

# **Implementation Plan for Minnesota's Statewide Mercury Total Maximum Daily Load**

**October 2009**



**Minnesota Pollution  
Control Agency**

## STRATEGY FOR NEW AND EXPANDING SOURCES OF AIR EMISSIONS

With successful implementation, the actions recommended in this plan will reduce mercury air emissions from current levels to below 789 lb per year by the year 2025. Between now and 2025, new mercury air emission sources, as well as expansions at existing sources will come before the MPCA for consideration. There must be a process in place to ensure that these new sources do not jeopardize the state's ability to reach the 2018 interim goal, or the final TMDL goal by 2025. To this end, the following guidance framework is recommended:

After May 1, 2008, new and expanding air emission sources will be allowed provided the following measures are employed to ensure that the new and expanding sources do not result in an eventual exceedance of the TMDL goals.

### Assumptions:

- The strategy framework is implemented to reduce existing emission sources to below the 789 lb per year goal by 2025.
- New emission sources permitted as of May 1, 2008, but not yet operational are counted as existing emission sources.
- Existing emission sources and sectors will be assigned a final cap used to achieve the 789 lb goal.

### Description:

#### Proposed new or expanded sources:

1. Required to achieve best control.
2. Must complete environmental review as applicable, including evaluation of local and cumulative impacts.
3. Submit a plan to the MPCA to account for the proposed emission. New sources must first seek permanent offsets with an existing source or sources in Minnesota at a 1:1 ratio.

If enough existing sources are not available, new sources must propose a plan to achieve at least a 90% reduction of the proposed emission by 2025, and in addition must secure temporary offsets prior to operation from either:

- a. Existing sources in Minnesota at a 1:1 ratio.
- b. Out-of-state sources at a ratio greater than 1:1, based on the location of the source.

The plan will include research and reduction targets and timetables.

# GUIDELINES FOR NEW AND MODIFIED MERCURY AIR EMISSION SOURCES

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Based on stakeholder recommendations, the MPCA prepared this guidance for proposed new mercury air emission sources and modifications to existing sources that result in increased mercury emissions. The MPCA and stakeholders acknowledge that new emission sources are expected, however, any proposal for increased mercury emissions in the state will be evaluated by the MPCA in light of the state's plan to decrease emissions to below 789 pounds (lb) by 2025. This plan includes reduction goals for nearly all emission source categories in Minnesota. Source categories with reduction targets include coal-fired electric utilities, industrial boilers, taconite processing, metal smelters, and crematories. Details of this plan can be found on the MPCA's Web site at [www.pca.state.mn.us/air/mercury.html](http://www.pca.state.mn.us/air/mercury.html).

The MPCA will strictly scrutinize source category and overall reduction targets. Increases due to a new or modified source should not jeopardize the specific source category's ability to reach its interim and final pounds-per-year (lb/yr) air emission goals or the overall reduction goal.

The MPCA intends to implement this guidance until at least 2013 with periodic minor changes. Following this initial implementation, the MPCA, with stakeholder input, will consider major changes to these guidelines. Potential changes will be considered in conjunction with emission-reduction progress reviews based on improved source measurement and reporting.

## New and Modified Source Guidelines

Any existing mercury-emitting facility with an MPCA air permit seeking to modify its permit or any new facility with permitted potential mercury emissions of greater than 3 lb/yr or its equivalent should implement the measures listed below to address the increases. These guidelines apply to all sources of mercury emissions. Common sources are coal- and biomass-fired boilers, taconite-processing facilities, and other mineral-processing operations, medical and municipal solid waste incinerators, and sewage sludge incinerators.

New emission sources permitted as of May 1, 2008, but not yet operational are counted as existing emission sources.

New and modified sources should:

1. Employ the best mercury control available. The MPCA expects facilities to explore all pollution-prevention opportunities and to utilize the best control technically feasible considering environmental, energy and economic impacts. If best controls reduce emissions by less than 90%, the MPCA will periodically review the source for opportunities for improved control efficiency.
2. Complete environmental review as required by Minnesota law, including evaluation of local and cumulative impacts per MPCA guidelines found at [www.pca.state.mn.us/air/area-cumulative.html](http://www.pca.state.mn.us/air/area-cumulative.html).
3. A modifying facility permittee should provide an assessment of whether its added emissions will impede progress toward attaining the source category's pounds-per-year air emission goal. A new facility should provide an assessment of whether its added emissions will

impede progress in attaining the source category goal, if applicable, or the statewide goal if the new source is not in an existing source category.

4. If actual emissions from a new or modified facility are greater than 3 lb/yr, the facility permittee is expected to arrange for a reduction from existing Minnesota sources equal to the new actual emissions. The MPCA will refer to these as “equivalent reductions” if they are beyond those otherwise required in the state’s mercury emission reduction plan for existing sources. Equivalent reductions can also be accomplished by reducing emissions ahead of the schedule established in the state’s Implementation Plan.
5. If equivalent mercury reductions from another facility in Minnesota cannot be identified, a new or modified facility permittee may propose alternative mitigation strategies in lieu of an equivalent in-state air emission reduction. The MPCA views this approach as a last resort after all other equivalent reduction possibilities have been fully explored. Alternative mitigation strategies should demonstrate an environmental benefit related to mercury and should be consistent with the objectives of the TMDL. Alternative mitigation strategies may include air emission reductions from sources located outside of the state.
6. During permitting, the new or modified facility permittee should submit a plan to the MPCA describing the facility’s specific plan for reductions described in 1 through 5 above. Plan guidance and instructions are on the MPCA Web site at [www.pca.state.mn.us/air/permits/forms.html#9](http://www.pca.state.mn.us/air/permits/forms.html#9).

## **Implementation and Evaluation**

The MPCA will issue permits with enforceable conditions for new or modified sources based on the facility’s plan. Public comment on the plan may be sought during the environmental review process and/or during permitting. The MPCA may also use other enforceable documents, such as compliance agreements or administrative orders, to achieve the reductions outlined in the facility’s plan. Facilities should be able to provide the agency with assurance that equivalent reductions can be secured for the entire potential to emit, if greater than 3 lb, even if expected actual emissions are below 3 lb.

New and modified facilities not required to obtain an MPCA air emissions permit will be handled on a case-by-case basis applying a similar approach to 1 through 6 above. The MPCA will consider if additional requirements are needed for unpermitted sources after emissions are reported to the MPCA and published in 2013.

At least every three years, coinciding with preparation of the MPCA air toxics inventory and improved mercury reporting based on pending rule-making, the MPCA, with stakeholder input, will review progress in meeting source category reduction targets and the overall target. If sufficient progress is not made, the MPCA will implement measures to achieve reductions and will consider adjusting these guidelines or establishing rules to specify additional requirements for new and expanding facilities. A major review of this policy will occur in 2013 at the latest.