

Initial Results of a Review of the
National Pollutant Discharge Elimination System Program
in the State of Minnesota

Region 5
United States Environmental Protection Agency
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May 2013

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I. Executive Summary

On October 5, 2009, the Minnesota Center for Environmental Advocacy (MCEA or petitioner) filed a petition with the U.S. Environmental Protection Agency (EPA) for correction or withdrawal of Minnesota's approved National Pollutant Discharge Elimination System (NPDES) program. MCEA provided a petition update letter on May 4, 2011. MCEA alleges the following inadequacies in the Minnesota program:

- failure to develop an adequate regulatory program for establishing water quality-based effluent limits (WQBELs) in NPDES permits,
- authorization of a pollutant offset and trading program contrary to the requirements of the Clean Water Act (CWA),
- establishment of schedules of compliance that are inconsistent with the CWA and EPA's regulations, and
- failure to establish and enforce an effective NPDES permitting program for over 55,000 septic systems that are estimated to be discharging directly to Minnesota waters.

EPA developed a protocol to review the petitioner's allegations.¹ Pursuant to this protocol, the review consisted of meetings with the Minnesota Pollution Control Agency (MPCA), separate meetings and discussions with MCEA, and review of MPCA policy documents, reports and NPDES files. EPA conducted these activities from October 2009 to April 2012.

MCEA states in its petition that it believes the MPCA has failed to develop an NPDES program that satisfies the minimum federal statutory and regulatory requirements, and that EPA should instruct Minnesota to take corrective action or, if necessary, initiate withdrawal of Minnesota's NPDES program approval. On November 18, 2009, EPA met with the petitioners. At that meeting the petitioners stated that one purpose for filing the petition was for MPCA to revise its process for developing and issuing permits to comply with EPA's CWA implementing regulations. While the petition and EPA's review focus on Minnesota's alleged inadequacies as set forth above, any action to withdraw approval of the State's program would affect the entire program.

Based on the initial findings from the review, Minnesota needs to modify its practices regarding issuance of permits that authorize the discharge of phosphorus² and improve its compliance evaluation program for discharges from septic systems. In particular, Minnesota must:

1. Establish numeric WQBELs for phosphorus that are sufficient to attain and maintain applicable water quality standards where it determines that phosphorus discharges to streams and rivers will cause, have a reasonable potential to cause, or contribute to an excursion beyond the applicable standards.

¹ Where this report references "results" or "our review", those terms refer to the initial results of the informal investigation conducted under 40 C.F.R. § 123.64(b)(1).

² The MCEA petition does not define nutrient pollutants. We infer from the petition document that MCEA is concerned about phosphorus, not nitrogen.

2. Have the capacity to inspect known straight pipe point sources that discharge to waters of the United States. Commitments for MPCA inspections can be negotiated between EPA and the State within the framework of the Joint Minnesota-EPA Region 5 CWA Enforcement & Permitting Work Plan, taking resources, NPDES program priorities, and inspections performed by local governmental units into account.

II. Introduction

This report describes the initial results of an EPA review of parts of the NPDES program that MPCA administers under section 402 of the CWA. EPA Region 5 conducted the review in response to a petition filed by the MCEA on October 5, 2009 (Appendix A). MCEA provided a petition update letter on May 4, 2011 (Appendix B). In its petition, MCEA asked EPA to correct or withdraw approval of Minnesota's NPDES program. EPA approved the State of Minnesota to administer the NPDES program in 1974. EPA approved subsequent modification to the program for pretreatment, federal facilities and general permits.

The purpose of the review was to conduct an informal investigation to determine whether cause exists to commence withdrawal proceedings, as provided in 40 C.F.R. § 123.64(b)(1). This review provided the means to develop the record on which to deny the petition, identify actions that MPCA must take to improve its program (and defer a final response to the petition pending State action), or recommend that the EPA Administrator review MPCA's NPDES program and consider commencing proceedings to withdraw the program.

Section 301(a) of the Federal Water Pollution Control Act (also called the Clean Water Act) prohibits the discharge of pollutants from point sources into waters of the United States unless the discharge is in compliance with specified requirements of the Act, including section 402. Section 402 authorizes the Administrator, or state with an approved program, to issue NPDES permits that impose effluent limitations and other terms and conditions on the permitted discharges. Section 502 of the Act defines the term "discharge" to mean, among other things, any addition of any pollutant or combination of pollutants from a point source to waters of the United States. It defines "point source" to include any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which pollutants are or may be discharged. It defines the term "pollutant" to include, among other materials, sewage and industrial and municipal wastes.

The Clean Water Act, § 402(c)(2), requires states with approved NPDES programs, including Minnesota, to administer their programs in accordance with CWA § 402 and the regulations EPA established under CWA § 304(i)(2) at all times. These regulations appear at 40 C.F.R. Part 123. They require approved states to prohibit the discharge of pollutants from point sources unless the discharge is in compliance with an NPDES permit. They also establish requirements regarding: (1) the submission of NPDES permit applications to, and processing of NPDES permit applications and development of permits by, approved states (see 40 C.F.R. §123.25), (2) state programs for evaluating compliance by point sources (see 40 C.F.R. §123.26), and (3) state enforcement authority (see 40 C.F.R. §123.27).

The Clean Water Act, § 402(c)(3), requires the EPA Administrator to withdraw approval of a state NPDES program if, after public hearing, it is determined that the state is not administering its program in accordance with applicable requirements, and the state fails to take corrective action. Criteria for withdrawal appear at 40 C.F.R. § 123.63. They include, but are not limited to, the following:

- (1) Where the state's legal authority no longer meets the requirements of 40 C.F.R. Part 123, including:
 - (i) Failure of the state to promulgate or enact new authorities when necessary; or
 - (ii) Action by a state legislature or court striking down or limiting state authorities.
- (2) Where the operation of the state program fails to comply with the requirements of 40 C.F.R. Part 123, including:
 - (i) Failure to exercise control over activities required to be regulated under Part 123, including failure to issue permits;
 - (ii) Repeated issuance of permits which do not conform to the requirements of Part 123; or
 - (iii) Failure to comply with the public participation requirements of Part 123.
- (3) Where the state's enforcement program fails to comply with the requirements of 40 C.F.R. Part 123, including:
 - (i) Failure to act on violations of permits or other program requirements;
 - (ii) Failure to seek adequate enforcement penalties or to collect administrative fines when imposed; or
 - (iii) Failure to inspect and monitor activities subject to regulation.
- (4) Where the state program fails to comply with the terms of the Memorandum of Agreement required under 40 C.F.R. §123.24.

While the petition and EPA's review focused on implementation of parts of MPCA's NPDES program, any action to withdraw approval of the Minnesota program would affect the entire program. Currently, there are 99 major and 610 minor NPDES permits, and 388 authorizations under non-storm water general NPDES permits, issued by MPCA.

III. Petitioner's Allegations

Following is an overview of the allegations provided in MCEA's October 5, 2009 petition and May 4, 2011 update:

- MPCA has not developed an adequate regulatory program for establishing WQBELs for phosphorus in NPDES permits.
- MPCA's pollutant offset and trading policy and practice allow for NPDES permits that violate EPA regulations.
- MPCA's use of schedules of compliance is inconsistent with EPA's regulations.

- MPCA has failed to establish and enforce an effective NPDES permitting program for over 55,000 septic systems that are estimated to be discharging directly to Minnesota waters in violation of the CWA.

IV. Methods

EPA Region 5 developed a protocol (Appendix C) to guide review of the allegations set forth in the petition. The protocol consisted of:

Permit Review: EPA reviewed files for 21 NPDES permits. EPA selected files for permits that MPCA issued in federal fiscal years (FFY) 2009 and 2010 (i.e., October 1, 2008 through September 30, 2010). The permits represented major facilities of various sizes and locations in the State of Minnesota. EPA selected facilities based on the likelihood of discharging phosphorus, an approach which generally excluded industrial point sources. EPA reviewed permit applications, fact sheets and permits. EPA reviewed these documents against the requirements in 40 C.F.R. §§ 122.44(d) and 122.47 (see Appendix D). Under 40 C.F.R. § 123.25, these regulations are applicable to states with NPDES approved programs. In March 2012, EPA received 13 MPCA office memoranda which describe how phosphorus effluent limits were derived using a water quality-based process. EPA reviewed these memoranda as well.

Document Review:

- Minnesota Pollution Control Agency, “MPCA pre-Total Maximum Daily Load Water Quality Trading Policy for Phosphorus,” 2007.
- Minnesota Pollution Control Agency, “Draft MPCA Water Quality Trading Rule 7054,” and “Statement of Need and Reasonableness,” 2011.
- Minnesota Pollution Control Agency letter to EPA Region 5, Responding to EPA proposed Petition Review Protocol, August 11, 2010.
- Minnesota Pollution Control Agency, “MPCA Phosphorus Decision Tree,” March 2011.
- Minnesota Pollution Control Agency letter to EPA Region 5, Cover Letter for MPCA Phosphorus Decision Tree, March 2011.
- Various Minnesota Pollution Control Agency office memoranda for phosphorus WQBELs, 2007 to 2012.
- Response to Congress on Use of Decentralized Wastewater Treatment Systems, EPA, Office of Water, Office of Wastewater Management, April 1997, (EPA 832-R-97-001b)
- Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems, EPA, March 2003 (EPA 832-B-03-001).
- MPCA’s 10-year plan to Upgrade and Maintain Minnesota’s Onsite (ISTS) Treatment Systems, February 2004 (“ISTS Strategy”), (Document No. LRwq-wwists-1sy04).

- MPCA’s Small Community Wastewater Needs in Minnesota, Final Report, June 2008.
- MPCA’s Small Community Wastewater Needs in Minnesota, A Strategy for Progress - June 2008 (Document No. wq-wwtp1-07).
- MPCA’s Straight Pipe System Law Guidance for Local Governments, June 2008, (Document No. wq-wwists2-38).
- MPCA’s Small Community Wastewater Improvements in Minnesota 2009 and 2010, Annual Report.
- MPCA Subsurface Treatment System Annual Reports: 2009, 2010, 2011.
- EPA Forum on Surface Discharging Wastewater Systems (Power Point Presentation), MPCA, Bill Priebe: June 10-11, 2009.

- Letter from Tinka Hyde (EPA) to Lisa Thorvig (MPCA) Regarding Minnesota's Functional Implementation of Decentralized Waste Treatment Guidelines, February 25, 2009.
- MPCA Letter from Lisa Thorvig to Tinka Hyde, August 11, 2010.
- *MPCA's Recommendations and Planning for Statewide Inventories, Inspections of Subsurface Sewage Treatment Systems, Report to Minnesota Legislature*, January 2011
- *MPCA's Website for SSTS-Local Government Units* (Document No. lrwq-wwists-1sy11).
- Minnesota Statutes §§ 115.55 and 115.56.
- Minnesota Administrative Rules Chapters 7001, 7050, 7080-7083.
- Estimates of ISPHT from 1/19/2012 email from Gretchen Sabel (MPCA) to Jenny Davison (EPA) Titled RE: Data on the impact of Clean Water Funds on SSTS Upgrades.
- SSTS Ad Hoc Committee Agenda Power Point Presentation, MPCA, October 17, 2011.
- Various emails from March 2010 through February 2012 between MPCA and EPA.

Meetings:

- November 18, 2009 - MCEA.
- October 8, 2009; November 9, 2009; December 10, and 22, 2009; November 1, 2010; September 28, 2011; and February 13, 2012 teleconference calls with MPCA.

V. Results

The results of EPA Region 5's review consist of:

- A summary of the MPCA NPDES program for determining the need for and setting effluent limits for phosphorus, establishing water quality trades, granting schedules of compliance, and identifying, inspecting, and if necessary enforcing against point source discharges from sewage disposal systems as it is contemplated in State law, administrative rules, and written policies and procedures.
- The manner in which the MPCA determines the need for and sets effluent limits for phosphorus, incorporates water quality trades into NPDES permits, grants schedules of compliance, and implements a program for point source discharges from sewage disposal systems. The discussion addresses whether MPCA meets the minimum requirements for state programs set forth in 40 C.F.R. §§ 123.25 and 123.26.

A. MPCA NPDES Permit Program

Laws, rules, policies, and procedures: MPCA's general authority to enforce environmental laws and administer a permit program is set forth in the Minnesota Environmental Protection Act, Laws 1973, Chapter 412, (the Act), at Section 116D.01. The State's Water Pollution Control Act is contained in Minn. Stat. Chapter 115. The State of Minnesota implements its regulatory program for point source discharges by way of the NPDES and water quality standards programs, the former of which establishes NPDES permitting requirements for various classes of sources necessary to adopt substantive effluent limits under Chapter 7001 (Permits and Certifications) and Chapter 7050 (Water Quality Standards), respectively, of the Minnesota Administrative Rules. *See* Minn. Adm. R. §§ 7001 and 7050.

In particular, the Environmental Protection Act authorizes the MPCA Board “to promote efforts that will prevent or eliminate damage to the [water] environment...” This includes regulations, requirements, water quality standards, effluent standards, standards for the issuance of permits, and inspection and monitoring requirements. Minnesota Environmental Protection Act, Chapter 116D. The Act directs the MPCA Board to adopt requirements, standards, and procedures which will enable the State to participate in and implement the NPDES program. The Water Pollution Control Act provides that “the agency shall have the authority to perform any and all acts minimally necessary including, but not limited to, the establishment of ... permit conditions, consistent with and, therefore, not less stringent than, the provisions of the Federal Water Pollution Control Act, as amended...” Minn. Stat. § 115.03, Subd. 5.

Regulations adopted by the MPCA Board prohibit the discharge of pollutants to waters of the State without an NPDES permit, and require compliance by permittees with effluent limitations and standards as established in permits. See Minn. Adm. R. §§ 7001 and 7050. Minn. Adm. R. §§ 7001.0040 and 7001.0050 establish permit application requirements for new and existing dischargers. Existing dischargers are required to apply for a permit at least 180 days before the expiration date of the existing permit or the planned date of the commencement of facility construction or of the activity. New dischargers are required to apply for a permit no later than 180 days in advance of the date on which the facility is to commence operation. Minn. Adm. R. § 7001.0040, Subparts 1 and 3.

Minn. Adm. R. § 7001.0150, Subp. 2, provides that “each draft and final permit must contain conditions necessary for the permittee to achieve compliance with applicable Minnesota or federal statutes or rules, including each of the applicable requirements in parts 7045.0450 to 7045.0649 and 7045.1390, and any conditions that the agency determines to be necessary to protect human health and the environment.” Minn. Adm. R. § 7053.0205, Subp. 6, provides that “the requirements of [chapter 7053] ... are in addition to any requirements imposed on a discharge by the Clean Water Act, United States Code, title 33, sections 1251 et seq., and its implementing regulations. In the case of a conflict between the requirements of [chapter 7053], chapters 7050 and 7052, and the requirements of the Clean Water Act or its implementing regulations, the more stringent requirement controls.” Minn. Adm. R. § 7001.1080, Subp. 2, provides, in part, that “in establishing effluent limitations, standards, or prohibitions the commissioner shall consider ... (3) the applicable water quality standards in parts 7050.0100 to 7050.0220, 7050.0300 to 7050.0380, 7055.0010 to 7055.0120, and 7055.0250 to 7055.0310.” Standards that are applicable to nutrients include those in Minn. Adm. R. 7050.0210, Subp. 2 (pertaining to nuisances), 7050.0220 (pertaining to eutrophication in lakes and reservoirs), and 7050.0222 (pertaining to phosphorus and dissolved oxygen).

Section 301(b)(1)(C) of the Clean Water Act requires inclusion in an NPDES permit of effluent limits necessary to meet water quality standards or required to implement any applicable water quality standard. 40 C.F.R. § 122.4(a) (made applicable to states by 40 C.F.R. § 123.25(a)(1)) provides, in part, that no permit may be issued when the conditions do not provide for compliance with applicable requirements of the Clean Water Act, or regulations promulgated under the Act.

The regulation at 40 C.F.R. § 122.4(i) prohibits issuance of a permit to a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. EPA did not find an explicit Minnesota corollary to 40 C.F.R. § 122.4(i)³. Under the federal rule, the owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of CWA, and for which the state or interstate agency has performed a pollutant load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

1. There are sufficient remaining pollutant load allocations to allow for the discharge; and
2. The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.

MPCA implemented this regulation by issuing two permits for Annandale and Maple Lakes, cities that discharge in the Lake Pepin watershed. Lake Pepin is impaired by nutrient pollution. The permits added approximately 2,200 pounds of phosphorus load to the lake annually. A total maximum daily load (TMDL) for Lake Pepin has not yet been proposed. MPCA sought to offset the additional load by reductions at another facility. In 2007, the Minnesota Supreme Court considered 40 C.F.R § 122.4(i) with respect to the Annandale-Maple Lakes wastewater discharges on Lake Pepin. The Court decided that MPCA can interpret and apply the Clean Water Act regulation that governs point source discharges to waters which do not meet water quality standards. The Court ruled that the federal regulation is “unclear and susceptible to more than one reasonable interpretation,” and MPCA’s interpretation is reasonable and deference should be given to MPCA.

The federal regulation at 40 C.F.R. § 122.44 (made applicable to states by 40 C.F.R. § 123.25(a)(15)) addresses a variety of topics, such as technology-based effluent limitations and standards, and implementing water quality standards and state requirements, including water quality criteria expressed in either a numeric or narrative fashion. The regulation at 40 C.F.R. § 122.44(d)(1) requires that permits include any requirements necessary to achieve water quality standards established under section 303 of the CWA, including state narrative criteria. Section 122.44(d)(1)(i) requires that limitations must control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard.” Section 122.44(d)(1)(ii) further provides that when conducting such a reasonable potential analysis, the permitting authority “shall use procedures” that account for certain specified factors in the regulation. Section 122.44(d)(1)(vii) provides that limitations must be derived from and comply with water quality standards and must be consistent with the assumptions and requirements of any approved TMDL.

In 2007, the MCEA sued the State over the reissuance of the Alexandria Lakes Area Sanitary District (ALASD) permit, arguing the 0.3 milligram per liter (mg/L) effluent limit for phosphorus was not water-quality based. The facility discharges to a lake that is impaired by algae, and that receives the majority of the phosphorus load from ALASD. The Minnesota

³ Minn. R. § 7001.1040 provides that a permit cannot issue if the proposed permittee will not comply with all applicable state and federal water pollution control statutes and rules.

Supreme Court reviewed the ALASD permit against the requirements in 40 C.F.R. § 122.44. The Court ruled in 2008 that MPCA could wait to set a WQBEL until after the State completed a TMDL.

In response to EPA's informal request, MPCA developed a phosphorus "decision tree" to implement the State's phosphorus criteria for lakes and reservoirs in the NPDES program. MPCA estimates that approximately 80% of facilities in the State of Minnesota discharge directly to or upstream from a lake or reservoir. MPCA began using the decision tree in March 2010.

EPA reviewed the MPCA phosphorus decision tree document. It provides MPCA the ability to conduct reasonable potential analyses and protect lakes and reservoirs from phosphorus. The decision tree does not provide for protecting a stream or river before it enters a lake or reservoir. New sources are not specifically covered in the decision tree but new dischargers are covered. In the decision tree, the presumptive cause of all nutrient impairments is phosphorus. Other causes (i.e., nitrogen) are not addressed. The State proposes for pre-TMDL waters to use waste load allocations calculated for similar areas. According to the decision tree, lakes and reservoirs are subject to reasonable potential determinations and limits. Expanded and new dischargers to lakes and impoundments are specifically identified. The decision tree addresses both waters that are better than water quality standards and impaired waters. Where there are approved TMDLs, the wasteload allocations (WLAs) are used to derive WQBELs. The specific methodology for performing reasonable potential analyses or deriving effluent limits is missing. EPA understands that for other substances MPCA applies the EPA Technical Support Document for Water Quality-Based Toxics Control procedures, which address effluent variability, background, and dilution.

The federal regulation at 40 C.F.R. § 122.45 addresses a variety of topics, such as the duration over which effluent limits are to be expressed, pollutants in intake water, internal waste streams, and mass limitations. EPA did not find an explicit Minnesota corollary to 40 C.F.R. § 122.45.

The federal regulation at 40 C.F.R. § 122.47 pertains to compliance schedules in permits. Minn. Adm. R. 7001.0150, Subp. 2(A) provides that schedules must require compliance in the shortest reasonable period of time or by a specified deadline if required by Minnesota or federal statute or rule. It provides that compliance schedules must include interim milestones, if appropriate, and reports of progress toward compliance.

The Memorandum of Agreement (MOA) between MPCA and EPA regarding MPCA's administration of the NPDES program commits MPCA to the processing and issuance of all required NPDES permits, and to provide ongoing, timely and adequate review of permits. The MOA also commits MPCA to comprehensively evaluate and assess compliance with effluent limitations and other permit conditions, and to maintain an enforcement program which takes timely and appropriate enforcement action in every case where in the State's opinion such action is warranted⁴.

⁴ As discussed in section V.B.5, annual commitments are further detailed in a two-year environmental Performance Partnership Agreement, or EnPPA. The EnPPA sets forth the joint environmental priorities and mutual interests, the

1. Permitting Practice

- ***Allegation: The Minnesota Pollution Control Agency has not developed an adequate regulatory program for establishing water quality-based effluent limits for phosphorus in NPDES permits.***

Program Requirements: The Minnesota statutory and rule provisions that are applicable to effluent limits for phosphorus are described in section V. A., above. As noted in that section, section 301(b)(1)(C) of the CWA requires inclusion in an NPDES permit of effluent limits necessary to meet water quality standards or required to implement any applicable water quality standard. The regulation at 40 C.F.R. § 122.4(a) provides, in part, that no permit may be issued when the conditions do not provide for compliance with applicable requirements of the Clean Water Act, or regulations promulgated under the Act. 40 C.F.R. § 122.44(d)(1) requires that permits include any requirements necessary to achieve water quality standards established under section 303 of the CWA, including State narrative criteria. Section 122.44(d)(1)(i) requires that limitations must control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.” Section 122.44(d)(1)(ii) further provides that when conducting such a reasonable potential analysis, the permitting authority “shall use procedures” that account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and, where appropriate, the dilution of the effluent in the receiving water. Accordingly, in determining whether or not a discharge has the reasonable potential to exceed a state water quality criterion, MPCA needs to use procedures that account for the factors specified in the regulation. Criteria that are applicable to phosphorus discharges include those in Minn. Adm. R. 7050.0210, Subp. 2 (pertaining to nuisances), 7050.0220 (pertaining to eutrophication in lakes and reservoirs)⁵, and 7050.0222 (pertaining to phosphorus and dissolved oxygen). The dissolved oxygen criteria are applicable due to algal respiration and decomposition. For narrative criteria including, but not limited to, the criterion at Minn. Adm. R. 7050.0210, Subp. 2, 40 C.F.R. § 122.44(d)(1)(vi) provides three methods for setting numeric effluent limitations in permits:

1. Calculate a criterion based on a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion;
2. Set the limit based on EPA’s CWA section 304(a) recommended criteria supplemented, where necessary, by other relevant information; or
3. Set the limit on an indicator parameter.

Practice: EPA reviewed files for 21 permits that Minnesota issued in federal fiscal years 2009 and 2010 (i.e., October 1, 2008 through September 30, 2010). The files generally contain permit applications, fact sheets, and NPDES permits. Consistent with the narrative water quality criterion set forth in Minn. Adm. R. 7050.0210, Subp. 2, all permits had a condition providing that at all times the discharge specified within the permit shall not “cause any nuisance

desirable environmental outcomes, the performance expectations for the participating programs, and the oversight arrangements between the parties.

⁵ EPA approved Minnesota’s lake and reservoir criteria in May 2008. [Minnesota anticipates adopting phosphorus criteria for streams and rivers in 2014.](#)

conditions, such as the presence of significant amounts of floating solids, scum, visible oil film, excessive suspended solids, material discoloration, obnoxious odors, gas ebullition, deleterious sludge deposits, undesirable slimes or fungus growths, aquatic habitat degradation, excessive growths of aquatic plants, or other offensive or harmful effects.” The permits did not contain numeric WQBELs for phosphorus based on the Minn. Adm. R. 7050.0210, Subp. 2, criterion. 40 C.F.R. § 122.44(d)(1)(vi) provides that, where a state has not established a numeric water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has a reasonable potential to cause, or contributes to an excursion above a narrative criterion, the state must establish effluent limits using one of three methods identified in that regulation.

EPA determined that the Minn. Adm. R. 7050.0220 and 7050.0222 criteria for phosphorus in lakes and reservoirs would have applied to 10 of the 21 permits. The remaining 11 permits discharge to either a TMDL waterbody (7), Lake Superior (1), or a flowing river without an impoundment (3). EPA found that 6 out of 7 TMDL discharges have effluent limits that are consistent with the waste load allocation in the TMDL. The review further indicated that in 9 of the 10, MPCA did not determine whether the discharge will cause, have a reasonable potential to cause, or contribute to excursions beyond the Minnesota criteria for lakes and reservoirs. (*See* Table 1.)

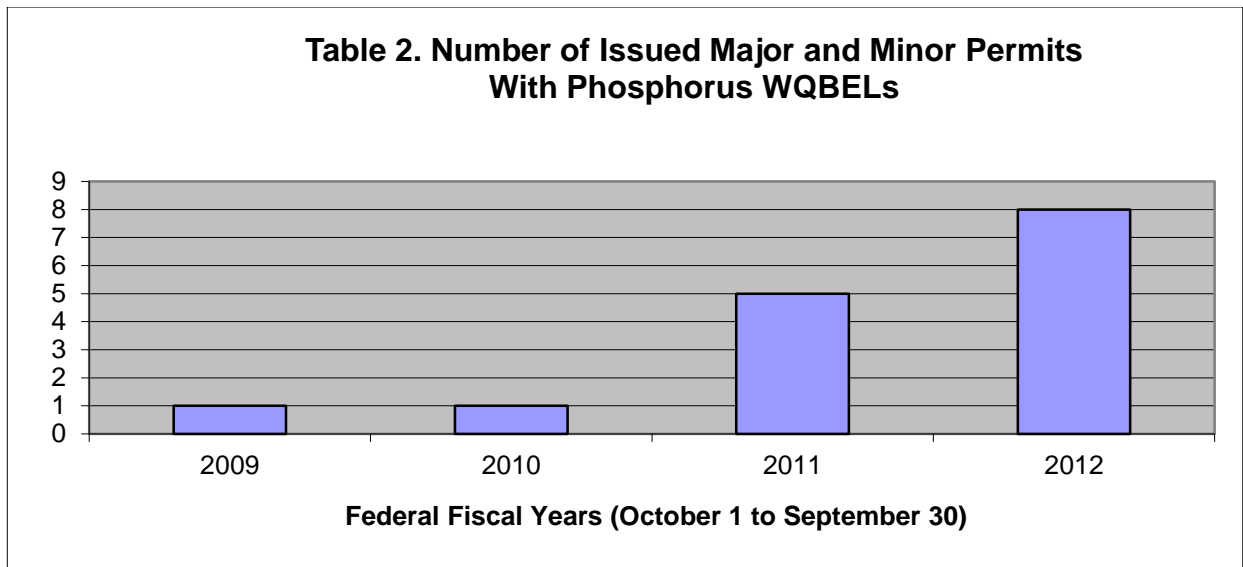
NPDES #	FACILITY NAME	Reasonable potential analysis performed	Reasonable potential found	Algal Nuisance or Dissolved Oxygen	P-Limit (mg/l)
MN0020508	ELY	No	No	na	0.3
MN0022462	BEMIDJI	No	No	na	0.3
MN0024538	PRINCETON	Yes	Yes	Algal N.	0.3
MN0029998	MET. COUN. ST. CROIX	No	No	na	0.8
MN0020222	SAINT MICHAEL	No	No	na	1
MN0022250	TWO HARBORS	No	No	na	1
MN0023094	COLD SPRING	No	No	na	1
MN0024040	MADELIA	TMDL WLA	Yes	D.O.	1
MN0024619	ROCHESTER	TMDL WLA	Yes	Algal N.	1
MN0029882	METR. COUN. BLUE LAKE	TMDL WLA	Yes	D.O.	1
MN0030066	NEW ULM	Yes	Yes	na	1
MN0030112	FAIRMONT	Yes	Yes	na	1
MN0030147	WINONA	No	No	na	1
MN0030163	VIRGINIA	No	No	na	1
MN0055808	CHISAGO LAKES	No	No	na	1
MN0055361	PLAINVIEW	No	No	na	1
MN0056219	ELKO	No	No	na	1
MN0020133	MONTEVIDEO	Yes	Yes	na	Na
MN0022683	AUSTIN	No	No	na	Na
MN0024759	SAINT JAMES	Yes	Yes	na	1

MN0021431	THIEF RIVER FALLS	No	No	na	Na
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The review found that in 4 permits, MPCA set phosphorus effluent limits below the 1 milligram per liter (mg/L) effluent standard provided by Minn. Adm. R. 7053.0255, Subp. 3a. However, the fact sheet for the City of Princeton is the only reference reviewed that documents use of the procedures that 40 C.F.R. § 122.44(d) requires to determine whether a WQBEL is needed and, if so, develop such a limit. MPCA used the BATHTUB model for this purpose. The permits for the Ely, Bemidji, and Met Council St. Croix facilities include numeric effluent limits below 1 mg/L for phosphorus, but the fact sheets do not describe how MPCA developed these effluent limits.

Based on the review of NPDES permit records during FFY 2009 and FFY 2010, EPA concludes that the allegation that the MPCA has not developed an adequate regulatory program for establishing phosphorus WQBELs in NPDES permits has merit for permit issuances during this time period.

In March 2012, MPCA provided EPA with 13 internal office memos that describe MPCA findings with respect to phosphorus effluent limits for calendar years 2007 and 2009 through 2011. The memos describe whether MPCA derived an effluent limit either through a model or through a TMDL process. Note that one of the facilities, City of Princeton (MN00224538), was included during EPA’s NPDES file review for this allegation. The other 12 were not. The memos show that in 2009, MPCA began conducting reasonable potential analyses using numeric lake and reservoir criteria in the development of NPDES permits with a phosphorus discharge. In one example, the City of Marshall (MN0022179), the memo proposes a mass-based (i.e. loading) phosphorus effluent limit, which will produce an 85% reduction compared to the prior NPDES permit. Based on the review of MPCA memos, EPA finds that MPCA is setting WQBELs for phosphorus when needed to implement the Minn. Adm. R. 7050.0220 and 7050.0222 criteria for phosphorus in lakes and reservoirs (*see* Table 2).



2. *Pre-TMDL Water Quality Trading Policy for Phosphorus*

- ***Allegation: MPCA's pollutant offset and trading policy allows for NPDES permits that violate EPA regulations.***

Program Requirements: Water quality trading is an innovative approach to efficiently achieve water quality goals. It is rooted in the EPA *Water Quality Trading Policy Statement* (2003). The goal of the policy is to make progress towards achieving a watershed's water quality standards by reducing pollutant loads. The method accomplishing this is by providing a voluntary market-based structure for stakeholders to exchange pollutant loads. A benefit to participating in a water quality trade is that a point source may achieve compliance with its WQBELs at a lower cost by purchasing pollutant load reductions from another source (point or nonpoint) in the watershed. A water quality trade must be consistent with federal NPDES program regulations when the trade involves a point source. In addition, EPA policy does not support the trading of offsets to comply with an existing technology-based effluent limit, except where specifically authorized by effluent guidelines. In most cases, trading takes place at a watershed level under a pollutant cap (the total pollutant load that can be assimilated by a waterbody without exceeding water quality standards) developed through the total maximum daily load (TMDL) process or a similar type of water quality analysis that produces information on pollutant loadings and resulting water quality conditions.

EPA has developed guidance for implementation of trading in the context of NPDES permits. See, *The Water Quality Trading Toolkit for Permit Writers* (2007), EPA-833-R-07-004, and <http://water.epa.gov/type/watersheds/trading/WQTTToolkit.cfm>. The *Toolkit* provides NPDES permitting authorities with the tools they need to facilitate trading and authorize and incorporate trading in NPDES permits. It is based on the 2003 *Policy*. Generally, EPA recommends that trade programs include several elements to ensure credibility and achievement of water quality standards. These elements include:

- Applying CWA regulations and established state law provisions to provide legal authority for administration of water quality trade programs.
- Clearly defining a common unit of trade.
- Generation of credits before or during the same time period they are to be used to comply with permit limits.
- Methods for managing uncertainty such as using trading ratios, modeling, and best management practice efficacy estimates.
- Ambient water quality monitoring, in addition to effluent monitoring requirements in NPDES permits. Samples should be collected at strategic locations to ensure progress in meeting water quality standards.
- Compliance and enforcement mechanisms, including a combination of record-keeping, certifications, inspections, and reporting.
- Adequate public notice through, for example, the TMDL and permit process and a public website.
- Evaluation in order to modify and make improvements to the program.

The petition cites to a water quality trade proposed in FFY 2009 and to an MPCA water quality trading strategy document. The proposed trade involved two municipal facilities (one a buyer and the other a seller), and a nonpoint-source seller. The buyer, the City of Princeton, was purchasing phosphorus pollution credits from the seller, the Metropolitan Council Metro facility. The City of Princeton intended to purchase pollution offsets from nonpoint source lands that would be paid for by the trade with the Metropolitan Council Metro facility.

The City of Princeton discharges into the Rum River, a high quality tributary to the Mississippi River. The Metro facility discharges upstream from the Lake Pepin reservoir, a nutrient-impaired waterbody that is on the Minnesota CWA § 303(d) list. As of this writing, MPCA has not completed the TMDL for Lake Pepin.

EPA reviewed the MPCA *Pre-TMDL Phosphorus Trading Permitting Strategy* (2008) and the City of Princeton and Metropolitan Council's Metro facility permits. The Strategy contains a framework for issuing NPDES permits to new and expanding municipal facilities that discharge phosphorus to waterbodies without a completed TMDL. The Strategy provides for the trading of phosphorus pollutant load offsets in pre-TMDL waters.

The MPCA *Strategy* provides, in part, for determining pollutant load baselines for buyers and sellers to participate in a water quality trade. For buyers, the baseline for a new or expanding point source consists of the current discharge, the expanded load, and an adjustment for a trade ratio. For sellers, the baseline consists of the current mass load, minus the mass for sale, and an adjustment for a trade ratio. The *Strategy* prohibits trading to meet technology-based effluent limits (*see* Restrictions page 5). EPA review of the *Strategy* finds that it allows a facility that does not have a numeric effluent limitation derived from 40 C.F.R. § 122.44(d) to participate in a trade program.

MPCA used a computer model to conduct a reasonable potential determination for the City of Princeton permit. Based on the model, MPCA set a phosphorus effluent limit for the facility. MPCA determined that the WQBEL would not lead to an excursion above the State water quality standards in the receiving water and that phosphorus would be assimilated before it reached the downstream waters of Lake Pepin. Note that the permittee upgraded the facility to comply with the WQBEL, and voluntarily entered into a trade program to purchase offsets from a nonpoint source.

EPA review of the NPDES permit records for the Met Council "Metro" facility showed that MPCA did not perform a reasonable potential analysis for phosphorus, nor were phosphorus effluent limits established to meet State of Minnesota water quality standards for Lake Pepin. The permit was issued before EPA approved State of Minnesota lake and reservoir numeric criteria. As a result, the proposed water quality trade would have allowed the Metro facility to sell pollutant loads without a WQBEL first being established for the discharge.

EPA review of the proposed water quality trade with the Metro facility determined that the mass-based offsets likely would not have resulted in a net pollutant load decrease. In December 2009, EPA requested and MPCA agreed to include additional conditions in the NPDES permit for the City of Princeton. These conditions bound pollutant offset purchases to nonpoint sources in the

watershed. If the proposed trade with the Met Council facility would have been allowed, the trade program would not have been credible because Metro did not have pollution credits for sale. This outcome occurred after MCEA submitted its petition.

Based on its review, EPA concludes that the *Strategy* does not preclude MPCA from conducting reasonable potential analyses and setting water quality based effluent limitations to prevent excursions of State of Minnesota water quality criteria.

3. *Schedules of Compliance in NPDES Permits*

- ***Allegation: MPCA's use of schedules of compliance is inconsistent with EPA's regulations.***

Program Requirements: 40 C.F.R. § 122.47 provides that permit issuing agencies may grant a schedule of compliance in an NPDES permit when appropriate. It requires the schedule to be established such that compliance is achieved as soon as possible. Section 502(17) of the Clean Water Act defines a compliance schedule as a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition or standard. When a permit-issuing agency chooses to grant a compliance schedule and the schedule extends beyond a year, 40 C.F.R. § 122.47 requires the permit to contain interim requirements. Minn. Adm. R 7001.0150, Subp. 2(A) provides for granting schedules of compliance for effluent limitations.

The withdrawal petition cites to one permit with a schedule of compliance, the Alexandria Lakes Area Sanitary District (ALASD). A review of permit records issued in FFY 2009 and FFY 2010 did not reveal additional permits that were issued with schedules of compliance. EPA requested MPCA assistance in identifying whether additional facilities had been granted schedules of compliance in FFY 2009 and FFY 2010. In February 2011, EPA received a letter from MPCA indicating that MPCA had issued just two NPDES permits with schedules of compliance in that period. All other permits had no such schedules. The letter is presented as Appendix E.

B. Enforcement and Compliance for Straight Pipe Systems⁶

- ***Allegation: MPCA has failed to establish and enforce an effective NPDES permitting program for direct discharges from over 55,000 known septic systems that are discharging to Minnesota waters in clear violation of the Clean Water Act.***
- ***Supplemental Allegation: Minnesota does not have an accurate or adequate surveillance system capable of identifying and addressing its sizeable number of illegal, point source septic systems***⁷.

Program Requirements: The performance of onsite and clustered (decentralized) wastewater treatment systems is a national issue of concern to EPA. To facilitate state and local governments with implementation of a long-term solution for meeting public health and water quality goals, particularly for small and rural communities, EPA issued the March 2003

⁶ Minn. Stat. 115.55, Subd. 1(r), defines a straight pipe system as a sewage disposal system that transports raw or partially treated sewage directly to a lake, stream, a drainage system, or ground surface.

⁷ On May 4, 2011 MCEA updated its petition to include an additional allegation (Appendix B).

Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Waste Treatment Systems (the Guidelines). In 2009, EPA's Region 5 NPDES Programs Branch reviewed Minnesota's Subsurface Treatment System (SSTS) regulatory and management program for conformance with 13 core management elements described in the *Guidelines*. These elements were designed to protect and sustain public health and water quality through the use of appropriate policies and administrative procedures that define and integrate the roles and responsibilities of the regulatory authority, system owners, service providers, and management entity, when present, to ensure that onsite and clustered wastewater treatment systems are appropriately managed throughout their life cycle. The program elements include public education and participation; planning; performance; training and certification/licensing; site evaluation; design; construction; operation and maintenance; residuals management; compliance inspections/monitoring; corrective actions; recordkeeping, inventory, and reporting; and financial assistance and funding. After reviewing Minnesota's rules, law, and program, EPA determined that Minnesota had adopted the *Guidelines* necessary for a successful program. A copy of EPA's determination letter is attached (Appendix F).

Section 301(a) of the Clean Water Act prohibits the discharge of pollutants from point sources into waters of the United States unless the discharge is in compliance with specified requirements of the Act, including section 402. Section 402 authorizes the Administrator, or state with an approved program, to issue NPDES permits that impose effluent limitations and other terms and conditions on the permitted discharges. Section 502 of the Act defines the term "discharge" to mean, among other things, any addition of any pollutant or combination of pollutants from a point source to waters of the United States. It defines "point source" to include any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which pollutants are or may be discharged. It defines the term "pollutant" to include, among other materials, sewage and industrial and municipal wastes. A person who discharges pollutants from a straight pipe point source to waters of the United States violates section 301 unless the discharge is in compliance with an NPDES permit. Minn. Adm. R. 7001.1030, Subp. 1 contains language that is nearly identical to section 301(a) of the CWA. As such, enforcement is an important means of dealing with straight pipe discharges to waters of the United States.

The Minnesota SSTS Program is regulated by Minnesota Statutes §§ 115.55 and 115.56 and Minnesota Administrative Rules Chapters 7080 through 7083. These regulations describe the requirements for SSTSs with volumes generating less than 10,000 gallon per day (GPD). "Straight-pipe systems" are a subset of these SSTS. Straight pipe systems that discharge untreated sewage to surface water or ground water, cause basement backups, or cause any other situation with the potential to immediately and adversely affect or threaten public health or safety constitute an "imminent threat to public health or safety" (ITPHS) (Minn. Stat. § 115.55, Subd. 5a). Such systems are illegal pursuant to Minn. Stat. § 115.55, Subd. 5a. If a straight pipe is designated as an ITPHS during inspection, it must be upgraded, replaced, or its use discontinued within ten months of receipt of the notice described in subdivision 5b, or within a shorter period of time if required by local ordinance. While Minn. Stat. § 115.55 applies as a result of an inspection, section 301 of the CWA and Minn. Adm. R. 7001.1030, Subp. 1 apply even if an inspection is not performed. It appears that issuance of an NPDES permit to the owner of a straight pipe system that is an ITPHS is inconsistent with Minn. Stat. § 115.55,

Subd. 5a. Without upgrades to achieve proper treatment, it is highly doubtful that a straight pipe system that is a ITPHS could comply with the terms and conditions of an NPDES permit.

In 2003, the Minnesota Legislature required MPCA to develop a plan to identify and upgrade all inadequate SSTs, and to require additional resources to be focused on the elimination of straight pipe systems (Chapter 128, Special Session, 2003, Sec. 164). The resulting plan, *The 10 Year Plan to Upgrade and Maintain Minnesota's On-site Treatment Systems* (February 2004) outlines an approach in which the MPCA and local governmental units (LGUs) develop a management system to ensure the SSTs remain in compliance, and sets a goal for the plan to be implemented within a 10-year period. The components of the *10 Year Plan* complement the *Guidelines* issued by EPA. While the *10 Year Plan* aims to address the cluster systems and non-compliant SSTs in impaired watersheds in 10 years, MPCA staff recognize the triggers identified in the plan will likely take 25 years to address all problems, due to a lack of financing. On November 4, 2008, after the plan was drafted, Minnesota voters approved the Clean Water, Land and Legacy Amendment to their constitution to protect drinking water sources; to protect, enhance, and restore wetlands, prairies, forests, and fish, game, and wildlife habitat; to preserve arts and cultural heritage; to support parks and trails; and to protect, enhance, and restore lakes, rivers, streams, and groundwater, possibly shortening the 25 year estimate to address all problems. The amendment increases the sales and use tax rate by three-eighths of one percent on taxable sales, starting July 1, 2009, continuing through 2034. Some of these funds are being used toward implementing the *10 Year Plan* (See Section 3, below). In the interim, watershed targeting was being used to address the most significant problems early in the *10 Year Plan*.

Under Minn. Stat. §§ 115.55 and 115.56, regulation of SSTs is primarily the responsibility of the LGU. LGUs are responsible for inspection and enforcement of systems smaller than 10,000 GPD. There are a total of 86 counties and 105 cities and townships that have adopted ordinances as required by statute.

The Municipal Section of the Municipal Division of the MPCA is involved with implementation of the *10 Year Plan*. The Municipal Section is composed of two subunits: the Southwest Regional and SSTS Policy and Planning Unit, and the North Central and Regional SSTS Compliance and Enforcement Unit. MPCA's offices are decentralized and staff is located in the St. Paul and Regional Offices around the State.

The Southwest Regional and SSTS Policy and Planning Unit is largely responsible for policy decisions, guidelines, and regulatory interpretations. In addition, this Unit works with the LGUs on inventory and reporting requirements, and facilitates the LGUs in obtaining funding from the Board of Water Soil Resources (BWSR) for inventory and pilot projects.

The North Central and Regional SSTS Compliance and Enforcement Unit is responsible for conducting inspections and compliance assurance activities, issuing informal enforcement actions, and providing support for formal enforcement actions. The Unit works with the Environmental Forum Process office to issue informal enforcement actions, and with the Minnesota Attorney General's Office to prepare administrative penalty orders.

Compliance Monitoring and Evaluation: The Minnesota laws assign responsibility for developing an inventory, conducting inspections, and determining the preliminary enforcement response for SSTS to the LGUs. This approach is consistent with the *Guidelines* for subsurface systems, which was intended to create a distinction between subsurface (nonpoint source) systems and straight pipe (point source) systems. The State remains responsible for inventory, compliance evaluation, and enforcement for non permitted point sources. Minn. Stat. §115.55 requires that LGUs ensure conformance with the regulations through ordinances that comply with design standards for SSTSs in the Minn. Adm. R. chapters 7080-7083 (Minn. Stat. § 115.15, Subd. 2). These rules contain minimum standards and criteria for the design, location, installation, use, maintenance, and closure of SSTSs. In addition, the ordinances must require inspections of properties for all new construction or replacement of a system to determine compliance with applicable requirements (Minn. Stat. § 115.55, Subd. 5). Each LGU has its own methodology for implementing its SSTS program, but the requirements of each program must be at least as stringent as set forth at Minn. Stat. §§ 155.55 and 155.56, and Minn. Adm. R. chapters 7080 through 7083. Based on discussions with MPCA, communities that are in areas with TMDL watersheds tend to have more active programs with more stringent inventorying, inspection and permitting requirements than those not in TMDL watersheds.

Under Minnesota law only a certified inspector can conduct field investigations to ensure conformance with the environmental regulations and compliance with local ordinance design standards for SSTSs. The inspector must be certified and licensed in accordance with Minn. Stat. § 115.56 and Minn. Adm. R. chapter 7083 in order to ensure that inspectors have appropriate training and experience to properly designate compliant SSTSs. Currently, MPCA administers a licensing and certification program that encompasses 400 inspectors statewide (MPCA's *Recommendations and Planning for Statewide Inventories, Inspections of Subsurface Sewage Treatment Systems, Report to Minnesota Legislature*, January 2011, Page 10). In addition, the State's licensing and certification program allows for 400 maintainers, 1200 installers, and 800 designers statewide to facilitate conformance with the Minn. Stat. § 115.56 and Minn. Adm. R. chapter 7083.

MPCA has defined a set of triggers that LGUs use to target inspections. The use of triggers, and the effectiveness of those triggers, is dependent on the capacity and priorities of local governments. Each community has its own methodology for targeting and tracking inspections. In areas where the local government regulates land use and/or administers the building code, there is a ready regulatory framework that forms the foundation for effective SSTS regulation. In other areas, extra effort by local governments is required to administer an effective SSTS program. Triggers can include:

- An inventory of systems in a specific area,
- A program under which systems are routinely inspected in a specific period of time,
- Addition of a bedroom, where a local permit is required (Minn. Stat. § 115.55),
- Issuance of a local permit, variance or other land use action where this trigger is included in the local ordinance (may be only in certain districts within the jurisdiction, or jurisdiction-wide), and
- Sale of a property, or when the buyer, lender or local government requires an inspection.

After an initial inspection, SSTS permits are issued to owners who wish to install new systems, or upgrade their current systems, and are tracked to ensure compliance with the requirements at Minn. Stat. §§ 115.55 and 115.56. These requirements are generally triggered by new home construction or remodeling, or to meet local point of sale requirements (*Subsurface Sewage Treatment System 2010 Annual Report Summary*, Page 13). In 2010, LGUs performed 8351 inspections. They issued 3585 new SSTS permits and 4596 SSTS replacement and repair permits (Figure 1). Some SSTS repair permits were to replace noncompliant straight pipe systems; however, the exact number is not recorded by MPCA.

Figure 1. New and Replacement SSTS Permits

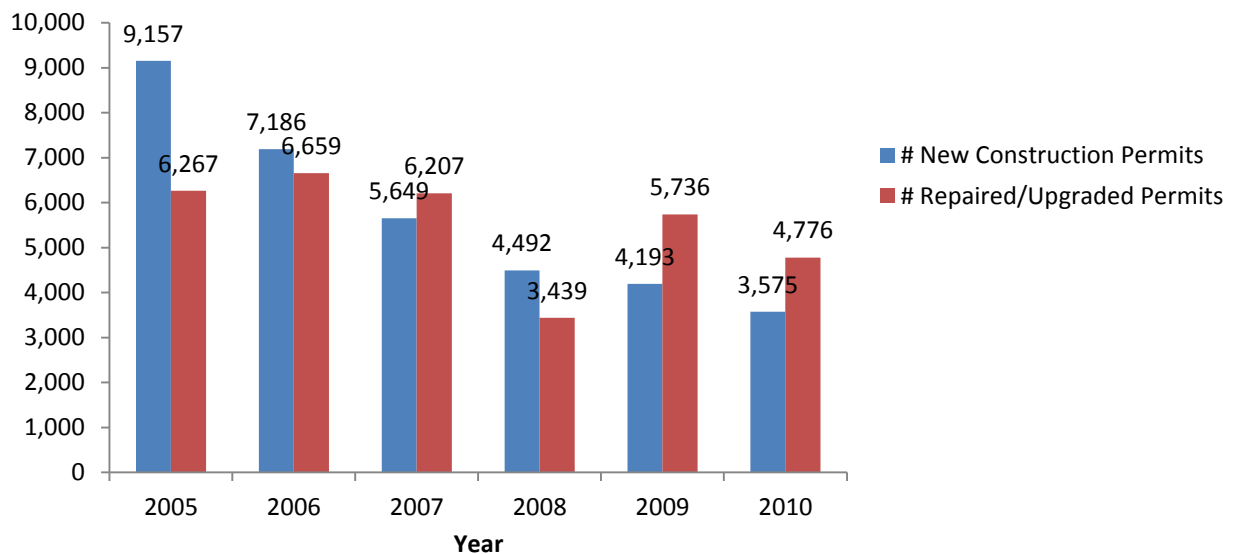


Figure 1. **Source: SSTS Annual Report Summary, March 2011, MPCA, Page 13

As part of the SSTS permitting process, an inspection of the property is required at the conclusion of installation of the SSTS system to ensure that the final SSTS is designed in conformance with the State requirements. If the inspection indicates that the system is in compliance with Minn. Adm. R. chapters 7080-7083, a certificate of compliance (CoC) is issued pursuant to Minn. Stat. § 115.55, Subd. 5c and 5d. If it is not in compliance a Notice of Noncompliance (NoN) is issued. Typically, a NoN is issued for failure to protect groundwater or some other deficiency, and specific upgrade timeframes apply. If the LGU inspector finds evidence of an ITPHS, the SSTS owner is required to comply with removal and abatement procedures under Minn. Stat. § 145A.04, Subd. 8.

A straight pipe is one type of ITPHS. Other types of SSTSs can be designated as ITPHSs. For example an SSTS which becomes clogged or backs up and overflows into a basement is an ITPHS. The rules on how to proceed with noncompliant ITPHSs, including straight pipes, are discussed below in Section 3.

Based on the above, EPA finds that, in cooperation with LGUs, MPCA has inspection and surveillance procedures sufficient to determine compliance or noncompliance with applicable SSTS program requirements. EPA also finds that it is appropriate for LGUs to conduct the periodic inspections of SSTS in accordance with EPA's voluntary guidelines for management of onsite systems. While EPA supports efforts of LGUs to conduct inspections of SSTS, the State must have a program that is capable of performing periodic inspection of known straight pipe point sources.

Enforcement Procedures: Minn. Stat. § 155.55 allows for LGUs to take enforcement actions against SSTSs not designed in conformance with Minn. Adm. R. chapters 7080-7083. Under § 115.15, Subd. 5a and 5b, "if the inspector finds sewage discharge to surface water, to ground surface, sewage backup; or any other situation with the potential to immediately and adversely affect or threaten public health or safety...[it] must be upgraded, replaced, or its use discontinued within 10 months." For noncompliant SSTSs, the NoN must be provided from the local inspector to the appropriate representative from the LGU (Minn. Stat. § 115.55 Subd. 5b). If the noncompliant SSTS is also a straight pipe discharge, the LGU issues a NoN and provides a copy of it to the respective MPCA regional office, where it is retained with a program contact (Minn. Stat. § 115.55, Subd. 11). If the SSTS is still noncompliant after 8 months, the LGU is to prepare a referral package⁸ including the NoN and inspection documentation, and submit it to MPCA. At 10 months, if the straight-pipe system has not been repaired, replaced or discontinued, the owner of the system shall be subject to an administrative penalty of \$500 for each month of noncompliance after the 10th month (Minn. Stat. § 115.55, Subd. 11). Administrative penalty orders are issued by MPCA. Penalties can accumulate through this process monthly until the system has been upgraded and is compliant with the State's SSTS regulations.

Since 2006, LGUs have discovered 402 straight pipes that are ITPHSs and have referred the cases to MPCA. MPCA is responsible for addressing all cases that have been referred to them. As of December 28, 2011, the following actions have been taken:

- 379 systems have been upgraded or otherwise resolved within the 10-month period;
- 8 are not resolved but are within the 10 month window to comply with the rules,
- 11 have been subject to MPCA enforcement actions; paid a total of \$7600 in penalties; and have resolved the non-compliant septic system;
- 4 open cases have been issued MPCA enforcement actions and have outstanding penalties of \$7500, which are not closed and still pending (Source: *Recommendations and Planning for Statewide Inventories, Inspections of Subsurface Treatment Systems*, December 28, 2011).

In addition, MPCA tracks estimated noncompliance rates on an annual basis. This rate is based on numbers reported by LGUs. The LGUs base estimates on best professional judgment or knowledge of what is going on in the communities. The SSTS numbers and noncompliance rate estimates were included in the published report "*Recommendations and Planning for Statewide*

⁸ Although not required by the Minn. Stat. § 115.55, Subd. 11, MPCA's Straight Pipe System Law fact sheet (wq-wwists2-38) recommends that the LGU prepare the referral package at Month 8.

Inventories, Inspections of Subsurface Treatment Systems”(January 2011). The most recent numbers reflecting systems through 2010 are included in Appendix F. For 2010, the communities estimate that 6% of SSTSs were noncompliant and designated as ITPHSs. These noncompliance rates are used by the State when reporting metrics quantifying the number of SSTSs not in compliance. Similarly, the 55,000 straight pipes referenced in MCEA’s petition were estimated using the same SSTS noncompliance rates. One shortfall of using this approach for quantifying the rate of noncompliance is that these numbers are not based on an inventory of noncompliant straight pipes that MPCA can address through an enforcement response.

Based on the above, EPA finds that MPCA acts in a timely and appropriate manner in response to known violations of program requirements applicable to point source discharges from straight pipe systems.

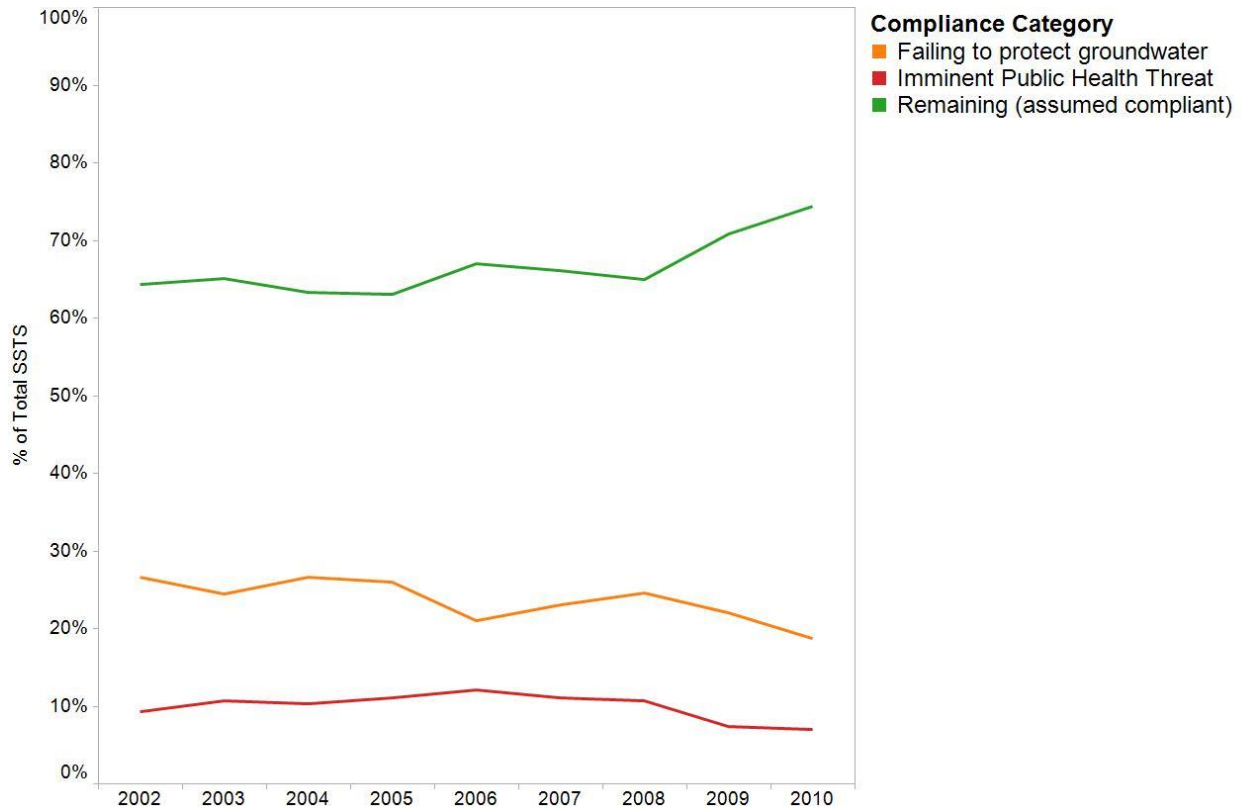
3. Other Straight Pipe Elimination Methods

MPCA has worked with communities to secure funding through SSTS “fix up” grants, BWSR grants (through the Clean Water fund), and financing from other local resources to eliminate straight pipe systems. Although these projects do not fall in the realm of inspection or enforcement efforts, they do reflect efforts to address and eliminate noncomplaint SSTSs, including unpermitted straight pipe discharges.

From 2008-2010, 31 communities have corrected their systems, resulting in a cumulative 212 million gallons of wastewater flow reduced from these projects (The *2010 Summary of Small Community Wastewater Improvements in Minnesota*, November 8, 2011 version). The cost for the repairs of systems in 16 communities in 2010 alone was \$20,829,570. The 51 remaining communities are currently taking actions as outlined in the report. The State continues to plan and work with communities to make funding available to address additional SSTS problems.

The results of these actions show that there has been a general decrease in the number of noncompliant systems over the past few years. Based on 2010 reporting, communities with identified straight pipes issues are generally declining as shown in Figure 2 (October 12, 2011 MPCA Power Point Presentation). Current estimates for systems that are in noncompliance with the rules have dropped to a 6% rate, as identified by the most recent LGU numbers reported to MPCA (see Appendix F). Only a portion of these ITPHSs are straight pipes, which reduces the straight pipe noncompliance rate to less than 6%, however MPCA still needs to ensure that 100% of straight pipe point source discharges are reported to the state for appropriate enforcement action. These decreases in ITPHS discharges show that LGUs, in cooperation with the MPCA, are making substantial progress towards identifying, responding to, inspecting and taking enforcement actions against straight pipe systems.

Figure 2. Compliance Trends 2002-2010. *Source:* October 12, 2011 MPCA Power Point Presentation



VI. Initial Findings and Required and Recommended Actions

Following is a summary of the initial findings in response to the petitioners' allegations, and the required actions MPCA must take to comply with the requirements for state programs set forth in 40 C.F.R. Part 123. Recommendations to improve the program are also provided below.

1. NPDES Permit Program.

For setting phosphorus effluent limitations:

Findings:

All reviewed permits contained a narrative WQBEL based on the narrative water quality criterion in Minn. Adm. R. 7050.0210, Subp. 2. Minnesota did not use one of the methods in 40 C.F.R. § 122.44(d)(1)(vi) to numerically express a limitation for phosphorus based on the narrative criterion. MPCA is setting numeric WQBELs for phosphorus when needed to implement the Minn. Adm. R. 7050.0220 and 7050.0222 numeric criteria for lakes and reservoirs.

Required actions:

In determining whether or not a discharge of phosphorus will cause, have a reasonable potential to cause, or contribute to an excursion beyond a State water quality criterion, MPCA needs to use procedures that account for the factors specified in the regulation at 40 C.F.R. § 122.44(d)(1)(ii). Where MPCA determines that phosphorus discharges to streams and rivers will cause, have a reasonable potential to cause, or contribute to an excursion beyond the Minn. Adm. R. 7050.0210, Subp. 2, criterion, MPCA must establish WQBELs for phosphorus that are sufficient to attain and maintain applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(vi) specifies methods to establish the numeric effluent limits necessary to implement the narrative criterion in Minn. Adm. R. 7050.0210, Subp. 2. Where MPCA determines that the discharge of phosphorus, either alone or in combination with oxygen-demanding pollutants and dissolved oxygen, will cause, have a reasonable potential to cause, or contribute to an excursion beyond the applicable Minn. Adm. R. 7050.0222 criteria, MPCA must establish WQBELs for phosphorus, or other pollutants or parameters, that are sufficient to attain and maintain applicable water quality standards. Such limitations must: (1) derive from and comply with the applicable criterion and (2) be consistent with the assumptions and requirements of any wasteload allocation in an applicable approved TMDL. 40 C.F.R. § 122.44(d)(1)(vii)(A) and (B).

Recommendation:

Minnesota should adopt a numeric water quality criterion for phosphorus in streams and rivers. **The State anticipates adopting such a criterion in 2014.** Adoption and EPA approval of such a criterion should prompt EPA to revise the required action identified above.

For water quality trading:**Findings:**

EPA identified and MPCA resolved concerns with the NPDES permit for the proposed trade involving the City of Princeton. EPA finds that the MPCA *Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy* allows a facility that does not have a WQBEL to participate in a trade.

Required actions:

EPA does not have any required actions for MPCA.

Recommendation:

MPCA should revise the guidance language in the *Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy*, which recommends developing pollutant offsets by averaging historical loadings as the baseline for when point sources can generate credits in trade programs. The *Strategy* should indicate that the point sources volunteering to participate in a water quality trade should have effluent limits determined through a reasonable potential process.

For establishing schedules of compliance:

Findings:

The MCEA withdrawal petition cites to one permit where MPCA established a schedule of compliance to a facility in order to allow MPCA more time to complete a TMDL. EPA does not find that this allegation has merit, because it neither demonstrates a practice of inappropriately granting schedules of compliance, nor does it cite a lack of legal authority required by 40 C.F.R. § 123.25.

Required actions:

EPA does not have required actions for MPCA.

Recommendation:

EPA does not have recommended actions for MPCA.

2. Compliance Evaluation/Inspection/Enforcement Program

Finding:

Minnesota has the legislative and regulatory authority to implement a functional management program for decentralized waste water treatment systems. LGUs inspect SSTS and MPCA takes timely and appropriate enforcement actions in response to known straight pipe violations consistent with Minn. Stat. §§ 155.55 and 155.56 and Minnesota Rules Chapters 7080 through 7083. MPCA's use of its primary informal pre-enforcement tools, Notices of Noncompliance, and Administrative Penalty Orders, is an appropriate mechanism to return known facilities to compliance. Furthermore, Minnesota's Subsurface Treatment System Program meets EPA's voluntary guidelines for management of onsite systems.

Required actions:

EPA's *Voluntary Guidelines for Management of Onsite Systems* provides discretion for MPCA to determine the nature of the overall inspection program for subsurface treatment systems, taking resources and priorities into account. EPA believes it is appropriate for LGUs to inspect subsurface treatment systems. Should the state choose to delegate the LGUs to be responsible for the preponderance of the inspections, it should be ensured that the LGUs are gathering the proper facts and reporting all identified straight pipe point source discharges to surface waters to MPCA. Consistent with 40 C.F.R. § 123.26(b), MPCA must have the capacity to inspect known straight pipe point sources that discharge to surface waters. Commitments for MPCA inspections can be negotiated between EPA and the State within the framework of the Joint Minnesota-EPA Region 5 CWA Enforcement & Permitting Work Plan, taking resources, NPDES program priorities, and inspections performed by LGUs into account.

Recommendation:

The State should have a comprehensive inventory of areas known to have straight pipe dischargers. Some LGUs maintain a list that could serve as a baseline for such an inventory.

MPCA should continue to work to build stronger partnerships with LGUs in order to ensure that the LGUs are managing and implementing the Straight Pipe Program in accordance with the Rules and Statutes appropriately. The State should ensure that resources are available to LGUs to implement their programs, or withdraw those programs.

MPCA should ensure LGUs and inspectors report all instances of noncompliance on at least a semi-annual basis consistent with Minn. Stat. § 155.55, and possibly even more frequently, so that problems are addressed when they occur. Straight pipes designated as ITPHSs should be reported to the MPCA immediately for inspection and/or enforcement actions.

MPCA should coordinate with the communities that have not been reporting annual noncompliance rates to determine if they are implementing an effective SSTS Management System, and intervene if necessary. MPCA should begin their coordinated actions with the communities that have completely unknown compliance rates listed, which includes Beltrami, Hubbard, Hennepin, Roseau, Marshall, Mahnomon, Lake, and Kittson counties. MPCA should further coordinate with the other counties that have high unknown compliance rate estimates.

MPCA should implement a tracking system for LGU Inspection Summaries to ensure that inspections and evaluations for straight pipes are classified and recorded consistently. Reportable Metrics should also be defined so they are reported consistently.