HARMFUL ALGAL BLOOMS ON LAKE WINNIPEG

Harmful algal blooms have been increasing in size and frequency on Lake Winnipeg – contaminating beaches, reducing water quality, and damaging Manitoba's important fishing and tourism industries.

algae.Lori_.Volkart.2006.JPG

Algal blooms are the result of eutrophication – a condition caused by an over-abundance of the nutrient phosphorus. All living things need phosphorus – in fact, it's one of the ingredients in the fertilizers we give our house and garden plants and our agricultural crops to help them grow. However, too much of it is a problem because it contributes to the growth of blue-green algae (which is also called cyanobacteria).

Like all plants, algae need phosphorus, nitrogen and sunlight to grow. We can't control the sun and interestingly, some types of cyanobacteria can pull nitrogen from the surrounding atmosphere to use as a nutrient; a process called "fixing." This means that phosphorus is the only nutrient humans have the ability to control, in terms of reducing how much of it gets into the lake and acts as food for algae.

It's normal for a lake to have some algae. The concern is how much algae and what kind. For example, in addition to being a slimy, unpleasant nuisance, some types of blue-green algae can be toxic to humans and animals. Algae can also change the chemical composition of the lake; when they die, they sink to the bottom and decompose, a process which uses up oxygen that other organisms need to survive.

The Lake Winnipeg Foundation is working to address the root causes of harmful algal blooms. Our Lake Winnipeg Health Plan identifies eight key actions to reduce the amount of algae-causing phosphorus reaching Lake Winnipeg.

Front page illustrations drawn by Shawn Stankewich from algal bloom maps derived from satellite data by Greg McCullough.

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