

# THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION FACT SHEET

## MICROCYSTIN & CYANOBACTERIA FACT SHEET Elevated levels of microcystin found in Lake Needwood and Lake Frank

### **BACKGROUND**

Montgomery Parks, part of the Maryland-National Capital Park and Planning Commission is asking residents to use caution when recreating on or near Lake Needwood and Lake Frank located within Rock Creek Regional Park. Testing has shown there are elevated levels of microcystin, a toxic substance produced by some species of blue-green algae (cyanobacteria), in both lakes. Microcystin, a hepatotoxin, can cause harm to the liver of humans and pets. Of particular concern are dogs that are off-leash and may swim and/or drink from the lake, despite park regulations.

### **FACTS ABOUT MICROCYSTIN & CYANOBACTERIA**

- Microcystin is a toxic substance produced by blue-green algae, also known as cyanobacteria.
- Liver damage can occur when humans and animals ingest large quantities of water contaminated by microcystin.
- Consumption may also result in stomach discomfort, nausea, and headaches.
- Absorption through the skin is unlikely but significant skin contact not remediated by hand washing can result in skin irritation.
- The World Health Organization (WHO) sets thresholds of concern for the microcystin toxin of >1ppb for drinking water sources and >10ppb for water contact recreation.
- Primary factors influencing algal growth include the sun, heat, and excess nutrients like Nitrogen and Phosphorus.
- Impacts of any algal blooms (regardless of the species present) can include water discoloration, reduction in sunlight penetration, reduction of dissolved oxygen, fish kills, and the potential for toxin production.
- Concentrations of toxins from algal blooms surpassing designated thresholds initiate closures or advisories for use of a water resource depending on its intended purpose.
- Lake Needwood will remain open and is safe for boating and fishing activities.
- Cyanobacteria algal blooms cannot maintain its high population for long. A population will die and disappear after one to two weeks. Under continued favorable conditions, however, a new bloom can quickly replace the previous one, making it appear to be a single continuous bloom.
- Toxin presence cannot be determined without laboratory analysis.

### **VISITORS SHOULD TAKE THE FOLLOWING PRECAUTIONS:**

When elevated levels of microcystin are found at a lake or body of water, visitors are urged to follow these precautions:

- Park visitors are encouraged to avoid contact with water that leads to ingestion.
- Park visitors should remember that swimming is prohibited in the lake at all times.
- The population most at risk are dogs. This risk can be alleviated by owners keeping dogs on leash (as is regularly required at the park). Do not allow them to drink, wade, or swim in the lakes.
- Wash hands thoroughly if someone comes in contact with the water.
- Only eat properly cooked muscle meat of fish that are caught in the lake.

### **HISTORY OF CYANOBACTERIA ALGAL BLOOMS IN MONTGOMERY PARKS**

- A cyanobacteria algal bloom was first identified at Lake Needwood in 2009. The Maryland Department of the Environment was notified and the bloom was tested. The microcystin toxin was identified above the WHO threshold for water contact recreation.
- Regular inspections have occurred since 2009 and any suspicious algal blooms are tested.
- When sightings occur, signage is posted to notify park users to avoid significant contact with the lake water. Media advisories and outreach through the Department's website and social media accounts are also used to inform the public.

**About The Maryland-National Capital Park and Planning Commission Montgomery Parks:**

Montgomery Parks manages more than 36,000 acres of parkland, consisting of 420 parks. Montgomery Parks is a department of the Maryland-National Capital Park and Planning Commission (M-NCPPC), a bi-county agency established in 1927 to steward public land. The M-NCPPC has been nationally recognized for its high-quality parks and recreation services, and is regarded as a national model by other parks systems. [www.MontgomeryParks.org](http://www.MontgomeryParks.org)

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