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## Canadian river contributes to Lake Erie algae

By Kristina Smith, News - Herald

The Maumee River has long been known as one of the biggest carriers of phosphorous to Lake Erie, helping fuel toxic algae blooms on the lake.

But another river in a heavily agricultural area on the other side of the lake appears to be contributing, too.

Scientists are examining whether the Thames River in southwest Ontario has a connection to the algae.

They have found the Thames has at least some indirect contribution to the blooms, said Tim Davis, research scientist at the National Oceanic and Atmospheric Administration's Great Lakes Environmental Research Laboratory in Ann Arbor, Michigan.

The Thames flows into Lake St. Clair, which empties into the Detroit River, which flows into Lake Erie.

"It is very similar in many aspects (to the Maumee)," Davis said of the Thames.

Phosphorous — largely from fertilizer runoff, sewer plants and other sources — feeds the algae, which has plagued Lake Erie's Western Basin during the summer and fall since 2002. Toxins the algae can produce could sicken people and pets and threaten Lake Erie's tourism and fishing industries.

The algae is really a bacteria, called microcystis, that can produce a toxin, called microcystin.

Scientists have found microcystis blooms in Lake St. Clair, although they are not nearly as large as those on Lake Erie, Davis said. Lake St. Clair is smaller than Lake Erie's Western Basin, he said.

"Much like the Maumee is the major nutrient source for Lake Erie, the Thames is the major nutrient source for Lake St. Clair," Davis said. "(Lake St. Clair blooms) have been overlooked because so much focus is placed on Lake Erie."

The algae contribution from the Thames and the other bodies of water it feeds reaching Lake Erie is not the cause of Lake Erie's harmful algae, he said. The Lake Erie harmful algae is started by a seed population of microcystis at the bottom of the lake that rises to the surface, photosynthesizes and blooms, he said.

Environment Canada, NOAA, Bowling Green State University and the University of Windsor are looking at the genetics of the algae in their research, Davis said.

They learned that the blooms can flow down the bodies of water into Lake Erie, he said.

The blooms in Lake St. Clair can also influence the genetic composition of blooms in Lake Erie, he said. Over longer periods of time, similar strains of algae could be found in Lake St. Clair, Lake Erie and Lake Ontario.

Jesse Gardner Costa, a research assistant in the department of biological services at the University of Windsor, is one of the researchers studying the Thames River's contribution to harmful algae.

Researchers are taking samples from the river and tracking the amount of phosphorous and other nutrients, although no data had yet been compiled as of late October, Costa said.