NUTRIENT POLLUTION IN IOWA’S RECREATIONAL WATERS

Nitrogen and phosphorus are essential nutrients for plant growth. Farmers supplement these naturally occurring nutrients in their soils with both chemical and animal fertilizer to increase crop production. When these nutrient levels exceed plant needs, water carries the nitrogen (as nitrate) and phosphorus away, leading to water pollution.

HEALTH EFFECTS
Nitrate pollution can lead to harmful algal blooms that release microcystin toxin.

Skin contact, ingestion, and inhalation of microcystin can cause:
- Breathing problems
- Stomach pain, nausea, vomiting, diarrhea
- Headaches, fever, runny eyes and nose, cough, sore throat, chest pain
- Rash, hives, blisters
- Liver damage

AFFECTS PETS, LIVESTOCK, AND WILD ANIMALS TOO.

ECONOMIC IMPACT
- Total direct spending on lake visits annually in Iowa = $1 billion
- Average direct spending per lake = $7 million
- Even small lakes can generate $2-3 million for rural Iowa communities
- Iowa lakes support over 12,000 Iowa jobs
- Water quality is the #1 factor considered when choosing a lake for recreation
- Estimated increase in recreational spending with improved water quality in Iowa = $30 million

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MICROCYSTIN WARNINGS IN IOWA: 252 WARNINGS AT 39 DNR-MONITORED BEACHES

37 RECREATIONAL LAKES ALSO SERVE AS A DRINKING WATER SOURCE
- Only 16 of those lakes are monitored by the DNR for microcystin
- 12 of the 16 monitored lakes had a total of 157 microcystin warnings from 2006-2021
- This constitutes 62% of all warnings for microcystin in recreational lakes in Iowa from 2006-2021

SWIMMING NOT ADVISED

**Number of Mycrocystin Advisories**

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*Start of 8 micrograms/L threshold
Note: 2008 omitted due to flooding
NUTRIENT POLLUTION IN IOWA’S RECREATIONAL WATERS

SOURCES


2 Iowa Department of Natural Resources. State Park Beach Monitoring data. https://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Beaches
