



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES



Iowa Department of Public Health
Protecting and Improving the Health of Iowans

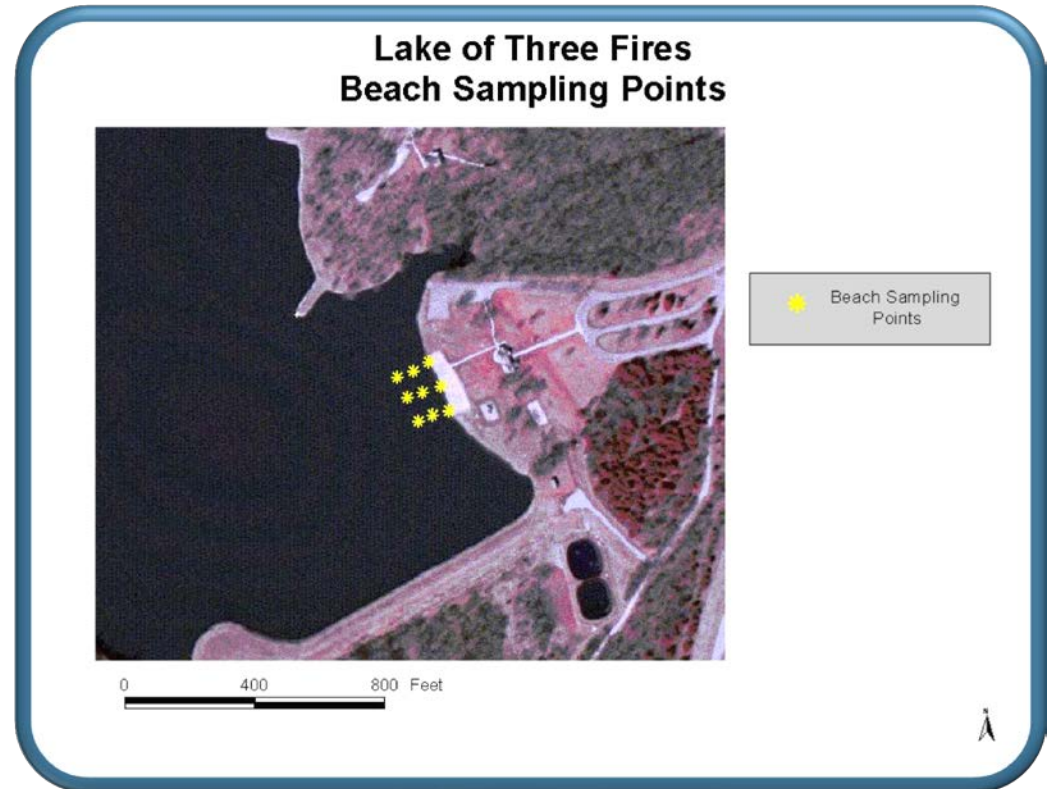
E. coli and Microcystin Monitoring at Iowa's State Park Beaches



Presenters:
Roger Bruner
&
Stu Schmitz

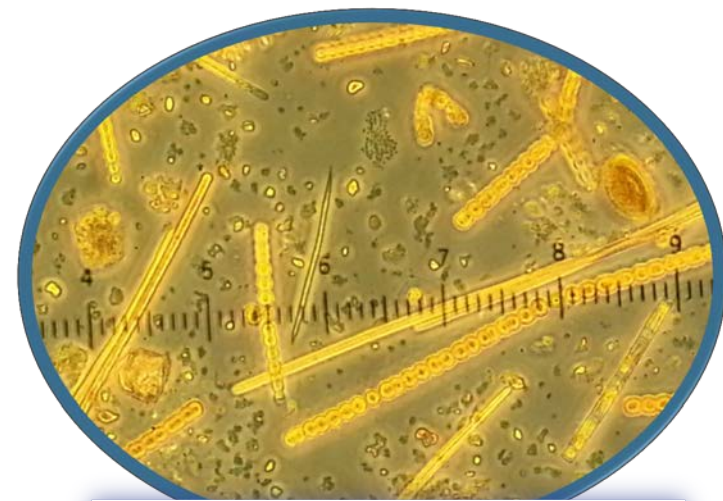
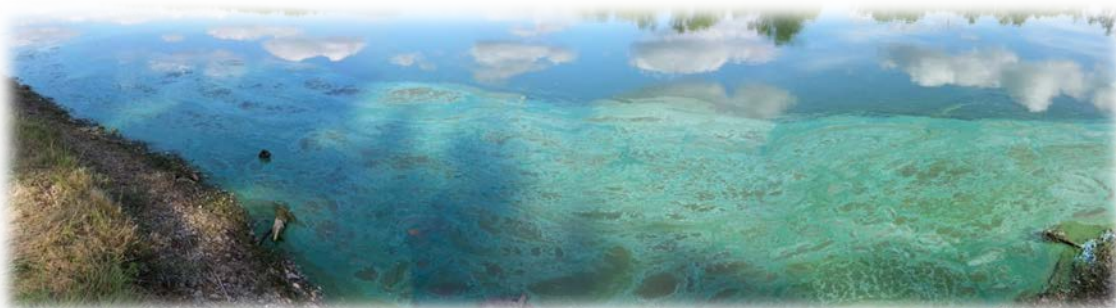
Description of talk

- Intro to the State Beach Monitoring Program
 - Brief History
 - Elements of the program
 - Program Objectives
- What we have learned
 - E. coli Trends
 - Microcystin Trends
 - Health Reports
- Questions



Introduction to program

- History
 - When did it start?
 - Beach Monitoring Program started 1999.
 - Microcystin added in 2006.
 - How big was it?
 - 12 Beaches sampled weekly in 1999.
 - E. coli only.
 - How big is it now?
 - 39 State Park Beaches and 29 County/City Beaches sampled weekly.
 - E. coli and Microcystin Toxins.



WATER QUALITY NOTICE

This beach is monitored for E.coli bacteria and Microcystins. E.coli bacteria are indicators of the possible presence of human health risks. Microcystins are a group of toxins produced by several types of cyanobacteria (blue-green algae) that pose a risk to human health.

If toxin levels exceed health guidelines, additional information will be posted at this location.

Watch

SWIM AT YOUR OWN RISK

HARMFUL ALGAE OR BACTERIA MAY BE PRESENT

It is advised that you:

- Use Caution when contacting lake water.
- Avoid areas of Blue-green algae accumulation.
- Not let people/pets eat dried algae or drink untreated lake water.
- Bathe or shower after contact with lake water.
- Clean fish well and discard guts.

Contact your doctor or veterinarian if you, a family member, or a pet experience sudden or unexplained illness shortly after recreating in this lake.

For more information:

www.iowadnr.gov (Search: "Beach Monitoring")

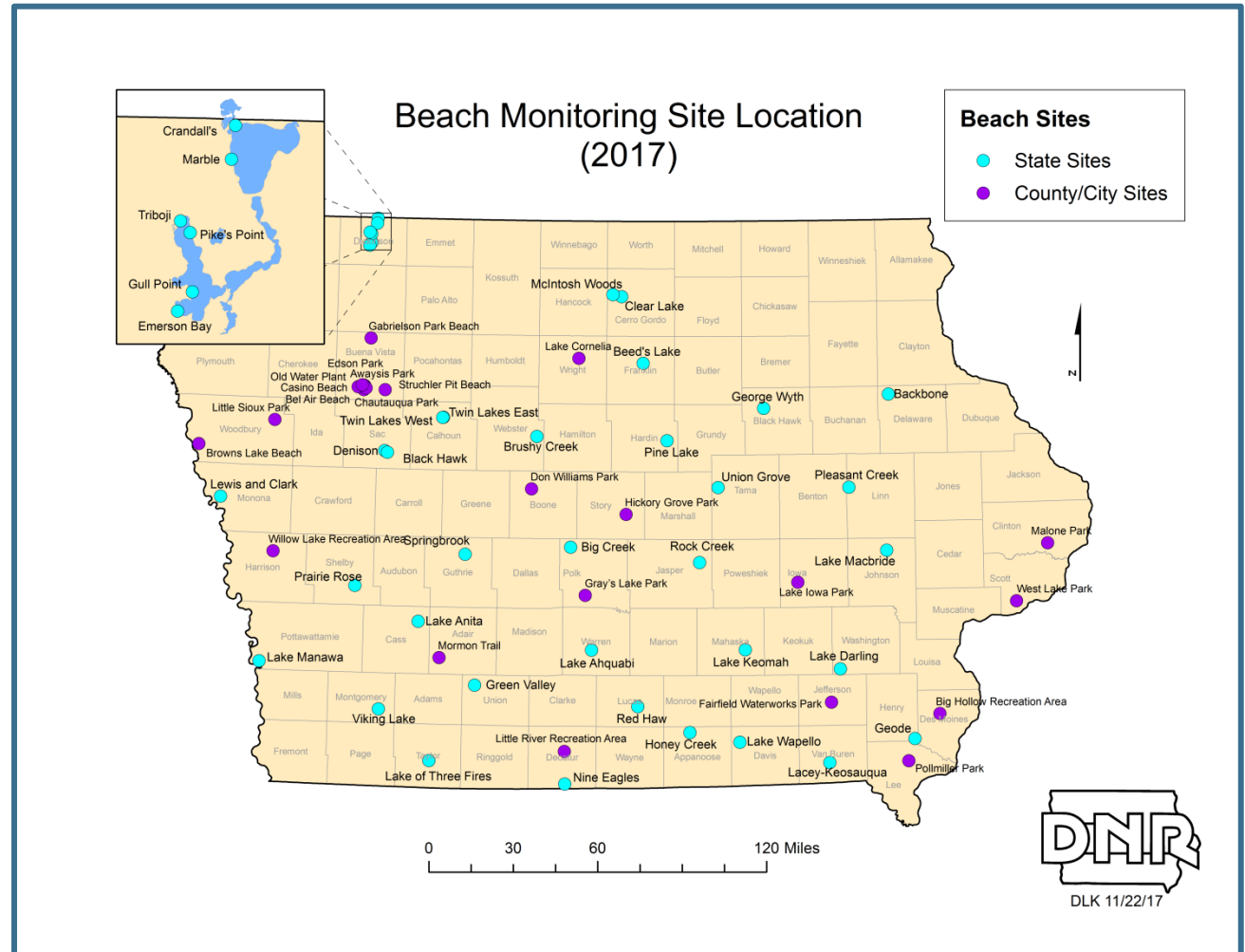
idph.iowa.gov (Search: "Harmful Algal Bloom")



Introduction to program

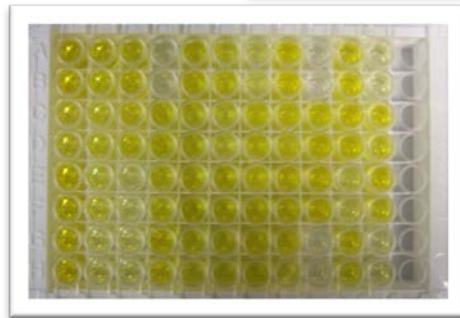
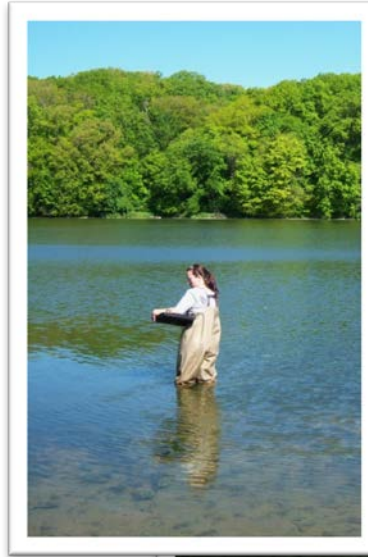
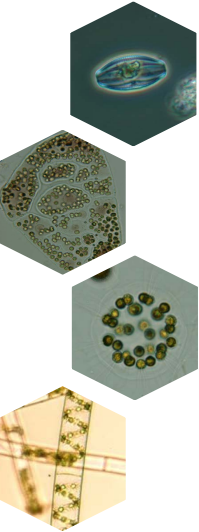
Elements of the program

- 39 State Beaches are each sampled E. coli and Microcystin toxins the week before Memorial Day through Labor Day.
- 29 County and City Beaches are each sampled E. coli the week before Memorial Day through Labor Day.
- E. Coli Samples are analyzed by end of business on Thursday of each week.
- Data is reported out, Public website is updated, and beach signage is updated Friday of each week.



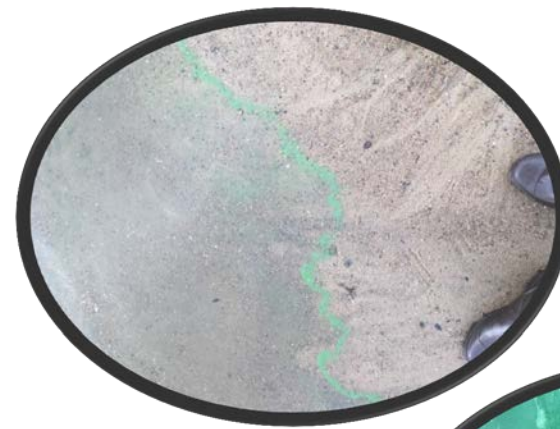
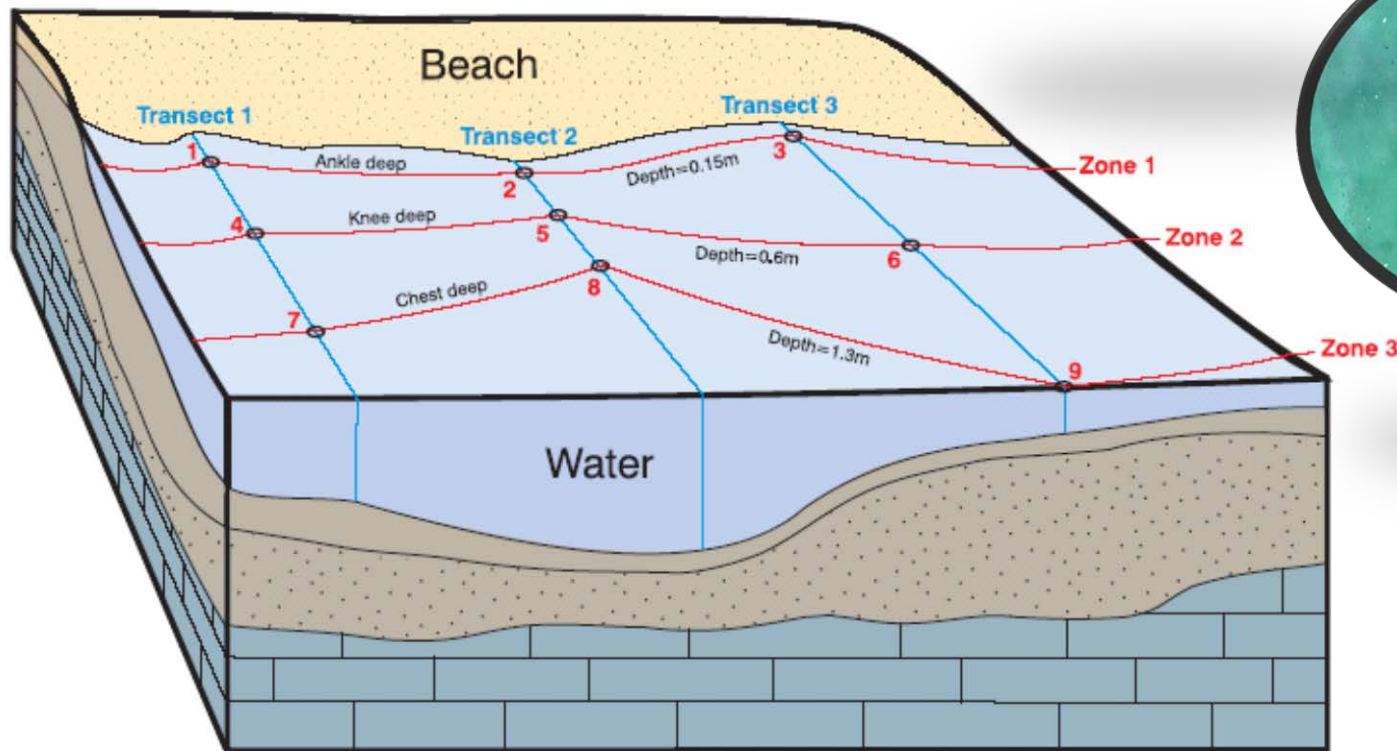
Introduction to program

- Elements of the program
 - Parameters collected:
 - Field (Beach):
 - Temperature
 - pH
 - Dissolved Oxygen (mg/L and % saturation)
 - Turbidity
 - Wave Height and Direction
 - Current Weather Conditions
 - Laboratory:
 - E. Coli (Indicator Bacteria) by SHL
 - Microcystin toxin by IDNR




Introduction to program

- Beach Sampling Design
 - 9 point composite



Introduction to program

- Program Objectives
 - Safeguard public health at Iowa's state-owned and locally managed beaches.
 - Informing the Public
 - General information and Advisory signs at State Owned Beaches.
 - Park staff, Iowa Department of Public Health notified
 - Beach Monitoring Website
 - Beach Monitoring Hotline
 - Press releases
 - Tracking long term trends.
 - Biannual Water Quality Assessments, listing and reporting as a part of the 303(d) and 305(b) sections of the Federal Clean Water act.



DEPARTMENT OF NATURAL RESOURCES

ADBNET

WATER QUALITY ASSESSMENTS
IMPAIRED WATERS LIST

West Okoboji Lake IA 06-LSR-2069

PORTION OF WEST OKOBOJI LAKE NORTH OF MANHATTAN BEACH ON THE WEST SHORE AND OMAHA BEACH ON THE EAST SHORE. APPROXIMATE CENTER OF BASIN IS IN SW 1/4, S12, T89N, R37W, DICKINSON CO.

Services Agencies Social

Assessment
Releas
Desi

Assessment
Assessment is the statewide monitoring program in 2010

[Note: For the purposes of this segment, monitoring at the more accurate

SUMMARY: This assessed (mon assessment. A statewide survey program conducted information from monitoring in 2010

EXPLANATION: Point beach we (16 samples), a need to be met the samples from


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HOME HUNTING FISHING THINGS TO DO PLACES TO GO CONSERVATION ENVIRONMENTAL PROTECTION ABOUT DNR

STATE PARK BEACH MONITORING

ENVIRONMENTAL PROTECTION > WATER QUALITY > WATER MONITORING > STATE PARK BEACH MONITORING

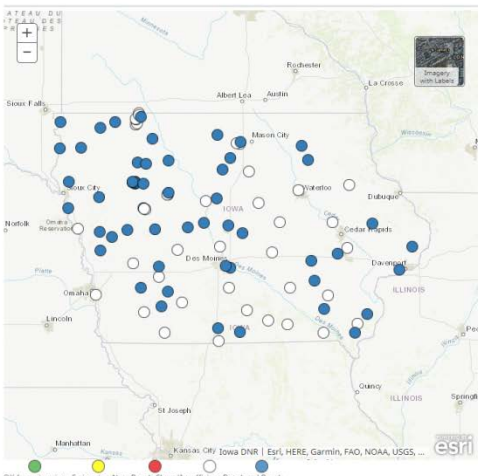
- > Air Quality
- > Land Quality
- > Water Quality
 - > Drinking Water Compliance
 - > Certification
 - > Iowa Water Plan
 - > Private Well Program
 - > Lake Restoration
 - > River Restoration
 - > Water Supply Engineering
 - > Source Water Protection
 - > Water Security
 - > Watershed Improvement
 - > Watershed Management Authorities
 - > Water Quality Standards
 - > Wasteload Allocations
 - > Water Monitoring
 - > State Park Beach Monitoring
 - > Impaired Waters
 - > Ambient Lake Monitoring
 - > Ambient Stream Monitoring
 - > Wetlands
 - > Fish Kills
 - > Groundwater
 - > Fish Tissue
 - > WQI
 - > Staff
 - > Volunteer Water Monitoring
 - > NPDES/Wastewater Permitting
 - > Water Summary Update
 - > Private Septic Systems
 - > NPDES/Storm Water Construction
 - > Wastewater Construction
 - > Wetlands Permitting



Water Quality Monitoring

Routine water quality monitoring is conducted at all of the State Park beaches and many locally managed beaches in Iowa. In order to help protect the health of those wishing to recreate at the beaches, the Iowa Department of Natural Resources works with various public health and management agencies throughout the state to inform the public of the most current water quality conditions.

Outdoor recreation at beaches in Iowa is typically limited to the time period between Memorial Day and Labor Day. Therefore, most beach monitoring is conducted and standard swimming advisories are issued during this time frame. Results for specific beaches are published as soon as they become available.



OK for swimming Swimming Not Recommended Beach Closed/Insufficient Data/Local Beach

Coralville Reservoir, Red Rock and Saylorville Beach Monitoring Results


For information regarding beach advisories and conditions, please contact the Natural Resource Specialist or Park Ranger at the following lakes:

- Saylorville Lake - (515) 276-4656
- Lake Red Rock - (641) 828-7522

Beach Monitoring

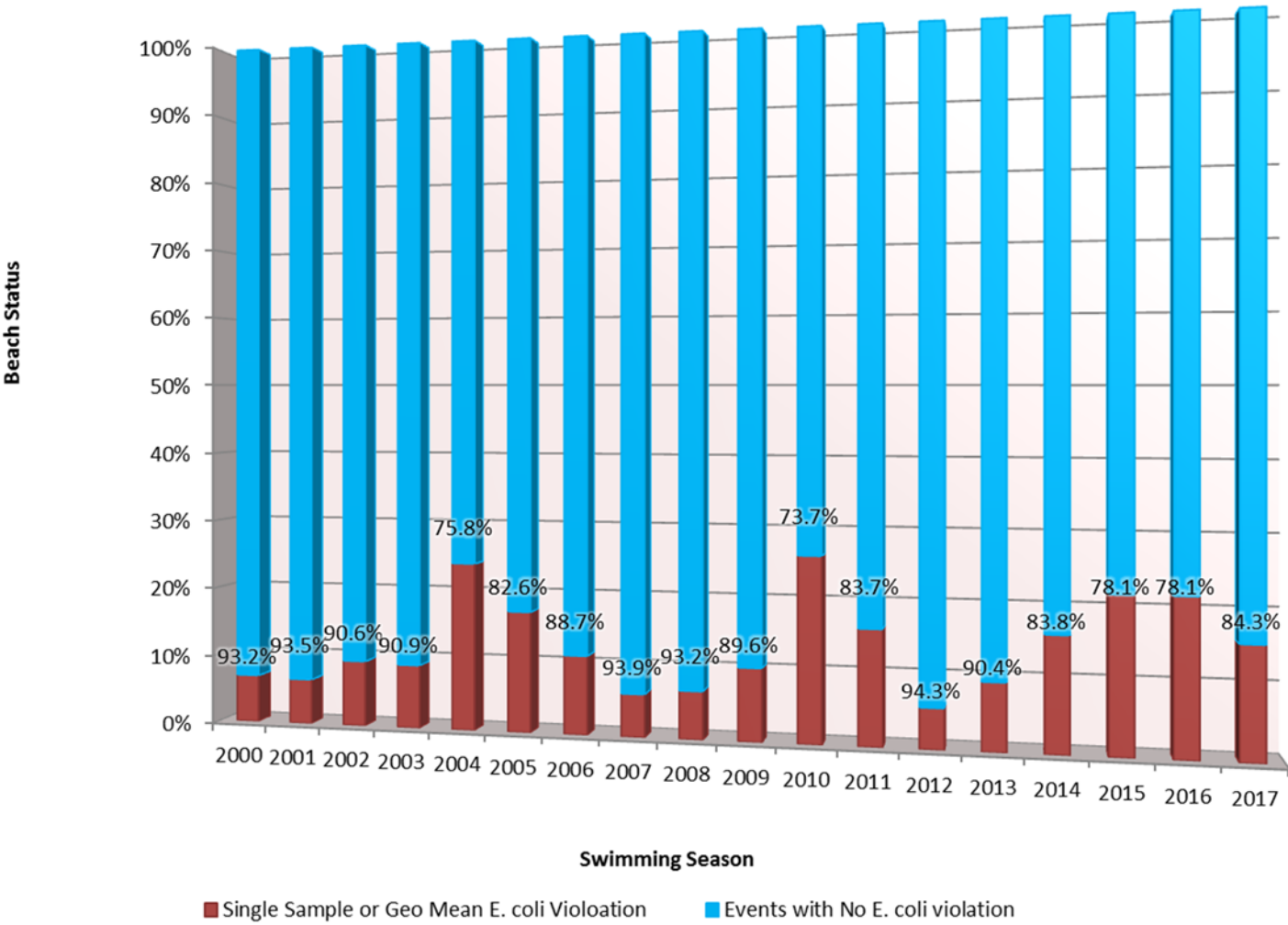
For up to date information, call the DNR Beach Monitoring Hotline: (515) 725-3434

If you have any questions or concerns, contact us by email.



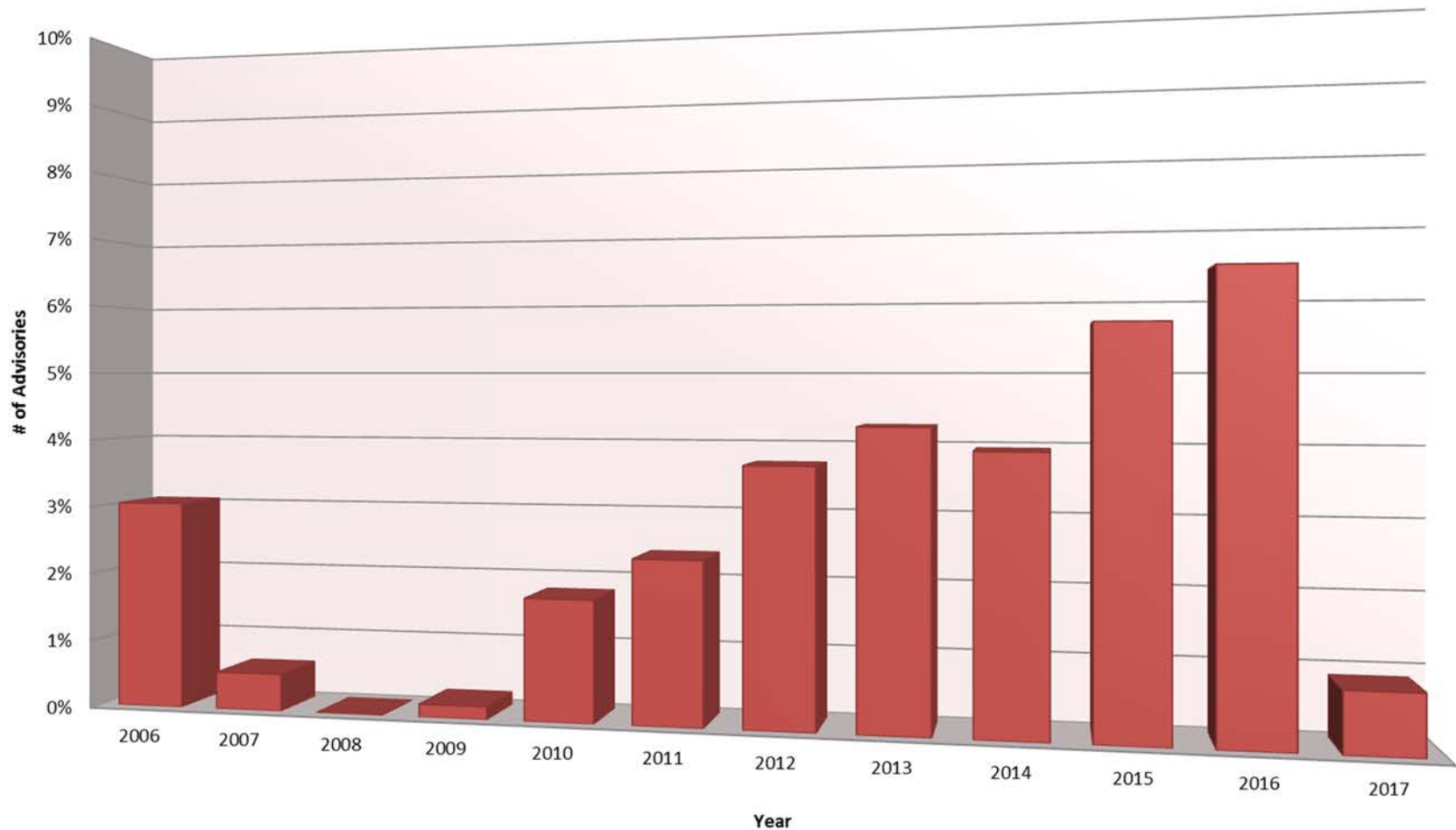
What we have learned?

Beach Status - Advisory Events due to Indicator Bacteria (Memorial Day - Labor Day)

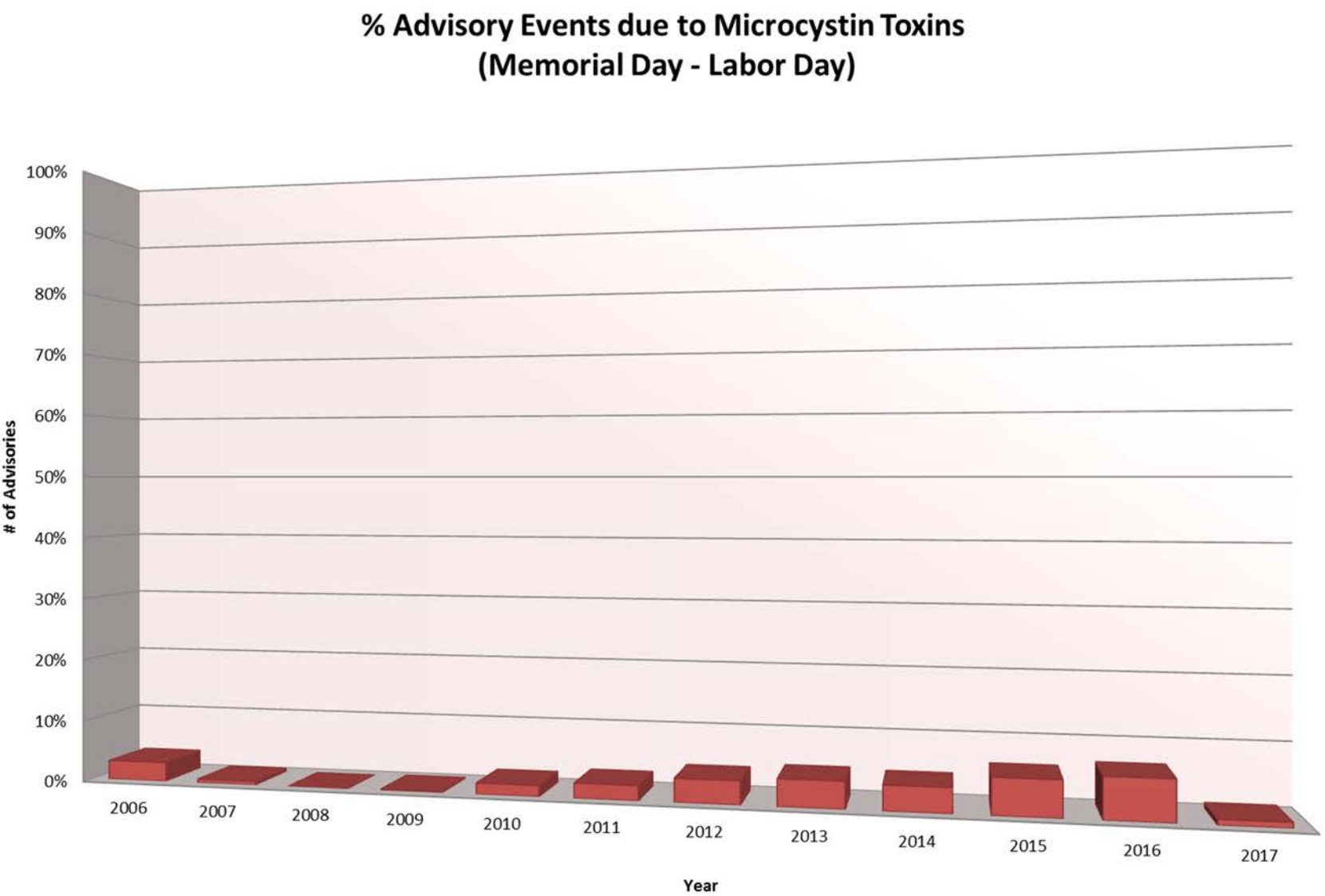


What we have learned?

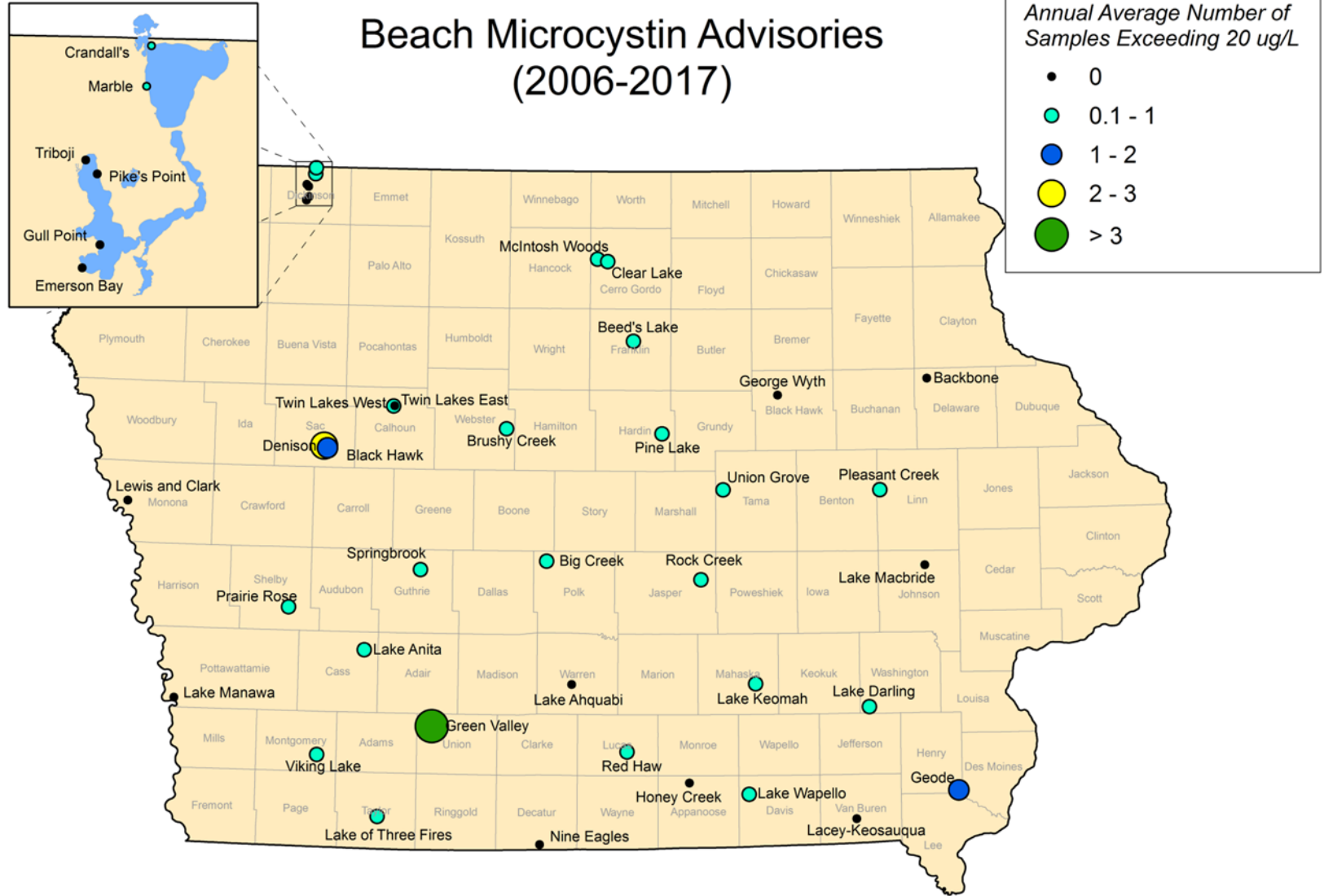
**% Advisory Events due to Microcystin Toxins
(Memorial Day - Labor Day)**



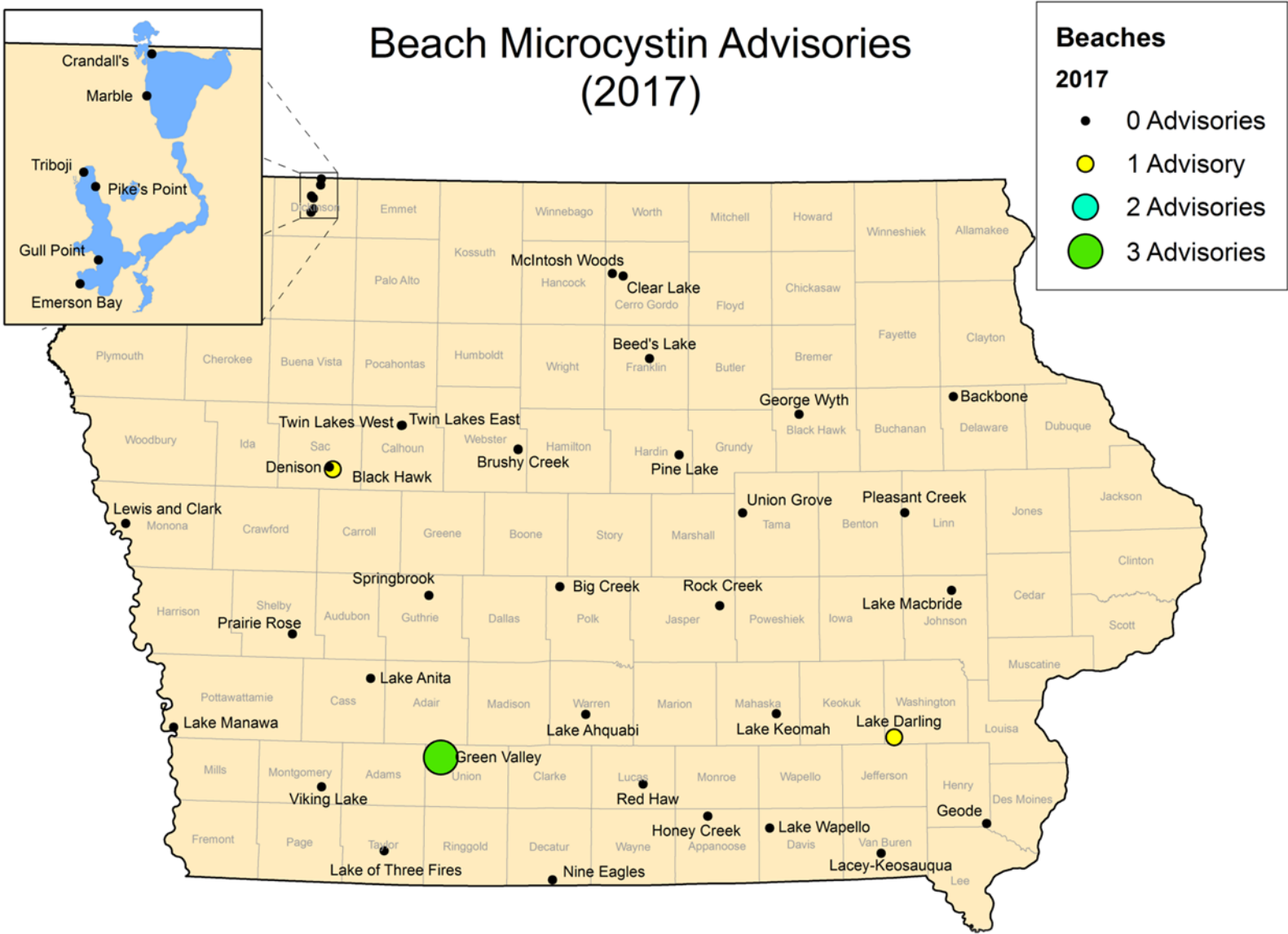
What we have learned?



What we have learned?

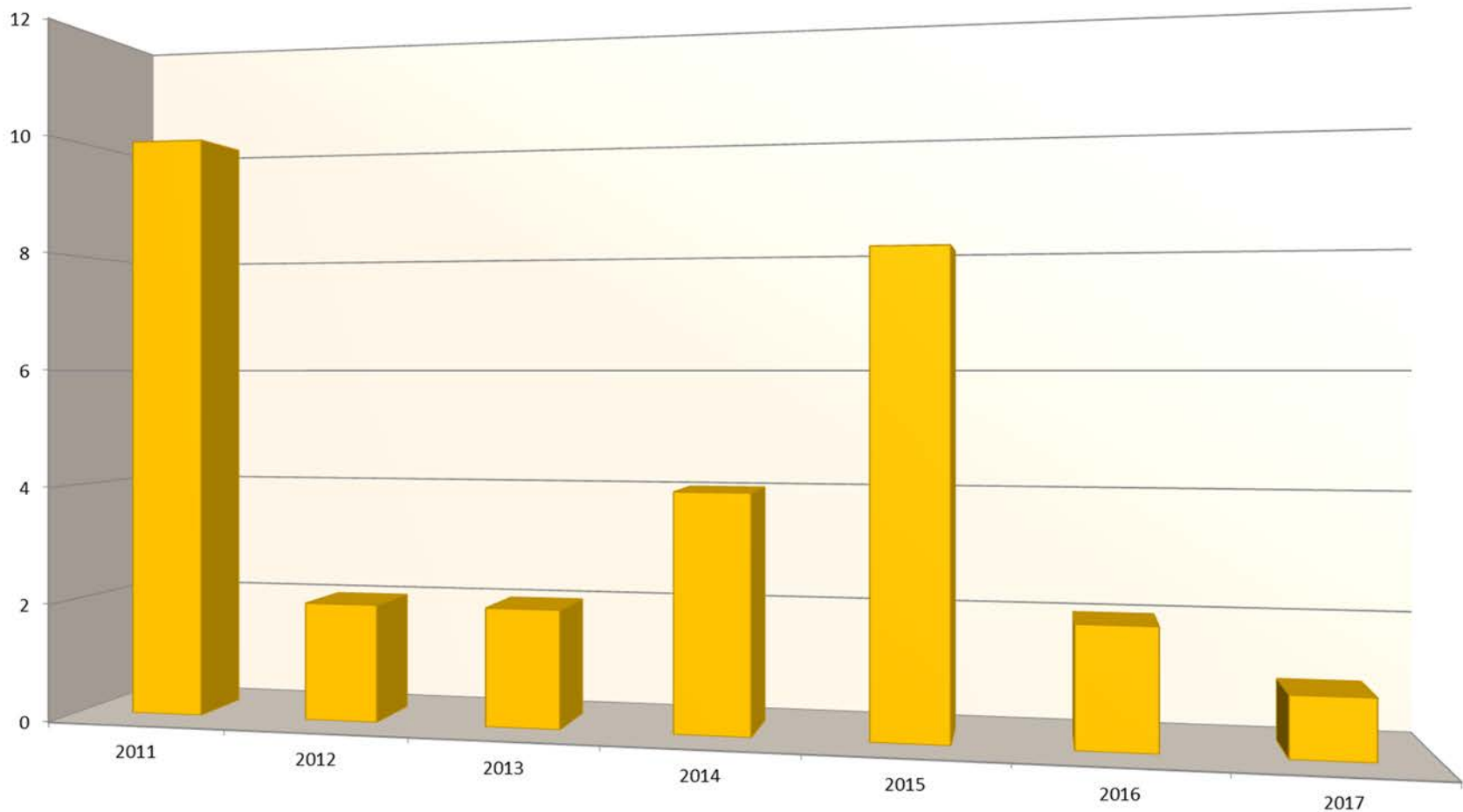


What we have learned?



What we have learned?

**Number of Suspected Cases of Microcystin
Poisoning Reported to IDPH**



Questions

