pond Evaluation Plan.

If a Permittee is required to submit a Leaking Pond Evaluation Plan, it will be listed in the Submittal Action Summary of the NOC. As required, the Permittee shall submit a Leaking Pond Evaluation Plan by 180 days after NOC issuance.

At a minimum, the Leaking Pond Evaluation Pond shall include:

- a. An evaluation of the past and present condition and operation of the pond system, including but not limited to: age of the pond system, liner material, rip rap condition and placement, erosion, presence of deep rooted vegetation, presence of rodents and rodent holes, if the pond system has been hydraulically overloaded and operated in the freeboard zone, if the dikes have overtopped, current influent and effluent flow monitoring practices
- b. A plan to ensure accurate influent and effluent flows, including but not limited to: ensuring flow meters in good working order, installing new flow meters if necessary, calibrating pumps at least twice per year, verifying pond acreages (via survey), verifying pond depths and measurements, ensuring accurate precipitation measurements and accurate discharge volumes.

Upon submittal of the plan and further MPCA review, a system with severe leakage may be removed from the Permit. If that is the case, the Permittee must submit a NPDES/SDS permit application for an individual permit.

Inflow and Infiltration (I/I) Evaluation Plan

An Inflow and Infiltration (I/I) Evaluation Plan shall be completed if a determination is made by the MPCA that a facility is receiving excessive I/I that could cause releases, upsets, unauthorized discharges/bypasses or permit violations. An I/I Plan will include one of the following action items:

- a. an EPA Capacity, Management, Operation, and Maintenance checklist, or
- b. a League of Minnesota Cities Sanitary Sewer System Assessment, or

- c. An assessment by an independent qualified consultant.

If a Permittee is required to submit an I/I Evaluation Plan, it will be listed in the Submittal Action Summary of the NOC. If required by the MPCA, the Permittee shall submit an I/I Evaluation Plan by 180 days after NOC issuance.

At a minimum, the I/I Evaluation Plan and action item shall include item A listed below and incorporate either item B, C or D listed below into the I/I Plan:

- A. The I&I Plan shall include:
 - i. An evaluation of the relationship between influent flows, wet weather and spring melt events to determine the extent of I/I to the system.
 - ii. Based on the system evaluation the Permittee shall identify all possible sources of I/I by methods such as smoke testing and televising. Possible sources include, but are not limited to, bad service line connections, broken or cracked municipal sewer lines, cracked or broken manholes or lift stations, unsealed manhole covers and illegal clean water connections.
 - iii. An evaluation of the Permittees current policy (ordinance, etc.), or establishment of a policy if absent, concerning the connection of foundation drains, floor drains, sump pumps, roof leaders, etc. from buildings connected to the system and how the Permittee ensures compliance with the policy.
 - iv. A description of past actions by the Permittee to identify and eliminate sources of I/I.
 - v. A description of current and future actions by the Permittee to identify and eliminate sources of I/I, including implementation and completion dates. The actions and dates specified in the submitted I/I Plan are enforceable provisions.

And:

- B. A completed EPA Capacity, Management, Operation, and Maintenance (CMOM) checklist. The checklist can be found at: <https://www3.epa.gov/npdes/pubs/cmomselfreview.pdf>. In addition to the checklist, the Permittee shall include a description of current and future actions by the Permittee to identify and eliminate sources of I/I, including implementation and completion dates. The actions and dates specified in the submitted I/I Plan are enforceable provisions;

Or:

- C. A completed League of Minnesota Cities Sanitary Sewer System Assessment. The assessment can be found at <http://www.lmc.org/media/document/1/modelSanitarySewerSystemAssessment.docx>. In addition to the assessment, the Permittee shall include a description of current and future actions by the Permittee to identify and eliminate sources of I/I, including implementation and completion dates. The actions and dates specified in the submitted I/I Plan are enforceable provisions;

Or:

- D. An assessment by an independent qualified consultant. In addition to the assessment, the Permittee shall include a description of current and future actions by the Permittee to identify and eliminate sources of I/I, including implementation and completion dates. The actions and dates specified in the submitted I/I Plan are enforceable provisions.

Antidegradation and anti-backsliding

The general permit includes eligibility criteria requiring facilities that are proposing a significant upgrade or expansion to be covered under an individual permit until completion of their construction project. Any permittee that is proposing a

significant upgrade or expansion that that would result in an increase in pollutant loading would be required to complete an antidegradation analysis per Minn. R. 7050.0270.

Additionally, the general Permit includes criteria that new discharges to restricted or prohibited Outstanding Resource Value Waters (ORVW) are not eligible for coverage under the Permit.

The Permit complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by parts 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.