

Maine Air Toxics Initiative Frequently Asked Questions

What is the objective of the Maine Air Toxics Initiative?

The Maine DEP began the Maine Air Toxics Initiative (MATI) in 2002 in response to the Environmental Protection Agency's National Air Toxics Assessment which indicated that Maine citizens faced an unacceptable risk from air toxics. MATI is a facilitated stakeholder process aimed at identifying: 1) air toxic pollutants that pose the greatest risk to the Maine public; 2) sources of air toxic pollutants; and 3) cost-effective solutions to reduce the risk of toxic air pollution. This will enable Maine to target available resources for maximum risk reduction. The ultimate goal of the initiative is to reduce exposure of all Maine citizens to acceptable levels of air toxics.

Who participated in the Maine Air Toxics Initiative?

The initiative was undertaken by the Air Toxics Advisory Committee (ATAC), composed of community, government (local, state and federal), industrial and environmental organizations. The process was facilitated by Jonathan Reitman of Gosline & Reitman. A list of the participants in the Maine Air Toxics Initiative is available online at www.maine.gov/dep/air/toxics/mati-groups1.htm.

What is the Air Toxics Priority List?

The Air Toxics Priority List is the list of toxic pollutants that the Air Toxics Advisory Committee identified as posing the greatest risk to the Maine public based on 2005 emissions data.

How were the pollutants on the Air Toxics Priority List selected?

Subcommittees of the Air Toxics Advisory Committee (ATAC) used emissions inventory, monitoring, and toxicity data to rank all toxic air pollutants emitted in Maine. Estimated emissions of toxic air pollutants were multiplied by toxicity factors to take into account how hazardous each pollutant is to human health using a common weighting scale. This prioritized the pollutants relative to each other, but did not identify which posed an actual risk to the public. The subcommittees compared the ranked list to the compounds assessed in the 1996 National Air Toxics Assessment, which did quantify risk, to benchmark actual risk levels. These risk levels needed to be adjusted to 2005, however, to make them current with the most recent air toxic emissions inventory available. Risk levels in 2005 were estimated by applying the ratio of 2005 emissions and 1996 emissions to the 1996 NATA risk. The cutoff for inclusion on the priority list was set at a Health Quotient (HQ) of 1 or greater for non-carcinogens and an Incremental Lifetime Cancer Risk (ILCR) of one in a million or greater for carcinogens.

Additional information detailing the development of the Air Toxics Priority List is available on the Maine DEP's website at www.maine.gov/dep/air/toxics/mati-docs.htm.

What emissions inventory data was used to establish the Air Toxics Priority List?

The emissions inventory data was obtained from the Maine DEP's 2005 annual emissions inventory. The inventory is a combination of emissions information submitted to the

Maine DEP by facilities (“point sources”) and emission estimates calculated by the Maine DEP based on data such as population and the level of activity in various business and industrial sectors. Activity level data is obtained from various state and federal agencies and trade associations.

The Maine DEP’s point source inventory for toxic pollutants differs from the Environmental Protection Agency’s Toxics Release Inventory (TRI). Some facilities exempt from reporting to TRI are required to report emissions to the Maine DEP, and several toxic pollutants that are not reported to TRI must be reported to the Maine DEP (e.g. hydrogen sulfide). Some emissions may be reported to the Maine DEP as belonging to a group of compounds, while they are reported individually to TRI (e.g. polycyclic organic matter and anthracene). This difference is particularly relevant when evaluating risk because individual compounds may have a higher or lower toxicity value than the value assigned to their compound family.

How was toxicity of pollutants on the Air Toxics Priority List determined?

The Toxicity Subcommittee of the Air Toxics Advisory Committee used toxicity factors from the Environmental Protection Agency’s Risk-Screening Environmental Indicators (RSEI) model, and updated some of the factors based on updated toxicological information EPA published after the RSEI toxicity factors. The ATAC did not use the RSEI model itself to determine risk levels because the model was only designed as a screening tool to be applied to major industrial air toxic sources required to report to the Toxic Release Inventory (TRI). The RSEI model fails to incorporate other sources of air toxic risk posed to the public, including smaller industrial, commercial, residential, mobile, and biogenic (naturally occurring) sources.

Do we measure actual pollutant levels across the state?

The Maine DEP monitors ambient air quality in several locations across the state, including Portland, Bangor, Lewiston, Rumford and Presque Isle. Samples at these locations are collected every six days and analyzed for thirty hazardous air pollutants. Additional air toxics monitoring will be conducted as resources become available. Data collected from monitoring activities is used not only to measure actual pollutant levels in a particular location, but also to confirm emission estimates and calculations that make up the state’s emissions inventory.

How can I get involved?

If you would like to be added to the Maine DEP’s mailing list for the Initiative, please contact Melanie Loyzim at melanie.loyzim@maine.gov.