

# **Summary of Comments and Responses: Strategy for Addressing Phosphorus in National Pollutant Discharge Elimination System (NPDES) permits**

## **Introduction**

In fall 1999, Minnesota Pollution Control Agency (MPCA) staff held informal discussion with stakeholder groups (environmental groups, watershed organizations, cities, state agencies and internal staff) to discuss a proposed strategy and decision tree for addressing phosphorus in NPDES permits. From these discussions, the MPCA received several hundred comments on its proposed strategy and decision tree. MPCA staff read and considered all of the comments and incorporated many of them into the decision tree.

The majority of comments received related to the following topics:

1. The overall approach of the strategy
2. The need for a new decision point – significant upgrade
3. The concept of de minimus
4. Definitions of “lake” and “affects a lake”
5. Basin planning issues
6. Phosphorus limits
7. Large dischargers
8. Phosphorus management plans
9. Phosphorus and the non-degradation rule
10. Recent MPCA rulemaking

This document is a summary of the comments received, sorted by topic, and MPCA staff responses to those comments. A copy of all of the individual comments received is available from the MPCA.

## **1. Overall approach**

**Comments:** Various comments focussed on aspects of the strategy’s overall approach:

- Support for the approach as reasonable
- Concerns about fairness aspects of the strategy
- Suggestions that the strategy’s approach may be perceived as reactive and not protective enough
- Suggestions that the MPCA’s phosphorus strategy should address nonpoint as well as point sources of phosphorus

- Suggestions that the MPCA is circumventing the rulemaking process by adopting the strategy as a rule

**Response:** *Issues and knowledge related to nutrient control are rapidly changing, at both the state and federal level. Within that context, MPCA staff developed the strategy to provide a consistent framework for addressing phosphorus in NPDES permitting. By documenting the many considerations in decision-making on addressing phosphorus in permits, MPCA staff hope that all stakeholders can anticipate the expected outcomes of permit decisions regarding phosphorus.*

*By linking this strategy to basin management, MPCA staff believe that the strategy will target phosphorus protection to those areas where it is needed. As MPCA's basin management program proceeds, MPCA staff expects to see phosphorus controls increasingly targeted to the needed areas.*

*MPCA staff strongly agree that the problem of phosphorus needs to be addressed for both point and nonpoint sources. Basin management and other state and local programs have begun to address nonpoint sources of phosphorus. One important reason for developing this strategy for point sources is to have in place an accepted framework for considering phosphorus control in NPDES permits, to free up MPCA staff and stakeholder time so that other sources of phosphorus can be considered and addressed, as appropriate.*

*On the issue of circumventing the rulemaking process, MPCA staff believe that in this climate of change regarding nutrient control issues, a strategy providing a framework allows for the flexibility to adjust as knowledge and issues change. MPCA staff view the strategy and decision tree as transitional and do not expect the strategy to be in place in the long term. MPCA's strategy should be expected to change over time. In addition, it should be remembered that the strategy is a tool for implementing existing rules in a fair and consistent manner, not for developing new rules.*

## **2. Significant upgrade**

**Background:** In the decision tree as proposed, facilities that are new or expanding “trigger” additional phosphorus controls. The underlying assumption is that phosphorus controls should be required to be added when facilities have a new discharge or are already making costly changes to expand a discharge, and not with a simple permit renewal or other small permit change.

**Comments:** A number of comments focused on the issue of significant upgrade. Commenters suggested the need for an additional “trigger”—when a facility makes a significant upgrade (doing significant construction), but are not technically new or

expanding discharges. Commenters also provided examples of facility upgrades to consider as significant.

**Response:** *MPCA staff is recommending the addition of the “significant upgrade” trigger to the decision tree and have defined “significant upgrade” in Section 2 of the information packet on page 8.*

### **3. The concept of de minimus**

**Background:** De minimus is a term used to identify the level below which there are diminishing returns for applying a rule, treatment, etc. In the draft strategy, MPCA staff proposed to consider a de minimus level below which effluent phosphorus limitations would not be applied. The de minimus level proposed by MPCA staff was a flow-based level. In addition, in the proposed strategy, one year of monitoring was suggested for de minimus facilities, with the additional requirement of a Phosphorus Management Plan if monitoring levels exceeded 5 mg/L.

**Comments:** Numerous comments were received on issues relating to de minimus. Many commenters appeared to be comfortable with the concept of de minimus, but had suggestions for refining the cutoff limits, facility types, etc. Others, however, were not comfortable with “writing off” the small facilities. Specific issues raised were:

- Suggestions that a load-based calculation, rather than flow-based, might be a better way of identifying de minimus facilities
- Concerns about applying de minimus to industrial facilities, because of the lack of data on industrial facilities
- Suggestions to increase the monitoring required of de minimus facilities beyond one year, although one commenter suggested a need for flexibility on this
- Suggestions to clarify and rethink the 5 mg/L trigger
- Concerns about local impacts of de minimus facilities
- Concerns about the possible unintended consequence of a de minimus policy that may result in disincentives to system integration or facility expansions

**Response:** *On the overall concept of de minimus, MPCA staff believe that, given finite resources, phosphorus control efforts should be targeted to the sources that will result in the greatest environmental outcome. Establishing a de minimus level for facilities with relatively small impacts is critical to this targeting effort. MPCA staff also believe its strategy is not “writing off” small facilities since these facilities would have to conduct monitoring and develop phosphorus management plans if phosphorus discharges exceed a trigger level. On the issue of disincentives to system integration or expansion, MPCA staff believe that there are a number of other variables that enter into decision making on system integration and facility expansion (cost, growth, etc.), and those issues would have a greater impact on local decisions than the issue of de minimus.*

*It should also be noted that the de minimus was derived based on the relative phosphorus contribution of these small facilities at a basin-scale level. That is, facilities which would have a measurable effect on a downstream lake or reservoir based on modeling efforts specific to that local resource, would not qualify for the de minimus exception.*

*MPCA staff is recommending, however, a load-based de minimus of 1,800 pounds per year, instead of the flow-based de minimus proposed in the draft strategy. This load-based de minimus, which is similar to the de minimus level used by Wisconsin, has been incorporated into the strategy document. In addition, MPCA staff is recommending handling the issue of industrial de minimus on a case-by-case basis, because of the lack of data on these facilities. The MPCA notes that in general, MPCA staff experience shows that discharges of less than 1,800 pounds per year do not have a measurable impact on the environment and as a result such discharges will not ordinarily be subject to phosphorus limits. However, if under further review of a specific discharge a measurable impact appears likely, appropriate measures will be considered.*

*On the issue of monitoring for de minimus facilities, MPCA staff is recommending that de minimus facilities conduct five years of monitoring because the MPCA will need complete monitoring data on which to base decisions. MPCA staff is also recommending a trigger level of a 4 mg/L annual average as a reasonable trigger point for requiring phosphorus management plans for de minimus facilities.*

#### **4. Definition of “lake” and “affects a lake”**

**Background:** The strategy proposed definitions for several key concepts that affect where a facility ends up in the decision tree: how does MPCA define a lake?; how does MPCA define “affects” a lake?; and what is a “measurable” impact?

**Comments:** Many comments were provided on the proposed definitions:

- Some commenters agreed with and supported the MPCA staff concept of using residence time to define lakes. Other commenters strongly felt that navigation pools and backwaters should be considered lakes.
- A number of comments focussed on Lake Pepin in terms of “affects” a lake – some thought that all discharges upstream of Lake Pepin affected Pepin and others questioned that logic.
- Comments also indicated that there was confusion about how MPCA staff make decisions about what affects a lake.

**Response:** *MPCA staff is recommending its original proposal of using lake identification numbers coupled with residence time to distinguish between lake-type and riverine*

*navigation pools. Using residence time provides a scientific basis for making decisions on what constitutes a lake, in terms of strictly applying the monthly average of the phosphorus rule. MPCA staff also note, however, that discharges that go directly to backwater lakes in these pools could be considered direct discharges if these lakes have been defined as separate lakes and there is some demonstration that the hydrology (e.g. residence time) of the lake is substantially different from the overall pool of which it is a part. MPCA staff also recommend that a more complete assessment of the navigation pools be conducted as part of the Lower Mississippi basin planning process. Based on that assessment and the overall basin plan, MPCA staff may revisit the level of protection needed for the pools. A revised discussion of this issue is included as Section 5 of the information packet, beginning on page 19.*

*Regarding the issue of Lake Pepin, MPCA staff continue to consider Pepin a lake for purposes of applying the phosphorus effluent rule. For wastewater treatment facility discharges in the Lower Mississippi River Basin (and potentially other basins as well as more information becomes available) above Lake Pepin, the phosphorus effluent rule will be applied in terms of “affects” on Lake Pepin.*

*MPCA staff have attempted to clarify how decisions are made on what “affects a lake.” A discussion of the criteria considered in these decisions is found in Section 2 of the information packet on page 7.*

## **5. Basin planning issues**

**Background:** The proposed strategy is linked to basin planning. The presence or absence of a basin plan or strategy is a “trigger” in the decision tree in determining the type of phosphorus controls applied to facilities in that basin.

**Comments:** MPCA staff received a variety of comments relating to basin planning issues:

- Comments questioning the legal authority of basin plans to drive point source controls
- Comments expressing concern that basin plans might not be protective enough on the phosphorus issue, which would impact the phosphorus controls applied to point source facilities
- Questions about how the basin planning process works, the MPCA’s role in it, and the status of basin planning efforts
- Questions about how basin planning handles interstate concerns.

**Response:** *Basin planning is a collaborative process intended to help Minnesota focus and coordinate efforts based on clearly defined water quality priorities within each of the major basins. Key elements of this approach include integration of existing programs,*

*watershed-based permitting, identification of specific goals and priorities and greater involvement by partners and the public in management of Minnesota's water resources. Basin management looks at both point and nonpoint threats to water resources. Participation of border states and countries is included in the process; a good example of this is the interagency work being conducted for the St. Croix Basin.*

*Because basin planning is a collaborative process, there is opportunity for all interested parties to become involved in the process and to contribute to the priorities established in the basin plans. Basin plans are not laws or rules, but can be considered in the implementation of agency programs. This is consistent with the MPCA's intention in the decision tree to use basin plans as criteria to consider in addressing phosphorus controls in permits. A fact sheet on basin planning providing greater detail on the process is available from the MPCA.*

## **6. Phosphorus limits**

**Background:** MPCA staff's proposed decision tree is a framework for making decisions about the types of phosphorus controls to be applied in permits. The decision tree is not intended to identify what the actual permit limits would be, in situations where a permit limit is applied.

**Comments:** Several commenters thought that the decision tree fell short because it doesn't address what the actual permit limits would be, and they provided specific ideas for selecting limits.

**Response:** *MPCA staff view the decision tree as a consistent framework under which decisions on phosphorus control will be considered. The agency did not intend the strategy and decision tree to provide an answer on the actual permit limit to be applied. Decisions on permit limits, whether they should be caps or concentrations, are site and water-resource specific decisions that cannot be reflected in a decision tree. These decisions are made by MPCA scientists after reviewing data, considering modeling information, and applying best professional judgement.*

## **7. Large discharges**

**Background:** In the decision tree, some large discharges would not receive a phosphorus limit for a number of reasons: the facility is not new or expanding or undertaking a significant upgrade, the facility is in a basin without a basin strategy addressing phosphorus, or the facility discharges to a water resource not threatened or impacted by phosphorus.

**Comments:** Some commenters were not comfortable with large dischargers receiving only a requirement for a phosphorus management plan in certain circumstances and

suggested that all large dischargers should automatically receive a limit. Others did not agree with this.

**Response:** *MPCA staff believe that the decision tree provides a consistent, fair approach to identifying considerations about which facilities receive limits and those in which facilities are required to do management plans. The decision tree also targets more stringent controls (limits) to water resources where greater protection is needed. On the issue of a large facility not receiving a limit because it is not expanding or undertaking a significant upgrade, MPCA staff note that this is one of the basic assumptions of the strategy and decision tree – that decision-making on phosphorus issues is tied to the permitting cycle. Facilities need time to plan for adding phosphorus controls and requirements for adding phosphorus treatment should be included at a time when other construction is being undertaken. It should also be noted that MPCA staff consider this strategy and decision tree to be a transitional policy, which may only be in effect for a relatively short period of time.*

## **8. Phosphorus Management Plans**

**Background:** The draft strategy requires permittees to submit phosphorus management plans under certain circumstances. For de minimus facilities, the plans are required if facility phosphorus monitoring exceeds a “trigger” level. For other facilities, phosphorus management plans may be required, rather than permit limits, under very specific circumstances.

**Comments:** Numerous comments were received on this topic:

- Suggestions that management plans should be required of de minimus facilities as soon as the trigger is reached, rather than waiting for the next permit cycle
- Suggestions that there should be guidelines for plans, and that plans should include certain required elements: monitoring; alternative technology assessments; and changes to industrial sources of phosphorus.
- Concern that facilities will not get credit for phosphorus reduction undertaken through management plans when phosphorus limits are proposed in subsequent permits
- Concerns that adding requirements for phosphorus management plans to permits may increase MPCA workload and permitting backlogs and questioning the MPCA’s authority to require and enforce management plans
- Suggestions that facilities with phosphorus limits should also be required to have phosphorus management plans

**Response:** *The majority of concerns regarding the requirements for phosphorus management plans resulted from a lack of clarity in the MPCA information packet. The MPCA staff has attempted to clarify several of these points in the revised packet.*

- *MPCA staff do not intend for permittees to wait for the next permit cycle before developing management plans, once a monitoring trigger is reached. MPCA staff has developed permit language which would require management plans within the same cycle; this permit language is found in Section 6 of the information packet on page 22.*
- *It should be noted that monitoring for phosphorus is currently a requirement of every re-issued municipal permit and some industrial permits. In addition to monitoring, phosphorus management plans can contain alternative technology assessment and evaluation of industrial/commercial sources. However, MPCA staff believe that requirements for the plans should remain flexible so that permittees can develop plans that best fit their needs. Phosphorus management planning guidelines are provided in the packet, although this guidance is not intended to be detailed and prescriptive.*
- *MPCA staff intend that facilities should get credit for phosphorus reductions under phosphorus management plans. Part of the planning process is to determine a facility's phosphorus baseline, against which future reductions and reduction requirements will be measured (see permit language on page 22).*
- *The MPCA does have the authority to require and enforce phosphorus management plans. Phosphorus management plans will be included in the special conditions portion of permits, and will be evaluated by the entire MPCA permit team – not the sole responsibility of the MPCA's pre-treatment coordinator. The MPCA recognizes that requiring additional permit conditions will add to the permitting backlog. In addition, there will be additional staff effort needed to evaluate monitoring data and ensure that facilities exceeding the trigger levels begin management planning. However, the MPCA believes that phosphorus is a pollutant of concern that needs this level of attention in NPDES permits.*

*Regarding the issue of requiring management plans for facilities that receive phosphorus limits, MPCA staff has changed its strategy to recommend phosphorus management plans at these facilities. MPCA staff believe preventing phosphorus discharges through management planning would likely be undertaken by permittees with required permit limits whether required or not, in order to reduce phosphorus treatment costs.*

## **9. Phosphorus and the non-degradation rule**

**Comments:** A few comments expressed the need for clarification between the strategy and the non-degradation rule.

**Response:** *MPCA staff has clarified the relationship between the phosphorus strategy and the nondegradation rule. A summary of this relationship is included in Section 7 of the packet on page 25.*

## **10. Recent MPCA rulemaking**

**Background:** At the same time as the MPCA was requesting input on the phosphorus strategy, the MPCA was also proposing a rule change that included some phosphorus issues.

**Comments:** Many questions and comments arose related to the MPCA's recent rulemaking effort.

**Response:** *The comments and questions received on this issue are important questions. These issues have been resolved, however, through the rulemaking process which is a separate action from this strategy. The MPCA has included a discussion of the rule changes in Section 8 of the information packet on page 27.*