

For Immediate Release: September 16, 2016

NORTH DAKOTA DEPARTMENT of HEALTH

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## Blue-green Algae Identified in the Des Lacs River: Public Advised to Avoid Contact with the Water

BISMARCK, N.D. – The North Dakota Departments of Health (NDDoH) and Agriculture (NDDA), Animal Health Division, have issued a blue-green algae advisory for the Des Lacs River, in Ward, and Renville Counties located northwest of Minot. An advisory means that people and animals should avoid contact with the river water, especially in areas where there is a green or blue-green appearance.

The production of blue-green algae, also known as cyanobacteria, often happens during hot weather in bodies of water that are used by people, pets, and livestock. Blue-green algae discolor the water they live in, and can cause foam, scum, or mats to appear on the surface. Blue-green algae can also produce cyanotoxins. When present in water, cyanotoxins are dangerous for both people and animals.

Exposure from ingesting affected water can cause illness in people and animals, and can result in death. There are no known antidotes for the toxins. People and animals that swallow water containing cyanotoxins can become sick with severe diarrhea and vomiting; numb lips; tingling fingers and toes; dizziness; or rashes, hives, or skin blisters. Children are at higher risk than adults for illness because their smaller size can allow them to get a relatively larger dose of toxin.

The advisory is in effect for the Des Lacs River from Lower Des Lacs Lake downstream to its confluence with the Souris (Mouse) River near Burlington. As part of a reported fish kill investigation, the NDDoH observed what appeared to be blue-green algae in the river. Testing this week has confirmed the presence of the cyanotoxin microcystin above the NDDoH's health risk threshold of 10  $\mu$ g/L (parts per billion). "While our investigation showed that the fish kill was caused by low dissolved oxygen in the river, the source of the blue-green algae in the river and associated cyanotoxin is believed to be from releases from some of the lower pools which are part of Des Lacs National Wildlife Refuge," said Mike Ell with the NDDoH's Division of Water Quality.

According to Chad Zorn, Refuge Manager for Des Lacs National Wildlife, the releases from the lower pools which occurred earlier in the month were unique for this time of year and were necessitated by the need to do repairs and maintenance on some control structures.

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"There is no reason to suspect the fish kill was caused by cyanotoxins produced by blue-green algae and the refuge has stopped its release of water from the lower pools which has already resulted in lower microcystin concentrations in the river around Donnybrook and Carpio," said Ell. Testing in the Souris River below its confluence with the Des Lacs River showed no evidence of cyanotoxins.

"The NDDoH will continue to monitor oxygen levels in both the Des Lacs and Souris Rivers and will continue to sample for the presence of cyanotoxin weekly until concentrations return to normal. We will keep the public informed of the status of the water," added Ell.

Blue-green algae blooms occur naturally, but human activities are believed to play a significant role in the increased occurrence and severity of some blooms. While much is known regarding the factors that cause blue-green algae blooms, our understanding of the relationship between blooms and cyanotoxin production is not well known. Scientists believe blooms may be triggered by a combination of human-induced and environmental conditions, including excess nutrient runoff, warmer temperatures, and low flow conditions. In order to better understand the magnitude and causes of blue-green algae blooms at Des Lacs National Wildlife Refuge and to ensure the continued protection of public health, the U.S. Fish and Wildlife Service and NDDoH have partnered in a study that commenced this year. As part of this effort, monitoring has been conducted weekly at five locations on the refuge since June.

The NDDOH recommends the following steps to avoid exposure to cyanotoxins:

- Respect any advisories or warnings announced by public health authorities. If you see posted signs or hear messages to stay out of a certain body of water, respect the message.
- Do not swim, water ski or boat in areas where the water is discolored or where you see foam, scum, or mats of green or blue-green algae on the water.
- If you swim in water that might have a cyanobacteria bloom, rinse off with fresh water as soon as possible.
- Do not let pets or livestock swim in or drink from areas where the water is discolored or where you see foam, scum, or mats of algae on the water.
- If pets (especially dogs) swim in scummy water, rinse them off immediately –do not let them lick the algae (and toxins) off their fur.
- Do not irrigate lawns or golf courses with pond water that looks scummy or smells bad.

For more information on public health issues, contact Mike Ell with the North Dakota Department of Health at 701.220.5025.

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