



Department
of Health

Blue-green Algae Bloom Response At Public Beaches

Development, Delivery & Deployment

Great Lakes Beach Association

Marquette, MI

October 6th, 2016

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Disclaimer: The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the New York State Department of Health.

Overview

- **Background & Health Risks**
- **NYSDOH Protocol**
- **Guidance: Format & Mechanism**

Blue-Green Algae Blooms

- Cyanobacteria, naturally present
 - “Blue-Green Algae” (BGA)
- Opportunistic in favorable conditions
 - Elevated nutrients
 - Warm temperatures $>25^{\circ}\text{C}$
 - Stagnant water, calm weather
 - High light, shallow depths
- Form dense mats, scum layer or discolored water
 - Green, blue-green, yellow, brown, white, purple, or red



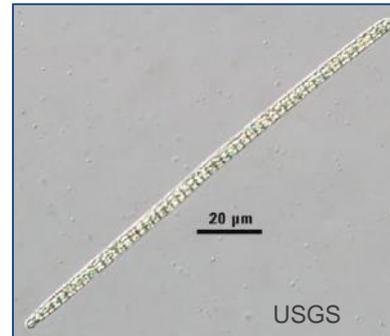
Blue-green Algae & Health

Exposure Potential

Ingestion, inhalation and/or direct contact:

- Cyanobacteria cells
- Secondary metabolites i.e. cyanotoxins
 - Microcystin: hepatotoxin
 - Anatoxin-A: neurotoxin
 - Cylindrospermopsin: hepatotoxin

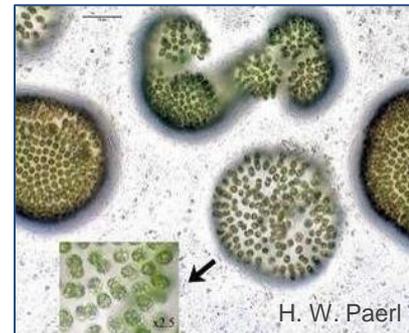
***Whether toxins are present or not, there is still a concern for health effects.**



Planktothrix (Oscillatoria)



Aphanizomenon



Microcystis colonies

Blue-green Algae & Health

Exposure Pathways

- Dermal
- Ingestion (Incidental)
- Inhalation

Symptoms

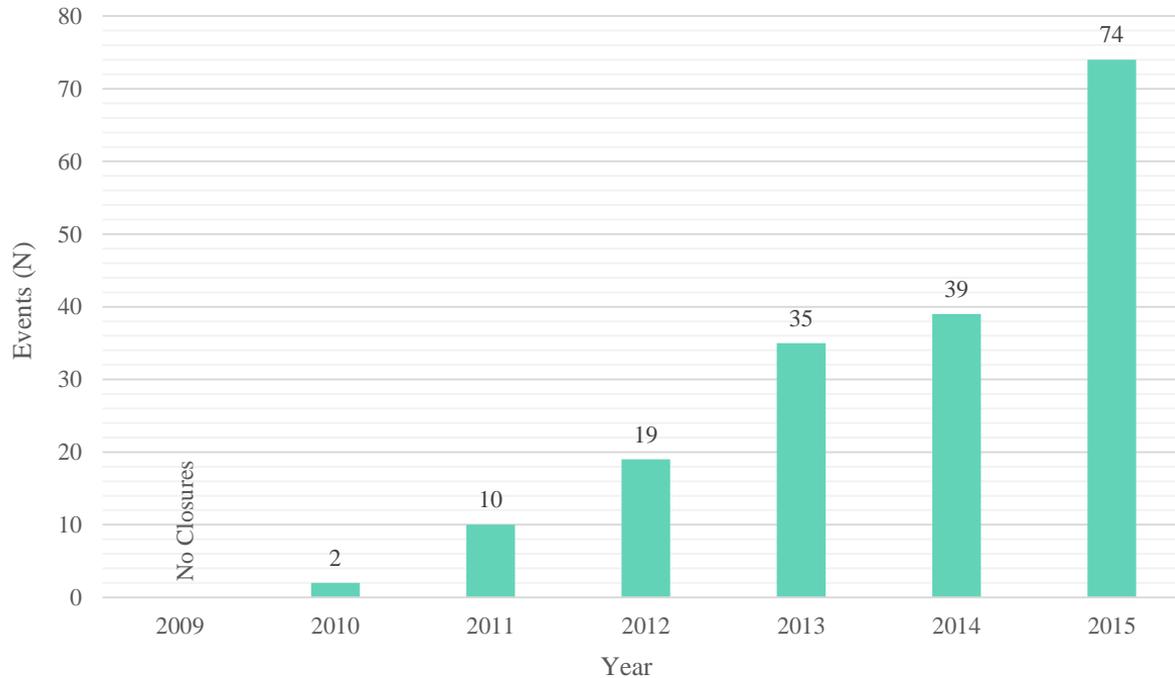
- Allergic or irritative skin, eye, ear, throat reaction
- Diarrhea
- Nausea
- Vomiting
- Respiratory difficulties



Beach Surveillance

NYS BGA Beach Closures

Total BGA Beach Closure Events by Year



Greatest number of BGA related beach closure events in 2015:

- Apparent increase in blooms, magnitude and duration
- Enhanced surveillance
- Increased outreach and education



NYSDOH Bloom Response for Beaches

- Development
- Delivery
- Deployment

NYSDOH Protocol:

Visual Evidence of Bloom=Beach Closure

- Toxin monitoring is NOT the primary public health intervention
- Sampling used to supplement and confirm (if needed).
- Lack of bloom for a day AND toxin analysis required to reopen beaches

Visual Based Response: Why?

- Symptoms can occur from exposure to blooms with or without toxin
 - Avoidance protective of acute health effects
- Sampling and analysis takes time
- Not all toxins analyzed

Visual Based Response: Why? (cont'd)

- Blooms are dynamic
 - Spatial, temporal and toxin gene expression
- Not practical to monitor all waters at all times
- “System” includes public outreach

BLUE-GREEN ALGAE BLOOM RESPONSE FOR BEACH OPERATORS AND STAFF

This fact sheet provides instructions for beach operators and staff to help protect patrons from potentially harmful blue-green algae blooms.

What is blue-green algae? Blue-green algae (*cyanobacteria*) are microscopic organisms that occur naturally in lakes, streams and oceans. Under certain conditions they can form dense blooms that discolor the water or produce floating scums.

Why is blue-green algae a concern? Some blue-green algae can produce toxins, some do not. However, exposure to any blue-green algae can cause health effects in people and animals when water with dense blooms is contacted or swallowed or when airborne droplets are inhaled.

How do I recognize blue-green algae? It could be a blue-green algae bloom if the water is blue-green, green, yellow, brown, red, has a paint-like appearance, or there is scum on the water surface.

Examples of blue-green algae blooms



What do beach operators and staff need to know?

- ✓ People and animals should avoid contact with blooms because blue-green algae exposure can cause health effects.
- ✓ Beaches should be monitored for blooms.
- ✓ Blooms can appear and disappear rapidly, even in under an hour. Staff should be trained to identify blooms and take action to prevent people from being exposed.
- ✓ Inform staff and beach patrons when suspicious blooms are present, when the swimming area is closed, and when blue-green algae advisories are in effect.

What should beach operators and staff do if they suspect a blue-green algae bloom?

Contact the local health department immediately if you suspect a bloom anywhere on a waterbody with a regulated bathing beach (see *Where can I get More Information?*). Health department staff will help confirm that the bloom is blue-green algae and provide signs to post to help prevent exposure.

If the bloom is within the swimming area: Prohibit wading, swimming, diving and any water contact activities in the swimming area. Post beach closure and advisory signs at the beach and other shoreline access areas (see *Examples of blue-green algae signs available from your local health department*).

If the bloom is outside the swimming area: Advisory signs should be posted to inform beach patrons to protect themselves and their animals from contact with blooms. Staff should monitor the location of the bloom and if it moves into the swim area, water contact activities should be prohibited and a beach closure sign should be posted.

BEACH CLOSED NO SWIMMING OR WADING



A blue-green algae bloom that can make you sick is in the beach area.

Keep people and animals out of the water:
Don't drink the water.

Rinse with clean water if exposed
Consider medical attention if you have symptoms such as nausea, vomiting or diarrhea, skin, eye or throat irritation, allergic reactions or breathing difficulties.
Report symptoms to the local health department and to health@nys.gov

Learn more health.ny.gov/environmental/water/drinking/bluogreenalgae.htm

BLUE-GREEN ALGAE BLOOM ADVISORY

Blue-green algae bloom(s) have been spotted in this waterbody.



- Don't swim, wade or fish near blooms or surface scum
- Don't drink the water
- Keep children and animals away from any blooms or scums
- Rinse with clean water if exposed

• Consider medical attention if you have symptoms of nausea, vomiting, or diarrhea; skin, eye or throat irritation, allergic reactions or breathing difficulties. Report symptoms to the local health department and health@nys.gov

Learn more health.ny.gov/environmental/water/drinking/bluogreenalgae.htm

Examples of blue-green algae signs available from your local health department

When can the swim area be re-opened? The local health department will provide guidance for reopening a beach. After the bloom is gone from the swimming area, a water sample from the swimming area must be collected. Wading, swimming and other water contact activities can resume if the results show that the water is clear of blooms and toxin levels are below a level of concern. Most blue-green algae blooms go away naturally, and can come and go in a short time period.

What are the potential health effects from blue-green algae bloom exposure? Potential health effects include irritation of the skin, eyes, nose, throat and respiratory tract. Swallowing water with blue-green algae blooms or toxins can also cause nausea, diarrhea and vomiting. Ingesting water with high levels of blue-green algae toxins over long time periods has also been associated with effects on the liver and nervous system.

Low levels of blue-green algae (where there is no visible bloom) are not expected to cause health effects in most people who are exposed during recreational contact. However, some people could be more sensitive and might experience mild symptoms such as skin, eye or throat irritation or allergic reactions.

What should someone do after being exposed to blue-green algae blooms?

- ✓ Rinse off with clean water immediately.
- ✓ Consider medical attention for symptoms such as nausea, vomiting or diarrhea; skin, eye or throat irritation, allergic reactions or breathing difficulties.
- ✓ Report symptoms that may be related to blue-green algae to the local health department as soon as possible.

Where can I get more information?

New York State Department of Health
www.health.ny.gov/environmental/water/drinking/bluegreenalgae/index.htm

NYS Department of Environmental Conservation
www.dec.ny.gov/chemical/77118.html

Contact a Local Health Department
www.health.ny.gov/EnvironmentalContacts

Operator Actions Steps

- Monitor beach areas for blue-green algae.
- Contact the local health department if blue-green algae is suspected.
- Close swim area and post signs to prohibit wading and swimming if suspicious algae is in the swim area.
- Post advisory signs if blooms are observed outside of the swim area.
- Inform staff when suspicious blooms are present, when the swimming area is closed, and when advisories are in effect.
- Report symptoms of blue-green algae exposure to the local health department.

Outreach: Beach Operators

Outreach: Public



If You are Exposed

- Rinse off yourself, children, and animals with clean water if exposed to blooms or surface scums, or water that is noticeably discolored.
- Stop using the water and consider medical attention if people or animals have symptoms and might have touched, swallowed, or inhaled surface waters with possible blooms. Symptoms include diarrhea, nausea or vomiting, skin, eye or throat irritation; and allergic reactions or breathing difficulties.

Report it.

- Please report suspicious blooms to HABsInfo@dec.ny.gov, your local health department (health.ny.gov/EnvironmentalContacts), or harmfulalgae@health.ny.gov
- Please report symptoms to your local health department or harmfulalgae@health.ny.gov

More Information

NYS Department of Health
www.health.ny.gov/harmfulalgae

NYS Department of Environmental Conservation
www.dec.ny.gov/chemical/77118.html

US Centers for Disease Control and Prevention
www.cdc.gov/nceh/hhs/hab/default.htm

US Environmental Protection Agency
www2.epa.gov/nutrient-policy-data/cyanohabs

Avoid blooms in surface waters because blue-green algae can cause health effects in people and animals.

 **Know it.**

It might be a blue-green algae bloom if you see:

- Strongly colored water.
- Paint-like appearance.
- Floating mats or scums.

 **Avoid it.**

Always stay away from blooms in surface waters:

- Don't swim, fish, boat, or wade in areas with blooms.
- Don't eat fish caught from areas with blooms.

If you're not on a public water supply:

- Bloom or no bloom, never drink, prepare food, cook, or make ice with untreated surface water.
- During a bloom, don't drink, prepare food, cook, or make ice with surface water, even if you treat the water yourself. Also consider not using it for showering, bathing, or washing.

If you are on a public water supply:

- Your water is treated, disinfected and monitored for drinking and household use.

 **Report it.**

Report blooms to: HABsInfo@dec.ny.gov, your local health department (health.ny.gov/EnvironmentalContacts), or harmfulalgae@health.ny.gov

Report bloom-related symptoms to: Your local health department or harmfulalgae@health.ny.gov

Consider visiting a health care provider if you, your family, or your animals are experiencing symptoms that might be related to blue-green algae exposure.

Learn more health.ny.gov/harmfulalgae



Blue-green Algae and Health

 Know it.

 Avoid it.

 Report it.

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Blue-green Algae







 Report it.

 Avoid it.

 Know it.

Avoid blooms in surface waters because blue-green algae can cause health effects in people and animals.

 **Know it.**

It might be a blue-green algae bloom if you see:

- Dense blooms.
- Strongly colored water.
- Paint-like appearance.
- Floating rafts or scums.

 **Avoid it.**

Always stay away from blooms in surface waters:

- Don't swim, fish, boat or wade near blooms, or eat fish from water with blooms.

If you're not on a public water supply:

- Bloom or no bloom, never drink or consume (prepare food, cook or make ice) untreated surface water.
- During a bloom, don't drink/consume surface water, even if you treat it. Also consider not using it for showering, bathing, or washing.

If you are on a public water supply:

- Your water is treated, monitored, managed and protected for drinking/ consuming and household use.

 **Report it.**

- Report blooms and symptoms to: harmfulalgae@health.ny.gov
- Consider visiting a health care provider if you, your family or animals are experiencing symptoms that might be related to blue-green algae exposure.

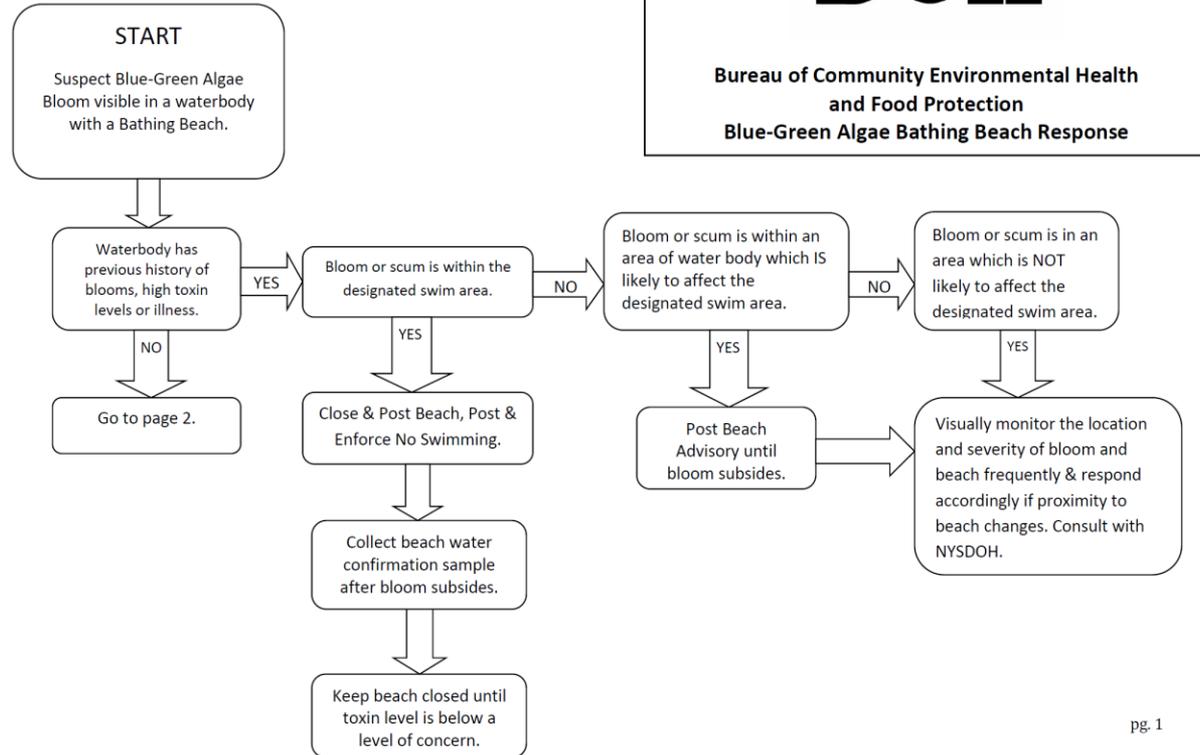
Learn more health.ny.gov/harmfulalgae


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NYSDOH Guidance

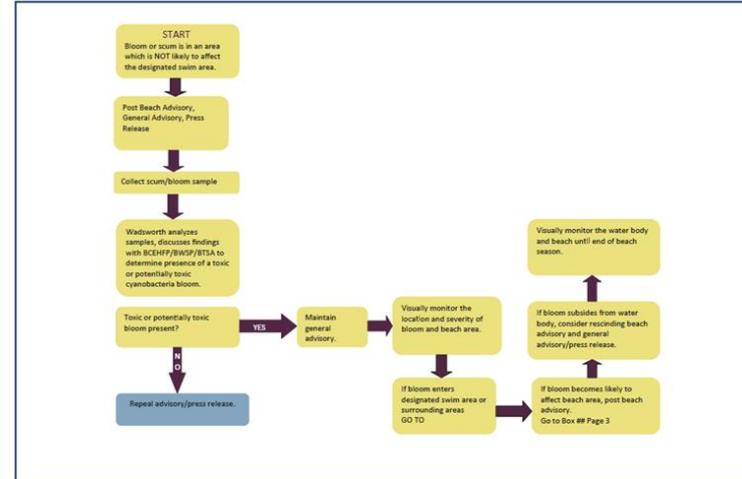
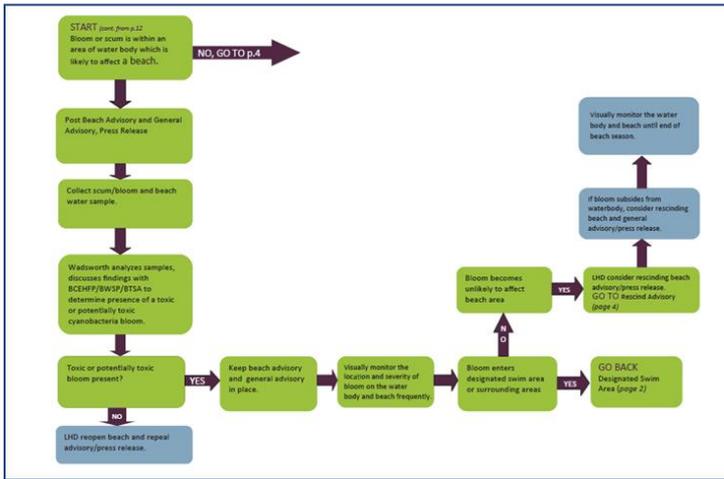
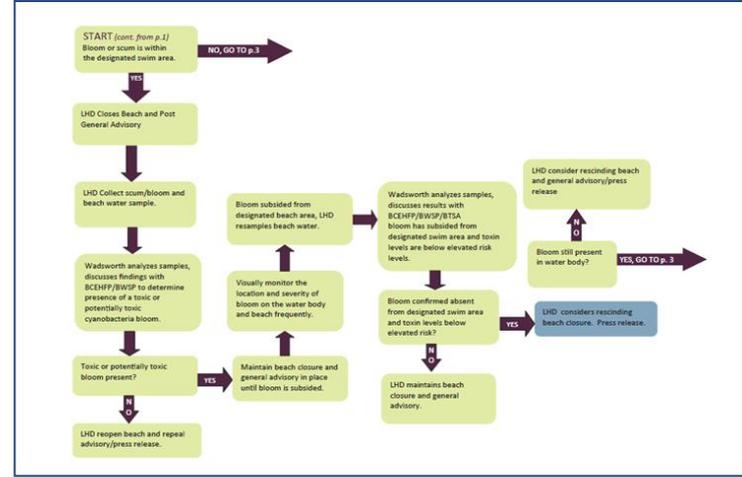
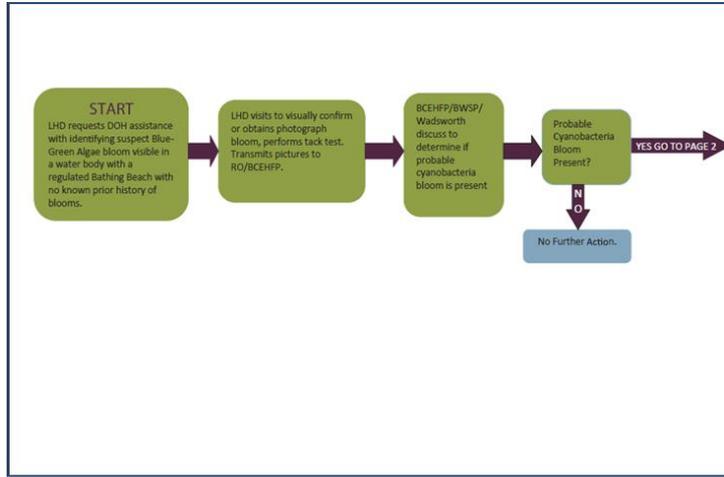
- Development
- **Delivery**
- Deployment

Example from Preliminary Version of Guidance



Guidance evolved-
became more
complex

Eventually
decided on
deploying via
web



Beach Guidance: Step-by-step Module on HCS

Regulated Bathing Beaches

NYSDOH FIELD GUIDANCE

Blue-Green Algae and Regulated Bathing Beaches

This module is for internal use by NYSDOH Regional, District and Local Health Department offices to address blue-green algae (BGA) bloom concerns at waterbodies with regulated bathing beaches. It provides guidance to close/reopen a swim area at the regulated bathing beach. It also provides information for coordinating optional response outside the regulated bathing beach area.

Click the [Go to Module](#) button and use the Main Menu bar to navigate through the guidance. This menu bar is designed to follow a decision-making process to identify and respond to BGA blooms. The module also provides links to resources necessary for implementation.

About the Guidance

Sampling for blue-green algal toxins is not necessary to close a swim area. The decision to close a regulated swim area is based on visual evidence of a BGA bloom and considers the bloom's location to assess the potential risk to swimmers. Closing a swim area based on visual evidence of a bloom is more protective because exposure to any blue-green algae, whether they contain toxins or not, can cause health effects when water with dense blooms are contacted, swallowed or inhaled.

However, samples must be collected to determine when a swimming area can be reopened. These samples must be used to confirm that the BGA bloom has cleared and to determine that microcystin toxins are not present in significant amounts. If results indicate microcystin toxins are below a concentration likely to result in symptoms (<10 µg/l) (WHO, 2003), the designated swimming area can be reopened.

Please notify your **NYSDOH regional office** and harmfulalgae@health.ny.gov when you are investigating a bloom, or closing or reopening a swim area. You should also please email harmfulalgae@health.ny.gov or contact your regional office with any concerns associated with the use of this module.

Reference: World Health Organization. *Guidelines for safe recreational water environments. Volume 1, Coastal and fresh waters.* Geneva, 2003. ISBN 92 4 154580 1

[Go to Module](#)

Please note:
You must be connected to the Health Commerce Network (HCN) for this guidance module to be fully functional.

Links within module allow multi-directional movement, simulating a decision-making process

Audience: Local Health Departments

Location: [Health Commerce System](#)

Beach Guidance: Resources Available

Main Menu

[START: Bloom response](#)

[Bloom locator](#)

[BGA bloom in swim area](#)

[BGA bloom **LIKELY** to affect swim area](#)

[BGA bloom **NOT LIKELY** to affect swim area](#)

[No BGA bloom present](#)

[Report BGA bloom-related symptoms](#)

Options Menu

[Support for identifying a BGA bloom](#)

[Support for determining if a BGA bloom cleared](#)

[Advisories outside beach](#)

NYSDOH FIELD GUIDANCE
Regulated Bathing Beaches



Blue-Green Algae

Reporting and managing blue-green algae (BGA bloom) at regulated bathing beach areas

For NYSDOH and LHD staff use only

Resources

[NYCRR Part 6, Subpart 6-2 Bathing Beaches](#)

[Algal toxins in surface waters \(2003 Field memo\)](#)

[Contacts](#)

[Definitions](#)

[FAQs](#)

[Photo References](#)

[Blue-green Algae Bloom Response for Beach Operators and Staff](#)

[Illness reporting form \(CDC 5212\)](#)

[Outreach templates](#)

[BGA bloom sampling procedure](#)

[Wadsworth Sampling Instructions and Submittal form](#)

- Identifying a bloom
- BGA within a swim area
- BGA likely to affect a swim area
- BGA not likely to affect a swim area
- No BGA

Beach Guidance: Resources Available

Photo References

Blue-Green Algae



NOT Blue-Green Algae

Caution: Do not collect suspicious algae with bare hands, photo for demonstration purposes only.



Definitions: Blue-green Algae Bloom Response

After BGA Subsides from the Designated Swimming Area: For the purpose of bathing beach operation, BGA is no longer within the designated swimming area and is no longer within an area likely to affect the designated swimming area.

Area LIKELY to Affect Swimming Area: For the purpose of bathing beach operation, a visible BGA bloom or scum is in close enough proximity to the designated swimming area that existing or potential environmental conditions, such as wind, waves or current, could move the bloom or scum into an area where beach patrons may come in physical contact with the bloom or scum.

Area NOT LIKELY to Affect a Designated Swimming Area: For the purpose of bathing beach operation, a visible BGA bloom or scum is present in the water body, however it is physically separated by a land mass or is in far enough proximity to the beach area that existing or potential environmental conditions, such as wind, waves or current, could not move the bloom or scum into an area where beach patrons may come in physical contact with the bloom or scum.

Outreach Templates

Use the following signs and public notices for blue-green algae related beach closures and blue-green algae advisories.

Signs



Generic beach closed



Beach closed due to blue-green algae



Blue-green algae advisory

Public Notices

- [Beach closed due to blue-green algae](#)
- [Blue-green algae subsided: beach reopened](#)
- [Blue-green algae advisory](#)

Beach Reopening and Sampling Procedure

Before the swim area can be reopened:

- The water in that area must be free from a visually apparent blue-green algae bloom AND
- Microcystin toxins must be below 10 µg/l to protect bathers from exposure to blue-green algae.

We recommend waiting until the next day after the bloom has cleared to take a sample from the swim area. Waiting provides protection in the unlikely event that toxins other than microcystins might be present and that the bloom has remained clear.



Interpretation of when a bloom is "all clear" can be difficult due to typical concentrations of green algae or turbidity. In the picture above the sample on the left contained > 10µg/l of microcystins and a BGA bloom is visually apparent.

The sample bottle on the right contained <10µg/l of microcystins. While there might still be some BGA present, it is not dense enough to be considered "in bloom."

Beach Guidance: Resources Available

STATE OF NEW YORK -- DEPARTMENT OF HEALTH
INTEROFFICE MEMORANDUM

Blue-green Algae Contacts

Field response activities should be coordinated through NYSDOH Regional Offices, local health departments (LHDs), NYSDOH Central Office and when applicable NYSDEC. NYSDOH Regional and Central Office staff and NYSDEC staff contacts are provided (see map on next page for specific NYSDOH field coordination assignments). When corresponding about blue-green algae please copy NYSDOH's harmful algae BML at harmfulalga@health.state.ny.us and copy Environmental Health Directors. This will help assist in the coordination of your response activities.

Office	Contact	Name	Phone	Fax	Email
NYSDOH Regional Offices					
Central Region					
St. Lawrence, Jefferson, Lewis, Oswego, Oneida, Cayuga, Onondaga, Madison, Chenango, Cortland, Tompkins, Tioga, Broome	Environmental Health Director	John Strepelis	315-477-8150	315-477-8581	john.strepelis@health.ny.gov
	Recreation/Beaches	Maggie Deitrich	315-477-8144	315-847-8581	margaret.deitrich@health.ny.gov
	Recreation/Beaches	Laurie Sheltra	315-785-2277	315-785-2600	laurie.sheltra@health.ny.gov
	Water Supply	Kevin Kenyon	315-402-7740	315-402-7599	kevin.kenyon@health.ny.gov
	Water Supply	Erin (Spier) Ingles	315-477-8149	315-477-8581	erin.ingles@health.ny.gov
Western Region					
Niagara, Erie, Chautauque, Cattaraugus, Allegany, Wyoming, Genesee, Orleans, Monroe, Livingston, Ontario, Wayne, Yates, Steuben, Chemung, Schuyler, Seneca	Environmental Health Director	Ralph Van Houten	585-423-8072	585-423-8099	ralph.vanhouten@health.ny.gov
	Recreation/Beaches	Anita Bonamici	716-847-4500	585-423-8099	a.bonamici@health.ny.gov
	Recreation/Beaches	Patty Hall	585-423-8156	585-423-8128	patricia.hall@health.ny.gov
	Water Supply	April Kellerhouse	716-847-4558	716-847-3172	april.kellerhouse@health.ny.gov
Capital District Region					
Clinton, Franklin, Essex, Hamilton, Herkimer, Fulton, Warren, Saratoga, Washington, Otsego, Delaware, Schoharie, Montgomery, Schenectady, Albany, Rensselaer, Columbia, Greene, Delaware	Environmental Health Director (Primary Contact)	Rob Swider	518-408-5398	518-408-5392	robert.swider@health.ny.gov
	Recreation/Beaches/Water Supply	Tim Vickerson	518-408-5407	518-408-5392	timothy.vickerson@health.ny.gov
	Recreation/Beaches	Ed Bartos	518-793-3893	518-793-0427	edward.bartos@health.ny.gov

TO: City/County Environmental Health Directors
District Directors

FROM: Edward G. Horn, PhD, Director
Bureau of Toxic Substance Assessment

SUBJECT: Algal toxins in surface waters

DATE: June 26, 2003

The attached background document summarizes guidance for responding to public inquiries concerning recreational or drinking water exposure to surface waters containing toxic algae. For recipients in the Lake Champlain basin, two documents are also included that provide details on the University of Vermont's algal toxin monitoring program for Lake Champlain. Public concern or inquiries about toxic algae may be prompted by the presence of visible algal blooms in lakes or by reports of elevated algal toxin levels in surface waters used for recreation or as a source of drinking water.

If you have additional questions concerning this material, or would like copies of the Lake Champlain documents, contact Gregg Recer, Ph.D. of my staff at (518) 402-7820 or gmr05@health.state.ny.us.

You are Here: [Home Page](#) > [Swimming Pools / Bathing Beaches / Recreational Aquatic Spray Grounds](#) > Blue-Green Algae Bloom Response for Beach Operators and Staff

Blue-Green Algae Bloom Response for Beach Operators and Staff

- Blue-Green Algae Bloom Response for Beach Operators and Staff is available in Portable Document Format (PDF).

Operator Action Steps

These instructions are for beach operators and staff to help protect patrons from potentially harmful blue-green algae blooms.

- Monitor** beach areas for blue-green algae.
- Contact the local health department** if blue-green algae is suspected.
- Close swim area and post signs** to prohibit wading and swimming if suspicious algae is in the swim area.
- Post advisory signs** if blooms are observed outside of the swim area.
- Inform staff** when suspicious blooms are present, when the swimming area is closed, and when advisories are in effect.
- Report symptoms** of blue-green algae exposure to the local health department.

You are Here: [Home Page](#) > [Health & Safety in the Home, Workplace and Outdoors](#) > Part 6, Subpart 6-2 Bathing Beaches

Part 6, Subpart 6-2 Bathing Beaches

Notice

The information contained on this website is not the official version of the Compilation of the Rules and Regulations of the State of New York (NYCRR). No representation is made as to its accuracy. To ensure accuracy and for evidentiary purposes, reference should be made to the Official Compilation of the Rules and Regulations of the State of New York, available from West Publishing at 1-800-344-5009.

Includes Amendments Effective July 6, 2011

(Statutory Authority: Public Health Law, Section 225)

General		CDC
National Outbreak Reporting System		
Waterborne Disease Transmission		
<p><small>This form is used to report waterborne disease outbreak investigations. This form has 6 parts, indicated by tabs at the top of each page. Part 1 asks for the minimum or basic information about the outbreak investigation. Part 2 asks for epidemiological data and clinical specimen test results. Parts 3, 4, 5 and 6 collect information about types of water exposure (treated recreational water, untreated recreational water, drinking water, and water not intended for drinking/unknown intent). Only 1 of these 4 water exposure parts should be completed for an outbreak investigation report.</small></p>		
<small>CDC USE ONLY</small>		
CDC Report ID	State Report ID	
General Section		
<small>Form Approved OMB No. 0620-0004</small>		



Department of Health

Beach Guidance: Bloom Response - Start

Regulated Bathing Beaches

Main Menu

- START: Bloom response
- Bloom locator
- BGA bloom in swim area
- BGA bloom **LIKELY** to affect swim area
- BGA bloom **NOT LIKELY** to affect swim area
- No BGA bloom present
- Report BGA bloom-related symptoms

Options Menu

- Support for identifying a BGA bloom
- Support for determining if a BGA bloom cleared
- Advisories outside beach

START: Bloom Response

- You have been notified that there is a bloom on a water body with a regulated bathing beach
 - Tasks:*
 - Obtain photos, conduct interview to determine if BGA and its proximity to the beach. Compare against [Photo References](#). Note: samples are not needed to confirm BGA bloom. [Need help? Get support for identifying a BGA bloom](#)
 - Provide/verify beach operator has [Blue-green Algae Bloom Response for Beach Operators and Staff fact sheet](#).
 - Notify your [NYSDOH regional office](#) and harmfulalgae@health.ny.gov that you are investigating a bloom
- Results show
 - BGA bloom suspected: [Continue to BGA bloom locator](#)
 - No BGA bloom suspected
 - Task: Notify your [NYSDOH regional office](#) and harmfulalgae@health.ny.gov that you are no longer investigating a bloom*
 - Event Ends

Field Guidance for NYSDOH and LHD staff use only
9/24/14

- Obtain photos
- Request support with ID
- Notify RO & CEH workgroup
- Provide factsheet to operator

Beach Guidance: Bloom Locator

Regulated Bathing Beaches

Main Menu

START: Bloom response

Bloom locator

BGA bloom in swim area

BGA bloom **LIKELY** to affect swim area

BGA bloom **NOT LIKELY** to affect swim area

No BGA bloom present

Report BGA bloom-related symptoms

Options Menu

Support for identifying a BGA bloom

Support for determining if a BGA bloom cleared

Advisories outside beach

Bloom Locator

- Bloom is located in ...
 - a designated swimming area
 - an area LIKELY to affect a designated swim area
 - an area NOT LIKELY to affect a designated swim area

Identify where the bloom is located

Beach Guidance: Bloom Identified in Swim Area

Regulated Bathing Beaches

BGA Bloom in Swim Area:

Close Swim Area (or Maintain Closure)

Main Menu

START: Bloom response

Bloom locator

BGA bloom in swim area

BGA bloom LIKELY to affect swim area

BGA bloom NOT LIKELY to affect swim area

No BGA bloom present

Report BGA bloom-related symptoms

Options Menu

Support for identifying a BGA bloom

Support for determining if a BGA bloom cleared

Advisories outside beach

- Advise operator to close swim area at the beach in accordance with Subpart 6-2.4(b)(5) and 6-2.15(a),(d),(f) as appropriate

Tasks:

- Notify your [NYSDOH regional office and harmfulalgae@health.ny.gov](#) that the swim area is closed.
- Provide operator with [Blue-green Algae Bloom Response for Beach Operators and Staff and signs](#);
- Inform beach operators to visually monitor location and severity of bloom in swimming and nearby areas to identify when bloom subsides.
- Inform operators to notify LHD of any reported BGA bloom-related symptoms in accordance with [Subpart 6-2.7\(d\)](#)
- If applicable notify media (see [Outreach Templates](#))
- Consider issuing advisories outside beach

- Blooms persists: Keep swim area closed
- Bloom clears: [Next steps](#)
- [Need help determining if bloom has cleared.](#)

- Swim area is closed
- Closure signs posted prohibit swimming and wading
- Notify Regional and State Health
- Inform operator to monitor conditions
- Inform operator to report symptoms indicative of exposure to LHD
- Consider posting waterbody advisory outside swim area

Beach Guidance: Reopening a Swim Area

Regulated Bathing Beaches

Main Menu

START: Bloom response

Bloom locator

BGA bloom in swim area

BGA bloom **LIKELY** to affect swim area

BGA bloom **NOT LIKELY** to affect swim area

No BGA bloom present

Report BGA bloom-related symptoms

Options Menu

Support for identifying a BGA bloom

Support for determining if a BGA bloom cleared

Advisories outside beach

BGA In the Swim Area: Bloom Clears

- Collect a water sample in the designated swimming area one day after the bloom has cleared.
Task: Follow [BGA bloom sampling procedures](#)
- If water sample results show the water is still discolored and/or microcystins are $>10 \mu\text{g/L}$ (BGA persists) **Maintain Beach Closure.**
Task: Wait one day, repeat steps above, if water still looks clear.
- If water sample results show water is clear AND microcystins are $<10 \mu\text{g/L}$ (BGA bloom has cleared) **Reopen swim area and re-evaluate advisory status.**

- Water must be visibly clear of algae or associated material
- One day after swim area is visibly clear, collect water sample
- Sample results must indicate toxin levels less than $10\mu\text{g/L}$ and swim area has remained clear
- If so, open swim area

Beach Guidance: Reopening a Swim Area

Regulated Bathing Beaches

Main Menu

- START: Bloom response
- Bloom locator
- BGA bloom in swim area
- BGA bloom **LIKELY** to affect swim area
- BGA bloom **NOT LIKELY** to affect swim area
- No BGA bloom present
- Report BGA bloom-related symptoms

Options Menu

- Support for identifying a BGA bloom
- Support for determining if a BGA bloom cleared
- Advisories outside beach

Reopen Swim Area: Re-evaluate Advisory Status

- Advise operators to reopen the swim area

Tasks:

- Remove beach closure signs
- Advise bathing beach operator to visually monitor water body and beach throughout swimming season
- Notify your NYSDOH regional office and harmfulalgae@health.ny.gov that swim area is reopened
- Consider advisories outside the beach

- Assess nearby areas of the water body for BGA blooms
 - BGA bloom likely to affect designated swim area
 - BGA bloom not likely to affect designated swim area
 - No bloom present: Event Ends

Field Guidance for NYSDOH and LHD staff use only
9/24/14

- Remove closure signs
- Continue to monitor waterbody
- Notify RO & CEH workgroup
- Consider waterbody advisory for outside beach



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Beach Guidance: Support for Identifying Bloom

Regulated Bathing Beaches

Get Support Identifying a BGA Bloom

If you have a suspicious looking bloom in a water body with a regulated bathing beach and want help identifying if it's BGA...

- Notify your [NYSDOH regional office](#) and harmfulalgae@health.ny.gov that you are investigating a suspicious BGA bloom
- Take pictures of bloom and or a sample of the bloom from the site and in swimming area
Follow [BGA bloom sampling procedures](#)
- Email pictures to: harmfulalgae@health.ny.gov (and copy [NYSDOH regional office](#)) or another entity that you are confident can assist with BGA identification.
- **The swim area must be closed on visual evidence of a bloom.** But, if desired, bloom samples could also be analyzed using toxin test strips, microscopy, chlorophyll differentiation or PCR to confirm the bloom is BGA, after the swim area has been closed.
- Bloom ID results indicate:
 - **BGA bloom suspected:** Return to [Bloom locator](#)
 - **BGA bloom not suspected: Event ends**
Task: Send an email to your [NYSDOH regional office](#) and harmfulalgae@health.ny.gov notifying us that the event is over

- Notify RO & CEH workgroup
- Provide pictures to CEH for help with ID
- Collect sample
- Based on results, follow guidance appropriately

Beach Guidance: Support for Identifying Cleared Bloom

Regulated Bathing Beaches

Get Support for Determining if BGA Bloom Cleared

If you are not sure if the bloom has cleared:

- Notify your [NYSDOH regional office](#) and harmfulalgae@health.ny.gov that you need help determining if bloom has cleared enough to sample for reopening the swimming area.
- Take pictures of a sample of water from the swim area (or other bloom site as appropriate) Follow *Collecting Your Sample in the BGA bloom sampling procedures*
- Email pictures to: harmfulalgae@health.ny.gov (and copy your [NYSDOH regional office](#)).
- Consultation with DOH indicates:
 - **BGA bloom has cleared:** return to ***BGA In the swim area: Bloom clears.***
 - **BGA bloom remains in swim area:** return to ***BGA bloom in swim area: close swim area (or maintain closure)***

- Notify RO & CEH workgroup
- Provide pictures to CEH for help with ID
- Collect sample
- Based on results, follow guidance appropriately

Public Notification Template:

Sample Public Notification: Blue-green Algae-related Beach Closure

This Sample Public Notification of a beach closure was developed to help promote accuracy and consistency in blue-green algae messaging. Please share this language with appropriate staff to use for notifying the public of a blue-green algae-related beach closure.

[BATHING BEACH] CLOSED ON [WATER BODY] in [TOWN, COUNTY, NEW YORK]

[Bathing Beach] in the Town of [Town] on [Water Body] has been closed to swimming due to the presence of a blue-green algae bloom. The beach will remain closed until the blue-green algae blooms have cleared and approval to reopen the beach is obtained from the [Health Department].

People and animals should not swim at the bathing beach and should avoid contact with any algae blooms, scums and colored water.

Blue-green algal blooms can turn the water green and can form thick scums on the water surface. Blue-green algae can cause skin or eye irritation, or diarrhea and vomiting if ingested. People and animals should keep out of the water where blooms are present.

The Department of Health recommends taking the following precautions:

- Don't swim, wade or fish near blooms or scums
- Don't drink the water
- Keep children and animals away from any blooms or scums
- Rinse with clean water if exposed

Please report symptoms that may be associated with exposure to blue-green algae blooms, such as skin or eye irritation, or diarrhea and vomiting to the Department of Health at (###) ###-####.

For more information, please contact the Department of Health at ###-###-####.

Learn more about blue-green algae at: health.ny.gov/environmental/water/drinking/bluegreenalgae.htm and dec.ny.gov/chemical/77118.html



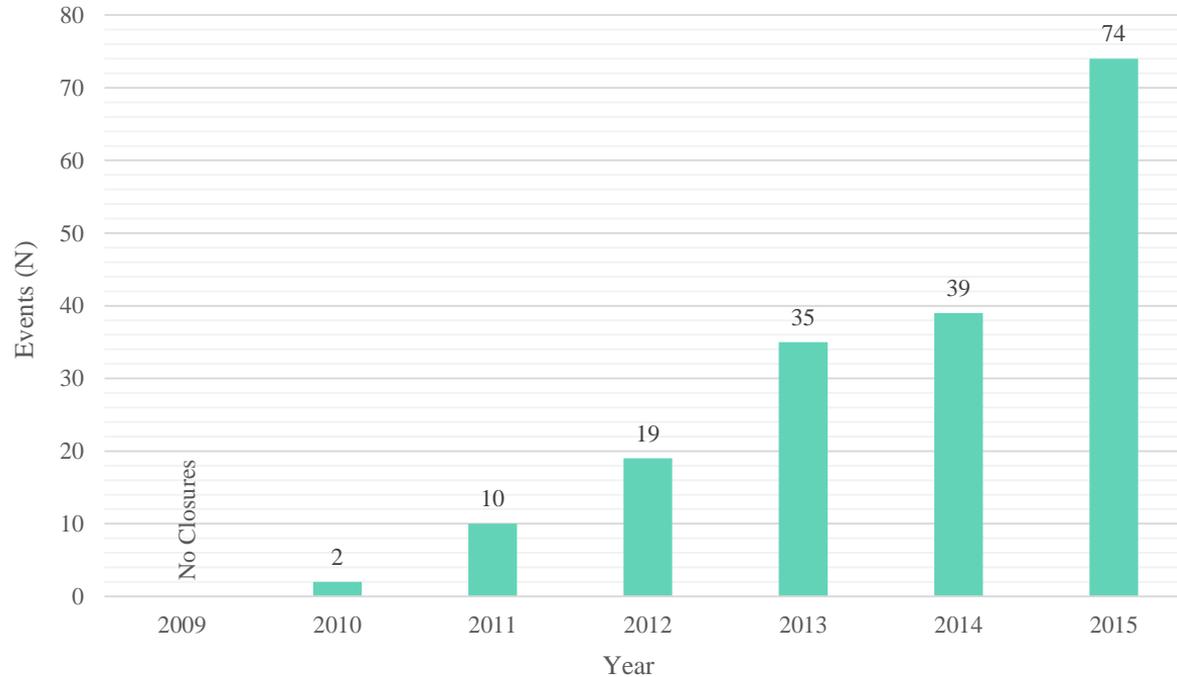
**Department
of Health**

NYSDOH Guidance

- Development
- Delivery
- Deployment

NYS BGA Beach Closures

Total BGA Beach Closure Events by Year



Greatest number of BGA related beach closure events in NYS occurred 2015:

- Use of guidance
- Increased outreach and education
- No reported outbreaks at beaches

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Thank you!

Questions?

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