



### Regional Mercury TMDL Approval Important

New York and six New England states (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont), in collaboration with the New England Interstate Water Pollution Control Commission, have developed a plan to reduce mercury in their waters. Called the Northeast Regional Mercury Total Maximum Daily Load (TMDL), the plan is designed to eliminate fish consumption advisories caused by mercury from air deposition (also see article on page 25). New York has already made much progress controlling mercury from in-state sources such as air emissions and wastewater discharges. However, since most mercury comes from out-of-state air emissions, regional and national action is needed to lower mercury deposition enough to remove the advisories.

Mercury is a potent neurotoxin that poses risks to human health. It is released into the air from coal-fired power plants, incinerators and residential heating, as well as natural sources such as volcanoes, forest fires and geologic deposits. From the atmosphere, mercury is deposited in lakes and rivers, where it becomes concentrated in certain fish species, such as largemouth and smallmouth bass and walleye. As a result, there are fish consumption advisories caused by mercury for more than 10,000 waterbodies and more than 46,000 river miles in the seven-state Northeast region. Of these, more than 80 waterbodies in New York are affected.

#### What is a TMDL?

“TMDL” stands for Total Maximum Daily Load, a management tool used to reduce the amount of a particular pollutant entering a lake, river or stream to a specified level, i.e., the “maximum daily load” of a pollutant allowed to enter a certain waterbody from all sources.

The Northeast TMDL indicates that overall mercury deposition to the region must be reduced by 86 to 98 percent in order for mercury in fish tissues to decline to levels where fish advisories will no longer be required. The TMDL plan highlights the need to

develop and carry out a comprehensive, nationwide mercury reduction strategy. New York and its six partner states believe that mercury deposition deserves to be a national priority, and that federal programs are required to address it. The intent of the Northeast Regional Mercury TMDL is to create a starting place for initiatives to control atmospheric deposition so fish consumption advisories caused by mercury are no longer necessary.

Regionally, nearly a decade of work has resulted in reductions of more than 70 percent in mercury emissions and discharges, including reductions in emissions from incinerators. New York recently adopted a new state air control regulation more stringent than that required by federal regulations. This new regulation will cut mercury emissions from in-state coal-fired utilities by 90 percent by 2015. The state has also begun to require wastewater treatment plants to prepare mercury minimization plans, and the Department of Environmental Conservation has enacted prohibitions on the possession and use of non-encapsulated elemental mercury in dental offices. Dentists are also required to recycle any elemental mercury or dental amalgam (used in tooth fillings) waste to help prevent this material from entering landfills, incinerators or sewer systems. The TMDL is not expected to place any additional economic or regulatory burdens on municipalities in New York State.

The public comment period on the draft Northeast Regional Mercury TMDL closed May 25, 2007. A small number of comments were received, and many were supportive of the TMDL. Revisions were made to the TMDL and the final TMDL was sent to the US Environmental Protection Agency (EPA) for approval on October 24, 2007. The EPA is expected to act on the TMDL several months later. If the EPA does not approve the regional TMDL, it must set its own TMDL allocations for Northeastern waters.

The Northeast Regional Mercury TMDL is an important step forward to reduce mercury levels in our waters and make fish consumption advisories for mercury unnecessary. New York and the New England states have made great strides in controlling sources of mercury emissions within our borders, but we cannot meet water quality standards for mercury without significant reductions in emissions from sources outside the Northeast region. The federal government is in the best position to address this issue. We look forward to federal action and approval of the Northeast Regional Mercury TMDL.

—Sandra L. Allen

Director, NYSDEC Division of Water

### Environments Where Methyl Mercury Is a Problem

Although mercury is a globally dispersed contaminant, it is not a problem everywhere. Aside from grossly polluted environments, mercury is normally a problem only where the rate of natural formation of methyl mercury from inorganic mercury is greater than the reverse reaction. Methyl mercury is the only form of mercury that accumulates appreciably in fish. Environments that are known to favor the production of methyl mercury include certain types of wetlands, dilute low-pH lakes in the Northeast and Northcentral United States, parts of the Florida Everglades, newly flooded reservoirs, and coastal wetlands, particularly along the Gulf of Mexico, Atlantic Ocean, and San Francisco Bay.

— excerpt from USGS Fact Sheet #146-00

