**AYC Ecology North**

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**Experts warn Lake Erie algae may increase if cities, farms don't control nutrient threat**

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Toxic algae blooms on Lake Erie may form more often unless farms and cities do a better job of controlling runoff of nutrients that feed them, a scientist said Tuesday as specialists developed proposals for confronting the threat.

About 40 experts met for two days in Windsor, Ontario, to compare research findings about the lake's struggles with algae and work on a report for government policymakers. The gathering was convened by the International Joint Commission, a U.S.-Canadian agency that advises both nations on issues affecting shared waterways.

Blue-green algae is native to Lake Erie, the shallowest of the Great Lakes and the smallest by volume. But the lake has been plagued by increasingly large masses of the substance over the past decade. An outbreak in 2011 spread across huge sections of the central and western basins.

The blooms produce toxins and suck oxygen from the water, creating "dead zones" where little if anything can live**. Dogs have died after swimming in the lake and licking themselves**, said Jeff Reutter, director of the Ohio Sea Grant College Program, who attended the Windsor session. Water contaminated with blue-green algae has been fatal to people in some places, though not in North America, he said.

Phosphorus runoff from farms is widely considered the leading culprit, while sewage-treatment plants and septic tanks are sources as well, Reutter said. The scientific team is putting together a series of papers that will examine topics such as where the phosphorus comes from, best-management practices that can cut down on runoff, and the role of climate change.

"We definitely need reductions of phosphorus," Reutter said in a phone interview. "If agriculture is the major source, they have to have the greatest reductions. But there are a number of contributors to the blooms, and that means all of us need to be part of the solution."

Climate change is likely to promote algae blooms by boosting water temperatures and causing severe storms that wash huge volumes of nutrients into the lake, he said. The 2011 bloom, which Reutter said was the largest he's seen in 40 years of studying Lake Erie, happened during one of the region's wettest years on record.

Many farmers have planted buffer strips to separate their fields from streams. The report will suggest additional steps, perhaps including better application of fertilizers and methods of removing phosphorus from effluent flowing from underground drain tiles, Reutter said.

A crucial question for government officials will be whether voluntary efforts are sufficient or regulations are needed to clamp down on runoff, he said.

The international commission plans to release a draft report for public comment in May, then a final version ahead of a Great Lakes conference scheduled for September in Milwaukee.

"Our goal is to make sure the latest scientific findings and recommendations are available to governments as they implement programs and policies to solve the problem," said Raj Bejankiwar, the lead commission scientist and workshop organizer.