



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

Permittee:

City of Rogers
22350 South Diamond Lake Road
Rogers, MN 55374

Facility Name:

Rogers Wastewater Treatment Facility
21751 - 137th Avenue
Rogers, MN 55374

Permit Number:

MN0029629

Current Permit Expiration: February 28, 2013

Public Comment Period Begins: December 28, 2012

Period Ends: January 28, 2013

Receiving Water: Unnamed Creek (Class 7, 3C, 4A, 4B, 5, 6 Water)

Proposed Action: Permit Reissuance

Permitting Contact:

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Purpose and Participation

Applicable Statutes

This fact sheet has been prepared according to 40 CFR § 124.8, 40 CFR § 124.56, and Minn R. 7001.0100, subp. 3, in regard to a draft National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit (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 that 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:

Nancy Heskett
Minnesota Pollution Control Agency
18 Wood Lake Drive Southeast
Rochester, MN 55904

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 details on all requirements placed on the Facility may be found in the Permit document.

Facility Description

Background Information

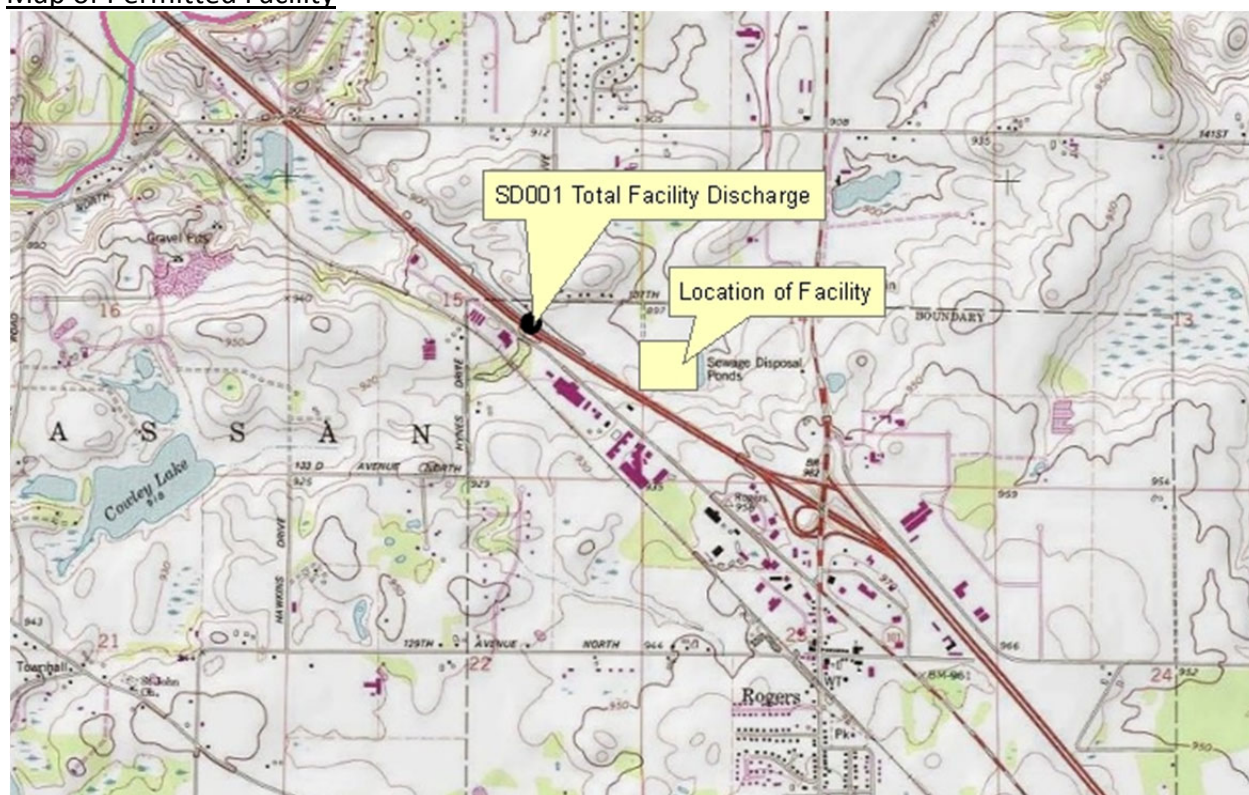
Facility Location

This Facility is an existing municipal wastewater treatment facility that treats wastewater from the community of Rogers. The Facility is located in the SW¼ of Section 14, Township 120 North, or approximately one-quarter mile west/northwest of the intersection of Highway 52 and Main Street, on South Diamond Lake Road.

Outfall Location

The continuous discharge outfall for this Facility (SD001 in the Permit) is located in the SE¼ of Section 14, Township 120 North, or approximately one-quarter mile west of the Facility.

Map of Permitted Facility

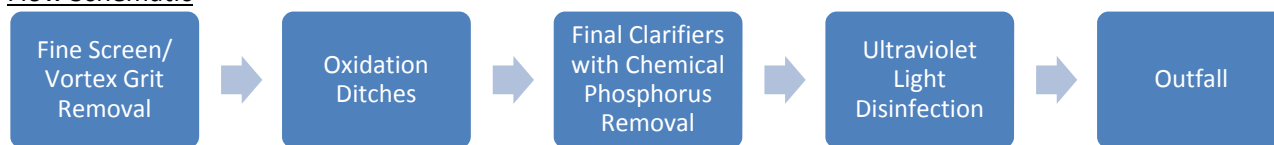


Current Information

Components and Treatment Technology

The existing treatment system consists of an incline rotary screen, vortex grit removal, two oxidation ditches, two final clarifiers, chemical phosphorus treatment, ultraviolet light disinfection, and a biosolids storage pond. The Facility has a continuous discharge (SD001) to an unnamed ditch (Class 7, 3C, 4A, 4B, 5, 6 water) and is designed to treat an average wet-weather (AWW) flow of up to 1,602,000 gallons per day (gpd) with a five-day carbonaceous biochemical oxygen (CBOD₅) demand loading of 2,595 pounds per day. There are no bypass points in the disposal system.

Flow Schematic



Changes to Facility or Operation

There were no significant changes to the Facility or its operation in the previous permit cycle. However, the Permittee plans to make upgrades to the Facility during this permit cycle. These upgrades include the addition of dissolved oxygen (DO) controls to the oxidation ditches, and replacement of motor equipment at the oxidation ditches. These upgrades will not cause an increase in design flow.

Significant Industrial Users (SIUs)

This Facility receives process wastewater from two significant industrial users: Graco and Flame Metals. The Facility has developed a pretreatment agreement with Graco, and is currently in the process of developing an agreement with Flame Metals.

Recent Compliance History

An evaluation of the compliance history of the Facility was performed for the time period of the current Permit issuance to present. There were no violations of the Limits and Monitoring Requirements of the current Permit.

Recent Monitoring History

The following table shows the average monthly reported values for the Facility from January 2011 through December 2011.

Table 1. Monthly Average Reported Values

Parameter Name	Limit (if applicable) and Units	Limit Type	Monthly Average
CBOD ₅ % Removal	85%	Minimum Calendar Month Average	98.583
CBOD ₅	91 kg/day	Calendar Month Average	9.942
CBOD ₅	151 kg/day	Maximum Calendar Week Average	15.688
CBOD ₅	15 mg/L	Calendar Month Average	3.113
CBOD ₅	25 mg/L	Maximum Calendar Week Average	4.579
Fecal Coliform	200 #100ml	Calendar Month Geometric Mean	27.207
Mercury, Total	ng/L	Calendar Quarter Average	1.22
Nitrogen, Ammonia	mg/L	Calendar Month Average	0.311
Dissolved Oxygen	mg/L	Calendar Month Minimum	4.767
pH	9.0 SU	Calendar Month Maximum	7.525
pH	6.0 SU	CalMoMin	6.983
Phosphorus, Total	6.0 kg/day	Calendar Month Average	1.232
Phosphorus, Total	1.0 mg/L	Calendar Month Average	0.402
TSS, % Removal	85%	Minimum Calendar Month Average	96.5
TSS	181 kg/day	Calendar Month Average	26.788
TSS	272 kg/day	Maximum Calendar Week Average	49.271
TSS	30 mg/L	Calendar Month Average	8.402
TSS	45 mg/L	Maximum Calendar Week Average	14.877

Receiving Water

Use Classification

This Facility discharges to an unnamed ditch that flows through an unnamed wetland before entering the Crow River. This ditch is classified as a Class 7, 3C, 4A, 4B, 5, and 6 water. Class 7 waters are limited-resource value waters that include surface waters of the state that have been subject to a use-attainability analysis and have been found to have limited value as a water resource. These waters shall be protected so as to allow secondary body contact use, to preserve the groundwater for use as a potable water supply, and to protect aesthetic qualities of the water. More information on the classification of waters can be found in Minn. R. 7050.0140.

Impairments

The receiving stream is not listed on the 303(d) list of impaired waters. However, the Crow River, which is downstream of the Facility, is listed as impaired for total suspended solids (TSS). The Draft Crow River Watershed - Main Stem & Lower North Fork - Conventional Pollutants Total Maximum Daily Load (TMDL) contains draft bacteria and TSS wasteload allocations for the Facility. The Draft North Fork Crow River Major Watershed Protection and Restoration Strategy is under development and will address the Fish Index of Biological Integrity and DO impairment listings.

The statewide Mercury TMDL was approved by the U.S. Environmental Protection Agency on March 27, 2007. Table 2 lists the current receiving water impairments.

Table 2. Receiving Water Impairments

AUID	River Name	Reach	Impairment	Approved TMDL
07010204-502	unnamed ditch	South Fork Crow River to Mississippi River	Fishes Bioassessments	Mercury
07010204-502	unnamed ditch	South Fork Crow River to Mississippi River	Dissolved Oxygen	Mercury
07010204-502	unnamed ditch	South Fork Crow River to Mississippi River	Turbidity	Mercury

Existing Permit Effluent Limits

The effluent limits and monitoring requirements in the current Permit are presented below in Table 3. This table lists both water quality based and technology based effluent limits, and state discharge restrictions.

Technology Based Effluent Limits (TBELs)

The TSS, potential of hydrogen (pH), fecal coliform, and percent removal limits are technology based limits developed for achieving secondary treatment standards. These limits are specified in 40 CFR § 133.102, Minn. R. 7050.0211, and Minn. R. 7053.0215.

Water Quality Based Effluent Limits (WQBELs)

Water quality based effluent limits in the existing Permit have been developed for CBOD₅ and phosphorus. The CBOD₅ limit is determined necessary to protect the use classification of the receiving water. The phosphorus limit is determined necessary to protect the wetland downstream of the receiving water.

State Discharge Restrictions

The limit for fecal coliform has been developed to meet discharge restrictions specified under Minn. R. 7053.0255.

Table 3: Existing Limits and Monitoring Requirements

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency
CBOD ₅	91	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	15	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	151	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	25	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅ , % Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	2 x Week
Fecal Coliform	200	#100ml	Calendar Month Geometric Mean	May-Oct	Grab	2 x Week
Mercury	Monitor Only	ng/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter
Ammonia, Total	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Month
Dissolved Oxygen	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	1 x Day
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	1 x Day
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	1 x Day
Phosphorus	6.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
Phosphorus	1.0	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	181	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	272	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	45	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS, % Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	2 x Week

Proposed Permit Effluent Limits

The effluent limits and monitoring requirements in the draft permit are presented below in Table 4. This table lists both water quality based and technology based effluent limits, and state discharge restrictions.

Technology Based Effluent Limits

Limits for CBOD₅, TSS, pH, and percent removal continue to be technology based limits, as specified by 40 CFR §133.102 and Minn. R. 7053.0215.

Water Quality Based Limits

The limits for phosphorus, total chloride, and total residual chlorine (TRC) are water quality based limits. The TRC limit is the final acute value for chlorine found in Minn. R. 7050.0222. This limit is determined to be necessary to protect the use classification of the receiving water.

State Discharge Restrictions

The limit for fecal coliform was developed to meet the requirements specified under Minn. R. 7053.0255.

Table 4. Proposed Effluent Limits and Monitoring Requirements

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency
Bicarbonates	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
CBOD ₅	91	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	15	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	152	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅	25	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
CBOD ₅ % Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	2 x Week
Calcium, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Copper, Total	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter
Cyanide, Free	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter
Fecal Coliform	200	#100ml	Calendar Month Geometric Mean	May-Oct	Grab	2 x Week
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Continuous	1 x Day
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day
Hardness	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Magnesium, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Mercury, Dissolved	Monitor Only	ng/L	Calendar Month Maximum	May, Sep	Grab	1 x Month
Mercury, Total	Monitor Only	ng/L	Calendar Month Maximum	May, Sep	Grab	1 x Month
Nitrite Plus Nitrate, Total	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month
Ammonia, Total	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Month

Table 4. (continued)

Total Kjeldahl Nitrogen	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month
Dissolved Oxygen	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	1 x Day
pH	9	SU	Calendar Month Maximum	Jan-Dec	Grab	1 x Day
pH	6	SU	Calendar Month Minimum	Jan-Dec	Grab	1 x Day
Phosphorus, Total	1	mg/L	12 Month Moving Average	Jan-Dec	24-Hour Flow Composite	1 x Week
Phosphorus, Total	1771	kg/yr	12 Month Moving Total	Jan-Dec	Calculation	1 x Week
Phosphorus, Total	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week
Phosphorus, Total	Monitor Only	kg/mo	Calendar Month Total	Jan-Dec	24-Hour Flow Composite	1 x Week
Potassium, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Selenium, Total	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter
Sodium, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
Total Dissolved Solids	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month
TSS	181	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	273	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS	45	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	2 x Week
TSS, %Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	2 x Week
TSS, grab (Mercury)	Monitor Only	mg/L	Calendar Month Maximum	May, Sep	Grab	1 x Month
Specific Conductance	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Measurement	1 x Month
Sulfate, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month

Reasonable Potential Determinations

Federal regulations require the MPCA to evaluate the discharge to determine whether the discharge has the reasonable potential to cause or contribute to a violation of water quality standards. The MPCA must use acceptable technical procedures that account for variability (coefficient of variation, or CV) when determining whether the effluent causes has the reasonable potential to cause, or contributes to, an excursion of an applicable water quality standard. Projected Effluent Quality (PEQ), derived from effluent monitoring data, is compared to Preliminary Effluent Limits (PELs), determined from mass balance inputs. Both determinations account for effluent variability. When the PEQ exceeds the PEL,

there is reasonable potential to cause or contribute to a water quality standards excursion. When reasonable potential is indicated, the Permit must contain a WQBEL for that pollutant. Even though this effluent is discharged to a Class 7 water, it is within a short distance of a wetland, and the standards for Class 2B waters listed under Minn. R. 7050.0222, subp. 4 apply, except for DO, pH, and temperature.

Information on three priority pollutant scans of the effluent was evaluated using reasonable potential procedures. All but total cyanide, copper, zinc, selenium, and arsenic were below the level of detection. Since these pollutants were at low enough levels not to be detected, reasonable potential to cause or contribute to a water quality standards excursion is not indicated.

Cyanide - Given that there is no water quality standard for total cyanide, it is recommended that the Facility monitors quarterly for free cyanide.

Zinc - Based on the three data points, zinc did not show reasonable potential to cause or contribute to an excursion of the water quality standard, and no further additional monitoring is recommended.

Copper - Based on the three data points, copper did show a reasonable potential to exceed a water quality standard. It is recommended that the Facility samples quarterly for total copper in order to collect sufficient samples to carry out a more robust statistical analysis of the data.

Arsenic - Of the three samples taken, one sample had an arsenic concentration of 0.64 micrograms per liter ($\mu\text{g/L}$), which is above the reporting level of 0.5 $\mu\text{g/L}$. The chronic water quality standard for arsenic for Class 2B waters is 53 $\mu\text{g/L}$. Since no reasonable potential exists, further additional monitoring is not recommended.

Selenium - One sample had a selenium concentration of 1.07 $\mu\text{g/L}$, which is above the reporting level of 1 $\mu\text{g/L}$. The chronic standard for selenium is 5 $\mu\text{g/L}$. It is recommended that the Facility monitors quarterly for selenium.

Mercury - The immediate receiving waters (ditch, creek, and wetland) are not listed as impaired for mercury. However, the North and South Forks of the Crow River upstream from the discharge are listed on the 303(d) list of non-attainment waters for mercury. In addition, the Lower Crow River is tributary to a reach of the Mississippi River that is also listed as a non-attainment water for mercury, as well as an Outstanding Resource Value Water (ORVW) designation. Discharges to this reach of the Crow River could impact the downstream ORVW reach of the Mississippi River (Minn. R. 7050.0180, subp. 9). The non-attainment listing is based on fish consumption advice for mercury.

Monitoring results of the effluent include 15 data points at a calculated CV of 0.42. PEQ is derived as an upper bound value from the highest value measured (2.04 nanograms per liter (ng/l)), the determined variability (CV = 0.42), and number of data points (15). Where PEQ exceeds the PEL, there is reasonable potential to cause or contribute to a water quality standards excursion. Since PEQ does not exceed the PEL in this case, reasonable potential to cause or contribute to an excursion above water quality standards is not indicated. A water quality based effluent limit is not needed. However, monitoring for total and dissolved mercury twice per year for the life of the Permit is included in the draft permit.

Acute Whole Effluent Toxicity (WET) - Minn. R. 7053.0215, subp. 1, "Minimum secondary treatment for municipal point source and other point source dischargers of sewage," specifies that the discharge shall

not be acutely toxic or exceed the final acute value, unless the effluent satisfies acute whole effluent toxicity test conditions (i.e. less than 50 percent mortality for a sensitive organism). A discharge that exceeds mortality requirements of the rule requires a permit limit.

This Facility has acute WET monitoring as a requirement because the ratio of the 7Q10 low flow of the receiving water compared to the Facility's average dry weather flow is greater than 20:1. In the previous permit cycle, all acute toxicity tests were less than 0.9999 Toxic Unit acute (TUa). As such, no reasonable potential to exceed the WET threshold value was found. Because no reasonable potential has been found, a monitoring threshold value of 0.9999 TUa has been established. The 0.9999 TUa is a threshold value, not a WET limit.

Phosphorus - Effluent from the Facility is discharged upstream of Lake Pepin, a reservoir on the Mississippi River. In 2002, Lake Pepin was placed on the federal Clean Water Act Section 303(d) list of impaired waters due to excess nutrients. A TMDL study is currently being developed, and a significant portion of the modeling analysis has been completed. Phosphorus is the primary nutrient responsible for excess algal growth in Lake Pepin. Federal law [40 CFR 122.44(d)] restricts mass increases upstream of impaired waters and states that all NPDES dischargers that have the reasonable potential to cause or contribute to downstream impaired waters are required to have a WQBEL. When determining reasonable potential, the Code of Federal Regulations also states that the MPCA shall use procedures that account for existing controls on point and nonpoint sources of pollution. Permittees are found to have reasonable potential for total phosphorus (TP) if 1) they discharge upstream of a nutrient-impaired waterbody, 2) they discharge at TP concentrations greater than the ambient target, and 3) there is no geographical barrier capable of trapping a significant mass of nutrients between the outfall and the impairment. For all reasons listed above, The Facility is found to have reasonable potential for TP upstream of Lake Pepin. Therefore, The Facility is required to have a TP WQBEL. It is recommended that the Facility receive a 1,771 kg/yr TP WQBEL, which was derived from a draft TMDL wasteload allocation (WLA), as described below. Draft WLAs in combination with other point and nonpoint reductions are sufficient to meet draft criteria in Lake Pepin designed to support the designated uses of this water resource.

A computer reservoir model for Lake Pepin was developed by MPCA modeling consultant, LimnoTech, to evaluate site-specific eutrophication criteria and the reductions necessary to achieve these criteria (LTI 2008). Using the best available science, draft criteria for Lake Pepin were determined to be 100 µg/L for TP and 28 µg/L for chlorophyll-a (Heiskary and Wasley 2010). Within the model, all major sources of TP upstream of Lake Pepin were considered, and 21 separate scenarios were developed. Scenario 17 achieved compliance with the draft criteria and predicted the following TP reductions from tributaries would be necessary: 50 percent from the Minnesota River and Cannon River, and 20 percent from the Mississippi River upstream of Lock and Dam 1 and the St. Croix River. Again, per Code of Federal Regulations, it was assumed that reductions would be from both point and nonpoint sources. During the modeling process, the MPCA staff simultaneously developed draft WLAs compatible with scenario 17 reductions for all NPDES dischargers within the contributing watershed.

A categorical approach was used to develop individual WLAs for the draft Lake Pepin TMDL. Rogers fits into a Municipal Major (MM) category, defined by municipal facilities with AWW design flows between 1 and 20 million gallons per day (mgd). Individual MM WLAs are calculated as follows:

General Formula:

$$\text{MM WLA} = (\text{AWWDF} \times 0.8 \text{ mg/L TP} \times 3.785 \text{ L/gal} \times 365 \text{ days/yr})$$

City of Rogers WWTP WLA:

$$1,771 \text{ kg/yr TP} = (1.602 \text{ mgd} \times 0.8 \text{ mg/L} \times 3.785 \text{ L/gal} \times 365 \text{ days/yr})$$

Summary

It is recommended that the Facility continue to receive the existing 1.0 mg/L TP limit. In addition, it was determined that the Facility has reasonable potential to cause or contribute to the excess nutrient impairment in Lake Pepin and is therefore required to have a WQBEL. The recommended TP effluent limit (1,771 kilograms per year (kg/yr)) in the draft permit is a WQBEL derived from the draft WLA which, in turn, is derived from the water quality standard that the receiving water must meet to support designated uses. Finally, more restrictive TP limits may be necessary following the completion of the Lake Pepin TMDL study and the adoption of numeric river nutrient criteria during the next triennial rulemaking session.

Additional Requirements

Mercury Minimization Plan

The Permittee is required to submit a Mercury Minimization Plan (MMP). The MMP requirements include educating users with regard to proper mercury disposal in order to prevent its introduction into the waste stream.

Salty Discharges

In recent years, the MPCA staff became aware of issues associated with “salty discharges” from industrial discharges, as well as some discharges from water treatment plants. As a result of increased concern regarding salty discharges, the MPCA staff determined that there is a need to obtain more information from dischargers. All industrial and municipal facilities with continuous, periodic/seasonal, or intermittent waste flows, where the receiving water stream flow to effluent design flow dilution ratio under low flow conditions is less than 5:1, will be required to monitor effluent for the parameters of chloride, Ca and Mg hardness as CaCO₃, specific conductance, total dissolved salts (AKA solids), sulfates as SO₄, bicarbonates, sodium, calcium, magnesium, potassium, and total salinity at 25 degrees Celsius. These parameters have been added to the draft permit and are required to be sampled on a monthly basis. If monitoring results indicate a reasonable potential for any of the parameters, the Permittee will be required to submit an application for a permit modification, and a compliance schedule (if appropriate) will be added to the Permit to ensure progress toward meeting the standards. Permittees may request a reduction in monitoring after two years of data if the monitoring does not indicate a reasonable potential to exceed a limit.

Total Facility Requirements

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.

Nondegradation and Anti-Backsliding

In accordance with MPCA rules regarding nondegradation for all waters (that are not ORVW), a nondegradation 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 gpd, 2) an expanded discharge that expands by greater than 200,000 gpd 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.

The January 1, 1988, calculated design AWW flow for this Facility is 0.150 mgd. In accordance with MPCA rules regarding nondegradation for all waters, the design AWW flow of the Facility as of January 1, 1988, and associated mass loading are the baseline design flow and mass loading. This baseline flow and mass loading will be used to determine whether nondegradation review is required for any change in the discharge. Any change that results in an increase in design flow greater than 0.2 mgd and an increased loading of one or more pollutants, or any change in a discharge containing a toxic pollutant that results in 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, is subject to nondegradation review, in accordance with Minn. R. 7050.0185.

This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding. Any point source discharger of sewage, industrial, or other wastes for which an 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.