

Interstate Harmful Algal Bloom Regulations and Guidance Matrix

Prepared by NEIWPCC in cooperation with the States of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.
Last Updated July 2014. For more information, contact Dan Peckham, NEIWPCC.

	CT	MA	ME	NH	NY	RI	VT
Regulations	<p>Statutory Authority: Connecticut General Statutes outlines enforcement authority under Chapter 98, Municipal Powers. Section 7-148: - power to "control and operate" recreation places, public beaches and beach facilities - power to "regulate and prohibit swimming or bathing in the public or exposed places within the municipality"</p> <p>CT Public Health Code does not include a pertinent regulation specific for lakes and ponds, however, section 19-13-B34 may apply to impoundments.</p> <p>Information below is from "Guidance to Local Health Departments For Blue-Green Algae Blooms in Recreational Freshwaters" (June 2014) - linked under Information Source(s): Web Access.</p>	<p>Statutory Authority: Massachusetts General Law 111, section 122: Regulations relative to nuisances: examinations - power of local boards of health to take action against nuisances (including HABs) Massachusetts General Law 11, section 5S: Public bathing waters- describes roles and responsibilities of bathing beach operation</p>	<p>Title 38, Chapter 3, Article 4A: Section 465-A 1B does not specifically mention HABs but does state: Class CPA (only water quality class for lakes) waters shall have a stable or decreasing trophic state, subject only to natural fluctuations and shall be free of culturally induced algal blooms which impair their use and enjoyment. DEP Rules (06-096 Chapter 581: 6B) define algal blooms as "planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 m."</p>	<p>DES: No entities are required to test for cyanobacteria. However, if cyanobacteria is found, an advisory sign must be posted. Still researching the state statutes to determine if Health & Human Services has the authority to close a beach or lake. DES does NOT have that authority.</p>	<p>DEC: No specific regulations for HABs. A narrative standard for phosphorus and nitrogen references algae (Part 703.2) "none in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best uses," and taste-, color-, and odor-producing, toxic and other deleterious substances allows "None in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages". The latter may be disaggregated to separate "toxins" and be interpreted through a numeric translator for citing HAB-related standards violations.</p> <p>DOH: https://www.health.ny.gov/regulations/nyccr/title_10/part_6/subpart_6-2.htm#s6215</p>	None	<p>Guidance Document Only: http://healthvermont.gov/enviro/bg_algae/documents/BGA_guide.pdf</p>
Regulations Comments:	<p>- Guidance Document</p> <p>- Comprehensive document includes public alert and action value components, with less of a focus on watershed management/assuring compliance</p> <p>- VT processes and procedures were mirrored closely in the development of the CT approach</p> <p>Regulations Comments:</p> <ul style="list-style-type: none"> - Type: Guidance, binding regulation, etc. - Purpose of the regulatory framework (e.g., alerting the public, assuring compliance) - Comments on how state reached the values, and how values were moved through the rulemaking process 	<p>- Bathing beach regulations: 105 CMR 445:</p> <ul style="list-style-type: none"> - Binding - The regulations allow for posting advisories at beaches for any potential health reason, including HABs. - Regulations moved through public process <p>Specific to Harmful Algae Blooms: MDPH Guidelines for Cyanobacteria in Freshwater Recreational Water Bodies in Massachusetts Document</p> <ul style="list-style-type: none"> - Goals: Respond to reports of blooms and collect samples as necessary and prevent exposures by recommending advisories as warranted - Values were proposed after conducting a literature review, and WHO and EPA recommendations were followed in developing a recreational water body concentration for microcystin (used TDI of 0.04 µg/kg of body weight per day, 35kg child, intake rate of 0.1L water per hour, and exposure duration of 1hr/day). Cell count guidelines considered available literature on associations between cell counts and toxin levels. Values were reviewed internally at DPH and by a small workgroup including MassDEP and Massachusetts Department of Conservation and Recreation. 	<p>State program and volunteers in the Maine Volunteer Lake Monitoring Program monitor algal blooms using Secchi disk. Maine does not have any monitoring specific to HABs; when DEP staff are asked about HABs, our standard answer pertains to general conditions (blooms, risk of contracting Giardia) rather than HABs (e.g., don't swallow water, some species irritate skin - shower after swimming, relate personal perspective that if it were my child and I couldn't see more than 6-7 feet into the water, I wouldn't want them swimming in the water because I might not be able to find them if they had an accident). Preliminary screening data indicate that toxic blooms are not a prevalent issue in Maine, but the state wants to be prepared for future bloom situations because changes in frequency and duration of precipitation events coupled with an extended growing season due to early ice-off and later ice-on, might change the types of blooms that occur in the state.</p>	<ul style="list-style-type: none"> - Type: No requirements. Still researching the state statutes to determine if Health & Human Services has the authority to close a beach or lake. DES does NOT have that authority. - Purpose: Notify public if cyanobacteria are found 	<p>DEC:</p> <ul style="list-style-type: none"> - No specific regulations for HABs, but WQS may be interpreted through a numeric translator for citing HAB-related standards violations. - DEC has integrated HABs sampling into their monitoring programs; encourages the public to submit reports; provides weekly updates on the public website based upon the information received; developed comprehensive web pages about blue-green algae & HABs and continues to improve the content; uses social media, DEC listserves and email to build awareness and direct the public to DEC & DOH information. - No official guidance for advisories for freshwater HABs. Guidance thresholds, based on literature review and analysis of other state's criteria, are used to categorize the alage bloom data received. <p>DOH/OPR:</p> <ul style="list-style-type: none"> - Regulations specify that certain parameters must be met for a water body to continue to be operated as a bathing beach. Regulations contain qualitative requirements for chemical, physical, and biological quality that are protective of public health; however, cyanobacteria and maximum concentrations of their associated compounds are not specified. <u>Guidance</u> developed response protocols for beach closures based on guidance, not regulations. 	<p>Type: Guidance, non-binding Purpose: Alerting the public Comments: Guidance has not undertaken the rule-making process. Guidance was developed based on MA studies/policy, which are based on WHO guidelines.</p>	- Type: Guidance
Indicators Monitored	<p>Visual scums Cell counts</p>	<p>Visual scums or mats Cell counts Toxin levels of lysed cells (Microcystic-LR)</p>	<p>Until 2014, Secchi Transparency only; we will use indicators recommended by Region 1 for the Regional project this summer.</p>	<p>Visual bloom Cell count Percent of the total cell count in an algae sample being identified as cyanobacteria.</p>	<p>Visual Evidence consistent with BGA (spilled paint, pea soup, green streaks) BG chlorophyll a, total chlorophyll a Microcystis-LR, Anatoxin-a Ancillary information (bloom increasing, unsampled denser shoreline blooms, etc.)</p>	<p>Visual scum/mat Cyanobacteria cell count Microcystin concentration</p>	<p>Visual Monitoring Cell Counts Species ID Toxins</p>

<p>Proactive Surveillance/ Sampling (DEP, DPH, Citizen) - Note indicator being sampled for each method</p>	<p>No volunteering monitoring program actively managed by the state, but consultants and individual lake groups can conduct their own as desired.</p> <p>State swimming beaches are monitored by DEEP staff (weekly).</p> <p>Further efforts ongoing with EPA R1 (Monitoring and Analysis Focus Team).</p>	<p>From 2009-2013, using CDC funding, MDPH conducted weekly monitoring at 5 locations with known history of blooms (MDPH) during the summer months. Tested for cyanobacteria count & ID, Microcystin, and water quality parameters (including pH, Turbidity, DO, Temp). That ceased after the CDC funding ended.</p>	<p>We request that volunteers notify Maine DEP when algal blooms decrease Secchi transparencies below 2.0 meters.</p>	<p>DES conducts routine sampling at freshwater beaches - the goal is to inspect each beach in the program three times between Memorial Day and Labor Day. Not all freshwater beaches sampled by the DES program are accessible to the general public.</p>	<p>DEC posts information about the programs and how the program that collect blue-green algae data: Citizens in lake communities that have a lake association may be able to participate in the Citizen Statewide Lake Assessment Program (CSLAP, http://www.dec.ny.gov/chemical/81576.html); information about what data is collected is available on DEC's website http://www.dec.ny.gov/chemical/81849.html. - appx 120 lakes sampled 8x per summer for open water blooms and as needed when shoreline blooms observed.</p> <p>DEC monitoring conducted on other lakes; bloom samples collected when blooms observed</p>	<p>Surveillance Program by Rhode Island Department of Environmental Management, as funding and manpower allows</p>	<p>16 VTDEC Long Term monitoring sites visited bi-weekly (cell counts, visual, toxins when bloom present) 70 Lake Champlain Committee volunteer sites (visual) 14 VDH monitoring sites (visual, cell count, toxins)</p>
<p>Sampling Methods - Note indicator being sampled for each method</p>	<p>Sampling for cell counts, visual observations, (secchi depth) Sampling at the Shoreline - Sampler should be using waders and long sleeved rubber gloves - Clearly mark sampling containers with required information (site #, date, time, etc.) - Wade to an approximate depth of three feet - Invert sample bottle(s) to collect a sample at approximately 18 inches below the surface - Decant water for required air space and/or pour into additional containers (if necessary), cap bottles - Visual observations – look to see if bottom is visible, if a scum on water's surface is present - Fill out chain of custody, including visual observations - Store samples in a cooler with ice until delivery to lab(s) Sampling the Shoreline from a Dock, Wall, or Boat - Sampler should be using long sleeved rubber gloves - Clearly mark sampling containers with required information (site #, date, time, etc.) - Choose a location that is approximately three feet deep (if possible) - Lean over to collect sample (if possible), or use a pole sampling device to collect sample - Invert sample bottle(s) to collect a sample at approximately 18 inches below the surface - Decant water for required air space and/or pour into additional containers (if necessary), cap bottles - Visual observations – look to see if bottom is visible, if a scum on water's surface is present - Use a Secchi disk with calibrated line to determine transparency and total depth - Fill out chain of custody, including visual observations - Store samples in a cooler with ice until delivery to lab(s) Logistical Issues 1. Long holding times may result in higher counts.</p>	<p>- MDPH has a written sampling protocol. - Samples must be collected at 1 meter depth, six inches below the surface. - Hip waders and gloves are used. - Depth is fixed but lateral location is not. - Sampling site is chosen based on bloom appearance and access to water to target worst case scenario for human exposure. - Samples must be placed on ice and analyzed for cell count and identification within 24 hours of collection.</p> <p>If a cell count sample exceeds 50,000 cells/mL, toxin testing of lysed cells should be done to ensure that guideline of 14 ppb is not exceeded. The lysing should consist of three freeze and thaw cycles.</p>	<p>State program and volunteers in the Maine Volunteer Lake Monitoring Program monitor algal blooms using Secchi disk. Maine does not have any monitoring specific to HABs.</p>	<p>The goal of the freshwater beach program is to inspect each beach in the program three times over between Memorial Day and Labor Day.</p>	<p>Citizen Statewide Lake Assessment Program (CSLAP, http://www.dec.ny.gov/chemical/81576.html); information about what data is collected is available on DEC's website http://www.dec.ny.gov/chemical/81849.html. - appx 120 lakes sampled 8x per summer for open water blooms and as needed when shoreline blooms observed.</p> <p>Full sampling procedures listed here: http://www.dec.ny.gov/docs/water_pdf/cslopsampro.pdf</p>	<p>At public access point (screening samples) or area of complaint (response samples), a single grab sample is collected for analysis of cyanobacteria cell count and microcystin concentration. If a bloom is noted in another area of the waterbody, a second grab sample can be collected from the bloom for cyanobacteria cell count and microcystin concentration</p>	<p>See QAPP for detail. Beach area whole water samples collected near surface at 1-2 feet in depth.</p>
<p>Indicator Action Limits/Levels (Advisories, Closures, Acute and Chronic)</p>	<p>Visual Rank Category 2 (or blue-green algae cells >20k/ml and < 100k): Notify CT DPH, CT DEEP, Increase regular visual surveillance until conditions change.</p> <p>Visual Rank Category 3, or blue-green algae cells > 100k/ml: POSTED BEACH CLOSURE: If public has beach access, alert water users that a blue-green algae bloom is present.</p>	<p>Further sampling (toxin testing of lysed cells to ensure that guideline of 14 ppb (microcystin) is not exceeded) if cell count exceeds 50,000 cells/mL.</p> <p>Advisory: Avoid contact with water if visible scum or mat, ≥14 µg/L microcystin-LR, or ≥70,000 cells/mL for cyanobacteria cell counts.</p>	<p>No official guidance for closures/advisories, but DEP Rules (06-096 Chapter 581: 6B) define algal blooms as "planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 m."</p>	<p>Beach Advisories issued when a bloom exists, with a cyanobacteria cell count exceeding 70,000 cells/mL OR >50% of the bloom is a cyanobacteria.</p> <p>A Lake WARNING is issued when a lake has no beach or the bloom covers area away from the beach. Action values the same as a beach advisory.</p> <p>Beach closures not issued.</p>	<p>"Suspicious" blooms = visual evidence consistent with BGA (spilled paint, pea soup, green streaks) "Confirmed" blooms = sample showing BG chlorophyll a > 30 ug/l or total chlorophyll a > 50 with dominance by BGA species; beach closure from DOH or OPR; chlorophyll > 20 with ancillary information "Confirmed with high toxins" = microcystin-LR > 20 ug/l or anatoxin-a levels > 4 ug/l; open water MC-LR > 10 and ancillary information (bloom increasing, unsampled denser shoreline blooms, etc.)</p> <p>DOH and OPR: Advisory: bloom outside swimming area; Closure: bloom within swimming area, post advisory Advisory may be issued if DEC reports BGA near regulated beach but no evidence of bloom at beach, or if beach has reopened and some indication that bloom may return. Recommended:</p>	<p>If any of the following guidelines are met, then a recreational health advisory is issued: 1. A scum or mat of cyanobacteria. 2. Cyanobacteria cell count >70K cells/mL. 3. Microcystin concentration >14ug/L</p>	<p>Recommendation: VISUAL Post Beach at Category 2 Close Beach at Category 3</p> <p>Cell Count Close Beach >4000 potential producer cells/mL</p> <p>Toxins Close >6 ug/L microcystin or >10ug/L anatoxin</p>
<p>Sources Referenced</p>	<p>WHO (Toxic Cyanobacteria in Water: A guide to their public health consequences, monitoring and management) VTDOH (Cyanobacteria (Blue-green Algae) Guidance for Vermont Communities.) USEPA (Exposure Factors Handbook) Oberholster P.J., B. A. (Microcystis aeruginosa: source of toxic microcystins in drinking water.) Bress, D., & Stone, W. (Addressing Public Health Risks for Cyanobacteria in Recreational Freshwaters: The Oregon and Vermont Framework.)</p>	<p>See pages 7-11 of the document linked below under Information Source(s): Web Access.</p> <p>WHO, USEPA, VT, CA, OR, and Australia were all key sources.</p>	<p>N/A</p>	<p>WHO</p>	<p>Guidance thresholds, based on literature review and analysis of other state's criteria, are used to categorize the algal bloom data received.</p>	<p>WHO. 1999. Toxic Cyanobacteria in Water: A guide to their public health consequences, monitoring and management. http://www.who.int/water_sanitation_health/resourcesquality/toxycyanbegin.pdf</p>	<p>Appendix G- Community Guidance Document - WHO, CDC, Scottish Executive Health Department, Providence of Quebec</p>

Bloom Classification System	<p>Category 1: Visible material is not likely cyanobacteria or water is generally clear.</p> <p>Category 2: Cyanobacteria present in low numbers. There are visible small accumulations but water is generally clear.</p> <p>Category 3: Cyanobacteria present in high numbers. Scums may or may not be present. Water is discolored throughout. Large areas affected. Color assists to rule out sediment and other algae.</p>	<p>Advisory: Avoid contact with water if visible scum or mat, $\geq 14 \mu\text{g/L}$ microcystin-LR, or $\geq 70,000$ cells/mL for cyanobacteria cell counts.</p>	<p>Secchi transparency < 2.0 meters due to algal growth is defined as a nuisance algal bloom.</p>	<p>Public Health Advisory: Avoid contact with water</p>	<p>"Suspicious" blooms = visual evidence consistent with BGA (spilled paint, pea soup, green streaks)</p> <p>"Confirmed" blooms = sample showing BG chlorophyll a $> 30 \mu\text{g/l}$ or total chlorophyll a > 50 with dominance by BGA species; beach closure from DOH or OPR; chlorophyll > 20 with ancillary information</p> <p>"Confirmed with high toxins" = microcystin-LR $> 20 \mu\text{g/l}$ or anatoxin-a levels $> 4 \mu\text{g/l}$; open water MC-LR > 10 and ancillary information (bloom increasing, unsampled denser shoreline blooms, etc.)</p> <p>DOH and OPR: Advisory may be issued if DEC reports BGA near regulated beach but no evidence of bloom at beach, or if beach has reopened and some indication that bloom may return</p>	None	<p>VISUAL</p> <p>Category 1: Little or no Blue-Green algae present-clear water</p> <p>Category 2: Blue-Green algae present, but less than 'bloom levels'</p> <p>Category 3: Blue-Green algae bloom in progress</p>
Labs Used	EcoAnalysts, Inc. Green Water Laboratories Northeast Laboratories, Inc. PhycoTech, Inc. State University of New York	Northeast Labs Greenwater Lab	We used State University of New York and University of New Hampshire for the screening study. We've used a semi-quantitative kit in our own lab since.		<p>CSLAP: NYS Federation of Lake Associations, sent to SUNY - Syracuse, ESF</p> <p>Non-CSLAP: SUNY - Syracuse, ESF</p> <p>DOH: NYS DOH Office, Albany</p>	GreenWater Laboratory, Palatka, FL	Vermont Public Health Lab
Reporting Protocol	<p>By Phone: DPH: 860-509-7758 DEEP: 860-424-3020</p> <p>By Email: algalbloomsCT@ct.gov, deep.algalblooms@ct.gov</p>	<p>Reports requested via phone to MDPH.</p> <p>MDPH asks local health dept or individual reporting the bloom to email photos of the bloom before samplers are deployed.</p>	<p>To report a bloom, contact the DEP Lakes Staff at 207-287-3901.</p>	<p>"If you suspect a cyanobacteria bloom is occurring at your lake or pond, please call DES immediately at 603-419-0918 (cyanobacteria hotline) or beaches@des.nh.gov...</p> <p>You may also collect a sample in a clean container (plastic or glass jar) and bring it to DES to identify."</p>	<p>DEC: Online: Citizens not associated with a lake association/CSLAP may submit information about potential blooms using DEC's online form (http://www.dec.ny.gov/docs/water_pdf/algaereportform.pdf) and limited sampling may be authorized under authority of DEC.</p> <p>By Phone: Contact regional DEC office or DEC HAB coordinators.</p> <p>DOH/OPR: blooms observed by beach managers reported by DOH/OPR HAB coordinators in Albany</p> <p>All data reported to any agency shared amongst all agency HAB coordinators</p>	<p>Email or call: Brian Zalewsky or Jane Sawyers at RIDEEM</p>	<p>Call 800-439-8550 or 802-863-7220, or email AHS.VDHBlueGreenAlgae@state.vt.us.</p>
Report Investigation	<ol style="list-style-type: none"> 1) Visit the site of a reported bloom. 2) If justifiable (Category 2), notify State Agencies 3) Continue regular field observations. (See example field observation form in Appendix.) 4) If conditions deteriorate to Category 3, post the site and the area. 5) When visual conditions improve, take a water sample for microscopic analysis. 6) Wait approximately one week and sample again. 7) A: If justifiable, terminate the posting; B: Otherwise wait approximately one more week and sample again. 8) Repeat step 7 until termination or the end of the summer recreational season. 	<p>MDPH responds to all received reports of blooms (reports come from state environmental and local health officials, parks staff, residents, and watershed associations):</p> <p>- Asks local health dept or individual reporting the bloom to email photos of the bloom before samplers are deployed</p>	<p>When a bloom is called in from a lake that has not supported chronic algal blooms in the past, DEP staff or VLMP staff will investigate extent and collect water samples for TP & Chl analysis.</p>	<p>Upon receiving notice of a suspected cyanobacteria bloom, DES will conduct a site visit.</p> <p>The Beach Program will also immediately resample all beaches upon issuing an advisory.</p>	<p>DEC: Follows up with all reports received for updates to the status of bloom: once visual evidence and/or lab results indicate BGA bloom conditions have dissipated, waterbody removed from DEC notification page</p> <p>DOH/OPR: Blooms observed by beach managers reported by DOH/OPR HAB coordinators in Albany.</p> <p>All data reported to any agency shared amongst all agency HAB coordinators</p>	<p>A picture is requested and reviewed by RIDEEM for evidence of cyano bloom. A qualitative sample for citizen complaints is collected and reviewed by RIDEEM (Jane Sawyers) for potential exceedance of the cyano cell count. If it may exceed, the sample is sent for quantitative cell count and microcystin analysis.</p>	<p>Site Visit by : Town Health Officer, LCC volunteer, VDH Staff, VTDEC Staff. Provide guidance document, signs and testing supplies if needed.</p>
Intervention Protocol	<p>Note: When issuing an advisory take note of all access points. Depending on the size of the bloom relative to the lake, and the location of the access point relative to the bloom, some access locations may not be impacted.</p> <p>Visual Rank Category 1: [Notifications: Not needed], [Further Monitoring: No change], [Public Posting: Not needed]</p> <p>Visual Rank Category 2 (or blue-green algae cells $> 20\text{K/ml}$ and $< 100\text{K}$): [Notifications: Notify CT DPH, CT DEEP], [Further Monitoring: Increase regular visual surveillance until conditions change.], [Public Posting: Not needed]</p> <p>Visual Rank Category 3 (or blue-green algae cells $> 100\text{K/ml}$): [Notifications: Update/inform CT DPH & CT DEEP and expand risk communication efforts. (See Risk Communication section.)], [Further Monitoring: Collect samples for analysis and/or increase frequency of visual assessment.], [Public Posting: POSTED BEACH CLOSURE: If public has beach access, alert water users that a blue-green algae bloom is present. POSTED ADVISORY: At other impacted access points.]</p>	<p>Advisory: Avoid contact with water if visible scum or mat, $\geq 14 \mu\text{g/L}$ microcystin-LR, or $\geq 70,000$ cells/mL for cyanobacteria cell counts.</p> <p>Once Advisory is posted: Weekly testing until advisory can be lifted, but follow-up testing more frequently than weekly may be suggested based on weather conditions.</p> <p>Advisories may be lifted after two successive and representative sampling rounds one week apart demonstrate cell counts or toxin levels below those at which an advisory would be posted.</p>	<p>DEP staff are in contact with Department of Health and Human Services Center for Disease Control staff when specific questions/issues arise. The CDC has not engaged with DEP in moving to an Intervention Protocol due to lack of resources, although the need for such protocols has been discussed. Documented evidence of human or pet illness specifically due to ingestion of algal toxins would likely result in legislative appropriation of resources to develop advisory specifics.</p>	<p>At any beach, an advisory is posted if a potential toxin-producing cyanobacterial scum is present at the beach and cell dominance is greater than 50 percent of the sample total cell count.</p> <p>Once an advisory is posted: Follow up testing conducted until toxin-producing cyanobacterial scum is less than 50 percent of the total sample cell count.</p>	<p>DEC posts waterbodies with bloom notifications on its website. The number of new waterbodies with blooms are announced in the Division of Water's weekly listserv email (Making Waves).</p> <p>DOH/OPR regulated beaches posted with signs (and some county DOH press releases) when beaches closed; signs removed or changed to advisory when beach reopened</p>	<p>If the guidelines are exceeded, then a letter is sent by RI Department of Health (HEALTH) to the town officials asking for signs to be posted at public access points and a press release is jointly issued by RIDEEM/HEALTH.</p>	<p>Beach closure recommended at Category 3, Advisory sign at Category 2</p>
Closure Protocol	<p>Visual Rank Category 3, or blue-green algae cells $> 100\text{K/ml}$: POSTED BEACH CLOSURE: If public has beach access, alert water users that a blue-green algae bloom is present.</p>	<p>Advisory: Signage posted at (all) water body entry points.</p>	None at this time (see above).	N/A	<p>DEC: Does not close freshwater waterbodies. Marine waters (immediately surrounding the sample location) are closed for shellfishing if mussels at a DEC monitoring sites test positive for Alexandrium.</p> <p>DOH/OPR: visual evidence of BGA bloom triggers beach closure; bloom cleared and MC-LR < 10 required to reopen beach. DEC regulated beaches would likely follow same protocol (blooms not reported at any DEC beaches since DOH protocol established)</p>	N/A	<p>(Recommendations Only)</p> <p>Visual: Category 3</p> <p>Toxins: Close $> 6 \mu\text{g/L}$ microcystin, $> 10 \mu\text{g/L}$ anatoxin</p>

<p>Terminating an Advisory</p>	<p>Health officials may justify lifting a blue-green algae bloom posting if observations meet either or both of the following two criteria: - Visual assessment remains at the Category 1 condition for at least two successive and representative observational rounds one week apart - Cell count results of the water column indicate that blue-green algal cell abundance has markedly decreased over at least two successive and representative sampling rounds one week apart and is below 70,000 cells per ml.</p> <p>As the situation requires, health officials may consider additional confirmation through microcystin testing of the water column. As is stated for the above, the water column should be below the threshold for at least two successive and representative sampling rounds one week apart. CT DPH suggests a toxin threshold of 15 ug/l microcystin.</p>	<p>Advisories may be lifted after two successive and representative sampling rounds one week apart demonstrate cell counts or toxin levels below those at which an advisory would be posted. (Approach is similar to that of OR and Australia)</p>	<p>None at this time (see above).</p>	<p>The Beach Program will immediately resample all beaches upon issuing an advisory. The sign will be removed from the area when further samples indicate the concentration of the cyanobacteria species is below 50 percent of a sample.</p>	<p>DEC follows up with all reports received for updates to the status of bloom: Resampled lakes- once visual evidence and/or lab results indicate BGA bloom conditions have dissipated, waterbody removed from DEC notification page Unsampled lakes- original or follow up- waterbodies that have not had an update for >= 4 weeks will be removed from the list on the DEC web page due to lack of information All cases- DEC still advises the public to be aware of blooms because blooms can come and go. DOH/OPR- beach reopened if bloom cleared and MC-LR < 10 (sampling not initiated until bloom has cleared)</p>	<p>A third party must follow up and sample the location with 2 samples at least 2 weeks apart meeting all of the above guidelines.</p>	<p>Visually clear and toxins less than 6 ug/L microcystin, 10ug/L anatoxin</p>
<p>Communications</p>	<p>Posting closure signs at swimming areas and advisory signs at other access points used for public recreation is the primary intervention.</p> <p>Further interventions include: - Notifying lake associations - Posting information for public access via the internet or local newspapers via a press release. Include information as to how the public can contact the CT DEEP for the most up-to-date information on the status of the blue-green algae bloom. - In some communities it may also be important to notify local Veterinarians and Physicians and keep them updated on the status of the blue-green algae bloom.</p>	<p>For any Advisory, signage should be posted at (all) water body entry points and should include the following: date of the posting, contact information for the posting authority, language (to be provided or reviewed by MDPH) advising against contact with the water, and a recommendation that pets accidentally entering the water be rinsed. Current advisories are listed on MDPH website.</p>	<p>None at this time (see above).</p>	<p>Cyanobacteria Advisory Sign: http://des.nh.gov/organization/divisions/water/wmb/beaches/graphics/rec-exposure-caption.gif</p> <p>Beach Monitored and Safe Sign: http://des.nh.gov/organization/divisions/water/wmb/beaches/graphics/monitored_sign.gif</p> <p>"DES will continue to monitor the water and will notify the appropriate parties regarding the results of initial and subsequent testing. Public notification occurs through press releases and the DES website."</p>	<p>DEC posts waterbodies with bloom notifications on its website. The number of new waterbodies with blooms are announced in the Division of Water's weekly listserv email (Making Waves). http://www.health.ny.gov/publications/2849/images/sign2.jpg</p> <p>Similar signs available from DEC for posting at non-regulated sites (boat launches, common access points, etc.)</p> <p>DOH/OPR regulated beaches posted with signs (and some county DOH press releases) when beaches closed; signs removed or changed to advisory when beach reopened</p>	<p>RIDEM and HEALTH have annual meetings and communicate regularly by email during active blooms.</p>	<p>Web Site CyanoTracker(Map) (https://webmail.vdh.state.vt.us/vtracking/bluegreenalgae/d/) Annual Media Release Social Media</p>
<p>Information Source(s): Web Access</p>	<p>http://www.ct.gov/dph/lib/dph/environmental_health/pdf/guidance_to_lhd_for_blue-green_algaeblooms_in_rec_fresh_waters_june_2014.pdf</p>	<p>http://www.mass.gov/eohhs/docs/dph/environmental/exposure/protocol-cyanobacteria.pdf</p>	<p>http://www.maine.gov/dep/water/lakes/cynobacteria.htm</p>	<p>http://des.nh.gov/organization/divisions/water/wmb/beaches/cyano_bacteria.htm</p>	<p>http://www.dec.ny.gov/chemical/77145.html</p>	<p>http://www.dem.ri.gov/programs/benviron/water/quality/surfwaq/pdfs/cyano11.pdf</p>	<p>http://healthvermont.gov/enviro/bg_algae/documents/BGA_guide.pdf</p>
<p>Contact</p>	<p>Internal: Stewart.chute@ct.gov, Charles.lee@ct.gov Public: algaebloomsCT@ct.gov</p>	<p>Internal: Michael Celona, Algae Project Coordinator - Mike.Celona@state.ma.us Public: MDPH - (617) 624-5757</p>	<p>Internal: Linda Bacon - Linda.C.Bacon@maine.gov Public: DEP Lakes Staff - (207) 287-3901</p>	<p>Internal: Sonya Carlson - sonya.carlson@des.nh.gov Public: (603) 271-2457 or beaches@des.nh.gov</p>	<p>Internal: karen.stainbrook@dec.ny.gov, scott.kishbaugh@dec.ny.gov Public: dowinfo@dec.ny.gov; harmfulalgae@health.state.ny.us</p>	<p>Internal: Public:</p>	<p>Internal: Sarah Vose, Andy Chevrefils 802-863-7220 AHS.VDHBlueGreenAlgae@state.vt.us Public: 802-863-7220 AHS.VDHBlueGreenAlgae@state.vt.us</p>