Minnesota Pollution Control Agency sees rise in mercury levels in northern pike, walleye from state lakes

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Samples at 845 lakes show increase, surprising MPCA

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After falling for years, mercury levels in large Minnesota fish such as northern pike and walleye are unexpectedly on the rise, according to the Minnesota Pollution Control Agency. Those levels declined by 37 percent between 1982 and the mid-1990s but have increased by 15 percent since, the agency said in a study published this month in the journal Environmental Science & Technology. The analysis was based on tissue samples from fish collected from 845 state lakes. "It is something that is affecting all the lakes in Minnesota," said agency scientist Bruce Monson, who conducted the analysis and characterized the results as surprising.

MPCA scientists said they are concerned about the upward trend because methylmercury, the form of mercury that contaminates fish, is harmful to people and wildlife. Children and fetuses are particularly vulnerable to poisoning by the toxic metal, which can cause birth defects and brain damage. To reduce human exposure, the state has been issuing fish-consumption advisories for years, updating them as more data are available and trying to eliminate ways mercury can be released into the environment. Because the trend is statewide, Monson said, it's unlikely a local source of mercury is responsible. Rather, he said, mercury emissions from outside Minnesota, particularly from Asia, or factors associated with global climate change, or both, are the likely culprits.

Much of the planet's mercury pollution comes from coal-fired power plants. It can travel thousands of miles in the air and settle in lakes, rivers and oceans, where it enters the food chain and is concentrated in large predatory fish such as walleye or pike. One effect of climate change, Monson added, is greater fluctuations in water levels, which result in more mercury being converted to methylmercury and being available to enter the aquatic food web.

Monson said scientists elsewhere in the Northern Hemisphere have noticed a similar trend in fish in recent years. He and Ned Brooks, the agency's mercury coordinator, said the agency would continue working to reduce mercury emissions within the state and supporting reduction strategies on regional, national and international levels. Estimated state emissions of mercury have dropped appreciably in Minnesota in the past two decades but still are three times higher than the state's target of 789 pounds by 2025.

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