



Minnesota Pollution Control Agency

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June 13, 2008

TO: INTERESTED PARTIES

RE: Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy

Enclosed for your information is a copy of the Minnesota Pollution Control Agency (MPCA) Citizens' Board (Board) Item for the proposed Pre-Total Maximum Daily Load (TMDL) Phosphorus Trading Permitting Strategy, and a copy of the Board Agenda. The Board Item includes:

- Comment letter from Minnesota Center for Environmental Advocacy (MCEA) dated October 17, 2007
- MPCA response to MCEA comments letter dated March 10, 2008
- Comment letter from Minnesota Environmental Science and Economic Review Board (MESERB) received April 3, 2008
- MPCA response to MESERB comments letter dated May 2, 2008
- Pre-TMDL Phosphorus Trading Permitting Strategy Description

The above documents may be reviewed at the following MPCA offices in St. Paul, Duluth, and Rochester. Requests for copies of the above Board documents may be made by contacting the St. Paul office at 651-296-7398.

The Pre-TMDL Phosphorus Trading Permitting Strategy Board Packet may also be viewed on our MPCA Web site at <http://www.pca.state.mn.us/about/board/bdagenda.html>.

The Board Item will be presented at the MPCA Committee and Board Meetings. Please refer to the enclosed Board Agenda for specific location, dates, and times. We encourage your attendance at the Committee and Board Meetings. If you have any questions regarding the enclosed Board Item or the specifics of the meeting, feel free to contact Elise Doucette of my staff at 651-296-7290.

Sincerely,

A handwritten signature in black ink, reading "Lisa J. Thorvig".

Lisa J. Thorvig
Director
Municipal Division

LJT:gs

Enclosures

MINNESOTA POLLUTION CONTROL AGENCY

Municipal Division Municipal Wastewater Section

Board Item Cover Sheet

MEETING DATE:	<u>June 24, 2008</u>	DATE MAILED:	<u>June 13, 2008</u>
Presenter(s):	<u>Elise Doucette/Gene Soderbeck</u>	Phone Number:	<u>651-296-7290/651-296-8632</u>
Supervisor:	<u>Gary Eddy/Gene Soderbeck</u>	Phone Number:	<u>651-296-7758/651-296-8280</u>
Manager:	<u>Wendy Turri</u>	Phone Number:	<u>507-280-2990</u>
Division Director:	<u>Lisa Thorvig</u>	Phone Number:	<u>651-296-8811</u>
Deputy Commissioner:	<u>Leo Raudys</u>	Phone Number:	<u>651-296-7305</u>
Attorney:	<u>Robert Roche</u>	Phone Number:	<u>651-215-1506</u>

TITLE OF BOARD ITEM: Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy

LOCATION: Statewide
City/Township County

TYPE OF ACTION: Approval of Pre-Total Maximum Daily Load Phosphorus Trading

RECOMMENDED ACTION: Approval of Pre-Total Maximum Daily Load Phosphorus Trading.
Phosphorus Trading as an interim permitting strategy for new or
expanding wastewater treatment facilities discharging upstream of an
U.S. Environmental Protection Agency approved 303(d) listed
nutrient (phosphorus) impaired water.

ISSUE STATEMENT: Minnesota Pollution Control Agency (MPCA) staff request that the MPCA Citizens' Board (Board) approve Pre-Total Maximum Daily Load (TMDL) Phosphorus Trading (PTPT) as a permitting strategy to allow new and expanding phosphorus-discharging wastewater treatment facilities (WWTFs) the ability to purchase phosphorus reductions from another National Pollutant Discharge Elimination System Permit (NPDES)-permitted WWTF in a sufficient quantity that assures a net decrease in the amount of phosphorus that may be legally discharged to a nutrient impaired water. PTPT is analogous to other cap and trade programs. Nutrient impaired waters are those listed on the most recent U.S. Environmental Protection Agency (EPA) approved 303(d) list of impaired waters. PTPT bridges the time from when a water is listed as nutrient impaired to the time the TMDL is complete. Once the TMDL is approved, PTPT is no longer an option and any trading would be governed by the approved TMDL. The MPCA staff recommends that the Board approve Pre-TMDL Phosphorus Trading Permitting Strategy.

ATTACHMENTS:

1. Comment letter from Minnesota Center for Environmental Advocacy (MCEA) dated October 17, 2007
2. MPCA response to MCEA comments letter dated March 10, 2008
3. Comment letter from Minnesota Environmental Science and Economic Review Board (MESERB) received April 3, 2008
4. MPCA response to MESERB comments letter dated May 2, 2008
5. Pre-TMDL Phosphorus Trading Permitting Strategy

MINNESOTA POLLUTION CONTROL AGENCY
Municipal Division
Municipal Wastewater Section

Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy

June 24, 2008

ISSUE STATEMENT

Minnesota Pollution Control Agency (MPCA) staff request that the MPCA Citizens' Board (Board) approve Pre-Total Maximum Daily Load (TMDL) Phosphorus Trading (PTPT) as a permitting strategy to allow new and expanding phosphorus-discharging wastewater treatment facilities (WWTFs) the ability to purchase phosphorus reductions from another National Pollutant Discharge Elimination System Permit (NPDES)-permitted WWTF in a sufficient quantity that assures a net decrease in the amount of phosphorus that may be legally discharged to a nutrient impaired water. PTPT is analogous to other cap and trade programs. Nutrient impaired waters are those listed on the most recent U.S. Environmental Protection Agency (EPA) approved 303(d) list of impaired waters. PTPT bridges the time from when a water is listed as nutrient impaired to the time the TMDL is complete. Once the TMDL is approved, PTPT is no longer an option and any trading would be governed by the approved TMDL. The MPCA staff recommends that the Board approve Pre-TMDL Phosphorus Trading Permitting Strategy.

I. BACKGROUND:

Both EPA and the courts have recognized that it can take several years from the time a water is listed as impaired until a TMDL is completed and approved. In the meantime, construction of new and expansion of existing WWTFs is often necessary to prevent additional deterioration of an impaired water. PTPT allows for necessary improvements to wastewater treatment infrastructure to take place while achieving reductions in pollutant loading to impaired waters during that interim period. The impairment addressed by PTPT is 'Nutrient/Eutrophication Biological Indicators' on the 2008 Final Draft TMDL List of Impaired Waters and 'Excess Nutrients' in the 2006 List. Herein, the term 'nutrient impairment' will be used to describe known impairments of water bodies by phosphorus.

Based on the Wastewater Infrastructure Needs Survey and 2008 Project Priorities List, Minnesota communities identified wastewater infrastructure costs over \$4.5 billion. Based on the draft Small Communities Wastewater Needs Report published February 2008, 1,043 small communities have

expressed wastewater needs, with 48 of those communities identifying known or suspected community surface discharges via the use of community straight pipes. Prudent design that addresses these needs includes future growth needs of the community. PTPT is a method by which communities can build new or expand existing WWTFs while achieving reductions to the impaired waters prior to TMDL approval without potentially causing or contributing to water quality impairments. This PTPT approach is intended to be an interim permitting strategy given that the 2008 303 (d) List identified 329 nutrient impairments, MPCA staff estimate that only 18 percent of Minnesota's lakes have been assessed and that, once an impairment is identified, a TMDL can take up to 15 years maximum to complete.

Some expanding dischargers have been able to satisfy the "cause or contribute" clause by greatly reducing previously non-regulated phosphorus loading. The MPCA has been able to create water quality improvements through new and expanding dischargers by implementing the March 28, 2000, Board Approved Phosphorus Strategy. On December 18, 2007, the Board adopted changes to Minnesota Rule Chapter 7053 that codify the Phosphorus Strategy. Some WWTFs that already had a permitted mass cap of phosphorus have been able to treat to a lower phosphorus concentration to stay beneath the cap. However, most new WWTFs will have difficulty in assuring a net decrease in phosphorus loading. The purpose of PTPT is to allow new and expanding WWTFs an opportunity to address their wastewater infrastructure needs now, and thus improve water quality, as opposed to waiting until completion of a TMDL. To be permitted for the discharge and participate in the PTPT process, Facilities will be allowed to purchase phosphorus reductions from other permitted WWTFs (i.e., trade phosphorus) in a sufficient quantity to assure no net increase in the authorized mass of phosphorus discharged upstream of the nutrient impaired water.

The Minnesota Supreme Court affirmed the legality of Pre-TMDL phosphorus trading in the Annandale/Maple Lake case. In that case, the Minnesota Supreme Court urged the MPCA to consider time, place, and other specifics in making trading determinations in permits. The proposed PTPT

permitting strategy would accomplish this by considering the relative watershed locations of the trading partners and requiring a contemporaneous phosphorus mass reduction from the seller's existing NPDES-permitted mass cap.

A. Pre-TMDL Phosphorus Trading Guidelines

The basics of PTPT involve specific entities, a 'buyer' and a 'seller'. The buyer is the entity that wishes to build or expand a WWTF and to discharge to a nutrient impaired water. The seller is an existing NPDES-permitted WWTF that already has a phosphorus mass cap in its existing permit and agrees to reduce its authorized phosphorus loading cap to a level requested by the buyer. The buyer and seller will enter into a contract for phosphorus trading. The amount traded will be noted in each WWTF's NPDES permit.

PTPT will require buyers to purchase phosphorus in excess of the exact amount needed to meet permit limits by applying a trade ratio to each transaction. As noted above, PTPT will result in net reductions of allowable phosphorus loading to impaired waters. To accomplish this, proposed trade ratios for Facilities in the same major watershed are 1.2 to 1.0 for new Facilities and 1.1 to 1.0 for expanding Facilities. For example, for every 1.0 kilogram of phosphorus needed by a new WWTF, a trade ratio of 1.2 to 1.0 will require the purchase of 1.2 kilograms from the seller. Neither Facility may use the extra 0.2 kilograms – the unused phosphorus load is a contribution toward water quality improvement. Both Facilities' effluent discharge must be upstream of the applicable impaired water body. MPCA staff will not approve trades where a nutrient impaired water is located between an upstream buyer and a downstream seller.

PTPT has three options to give Facilities direction in determining trading partners while still allowing MPCA staff the ability to review trades on a case-by-case basis. Option 1 involves a buyer and seller in the same major watershed. Option 2 involves a buyer and seller in different major watersheds, but in the same basin where the seller is closer, in river miles, to the impaired water than the buyer. Both Option 1 and Option 2 would result in a trade ratio of 1.2 to 1 for new WWTFs and 1.1 to 1 for expanding

WWTFs. Option 3 would involve a buyer and a seller in different major watersheds, but still in the same basin, where the buyer is closer in river miles to the impaired water than the seller. Option 3 would result in a trade ratio of 1.4 to 1.

If trading partners believe they have a viable option other than those described above, that is protective of downstream waters but differs from those listed above, MPCA staff will review proposals on a case-by-case basis. MPCA staff will also consider trades that involve pollutant load reductions made by non-point sources (agricultural operations, stormwater discharges, and other non-point sources), but these situations are not addressed by this PTPT proposed permitting strategy and would require additional review. The MPCA will need to review any such point to non-point trades on a case-by-case basis.

An important distinction between 40 CFR 122.4 (i) and the existing Phosphorous Strategy (and amendments to Minn. R. 7050) is that the latter does not require a phosphorus limit if the new or expanding Facilities discharge is less than 1,800 pounds of phosphorus per year. As a result of nutrient impaired waters listing in the EPA approved 303(d) list, new and/or expanding Facilities upstream of the impairment will be required to demonstrate no net increase in phosphorus loading resulting from the discharge, even if the Facility currently discharges less than 1,800 pounds per year. PTPT is a tool that will allow timely improvements to wastewater infrastructure needs prior to completion of the TMDL.

B. Interim Process

EPA's 2003 Water Quality Trading Policy encourages the development of Pre-TMDL trading programs to achieve progress towards the attainment of water quality standards. PTPT will achieve progress towards the attainment of water quality standards by allowing for improvements to wastewater treatment infrastructure while at the same time achieving reductions in allowable phosphorus loading to impaired waters.

Once a TMDL is completed and approved for a nutrient impaired water, that TMDL will govern permitting for discharges to that water. A completed and EPA-approved TMDL will include individual wasteload allocations for any significant NPDES permits, which will subsequently be modified or

reissued to incorporate the assumptions and requirements of the TMDL. Phosphorus trading may be a viable management tool for achieving the pollutant reduction goals specified in TMDLs that require point source phosphorus reductions.

The PTPT Policy is intended to be temporary. As noted above, PTPT will only apply in the interim period between when a water is listed as impaired due to phosphorus and completion and approval of a TMDL for that water. Moreover, the MPCA is currently working on developing Water Quality Trading Rules. The rules are scheduled to be drafted by the end of June 2008. The Water Quality Trading Rules are intended to address trading between point sources, between point and non-point sources and potentially between non-point sources in both pre and post-TMDL situations. Once those rules are in effect, the rules will replace the PTPT Policy.

C. Case-by-Case Analysis

PTPT focuses on trades between NPDES permitted WWTFs. As trading opportunities arise, MPCA staff will continue to look for ways to leverage greater environmental good through the use of trades. In these cases, MPCA staff will use the PTPT framework and the basic principles, such as contemporaneous trades with appropriate trade ratios, in its review of trading opportunities. PTPT is offered as a framework on which to build trading options, and MPCA staff would consider viable trading options brought forth by permitted WWTFs.

II. PROHIBITIONS:

In addition to phosphorus trading not being allowed where there is a nutrient impairment between the buyer and the seller, the following conditions also apply:

- Trading cannot be used to meet technology-based effluent limitations
- Trades will not be allowed if the trade itself would cause or contribute to a water quality impairment
- Trading may not adversely affect water quality at an intake for drinking water supply

In accordance with the Minnesota Supreme Court's decision in the Annandale/Maple Lake matter, the MPCA will utilize PTPT in a manner that ensures that point source discharges do not cause or contribute to violations of water quality impairments.

III. CONCLUSIONS:

In conclusion, MPCA staff believes the use of Pre-TMDL Phosphorus Trading will benefit the environment by further reducing the current authorized mass loading within a basin, by allowing timely improvements in municipalities' infrastructure, and by allowing an opportunity for new growth and development to occur upstream of a nutrient impaired water.

IV. RECOMMENDATION:

MPCA staff recommends that the Board approve PTPT and the below Suggested Staff Resolution.

SUGGESTED STAFF RESOLUTION

BE IT RESOLVED that the Minnesota Pollution Control Agency approves and adopts Pre-Total Maximum Daily Loads (TMDLs) Phosphorus Trading as an interim permitting strategy of achieving a net decrease in phosphorus loading associated with new and expanding National Pollutant Discharge Elimination System wastewater treatment facilities upstream of nutrient impaired waters as outlined in the attached Pre-TMDL Phosphorus Trading Permitting Strategy.

IT IS SO ORDERED

Commissioner Brad Moore
Chair, Citizens' Board
Minnesota Pollution Control Agency

Date



Minnesota Center for Environmental Advocacy

The legal and scientific voice protecting and defending Minnesota's environment

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Executive Director

October 17, 2007

Elise Doucette
Marco Graziani
Minnesota Pollution Control Agency

Dear Elise and Marco—

Thank you for the opportunity to provide comments of the Minnesota Center for Environmental Advocacy (MCEA) regarding the Minnesota Pollution Control Agency's (MPCA) Pre-TMDL Phosphorus Trading draft guidance. As you may be aware, MCEA is very supportive of trading as a mechanism to meet water quality goals in a cost-efficient manner. As such, MCEA has been actively engaged in shaping the trading permits for Rahr Malting (the nation's first point-nonpoint source trading NPDES permit), the Southern Minnesota Sugar Beet plant (also a point/nonpoint trading permit) and the phosphorus permit implementing the Lower Minnesota River Low Dissolved Oxygen TMDL (authorizing phosphorus trades among 40 large point sources in the Minnesota River basin). It is important to note that all of these trading permits were post TMDL, so the important analysis of what the relevant receiving waters needed to meet water quality standards was known beforehand.

In general, MCEA believes that the guidance is well-crafted. The following comments are intended to "tighten up" or clarify a few specific provisions. They are written to correspond to the MPCA's 6/21/2007 draft guidance "Questions and Answers" document.

Issues concerning federal trading policy and regulation (See Question 3)
EPA's trading policy¹ contains a list of Clean Water Act statutory and regulatory requirements (bottom of page 2), specifies that the provisions and regulations are legally binding, and that the trading policy cannot substitute for them. MCEA strongly recommends that the MPCA incorporate this list and statement into its pre-TMDL trading guidance.

MPCA's draft guidance contains the following statement, with MCEA-recommended additions in red and underlined:

¹ *Water Quality Trading Policy*, USEPA Office of Water, January 13, 2003.

- The MPCA will not authorize Pre-TMDL Phosphorus Trading that would cause or contribute to an impairment of existing or designated uses, adversely affect water quality at a drinking water supply intake, exceed a cap under a TMDL, or cause a water quality impairment, or reduce assimilative capacity in high quality waters.

The “or contribute to” language is needed to harmonize the guidance with the federal regulations at 40 CFR §122.4. The “reduce assimilative capacity in high quality waters” language is needed to harmonize the guidance with anti-degradation regulations at 40 CFR §131.12.

Who can participate? (See Question 4)

The second paragraph of this section indicates that the closest nutrient impaired **lake** will be protected by the trading guidance. This is impermissibly narrow and should be clarified to address the “nearest nutrient-caused impairment.” This would include downstream dissolved oxygen impairments and any other nutrient-caused stream/river impairments.

The guidance is silent on two situations that MCEA believes must be addressed:

1. Where waters between the buyer and seller are not assessed for excess nutrients (lakes and reservoirs) or dissolved oxygen (streams and rivers), trades should not be allowed until water quality is assessed and the proposed trade will not negatively affect water quality; and
2. Similarly, where streams and rivers between the buyer and seller are not assessed for compliance with the narrative nutrient standard (“free from undesirable levels of slime growth and algae”), trades should not be allowed until such assessment is complete, water quality is compared against a numeric translator of the narrative standard, and the proposed trade will not negatively affect water quality.

If the guidance does not address these situations where we do not know the quality of the receiving waters between the partners, the MPCA could unknowingly permit additional nutrient loads to an already impaired water, or permit the upstream discharger to “cause or contribute to a nutrient-related impairment.

This section of the guidance also states that the MPCA will consider trades between nonpoint and point sources. This statement should be deleted from the guidance and not adopted as a practice, as it is inconsistent with the rest of the guidance (See answer to Question 2, “Trading is the temporary transfer of a portion of one facility’s (sellers) NPDES permitted phosphorus mass limit to another facility’s (buyers) NPDES permit. [emphasis added])). In addition, the trade ratio for point-nonpoint source trades is dramatically different.

The guidance needs to be clarified to require dischargers that are expanding their phosphorus discharge, but which will still be discharging less than 1,800 pounds per year, to purchase credits sufficient to cover their additional phosphorus.

How long are trades effective?

How does the MPCA plan to handle permit cycles that do not co-incide, given the necessity for the NPDES permits of both trading partners to reflect the terms of the trade?

MCEA appreciates the opportunity to discuss and submit its comments on the draft pre-TMDL trading guidance.

Sincerely,

A handwritten signature in black ink, appearing to read "Kris Sigford". The signature is fluid and cursive, with the first name "Kris" being more prominent than the last name "Sigford".

Kris Sigford
Water Quality Director



March 7, 2008

Ms. Kris Sigford, Water Quality Director
Minnesota Center for Environmental Advocacy
26 East Exchange Street – Suite 206
St. Paul, MN 55101-1667

Dear Ms. Sigford:

Thank you for submitting comments dated October 17, 2007, to the Minnesota Pollution Control Agency) MPCA's Pre-TMDL Phosphorus Trading draft guidance dated June 21, 2007. This letter is in response to your comments. Some changes were made as you suggested and this letter provides an explanation for changes that were not made at this time.

1. MCEA requested the list of Clean Water Act statutory and regulatory requirements in page 2 of EPA's Water Quality Trading Policy be included in the pre-TMDL trading guidance.

MPCA RESPONSE: The requirements from page 2 of EPA's Water Quality Trading Policy were incorporated into page 1 and 2 of the Pre-TMDL Phosphorus Trading: A Draft Guidance (wq-tp1-02). The language now reads as follows:

EPA's Policy also "describes various requirements of the CWA and implementing regulations that are relevant to water quality trading, including: requirements to obtain permits (Sections 402 and 404), anti-backsliding provisions (Section 303(d)(4) and Section 402(o)), the development of water quality standards including anti-degradation policy (Section 303(c)), federal NPDES permit regulations (40 CFR Parts 122, 123 and 124), TMDLs (Section 303d(1)) and water quality management plans (40 CFR Part 130). These CWA provisions and regulations contain legally binding requirements." EPA's Trading Policy and MPCA's Pre-TMDL Phosphorus Trading do not substitute for those provisions or requirements.

2. MCEA requested the draft guidance change the language to the following (requested changes underlined): "The MPCA will not authorize Pre-TMDL Phosphorus Trading that would cause or contribute to an impairment of existing or designated uses, adversely affect water quality at a drinking water supply intake, exceed a cap under a TMDL, cause a water quality impairment, or reduce assimilative capacity in high quality waters.

MPCA RESPONSE: The last reference, "assimilative capacity in high quality waters", will not be included in "Pre-TMDL Phosphorus Trading: A Draft Guidance" because the MPCA believes this is addressed in Minn. Rules Ch. 7050.0185, which requires new or expanding wastewater treatment facilities which are identified as "significant" to undergo a nondegradation review. This review includes an assessment of the assimilative capacity of the waterbody of concern.

MCEA's first underlined portion appears to confuse the function of nutrient trading. As the Minnesota Supreme Court ruled in the Annandale / Maple Lake case, trading may be used to ensure that a discharge does not cause or contribute to a violation of water quality standards. Because trading will be used to reduce overall loading to receiving waters and to ensure that discharges do not cause or contribute to

violations of water quality standards, MPCA believes that the change that MCEA has requested is unnecessary and would lead to confusion.

Therefore, the paragraph in the document will be changed to the following:

The MPCA will not allow Pre-TMDL Phosphorus Trading and associated trades that will harm an existing designated use, adversely affect water quality at a drinking water supply intake, exceed a cap under a TMDL, or cause a water quality impairment. In accordance with the Minnesota Supreme Court's decision in the Annandale / Maple Lake matter, the MPCA will utilize Pre-TMDL Phosphorus trading in a manner that ensures that point source discharges do not cause or contribute to violations of water quality standards.

3. MCEA requests that that MPCA's Pre-TMDL Phosphorus Trading document address the "nearest nutrient-caused impairment", including downstream dissolved oxygen impairments and other nutrient-caused stream/river impairments, as opposed to the closest "nutrient impaired lake."

MPCA RESPONSE: Pre-TMDL Phosphorus Trading: A Draft Guidance was drafted with Lake Pepin in mind, but was written to incorporate and address impacts to other waterbodies. Therefore, the document has changed many references from "nutrient impaired lake" to "nutrient impaired water body". The MPCA will deal with dissolved oxygen impairments on a case-by-case basis and the document will not address this specific stream/river impairment at this time. However, trading will remain an option should the MPCA find a phosphorus limit is necessary and/or the Permittee proposes a trade. The MPCA currently does not have nutrient narrative standards for streams/ivers. Therefore, this is not addressed in the guidance. The MPCA plans to address stream/river nutrient standards in the next triennial review (2011).

4. MCEA believes that the trades should not be allowed where 1.) waters between the buyer and the seller that have not been addressed for excess nutrients (lakes/reservoirs) or dissolved oxygen (streams/ivers), and 2.) waters that have not been assessed for compliance with narrative nutrient standards ("free from undesirable levels of slime growth and algae).

MPCA RESPONSE: The current rule (Minn. R. 7050.0211, subp. 1a.) applies a 1 mg/L total phosphorus limit to dischargers if the discharge is directly to or affects a downstream lake or reservoir. This part of the existing rule will not change under the proposed Minn. R. 7050 and 7053 that the MPCA's Citizen's Board approved on December 18, 2007. Under the proposed rules, new or expanding facilities that discharge more than 1,800 pounds of phosphorus per year will get a 1 mg/L limit without the need to demonstrate "affects." The MPCA believes the Strategy and proposed rules, not Pre-TMDL Phosphorus Trading, should address concerns about new or expanding facilities discharging to un-assessed waters. Any new or expanding wastewater treatment facility above the *de minimis* criteria will be required to treat the discharge to a 1 mg/L. This will occur whether the water has been assessed or not. Also, because of the sheer size of the watershed that flows through Lake Pepin, approximately two thirds of the state will be required to control and trade phosphorus if they wish to expand or build a new facility. As stated above, the MPCA will deal with dissolved oxygen impairments on a case-by-case basis and trading will remain an option should the MPCA find a phosphorus limit is necessary and/or the Permittee proposes a trade. Finally, as stated above, "Pre-TMDL Phosphorus Trading: A

Draft Guidance" (wq-ptp1-02) will not address nutrient narrative standards for streams/rivers, as the MPCA plans to address this issue in the next triennial review. The MPCA believes this adequately addresses the concern for waters that have not been assessed.

5. The guidance should not allow trading between non-point and point source discharges.

MPCA RESPONSE: The Pre-TMDL Phosphorus Trading guidance was created to guide point to point source trades; however, it was also intended to guide point to non-point source trades should the participants wish to propose a viable trading option. Although these trades will involve a more complex analysis of trade ratios and verification of non-point Best Management Practices (BMPs), the MPCA would like the option to remain. One benefit of non-point to point source trading is new or expanding wastewater treatment facilities may have more trading partners in the vicinity. Second, non-point source reductions have been shown to improve water quality, and the MPCA sees a benefit to Permittees in smaller watersheds using non-point BMPs to offset increases in phosphorus. Finally, the intent of Pre-TMDL Phosphorus Trading is for Permittees to seek out trading partners and present options to the MPCA. The MPCA believes that Permittees negotiating with local non-point sources will insure the best reduction at the lowest cost. To address MCEA's concerns, the document now states on page 2, "MPCA staff will also consider proposals for trades between non-point sources (agricultural operations, stormwater discharges and other non-point sources) and point sources. Be aware, however, that this guidance mainly addresses point source dischargers with NPDES permits and that point to non-point source trades may involve a higher trade ratio to account for the variability of non-point source reductions".

6. The guidance should be clarified to require dischargers that are expanding their phosphorus discharge, but are still considered *de minimus* (discharge less than 1,800 pounds per year), to trade phosphorus credits to sufficiently cover additional phosphorus.

MPCA RESPONSE: MPCA's Citizen's Board recently approved the adoption of the proposed Minn. R. 7050 and 7053 (promulgation will occur after EPA review and approval and Notice of Adoption). Minn. R. 7053 incorporates parts of the NPDES Permitting Phosphorus Strategy (2000) into rule, specifically the 1.0 mg/L phosphorus limit for new and/or expanding facilities over the *de minimis* criteria. To a large extent, the proposed extension of the phosphorus limit is already being implemented under the Strategy. The basis for the proposed *de minimis* loading of 1,800 pounds per year, below which the proposed 1 mg/L limit does not apply; is discussed in the Strategy documents (www.pca.state.mn.us/water/phosphorus.html). A wastewater treatment plant discharging 200,000 gallons per day at a typical effluent phosphorus concentration of 3 mg/L will discharge about 1,800 pounds in a year. This size plant is typical for a community with a population of about 2,000 people. The *de minimis* loading, however, does not apply to facilities that discharge directly to or affect a lake or reservoir. Such facilities of any size are subject to the 1 mg/L TP effluent limit as is the case now.

The MPCA believes the Strategy and proposed rules should guide the assignment of limits. In general, MPCA staff experience shows that discharges less than 1,800 lbs/year do not have a measurable impact on the environment and as a result such dischargers are not ordinarily subject to a phosphorus limit. If a measurable impact appears likely for a specific discharge upon further review, appropriate measures are considered. Therefore, the MPCA will proceed with permitting facilities in accordance with the Strategy

Ms. Kris Sigford, Water Quality Director
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and proposed rule. Pre-TMDL Phosphorus Trading will address those facilities with permitted phosphorus limits.

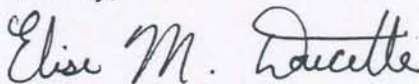
7. MCEA asked for clarification on trades that occur between permittees whose permit cycles do not coincide, specifically how the MPCA will reflect the terms of the trades in both permits.

MPCA RESPONSE: The MPCA is currently drafting permit language and permit writer guidance to address trades in individual permits for both buyers and sellers. First, the MPCA expects that both Buyers and Sellers to enter into signed, contractual Trade Agreements. The MPCA will request this document and the details and schedules of the trade will be reflected in the permit. Second, the MPCA will place enforceable phosphorus limits in permits based on trades, as well as require a "Pre-TMDL Phosphorus Trading Application to Trade Form" and a Trade Agreement 180 days prior to the discharge. If the permit requires modification based on these documents, the Permittee shall not commence discharge until the permit has been modified. Third, any modifications to an existing trade agreement must be submitted to the MPCA no later than 30 days after changes are made between the Buyer and Seller, and the "Pre-TMDL Phosphorus Trading Application to Trade Form" must also be updated and submitted within 30

days. Again, if the permit requires modification based on these documents, the Permittee shall not commence discharge until the permit has been modified. Fourth, the MPCA will require an Annual Trading Report 60 days before the end of each calendar year. This Report must include a discussion of the projected need for trading in the following year, increased flow from development or industrial users, the potential need for new or increased phosphorus trade, and other factors the Permittee must address to remain compliant with the permit and trade agreement. Finally, as a safeguard, the sellers permit will require notification to the MPCA and the buyer 180 days prior to termination of an agreement to allow time for the buyer to secure a new trade agreement with another entity. Per protocol, the MPCA will copy MCEA on all permits that include Pre-TMDL Phosphorus Trading language.

Thank you for your comments on Pre-TMDL Phosphorus Trading. The MPCA welcomes the opportunity to enhance the program based on your perspective. At the present time, the MPCA plans on presenting Pre-TMDL Phosphorus Trading as a decision item in April to the Citizen's Board. Please consult the website for specifics (<http://www.pca.state.mn.us/about/board/bdagenda.html>).

Sincerely,



Elise M. Doucette
Pre-TMDL Phosphorus Trading Coordinator
Municipal Division

EMD:jeh

cc: Bob Roche, Attorney General
Marco Graziani, MPCA

**MESERB**Minnesota Environmental Science
and Economic Review Board

Using science and economics to improve environmental regulations

RECEIVED ON

APR 03 2008

March 31, 2008

Elise Doucette, Municipal Wastewater Section
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

BY E-MAIL AND U.S. MAIL

Re: Draft Pre-TMDL Phosphorus Trading Guidance

Dear Ms. Doucette:

Thank you for the opportunity to offer the following comments on the draft pre-TMDL Trading Guidance (herein "Guidance") that you had e-mailed to MESERB staff on March 10, 2008. These comments are offered on behalf of the Minnesota Environmental Science and Economic Review Board (MESERB), a joint powers board of cities, public utilities commissions, and sanitary sewer districts dedicated to ensuring that regulations affecting wastewater treatment are reasonable and based on sound science. MESERB's members represent over half a million Minnesotans, and almost 160 million gallons per day of wastewater treatment capacity.

For ease of use, these comments are organized in the order in which the questions are presented in the draft Guidance. I would also refer you to MESERB's Statement of Position on water quality trading, available on MESERB's website at <http://www.meserb.org>.

1. What is Pre-TMDL Phosphorus Trading?

The description itself appears to be in order, but two considerations are missing. First, trading should not be limited to phosphorus – trading of other pollutants should also be allowed. Second, trading should not be limited to addressing impaired waters. So long as water quality standards are met, trading should be allowed wherever necessary to accommodate growth while protecting water quality.

Some of these issues are being addressed through the development of a water quality trading rule, a process in which MESERB is participating, but we do not wish to lose sight of these issues as this Guidance and the rule move towards adoption. The Guidance should, at minimum, contain a short explanation why the above considerations have been excluded.

2. What is phosphorus trading?

No comments.

3. Does the federal government allow Pre-TMDL Phosphorus Trading?

The discussion regarding anti-backsliding seems out of place. Anti-backsliding only applies where an existing permit limit is being made less restrictive. If a limit is not yet in the permit (as will often be the case for phosphorus pre-TMDL), there is no limit to backslide from. The MPCA should clarify why this provision is relevant in this instance. Further, with regard to the last paragraph in this section, the *Annandale/Maple Lake* case dealt with the federal regulation 40 C.F.R. § 122.4, which deals with new discharges. This regulation does not apply to existing discharges, which are regulated under 40 C.F.R. § 122.44. Section 122.44 is at issue in a case involving the Alexandria Lake Area Sanitary District, which is pending before the Minnesota Supreme Court.

4. Who can participate in Pre-TMDL Phosphorus Trading?

See MESERB's comments under Question 1.

5. Can a facility participate in PTPT if it has a general NPDES permit?

No comments.

6. What is a "new" facility?

In light of the *Annandale/Maple Lake* case, this definition should be clarified to state that if two or more existing facilities abandon their existing permits and construct a combined treatment facility, this joint facility would not be considered a "new" facility as it only replaces two or more previously existing facilities. EPA considers that if the combined discharge remains in the same watershed, it should be considered a discharge to the same "site." For more information, please see the *amicus* brief filed by MESERB in that case.

7. What is an "expanding" facility?

The second paragraph does not appear to fit in this section.

8. What if a facility is already covered by an approved phosphorus-limiting TMDL?

The response to this question does not indicate whether a discharger who meets the conditions of an applicable phosphorus-limiting TMDL would nonetheless be able to trade. MESERB presumes the answer to this question is "yes."



May 2, 2008

Mr. David C. Lane

Environmental Coordinator, Rochester Water Reclamation Plant & MESERB President

Minnesota Environmental Science and Economic Review Board (MESERB)

525 Park Street, Suite 470

St. Paul, MN 55103

Dear Mr. Lane:

Thank you for submitting comments dated March 31, 2008, to the Minnesota Pollution Control Agency (MPCA) concerning the MPCA's Pre-TMDL (Total Maximum Daily Load) Phosphorus Trading draft guidance (guidance) dated June 21, 2007. This letter is in response to your comments. Some changes were made as you suggested and this letter provides an explanation for changes that were not made at this time.

1. MESERB requested the description of trading include other pollutants and not be limited to addressing impaired waters. MESERB also believes that trading should not be limited to impaired waters, and should be allowed wherever necessary to accommodate growth while protecting water quality.

MPCA RESPONSE: Currently, the guidance will be limited to phosphorus. The guidance was designed with the Lake Pepin excess nutrient impairment in mind. However, the MPCA will entertain trades as proposed by outside parties. The MPCA is also in the process of drafting Water Quality Trading Rules that will address other pollutants, as stated in the MESERB comment letter. The MPCA will revise the trading policy as requested by MESERB, and will state:

"This guidance was designed with the Lake Pepin excess nutrient impairment in mind. However, the MPCA has issued permits with trades in the past, such as Rahr Malting, Southern Minnesota Sugar Beet Cooperative and the Minnesota River Basin Permit. Should a Permittee request a trade to address another type of impairment or to maintain water quality in an unimpaired waterbody, the MPCA will review the proposal on a case-by-case basis. This document is designed for facilities upstream of a nutrient impairment interested in trading phosphorus, but it may be used to guide other trades. Currently, the MPCA is working on Water Quality Trading Rules that will regulate trades in the State and will override this guidance upon completion."

2. MESERB requested clarification on the reference to backsliding in question #3 in the guidance and stated that anti-backsliding only applies where an existing permit limit is being made less restrictive. If a limit is not in the permit, then there is no limit from which to backslide. Second, MESERB requested clarification on the regulations addressing new and existing dischargers, and stated that the Annandale/Maple Lake case dealt with the federal regulation 40 CFR 122.4 which deals with new discharges and not existing discharges, which are regulated under 40 CFR 122.44.

MPCA RESPONSE: The language concerning backsliding was taken directly from EPA's Water Quality Trading Policy Statement (2003). The language was included to help interested parties realize that by becoming a buyer and/or a seller, they are not restricting themselves to a lower limit upon expiration of the trade agreement. For example, if a facility agrees to 'sell' 100 kg/year to another facility, the permit will reflect this reduction. If the trade were to be terminated, the 'seller's' limit would return to the previously authorized level. The MPCA will clarify this in the guidance.

As MESERB observes, there are two separate federal regulations that address 'new' and 'existing' dischargers. However, MPCA's proposed Pre-TMDL Phosphorus Trading framework is applicable to both new and existing facilities. Existing facilities also have an option to accept a pollutant loading cap based on permitted pre-expansion pollutant loads. The MPCA has designed Pre-TMDL Phosphorus Trading Policy in accordance with the Annandale/Maple Lake decision.

3. MESERB requested clarification and a broadening of the definition of 'new' facility in light of the Annandale/Maple Lake decision and the *amicus* brief filed by MESERB in this case.

MPCA RESPONSE: Thank you for the comment. MPCA will continue to use the federal definition of "new" as referenced in 40 CFR 122.

4. MESERB inquired if a discharge that met the conditions of an applicable phosphorus-limiting TMDL would nonetheless be able to trade, and presumed the answer was "yes".

MPCA RESPONSE: Water quality trading could be a useful tool for TMDL implementation provided that it is consistent with the TMDL's assumptions and requirements. TMDL trading will be addressed in the upcoming Water Quality Trading rules.

5. MESERB expressed hope that the Water Quality Trading Rules would guide the limit calculation process.

MPCA RESPONSE: Marco Graziani, MPCA staff assigned to drafting the Water Quality Trading Rules, is involved with the Pre-TMDL Phosphorus Trading limit calculation process. Therefore, information garnished from Stakeholders in that process are being addressed. Because Pre-TMDL Phosphorus Trading will only apply to trades between point sources, limits will be specific to the NPDES permits involved in the trades. The guidance establishes geographic limitations and trade ratios based on the relative hydrologic position of the trading partners and the targeted waterbody.

6. MESERB commented that, if a buyer were downstream from a seller but in close proximity and with no substantial loss of phosphorus between the discharge locations, that a trade ratio of less than 1.4 would be appropriate.

MPCA RESPONSE: The MPCA will treat each trade on a case-by-case basis. If the buyer is downstream of the seller, but can demonstrate no substantial loss of phosphorus between the two, then the MPCA would review the lower trade ratio.

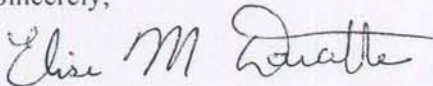
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7. MESERB requested clarification that if more than two dischargers engage in a trade (such as a trade association), violations would be levied against those individual participants who violated their permit conditions.

MPCA RESPONSE: The MPCA will enforce permit terms, as stated in the guidance. The MPCA's Pre-TMDL Phosphorus Trading proposal does not provide for the establishment of trade associations as specified in the Minnesota River Basin General Phosphorus permit. The process is intended to provide for temporary phosphorus load trades pending the development of a TMDL rather than long term trading arrangements for TMDL implementation. Each participant's permit will be modified to reflect the specific limit based on a trade agreement and any permit violation could result in enforcement action.

Thank you for your comments on Pre-TMDL Phosphorus Trading. The MPCA welcomes the opportunity to enhance the program based on your perspective. At the present time, the MPCA plans on presenting Pre-TMDL Phosphorus Trading as a decision item on May 20 to the Citizen's Board. Please consult the website for specifics (<http://www.pca.state.mn.us/about/board/bdagenda.html>).

Sincerely,



Elise M. Doucette
Pre-TMDL Phosphorus Trading Coordinator
Municipal Division

EMD:jeh

cc: Steven W. Nyhus, Flaherty & Hood, P.A.
John C. Hall, Hall & Associates
Bob Roche, Attorney General
Gene Soderbeck, MPCA



**Minnesota Pollution
Control Agency**

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Pre-Total Maximum Daily Load Phosphorus Trading Permitting Strategy

Background

Under federal law, the Minnesota Pollution Control Agency (MPCA) cannot issue a permit to a new source or new discharger if the discharge will cause or contribute to a violation of water quality standards (40 C.F.R. § 122.4(i)). Under federal law, if an existing discharge has the reasonable potential to cause or contribute to a violation of water quality standards, then MPCA must include specific controls in the permit for the pollutant of concern (40 C.F.R. § 122.44(d)(1)). In order to demonstrate that a discharge will not cause or contribute or that the discharge does not have the reasonable potential to cause or contribute to a nutrient impairment in a receiving water, a wastewater treatment facility (WWTF) will need to either discharge at or below the water quality based lake/reservoir phosphorus standard (discussed below) or assure that the discharge will not result in additional authorized mass phosphorus loading to the impaired water. Many municipal WWTFs will have difficulty discharging at or below the phosphorus water quality standard. Both the U.S. Environmental Protection Agency (EPA) and the Minnesota Supreme Court have concluded that Pre-Total Maximum Daily Loads (TMDLs) Phosphorus Trading (PTPT) may be an appropriate tool to ensure that discharges to impaired waters do not violate the above-referenced requirements. Without a strategy to deal with this issue, proposed wastewater treatment plant improvements that are needed to protect our environment could be delayed for many years until TMDLs are completed and approved by EPA.

Purpose

The purpose of PTPT is to develop a consistent framework for developing phosphorus trades in permits for new or expanding WWTFs that discharge upstream of waters impaired for excess nutrients. PTPT is a permitting strategy that will assure a net decrease in the allowable mass of phosphorus that may be legally discharged. If a dissolved oxygen impairment exists downstream of a new or expanding facility, trading may be an option, but not necessarily within the framework offered by PTPT. Discharges to dissolved oxygen impairments will be reviewed separately.

PTPT is temporary. An EPA-approved TMDL will include individual wasteload allocations for any significant National Pollutant Discharge Elimination System (NPDES) permits, which will subsequently be modified or reissued to incorporate the assumptions and requirements of the TMDL. Phosphorus trading may be a viable management tool for achieving the pollutant reduction goals specified in TMDLs that require point source phosphorus reductions. The need for PTPT permit conditions to be eliminated or modified will be addressed through permit modification or reissuance following the completion of the relevant TMDL. PTPT is not intended to be a rule and does not create any rights, substantive, or procedural. The MPCA reserves the right to act at variance with PTPT based on the unique facts of any given permit.

Federal EPA Trading requirements

The EPA's Water Quality Trading Policy (January 13, 2003) supports Pre-TMDL pollutant trading to achieve progress towards, or attainment of, water quality standards. PTPT is consistent with EPA's trading policy. EPA's policy describes various requirements of the Clean Water Act (CWA) and implementing regulations that are relevant to water quality trading, including: requirements to obtain permits (Sections 402 and 404), antidegradation provisions (Section 303(d)(4) and Section 402(o)), the development of water quality standards including antidegradation policy (Section 303(c)), federal NPDES permit regulations (40 CFR Parts 122, 123 and 124), TMDLs (Section 303d(1)) and water quality management plans (40 CFR Part 130). These CWA provisions and regulations contain legally binding requirements. EPA's policy and PTPT do not substitute for those provisions or requirements. When EPA makes a decision with regard to any particular permit that includes provisions for trading to occur, it makes each decision on a case-by-case basis guided by the applicable requirements of the CWA and implementing regulations and the specific facts and circumstances involved. The MPCA will administer PTPT in this same manner. View EPA's Trading Policy at: <http://www.epa.gov/owow/watershed/trading/finalpolicy2003.pdf>.

Participants

Participants include new and expanding WWTFs and their trading partners whose discharges contain phosphorus and who are located upstream of a phosphorus-related water quality impairment where a TMDL is not yet complete. WWTFs include municipal and industrial point source NPDES permit holders. As an example, PTPT can be used by new or expanding phosphorus dischargers upstream of Lake Pepin (at Mississippi River at river mile 763) because Lake Pepin is listed as impaired for excess nutrients and a TMDL is not yet completed. All WWTFs that discharge to surface waters within the following basins are upstream of Lake Pepin: Upper Mississippi River Basin, Minnesota River Basin, and St. Croix River Basin. In addition, WWTFs that discharge within the following two major watersheds of the Lower Mississippi Basin are upstream of Lake Pepin: Mississippi River Watershed (Red Wing and Lake Pepin) and the Cannon River Watershed. PTPT guidelines described here do not apply to non-point source trades. MPCA staff will consider proposals for trades between non-point sources (agricultural operations, stormwater discharges and other non-point sources) and point sources on a case-by-case basis.

For the purposes of PTPT, the EPA's definition of a "new discharger" is used. A "new discharger" is defined as any building, structure, facility, or installation from which there is or may be a discharge of pollutants, specifically phosphorus, and which has never received a NPDES permit. For existing straight pipe communities, pre-NPDES conditions will be considered when establishing baseline conditions.

For the purposes of PTPT, an expanding WWTF is an NPDES discharger that wishes to increase its phosphorus discharge on or after the date the affected nutrient impaired water body is listed on an EPA approved 303 (d) list of impaired waters. For example, Lake Pepin was listed as impaired for excess nutrients in the 2002 Final TMDL List of Impaired Waters approved by the EPA on January 22, 2003. Therefore, any WWTF that exists today upstream of Lake Pepin and wishes to expand would be required to meet the Board-approved Phosphorus Strategy (which will be substituted with Minn. R. 7053 once approved by EPA) and prove no net increase in phosphorus over the current permitted load to Lake Pepin. One way to accomplish this is participation in PTPT. However, PTPT is not the only permitting option for existing dischargers that wish to expand. An existing WWTF can accept a phosphorus mass cap which ensures that the expansion does not result in any additional allowable phosphorus loading to surface waters upstream of an impairment. Such a facility would be able to receive an NPDES permit without participating in PTPT. Many expanding WWTFs will be able to provide phosphorus treatment to assure no net increase in the allowable mass of phosphorus discharged. PTPT offers another option for demonstrating no net increase in allowable phosphorus mass discharged upstream of an impaired water.

PTPT is voluntary. WWTFs interested in receiving NPDES permit prior to completion of the applicable TMDL may choose to participate in PTPT. Alternatively, new WWTFs have the option of waiting for completion of the applicable TMDL before getting their NPDES permits. Expanding WWTFs may be able to delay their expansion until completion of a TMDL. Once a TMDL is complete, it would provide the basis for assigning effluent limits for any such WWTFs. In some situations, new or expanding WWTFs may also have the option of sub-surface discharges, spray irrigation, or connecting to a neighboring facility.

Water Quality Standards for Lakes and Reservoirs

Upon EPA approval of the December 18, 2007, Board-approved Amendments to Minn. R. 7050 and 7053, new and expanding WWTFs with effluent pollutant concentrations less than the respective nutrient impaired lake or reservoir water quality standards listed below will not need to participate in PTPT.

Ecoregion and Lake Type Units	Total Phosphorus µg/L (ppb)	Total Phosphorus mg/L
Northern Lakes and Forests		
- Lake trout lakes	12	0.012
- Stream trout lakes	20	0.02
- Deep and shallow lakes	30	0.03
North Central Hardwood Forest		
- Stream trout lakes	20	0.02
- Deep lakes	40	0.04
- Shallow lakes	60	0.06
Western Corn Belt Plains and Northern Glaciated Plains		
- Deep lakes	65	0.065
- Shallow lakes	90	0.09

ug/L = Micrograms per Liter

mg/L = milligrams per liter

ppb = parts per billion

Facilities that have the potential for their effluent phosphorus concentration to be below the phosphorus lakes and reservoir standards include:

- Noncontact cooling water with no chemical additives; or
- Facilities where source water is primarily ground water (i.e., ground-water pumpouts and mine dewatering).

New and expanding industrial WWTFs not listed above will be required to submit a Total Composition Report. This report shall list all chemical additives that are present in the wastewater, including non-hazardous or inert ingredients and phosphorus content. This report will be used to calculate the concentration of phosphorus in the discharge. The MPCA will use Maximum Daily Design Flow in calculating the projected phosphorus loading. If the facility is unable to reduce the concentration below the water quality standard, the facility will be required to address no net increase in phosphorus.

New and expanding WWTFs that do not fit the aforementioned criteria will be allowed to participate in PTPT and trade phosphorus loading to assure no net increase in the allowable mass of phosphorus discharged upstream of the nutrient impaired water. This includes WWTFs that have been determined to be *de minimus* (discharge less than 1800 pounds per year) and therefore not subject to a concentration limit of 1.0 mg/L per Minn. R. 7053.

Phosphorus Trading

Trading is the temporary transfer of a portion of one WWTF's (seller's) NPDES permitted phosphorus *mass limit* to another WWTF's (buyer's) NPDES permit. Because the TMDL is not complete, it is not possible to identify any geographical discounts which would reflect how much of the phosphorus discharged would actually affect the nutrient impaired water nor is it possible for potential discounts that would occur because of the proximity of the buyer to the seller. Therefore, PTPT will take a conservative approach and require a pound of phosphorus discharged by the buyer to be offset by a pound of phosphorus removed from the seller. In addition, a trade ratio will be added to the transaction to assure a net aggregate reduction.

The first step in the trading process is for the interested parties to submit to the MPCA a completed PTPT *Application to Trade* form (wq-tp2-01.doc, found at www.pca.state.mn.us/water/tmdl/ptpt.html). The *Application to Trade* form specifies the mass of phosphorus that is being traded and the effective period of the trade. At a minimum, trading partners must be established prior to initiation of operation.

The following definitions refer to trading calculations:

“Buyer’s Baseline” is the phosphorus mass limit at the facility wishing to build a new facility or expanding an existing one. In the case of a new facility, the baseline for trading will be zero to insure no net increase. For an expanding facility, the Baseline is the phosphorus mass discharged prior to the expansion based on the facility’s permitted Average Wet Weather Design Flow and phosphorus concentration limit for municipal dischargers. The Baseline for Industrial dischargers is based on the Maximum Daily Design Flow and the facility’s phosphorus concentration limit.

“Seller’s Baseline” is the current phosphorus mass limit in the seller’s permit prior to the trade. The Baseline for municipal dischargers is calculated from the facility’s permitted Average Wet Weather Design Flow and the facility’s phosphorus concentration limit. For industrial dischargers, the Baseline is based on the Maximum Daily Design Flow and the facility’s phosphorus concentration limit.

“Trade Ratio” is a factor that requires buyers in a phosphorus trade to purchase a specified mass of phosphorus that has been adjusted to provide a margin of safety and contribute toward water quality improvement. Buyers cannot use this purchased phosphorus mass to increase their own permit limit.

Trade Ratios

Each trade is subject to a trade ratio which is intended to account for uncertainty and provide a water quality benefit. The trade ratio specifies an additional percentage of the load which the buyer is required to purchase but which may not be used to increase the buyers permit limit. Expanding dischargers are subject to a minimum trade ratio of 1.1 to 1 (10 percent of the traded load). New dischargers are subject to a minimum trade ratio of 1.2 to 1 (20 percent of the traded load). If the proposed trade crosses a major watershed boundary and the buyer is closer to the impairment than the seller, the buyer is subject to a trade ratio of 1.4 to 1 (40 percent of the traded load).

NPDES Permit Notification

The phosphorus trade is implemented through each WWTF's individual NPDES permit. The buyer's phosphorus mass limit will be adjusted upwards and the seller's phosphorus mass limit will be adjusted downwards in proportion to the extent of the trade. The NPDES permit issued to the buyer, or new or expanding WWTF, will be subject to public notification. This notification includes the public notice document, which will include the trading partners, impairment of concern, and explain the baseline and trade calculations. A minor modification of the seller's permit will be completed to reflect the change. The permit for both facilities will contain monitoring to assure accountability. The trade is not effective until it is reflected in the WWTF's NPDES permit. Adjusted mass limits apply to both the buyer's and seller's discharge, in addition to any other phosphorus limits that may be applicable to the WWTF, for example, a concentration limit. Once the period of the trade ends, each WWTF's phosphorus permit limit reverts to its original value. Once the applicable TMDL implementation plan is complete, each WWTF will be required to comply with the TMDL waste load allocation. Post-TMDL pollutant trading may still be a viable option for a facility to meet its regulatory obligations, but will occur within the TMDL framework.

Only WWTFs with effluent phosphorus limits are eligible to participate in Pre-TMDL Phosphorus Trading as sellers. WWTFs willing to accept a phosphorus limit in an existing permit can choose to be sellers.

Geographic Restrictions and Associated Trade Ratios

Both parties' effluent discharge must be upstream of the applicable impaired water body. The MPCA will not approve trades where a nutrient impaired water is located between an upstream buyer and a downstream seller. The following options give permittees direction in determining trading partners.

Option 1: Buyer and seller are both in the same major watershed

Option 2: Buyer and seller are in different major watersheds, but in the same basin and the seller is closer, in river miles, to the impaired water than the buyer

Both of the above options would result in a trade ratio of 1.2 to 1 for new facilities and 1.1 to 1 for expanding facilities.

Option 3: Trading is between different major watersheds in the same basin and the buyer is closer, in river miles, to the impaired water than the seller. Option 3 would result in a trade ratio of 1.4 to 1.

If trading partners believe they have a viable option that is protective of downstream waters but differs from those listed above, the MPCA will review proposals on a case-by-case basis. The MPCA will also consider trades that involve pollutant load reductions made by non-point sources (agricultural operations, stormwater discharges, and other non-point sources), but these situations are not addressed by this PTPT proposal and would require additional review.

Mass Discharge Limits

PTPT phosphorus mass discharge limits are calculated as follows:

Limit Calculation For Buyers: In PTPT, a buyer is required to obtain a phosphorus mass discharge that is equal to its anticipated phosphorus mass loading (new facility's "baseline") or current phosphorus mass loading plus a phosphorus increase based on an expansion (existing facility's "baseline") in addition to an adjustment based on the applicable trade ratio. The limit assigned in the permit is based on the amount needed by the buyer, but does not include the trade ratio adjustment. The phosphorus removed by applying the trade ratio is an overall reduction in the phosphorus mass cap to the impaired waterbody.

As an example trade, if a new buyer (with an initial permitted limit of zero phosphorus mass) wishes to receive a PTPT phosphorus mass limit of 100 Kilograms per year (kg/year), it must purchase 120 kg/year from the seller. In this trade, 100 kg/year of phosphorus transfers to the buyer's limit and 20 kg/year of phosphorus cannot be used by either party.

Limit Calculation For Sellers: The seller's PTPT phosphorus mass discharge limit is equal to its current NPDES-permitted mass limit ("Baseline"), minus the mass of phosphorus that it has sold through trading. Again, the trade ratio adjustment is not included in the limit, but is an overall reduction in the phosphorus mass cap to the impaired waterbody.

As an example:

New WWTF Phosphorus discharge limit (kg/year)	New WWTF wishes to discharge (kg/year):	Trade Ratio	New WWTF must purchase (kg/year)	New WWTF NPDES permitted limit based on trade (kg/year)	Downward Adjustment to Seller's NPDES Phosphorus Limit (kg/year)
0	100	1.2	120	100	120

Another example:

Existing WWTF permitted limit (kg/year)	Expansion of WWTF discharge requires additional loading of (kg/year):	Buyer Trade Ratio	Existing WWTF must purchase (kg/year)	Modified NPDES permitted limit based on trade (kg/year)	Downward Adjustment to Seller's NPDES Phosphorus Limit (kg/year)
1000	100	1.1	110	1100	110

Trade Agreements

The term of the trade is determined by each trade agreement. A trade can last as long as the trading partners agree to trade. The MPCA anticipates trades of at least five years to match the NPDES permit cycle. A trade is not effective until its terms are implemented through the WWTF's respective NPDES permits. The trade will remain in effect for the life of the permit unless the permit is modified to reflect the waste load allocation consistent with an EPA approved TMDL. After the TMDL for the affected impaired water body is approved by EPA, the MPCA will modify NPDES permits to replace PTPT provisions with requirements consistent with the waste load allocations of the applicable final TMDL.

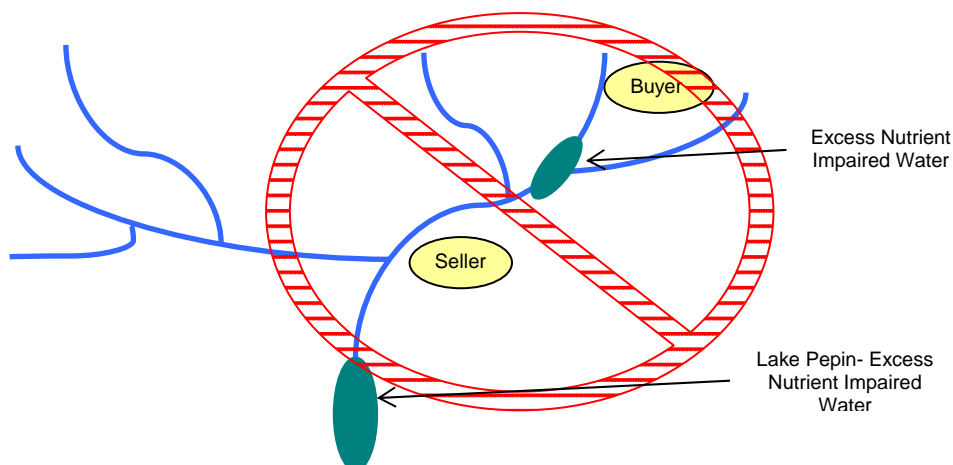
WWTFs can sell as much as they want as long as they remain in compliance with the modified permit limit. Because the modified permit limits will be enforceable, buyers and sellers should be conservative in determining how much phosphorus they need and can sell in order to comply with their respective permit limits. The MPCA will take appropriate enforcement action against any violation of any permit provision.

Restrictions

Trading cannot be used to meet technology-based effluent limitations. Also, trades will not be allowed if the trade itself would cause or contribute to a water quality impairment and trades must not adversely affect water quality at an intake for drinking water supply. In accordance with the Minnesota Supreme Court's decision in the Annandale/Maple Lake matter, the MPCA will utilize PTPT in a manner that ensures that point source discharges do not cause or contribute to violations of water quality standards.

Impaired Water Bodies

PTPT is not intended to address multiple impaired water bodies. PTPT is therefore limited to buyers and sellers upstream of the closest nutrient impaired water body. For example, if a facility discharges phosphorus upstream of Lake Pepin but also contributes to the impairment of a closer nutrient impaired lake, PTPT will not authorize the purchase of phosphorus credits from a WWTF located downstream of the closest impairment. Assuming localized impacts can be avoided, the WWTF would however be authorized to purchase phosphorus credits from another WWTF located upstream of the closest downstream nutrient impaired water.



General NPDES Permits

General NPDES permits cannot accommodate the facility-specific requirements necessary to implement PTPT. This includes process specific general permits, such as industrial byproducts or ponds, not basin-wide general permits, such as the Minnesota River Basin General Phosphorus Permit. If a WWTF currently has a General NPDES permit and wishes to sell phosphorus credits, the facility must apply for an individual NPDES permit.

Existing TMDLs

Discharges whose permit requirements satisfy phosphorus waste load allocations contained in an EPA approved TMDL must comply with their permit requirements.

Pollutants

PTPT is limited to phosphorus trades.