



Summary of the
3rd Water Quality Pollutant Trading
Advisory Committee Meeting
Dakota Lodge, West St. Paul
July 17th 2007
9:30 am - 2:30 pm

Greetings. Thanks to all of you who were able to participate in the third Water Quality Trading Advisory Committee meeting.

Thirty three representatives of 22 organizations participated in the third committee meeting. The email attachment Microsoft Excel file Advisory073107.xls contains two worksheets. The worksheet titled Advisory Committee lists individuals and organizations that have agreed to participate in the process. Please check the accuracy of your contact information on the list. The worksheet titled Meeting Participants is a checklist of the individuals who participated in the meetings so far.

1. We started off reviewing the agenda for the day. The email attachment 071707.doc is a copy of the agenda.
2. The next order of business was to go around the room for introductions.
3. Next, an update on the trading implications of the Minnesota Supreme Court's recent ruling in the *Matter of the Cities of Annandale and Maple Lake NPDES/SDS Permit Issuance for the Discharge of Treated Wastewater, and Request for Contested Case Hearing*. The issue is relevant to the work of this committee because it relates to the concept of offsetting the pollutant load from one point source facility by improvements made by another point source facility. A Pre-TMDL Phosphorus Trading process developed by the MPCA in response to the Annandale/Maple Lake issue is of particularly relevant to the committee's work.

The case specific arguments considered by the courts are complex. The following summary is only intended to relate the case, and a Pre-TMDL Phosphorus Trading process that MPCA staff have developed as a result, to our water quality trading interests. For a detailed review of the rulings links are provided below.

In summary, the cities of Annandale and Maple Lake proposed the construction of a new wastewater treatment facility which would discharge to a tributary of the North Fork of the Crow River watershed. The Crow River is a tributary to the Mississippi River upstream of Lake Pepin, a nutrient impaired lake. The MPCA issued an NPDES/SDS permit for the new facility on September 30th 2004. The Minnesota Center for Environmental Advocacy (MCEA) challenged the MPCA's decision to issue the permit and, on August 9th 2005, the Court of Appeals reversed the MPCA's permit issuance. The case was appealed to the Supreme Court which reversed the appellate court's decision on May 17th 2007 and reinstated the permit.

The MCEA's challenge to the permit was in part based on the provisions of 40 C.F.R. § 122.4(i) (2004), which states that *"a National Pollutant Discharge Elimination System (NPDES) permit may not be issued for a new source when its discharge will cause or contribute to the impairment of waters with impaired status under the Clean Water Act"*¹.

The MPCA had issued the permit based, in part, on consideration of *"... a finding that, when operated at capacity, the proposed plant would increase phosphorus discharge to the North Fork by approximately 2,200 pounds annually over that which is discharged by Maple Lake's existing plant. But the MPCA found that this increase in phosphorus discharge would be offset by an approximate 53,500-pound reduction in phosphorus discharge to the North Fork due to upgrades to the Litchfield wastewater treatment plant. Accordingly, the MPCA concluded that "[b]ecause of the net reduction in the watershed, the proposed joint Annandale/Maple Lake facility will not contribute to water quality standards violations in Lake Pepin."*².

Note that the MPCA based its decision on the finding that the phosphorus reductions achieved by the upgrade of city of Litchfield's wastewater treatment facility "offset" the increase in phosphorus by the proposed Annandale/Maple Lake wastewater treatment facility. No specific trading relationship existed between the two sources.

The Court of Appeals reversed the MPCA's permit issuance because it found that *"Because the discharge from the Cities' proposed plant would contribute to the impairment of Section 303(d) waters, the PCA erred by issuing a permit in violation of 40 C.F.R. § 122.4(i) (2004)."*¹

The Supreme Court reinstated the permit because it found that *"The MPCA's interpretation of 40 C.F.R. § 122.4(i) as allowing offsets from another source in determining whether a new source will cause or contribute to the violation of water quality standards is reasonable; therefore, deference should be given to the MPCA's interpretation and the agency's interpretation should be upheld."*²

Significantly, the Supreme Court's majority opinion concluded that the MPCA's *"... interpretation of 40 C.F.R. § 122.4(i) to allow offsets from another source in determining whether a new source will cause or contribute to the violation of water quality standards is reasonable"* and that *"... reasonableness is necessarily determined using a case-by-case inquiry, our opinion does not authorize, much less invite, the MPCA to interpret 40*

¹ State of Minnesota In Court of Appeals, A04-2033, In the Matter of the Cities of Annandale and Maple Lake NPDES/SDS Permit Issuance for the Discharge of Treated Wastewater, and Request for Contested Case Hearing, Filed August 9, 2005. <http://www.lawlibrary.state.mn.us/archive/ctappub/0508/opa042033-0809.htm>

² State of Minnesota In Supreme Court, A04-2033, In the Matter of the Cities of Annandale and Maple Lake NPDES/SDS Permit Issuance for the Discharge of Treated Wastewater, and Request for Contested Case Hearing, Filed May 17, 2007. <http://www.lawlibrary.state.mn.us/archive/supct/0705/opa042033-0517.htm>

C.F.R. § 122.4(i) to allow discharge permits in cases involving offsets that are remote in either time or place”.

As a result of the Court of Appeals’ ruling, with few exceptions, the MPCA did not issue permits for new or expanding point source discharges in the Lake Pepin watershed from August of 2005 to May of 2007. During this interval MPCA staff developed a Pre-TMDL Phosphorus Trading process to address the issue of new and expanding point sources prior to the development of a TMDL for an excess nutrient impairment. Although the Supreme Court ruled that it was reasonable for the MPCA to determine that increased pollutant loadings from one facility would not contribute to water quality standards violations if they are “offset” by pollutant reductions by another facility, the MPCA has now determined that it will employ a procedure that is more closely associated with water quality trading.

Details of the proposed Pre-TMDL Phosphorus Trading guidance are available on the MPCA’s website at the following URL: <http://www.pca.state.mn.us/water/tmdl/ptpt.html>. MPCA staff plan to present the draft Pre-TMDL Phosphorus Trading proposal and solicit comments at the July 24th, 2007 MPCA Citizens’ Board meeting but the meeting was cancelled. The draft proposal will be presented as an informational item at the August 28th, 2007 MPCA Board meeting and the Board’s approval will be sought at the October 23rd, 2007 meeting. In the interim, MPCA staff intend to test the draft Pre-TMDL Phosphorus Trading guidance.

The following are a few relevant issues to consider while reviewing the proposal:

- ⇒ Pre-TMDL Phosphorus Trading is a point source/point source trading system that is only applicable before the development of the relevant phosphorus related TMDL. The TMDL will establish waste load allocations for each point source facility in the watershed and Pre-TMDL Trading will no longer be applicable.
- ⇒ The MPCA encourages and will consider proposals for point/non-point trading but they are not subject to the process described in the Pre-TMDL Phosphorus Trading guidance.
- ⇒ Pre-TMDL Phosphorus Trading involves the establishment of direct trading relationships between point source buyers and sellers. The sellers’ permits must contain effluent limitations for phosphorus which establish the baselines for credit generation.
- ⇒ Pre-TMDL Phosphorus Trading is an exchange of credits based phosphorus loads that are currently authorized by NPDES/SDS permit effluent limitations. A direct linkage is established between the buyer’s and the seller’s permits. The phosphorus load traded is subtracted from the seller’s effluent limit and transferred to the buyer’s effluent limit. Taking trade ratios into account, each trade will result in a net decrease in the authorized (permitted) phosphorus load to the impaired water.

4. The next item on the agenda was the completion of the stakeholder’s goals for the Water Quality Trading rule that was initiated at our first meeting in February. Barb helped us review and update the results of the original exercise. It is likely that these

concepts will be further refined as we continue to learn more about how to apply Water Quality Trading concepts in Minnesota. During the first meeting in February we also developed a list of questions about water quality trading. The current iteration of those questions are listed below. Some of these were taken from our previous goals exercise (they seemed to fit the question category better than the goal category), others were added at our July meeting. I hope to be able to use these questions and principles to guide our efforts and test our progress with the development of the rule.

Questions to answer with project:

- A. What is the purpose of considering pollutant trading? What is the value in doing it?
- B. What is included in our vision of water quality credit trading – Who are the constituents? What part(s) of the state?
- C. Can markets address the water quality issue?
- D. Why are we talking about trade credits prior to setting the TMDL?
- E. Who will oversee the trading system(s)?
- F. How to develop a trading system that goes beyond individual trading permits?
- G. How to address the controversial topics and issues?
- H. How to allow room in this process for “eco-access process”?
- I. How do we deal with the interface between point and non-point sources?
- J. Will we deal with credits on land acquisition?
- K. How does the rule/consortium handle *perceptions* of water quality credit trading?
- L. Can mine land restoration be considered a credit?*
- M. Are we getting into discharges having “real property” in their loads?*
- N. How much of a market-based system is it?***
- O. Do we care about how much money people make?***
- P. How to address wetland banking?***
- Q. Can we leverage federal funds for this?***

* added from goals discussion

** added at July 17, 2007 meeting

The goals exercise involved breaking up into small groups to address the following questions:

- ⇒ What do you want to accomplish with Water Quality Credit Trading?
- ⇒ What will this process accomplish?
- ⇒ What will the product look like?
- ⇒ How will Water Quality Credit Trading operate?

The whole group then discussed the resulting answers and grouped them into categories. The following table summarizes the current status of the goals exercise.



Water Quality Credit Trading		Goals			July 19, 2007
A. Program economics (Discuss and define in future meetings)	B. Benefits water quality	C. Program mechanics: simplicity, flexibility, equity, efficiency, efficacy	D. Program is attractive to participants	E. Verifiable: accountability, transparency, enforceability	
<ul style="list-style-type: none"> Nobody gets rich off trading (water quality improves) (no one gets poor). Water quality, not economic benefits, is the goal. Market-driven Incentives for landowners to change from polluting activities to putting land into forests Reduce costs of achieving standards Funding source does not limit incentives Incentives drive the best things possible to happen Reward high stewardship for improving practices and still be valuable to the market: Establish balance between improving practices and market value. Dollar value added for BMPs (or changing land use) Supply and demand are plentiful Affordable water quality attainment Currency that's fluid among economic sectors Low-cost solution or process to improve water quality Reward early adopters and late adopters (over baselines, above and beyond) Efficient and functional market Equitable tool for watershed management Program economics needs to include program sustainability: monitoring, administration, brokers vs. aggregators Program economics needs to discuss prioritization of the program 	<ul style="list-style-type: none"> Water quality is overarching. Keywords are: <ul style="list-style-type: none"> <i>improvement</i> (by definition we're talking impaired waters) <i>additionality</i> (credits are for actions beyond what is otherwise required) <i>equivalence</i> (impacts to receiving waters of a trade must be equivalent about – for example, SRP in low flow is different from TP in high flow) Want water quality to improve Net improvement of water quality Restore water quality and habitat to historic standards (~ 300 years ago) Repair waters and prevent further impairments and allow for further growth and development Want to <i>see</i> results – non-trivial Focus on pollution prevention to reduce pollutants to trade Capture multiple cross-parameter benefits wherever possible Intra-watershed water quality trading should not lead to the impairment of currently unimpaired waters within that watershed. <i>(added after meeting)</i> 	<ul style="list-style-type: none"> Program needs to be dynamic and flexible for technology change and ecological understanding Like a free market system with government oversight to ensure everybody plays by the rules with practice verified Simplify the rules to reduce administrative costs Set up program that allows for "credits" to go toward environmental improvements, for example, portion of profits from trades going toward established management program <i>Fair</i> regulatory backbone Tie to <i>local</i> activities Make the administration, including cost, manageable Rules need to be clear enough that the market will work Flexibility for future emerging contaminants Establish an adaptive management process; continuous monitoring and compliance checks and balances Want rules to be prescriptive or performance-based? Matrix or decision tree that is user friendly, combined with technical support documents that allow for transparency Make it meaningful and manageable Make it comply with federal law Expand pollutant trading beyond phosphorous trading 	<ul style="list-style-type: none"> Wildly popular and useable: marketing; practical, feasible Simple, transparent, attractive; doesn't compete with other programs Start simple – phosphorous/sediment – work out details and build on that Efficient, simple program design Want it to make sense Real trades, real often Need broadest geographical applicability An educated group that has buy-in to the final product 	<ul style="list-style-type: none"> Credits should be as long term as it lasts Make it accountable Need coordination among various stackable benefits Double benefit of the same water quality credit – shouldn't be able to do it Make it transparent Central aggregator that oversees trades, transactions, and environmental outcomes How/who (someone) is going to do long-term monitoring and finance it long term? 	

A lively discussion about program economics ensued which took us considerably beyond the timelines allotted by the meeting agenda. It was very interesting however and we discussed the need to schedule some time to discuss these economic issues further. If I may attempt to summarize, the discussion was in response to a component of the first bulleted item in column A above:

- Nobody gets rich off trading (water quality improves)

This comment raised various questions about the role of economics in our discussions and whether it is appropriate for us to meddle with the potential magnitude of profits involved. The intent of the original statement was clarified: Our goals and focus need to be about water quality outcomes rather than financial benefits. Additional time will be devoted to this issue in future meetings.

My two cents worth? Successful trading programs will in large part be a function of trade drivers and about supply & demand. In an oversimplified scheme, the seller will be able to generate credits more inexpensively than the buyer and will therefore create an incentive for trading. In reality however these issues will be much more complicated.

Successful trading markets are likely to be driven by tightening environmental regulations. As long as the status quo prevails it is not likely that significant trading markets will develop because point sources can achieve current effluent limitations at reasonable costs. Opportunities for marginal cost savings offered by potential trade arrangements are not likely to offset the regulatory security provided by affordable treatment technologies.

It seems probable that more restrictive environmental regulations in the future are likely to change the demand side of the equation. Treatment costs tend to increase significantly as regulations require facilities to meet very stringent effluent concentrations and TMDL based caps on watershed pollutant loads may result in restrictions on future growth and development opportunities. These factors will drive the demand for water quality trading, but they will not drive the supply. The potential for satisfactory economic gain, predictability and regulatory security are likely to be significant considerations for potential generators of tradable credits. If this is the case, it is important for us to carefully consider the economic and regulatory implications of the assumptions that go into the design of a trading program.



5. Presentation: Comparing Selected Water Quality Trading Rules and Policies.

A copy of the power point presentation is attached to the transmittal email. The following are links to the programs described in the presentation. Also included are links to Pennsylvania's nutrient trading program overview and policy. These were not part of the presentation but contain interesting elements.

Michigan Water Quality Trading:

Program Overview - http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3719-13825--00.html

Rules - http://www.state.mi.us/ort/emi/admincode.asp?AdminCode=Single&Admin_Num=32303001&Dpt=EQ&RngHigh

Oregon Water Quality Trading:

Program Overview - <http://www.deq.state.or.us/WQ/trading/trading.htm>

Internal Management Directive - <http://www.deq.state.or.us/WQ/pubs/imds/wqtrading.pdf>

Ohio Water Quality Trading:

Program Overview - http://www.epa.state.oh.us/dsw/WQ_trading/index.html

Rules - http://www.epa.state.oh.us/dsw/rules/final_WQ_trading_jan07.html

Pennsylvania Water Quality Trading:

Program Overview - <http://www.dep.state.pa.us/river/Nutrient%20Trading.htm#Background>

Policy - [http://www.dep.state.pa.us/river/Nutrient%20Trading%20Documents/Interim%20Policy%20and%20Guidelines%20\(9-22\).pdf](http://www.dep.state.pa.us/river/Nutrient%20Trading%20Documents/Interim%20Policy%20and%20Guidelines%20(9-22).pdf)

6. After lunch we broke up into small groups and discussed some of the concepts and ideas from the water quality trading programs reviewed in the presentation. The following table records and categorizes the issues that were identified:

7. The last order of business was to discuss what to do next. The following is a list of options that were discussed:

Options for next Water Quality Credit Trading meeting (from 7/17/07)

- ⇒ Scoping discussion
- ⇒ Identification of principles
 - Learned from existing programs
 - Benefits of water quality
 - Program economics
- ⇒ Policy versus rules
- ⇒ Types of trades scenarios
 - Point
 - Non-point
 - Stormwater
- ⇒ BMP load reduction models (STEPL and Region 5)

This concludes the summary of our third advisory committee meeting. Once again, thank you for your assistance with this project, I look forward to seeing you at the next meeting.

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