



**National Pollutant Discharge
Elimination System /State Disposal
System (NPDES/SDS) Permit Program
Fact Sheet**

**Water Treatment Plant Surface Water Discharge NPDES/SDS General
Permit Number: MNG640000**

Current Permit Expiration: June 30, 2012

Public Comment Period Begins: June 25, 2012
Period Ends: July 24, 2012

Proposed Action: General Permit Reissuance

Permitting Contacts

Robin Novotny
Ph. 218-316-3851

or

Nicole Blasing
Ph. 218-316-3890

7678 College Road, Suite 105
Baxter, MN 56425
Fax. 218-828-2594

Table of Contents

Purpose and Participation.....	3-4
Fact Sheet Purpose	3
Applicable Statutes	3
Public Participation	3-4
Facility Description.....	4-7
Background Information	4-6
Components and Treatment Technology	6-7
General Treatment Description	6
Changes to Facility or Operation	6
Significant Industrial Users	6
Recent Compliance History.....	7
Existing Permit Effluent Limits	7-8
Technology Based Effluent Limits	8
Water Quality Based Effluent Limits.....	8
Proposed Permit Effluent Limits	8-11
Technology Based Effluent Limits.....	10
Water Quality Based Effluent Limits.....	10-11
Additional Requirements	11
Compliance Schedules	11
Variances.....	11
Total Facility Requirements	11-12
Nondegradation and Anti-backsliding	12

Purpose and Participation

Applicable Statutes

This fact sheet has been prepared according to the Title 40 Federal Code of Regulations (CFR) 124.8 and 124.56 and Minn R. 7001.0100, Subp. 3 in regards to a draft NPDES/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 1 through 3 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 1 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. During the public comment period, however, you may request that the draft permit be presented to the MPCA's Citizens' Board (Board) for final decision. You may participate in the activities of the Board as provided in Minn. R. 7000.0650.

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

Robin Novotny
Minnesota Pollution Control Agency
7678 College Road, Suite 105
Baxter, MN 56425

The permit will be reissued 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.

Facility Description

Background 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 Water Treatment Plant Surface Water Discharge NPDES/SDS General Permit (General Permit) for water 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 this general permit has submitted all of the necessary application forms to be covered under the general permit;
- b) The Permittee meets all of the general permit applicability criteria (a.-j.) that is listed in the following section of this chapter; and
- c) The Permittee has received a written Notice of Coverage (NOC) indicating that coverage has been granted.

Facilities that meet the following general permit applicability criteria are granted coverage under the General Permit:

- a) New discharges to surface water must be covered under an individual permit for one permit cycle prior to qualification under the general permit.
- b) The facility is not proposing a significant upgrade.
- c) The discharge consists of wastewater from domestic water treatment facilities.
- d) The facility has at least 24 hour detention time prior to the discharge to the receiving water.
- e) The discharge of wastewater to surface water will not have a significant impact on water quality.
- f) The discharge is not a new discharge to an Outstanding Resource Value Water (ORVW).
- g) The discharge will meet the limits assigned to the facility in the NOC and the limits and monitoring section of the general permit at time of NOC issuance.
- h) The discharge does not contain a contaminant that is not included in the limits and monitoring section of this permit.
- i) No discharge is allowed under this permit in cases where the discharge would violate surface water quality standards (Minn. R. 7050.0220).
- j) Facilities that fail or have failed to comply with a regulation, permit schedule, or compliance order issued by the MPCA may be excluded from coverage under the general permit and required to apply for coverage under an individual permit.

Components and Treatment Technology

General Treatment Description

Facilities in this General Permit use media filters for treatment of potable water.

Filtration is used to remove suspended particles in the source water. Media filters remove suspended solids by adsorption and straining. Single media beds or multi-media beds may be used. The most common type of filter is a rapid sand filter. There are two different types of filtration; gravity filtration and pressure filtration. In gravity filtration water is allowed to pass through the filter by gravity and in pressure filtration the water is forced through the filter under pressure.

To clean the filter, water is passed quickly upward through the filter, opposite the normal direction (called backwashing) to remove embedded particles. Prior to this, compressed air may be blown up through the bottom of the filter to break up the compacted filter media to aid the backwashing process; this is known as air scouring.

Filter backwash water is required to undergo at least 24 hours of detention time prior to discharging to the environment. Detention time allows for settling of the suspended solids. Detention time is typically accomplished through holding ponds or holding tanks. The filter backwash water that is discharged to the environment is regulated under this general permit.

Water filter backwash solids (WFBS) settled out in holding ponds or tanks are periodically cleaned out and disposed. Disposal of WFBS is regulated under this general permit. There are four options for disposal: wastewater treatment facility, landfilling, use as non-residential construction fill, and land application. The requirements for each of these options is listed in a guidance document titled, "Guidelines – Disposal Methods for Water Filter Backwash Solids," included in Appendix B.

Changes to Facility or Operation

Facilities with significant changes to the Facility or operations are not eligible for coverage under the General Permit.

Significant Industrial Users (SIUs)

There are no SIUs for the Facilities covered under this General Permit.

Recent Compliance History

Facilities that fail or have failed to comply with a regulation, compliance schedule, or compliance order issued by the MPCA are excluded from coverage under the General Permit.

Existing Permit Effluent Limits

Effluent limitations under the existing General Permit were dependent on treatment type and were split into two different categories:

1. Category 1 – Media Filter Limits and Monitoring Requirements
2. Category 2 – Lime Softening Limits and Monitoring Requirements

Facilities that were determined to be a Category 2 Facility were assigned Facility specific limits in the NOC.

The limits and monitoring requirements for each category are summarized in the following tables:

Category 1 – Media Filter Limits and Monitoring Requirements

Surface Discharge Station: Effluent Discharged to Surface Water – Category 1 Facilities

PARAMETER	LIMIT	UNITS	LIMIT TYPE	EFFECTIVE PERIOD	SAMPLE TYPE	FREQUENCY
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan – Dec	Measurement, Continuous	Daily
Flow	Monitor Only	MG	Calendar Quarter Total	Jan – Dec	Measurement, Continuous	Daily
Solids, Total Suspended (TSS)	30	mg/L	Single Value	Jan – Dec	Grab	Quarterly
pH ¹	9.00	standard units	Instantaneous Maximum	Jan – Dec	Grab	Quarterly
pH ¹	6.00	standard units	Instantaneous Minimum	Jan – Dec	Grab	Quarterly
Phosphorus, Total (as P)	Monitor Only	mg/L	Single Value	Jan – Dec	Grab	Quarterly

¹ Analyze immediately. This means within 15 minutes or less of sample collection.

Category 2 – Lime Softening Limits and Monitoring Requirements

Surface Discharge Station: Effluent Discharged to Surface Water – Category 2 Facilities

PARAMETER	LIMIT	UNITS	LIMIT TYPE	EFFECTIVE PERIOD	SAMPLE TYPE	FREQUENCY
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan – Dec	Measurement, Continuous	Daily
Flow	Monitor Only	MG	Calendar Quarter Total	Jan – Dec	Measurement, Continuous	Daily
Solids, Total Suspended (TSS)	30	mg/L	Single Value	Jan – Dec	Grab	Quarterly
pH ¹	9.0	standard units	Instantaneous Maximum	Jan – Dec	Grab	Quarterly
pH ¹	6.0	standard units	Instantaneous Minimum	Jan – Dec	Grab	Quarterly
Iron, Total (as Fe)	As specified in NOC	mg/L	Single Value	Jan – Dec	Grab	Quarterly
Manganese, Total (as Mn)	As specified in NOC	mg/L	Single Value	Jan – Dec	Grab	Quarterly
Phosphorus, Total (as P)	As specified in NOC	mg/L	Single Value	Jan – Dec	Grab	Quarterly
Aluminum, Total (Al)	As specified in NOC	mg/L	Single Value	Jan – Dec	Grab	Quarterly
Turbidity	Monitor Only	mg/L	Single Value	Jan – Dec	Grab	Quarterly

¹ Analyze immediately. This means within 15 minutes or less of sample collection.

Technology Based Effluent Limits (TBELs)

The total suspended solids and pH limits were technology based effluent limits that were derived from 40 CFR §133.102. Minn. R. 7053.0215 and Minn. R. 7053.0255.

Water Quality Based Effluent Limits (WQBELs)

If a water quality based effluent limit (WQBEL) was required for a Category 2 Facility the WQBEL was assigned to the Facility in the NOC. A WQBEL was required when it was determined to be necessary to protect the use classification of the receiving water [40 CFR Part 122.44(d)].

Proposed Permit Effluent Limits

The General Permit includes two Categories of Limits and Monitoring Requirements:

1. Category 1 Facility – A Facility with a discharge that requires only Technology Based Effluent Limits, and
2. Category 2 Facility – A Facility with a discharge that requires a Water Quality Based Effluent limit for Phosphorous.

Lime softening Facilities are no longer included in the General Permit. The MPCA made the determination that the small number of lime softening Facilities in Minnesota make their

inclusion in the General Permit infeasible. Therefore, the General Permit only allows coverage for Facilities with media filters.

The limits and monitoring requirements for each category are summarized in the following tables:

Category 1 Facilities - Limits and Monitoring Requirements

The Permittee shall comply with the limits and monitoring requirements and specified below:

Surface Discharge Station: Effluent to Surface Water

PARAMETER	LIMIT	UNITS	LIMIT TYPE	EFFECTIVE PERIOD	SAMPLE TYPE	FREQUENCY
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan - Dec	Measurement, Continuous	Daily
Flow	Monitor Only	MG	Calendar Quarter Total	Jan - Dec	Measurement, Continuous	Daily
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter
pH ¹	9.00	standard units	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter
pH ¹	6.00	standard units	Calendar Quarter Minimum	Jan - Dec	Grab	1/Quarter
Oxidants, Total ¹ Residual (Chlorine), Continuous	0.2	mg/L	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter
Phosphorous, Total (as P)	Monitor Only	mg/L	Calendar Quarter Average	Jan - Dec	Grab	1/Quarter

¹ Analyze immediately. This means within 15 minutes or less of sample collection.

Category 2 Facilities - Limits and Monitoring Requirements

The Permittee shall comply with the limits and monitoring requirements and specified below:

Surface Discharge Station: Effluent to Surface Water

PARAMETER	LIMIT	UNITS	LIMIT TYPE	EFFECTIVE PERIOD	SAMPLE TYPE	FREQUENCY
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan - Dec	Measurement, Continuous	Daily
Flow	Monitor Only	MG	Calendar Quarter Total	Jan - Dec	Measurement, Continuous	Daily
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter
pH ¹	9.00	standard units	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter
pH ¹	6.00	standard units	Calendar Quarter Minimum	Jan - Dec	Grab	1/Quarter
Oxidants, Total ¹ Residual (Chlorine), Continuous	0.2	mg/L	Calendar Quarter Maximum	Jan - Dec	Grab	1/Quarter

Phosphorous, Total (as P)	Monitor Only	mg/L	Calendar Quarter Average	Jan – Dec	Grab	1/Quarter
Phosphorous, ² Total (as P)	As specified in NOC	kg/year	Calendar Year Total	Jan - Dec	Grab	1/Year

¹ Analyze immediately. This means within 15 minutes or less of sample collection.

² See Surface Discharge Chapter for Additional Information.

Technology Based Effluent Limits

Category 1 and 2 Facilities are required to meet technology based effluent limits (TBEL) for total suspended solids and pH. The TBELs are developed for achieving secondary treatment standards and/or state discharge restrictions. The limits are specified in 40 CFR §133.102. Minn. R. 7053.0215 and Minn. R. 7053.0255.

Water Quality Based Limits

A water quality based effluent limits (WQBEL) for chlorine has been developed for Category 1 and 2 Facilities. A phosphorous WQBEL has been developed for Category 2 Facilities as outlined in the Phosphorous Limit section below. The chlorine and phosphorous limits are determined necessary to protect the use classification of the receiving water.

Category 2 – Phosphorous Limit

A Category 2 Facility is required to meet a WQBEL, a wasteload allocation (WLA), or a state discharge restriction for phosphorous. A WQBEL is required when it is determined necessary to protect the use classification of the receiving water [40 CFR Part 122.44(d)]. Determination of reasonable potential and the limit development process are defined in Agency guidance (Phosphorous Decision Tree, 2010 or the most recent version). A WLA is required for Facilities that discharge to an impaired surface water, watershed, or drainage basin that has an US EPA approved Total Maximum Daily Load Study (see the Total Facility chapter of this permit). Procedures for the implementation of TMDL WLAs for phosphorus are defined in Agency guidance (Phosphorous Decision Tree, 2010 or the most recent version). A state discharge restriction for phosphorous is required as defined in Minn. R. 7053.0255.

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. In the case of WTPs, Total Phosphorous (TP) loading from these sources is often so small that there is very little, if any, reduction potential available. TP concentrations from WTPs are typically < 0.3 mg/L and/or flow is so low that annual TP loading is on the order of 10 kg/yr or less. Nonetheless, the Phosphorous Decision Tree (March 2010 or the most recent version) instructs that a Facility found to have reasonable potential when concentrations are discharged even slightly above ambient standards. Subsequently, federal

regulations [40 CFR § 122.44 (d)] require that Facilities with reasonable potential receive a WQBEL. Where the existing load from a WTP is either at such a low concentration or where the total volume of water discharged is so small that there is virtually no tenable reduction potential, mass limits are set to prevent future load increases. In some cases WQBELs were derived from draft TMDL WLAs. An example of how a WQBEL would be developed is outlined in the following paragraph.

Example:

WTP A discharges to an unnamed wetland which outlets to Clear Lake and eventually flows through a series of lakes to Peltier Lake. Over the past three years (2009-2011), WTP A discharged an average TP concentration of 0.21 mg/L and an average annual TP load of 1.25 kg/yr. Summer average TP in Peltier Lake is in exceedance of the applicable standard (60 µg/L), and therefore, the Lake is impaired for eutrophication due to excess phosphorus. The annual TP limit for WTP A is determined to be 2.15 kg/yr. This limit is derived from the TMDL WLA for Peltier Lake. This limit is a WQBEL in that it is designed to meet water quality standards in combination with other point and nonpoint controls. This limit serves as a phosphorus load cap insuring no further load increases from this source. WTP A is not required to comply with more restrictive limits given the existing low TP concentration and the limited potential to further reduce phosphorus.

Additional Requirements

Compliance Schedules

Facilities that are eligible for coverage under the General Permit do not require a compliance schedule in their permit. If a compliance schedule is required for any reason, the Facility is not eligible for coverage under the General Permit.

Variances

The General Permit does not include a variance to a Clean Water Act (CWA) requirement. Any Facility that would have a variance for a water quality standard would not be eligible for coverage under the General Permit.

Total Facility Requirements (TFR)

All NPDES/SDS permits issued in the State of Minnesota contain certain conditions that remain the same regardless of the size, location, or type of discharge. The standard conditions satisfy the requirements outlined in 40 CFR 122.41, Minn. R. 7001.0150 and Minn. R. 7001.1090. These

conditions are listed in the Total Facility Requirements chapter of the NPDES/SDS permit. These requirements cover a wide range of areas, including recordkeeping, sampling, equipment calibration, equipment maintenance, reporting, facility upsets, bypass, solids handling, changes in operation, facility inspections, and permit modification and reissuance.

Nondegredation and Anti-Backsliding

In accordance with Minnesota Pollution Control Agency rules regarding nondegredation for all waters (that are not Outstanding Resource Value Waters), nondegredation review is required for any new or expanded significant discharge (Minn. R. 7050.0185). A significant discharge is 1) a new discharge (not in existence before January 1, 1988) that is greater than 200,000 gallons per day or 2) an expanded discharge that expands by greater than 200,000 gallons per day that discharges to any non-ORVW water other than a Class 7 water or 3) a new or expanded discharge containing any toxic pollutant at a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality.

This General Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a national pollutant discharge elimination system permit has been issued by the agency 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.