Coastal Georgia Harmful Algal Bloom Response Plan

A Public Health and Natural Resources Response

Introduction

Phytoplankton are microscopic algae that are common members of freshwater and marine habitats. Algae are vitally important to marine and freshwater ecosystems and most species of algae are not harmful. However, a harmful algal bloom (HAB) can occur when certain types of microscopic algae grow quickly in water, forming visible patches that may harm the health of the environment, plants or animals. HABs can deplete the oxygen and block sunlight that other organisms need to live and some HAB-causing algae release toxins that are dangerous to animals and humans. HABs occur in marine, estuarine and fresh waters. HABs appear to be increasing along the coastlines and in the surface waters of the United States, according to the National Oceanic and Atmospheric Administration (NOAA). Retrieved December 16, 2008, from Centers for Disease Control and Prevention Website: http://www.cdc.gov/hab.about.htm

Potentially toxic algal blooms can be consumed, without harm, by certain types of fish and shellfish which, in turn, accumulate the biotoxin in their flesh. When these types of contaminated seafood are then consumed by humans, the result could possibly be illness and/or death.

The following are the 5 major types of HAB-related human health syndromes linked to consumption of seafood and the marine algal species responsible for the corresponding poisoning:

Toxic Diatoms

Toxic Dinoflagellates
- Azaspiracid Poisoning (AZP): *Azadinium spinosum*
- Ciguatera Fish Poisoning (CFP): *Gambierdiscus toxicus*
- Diarrhetic Shellfish Poisoning (DSP): *Dinophysis* spp. and *Prorocentrum* spp.
- Neurotoxic Shellfish Poisoning (NSP): *Karenia brevis*

Another adverse human health effect that has been observed and reported suggests that individuals who are in close proximity to a bloom of *Karenia brevis*, which produces a neurotoxin called brevetoxin, have shown symptoms of respiratory distress such as coughing, wheezing, and shortness of breath. This is commonly referred to as red tide cough. Exposure to the brevetoxin by humans has also produced reports of eye, nose and throat irritation. There is also evidence that suggests that individuals who have asthma or other respiratory illnesses experience the respiratory distress symptoms on a more severe
level. All of this is based on the assumption that the brevetoxin becomes aerosolized and then inhaled by nearby humans, although, there is currently no scientific evidence on how far the aerosolized toxin will travel through the air. These symptoms in non-asthmatic people have been known to usually subside within a few hundred feet of the seashore or upon entering climate-controlled vehicles or buildings.

Other adverse human health effects that are suspected to be caused by HABs and/or their by-products are fatigue, headache, skin lesions, disorientation, memory loss, and impairment of cognitive function.

HABs can also cause marine animal sickness and/or death up to a mass marine mortality event. Large fish kill events have been linked directly to HAB events. One main cause of these negative animal health effects is that a HAB can severely deplete the dissolved oxygen levels in water that many marine animals need to survive. Also, chronic marine animal disease and mortality can be associated with HAB events from the exposure to by-products that are formed such as toxic sulfides, nitrogen-based compounds, etc.

Large marine animal mortality events, such as fish kills, can cause decaying matter to be washed up on public beaches causing a general public health nuisance. These events can also increase harmful bacteria levels in public swimming waters, creating an increasingly more dangerous public health threat.

Although occurrences of HAB events along coastal and inter-coastal waters of Georgia are largely undocumented, that does not mean that they have not occurred or will not occur. Perceived increases of HAB events worldwide may be contributed to increase in monitoring and improved detection methods, but factors such as increased pollution of coastal waters from urban development, climate change cycles, and isolated weather events need to be considered when determining if coastal Georgia can be subject to a HAB event. It is critical to have a HAB response plan in place to address public health and natural resource concerns if a suspected or confirmed HAB occurs in coastal Georgia waters. The plan shall include methods of passive and active surveillance for possible HAB events and the means and capacity to confirm those events. Once a HAB event is confirmed, then notification to all concerned and affected parties in a timely manner is critical. Notification should include reassurance to the public that a coordinated response is in place, what the possible human-health effects are and the ways to avoid contact with potentially harmful substances associated with a HAB.

This response plan will be a living document that will be updated on a regular basis as needed including a minimum annual review based on factors such as, but not limited to:

- Changes in participating agency contact information due to staff changes
- Changes in available resources for HAB monitoring and testing whether by addition or subtraction
- Information provided in After Action Reports (AAR) and lessons learned from responded HAB events
- Any governmental legislation mandating more specific implementation of marine toxin contingency plans
Objectives

The primary objectives of the Coastal Georgia Harmful Algal Bloom Response Plan to be accomplished through a network of federal, state and local governments, non-governmental agencies and volunteer groups, are as follows:

- Gather credible intelligence regarding possible and confirmed HAB events through surveillance, routine sampling and testing, and investigation
- Develop and provide timely public health advisories concerning HAB events
- Work with other government agencies who also have HAB response plans in place so information can be shared and responses are not duplicated

This plan is meant to effectively manage a HAB event, not to try and mitigate or prevent a HAB event.

Participating Agencies

Georgia Coastal Health District 9-1 (CHD)
- An 8-county health district including Camden, Glynn, McIntosh, Long, Liberty, Bryan, Effingham and Chatham Counties. With all but 2 of its counties (Long and Effingham) bordering the Atlantic Ocean, the Coastal Health District will be the public health agency involved with a HAB event response in coastal Georgia. CHD is involved with public health through environmental health monitoring, disease tracking and management, clinical services such as immunizations, and a variety of health assessments, in addition to other public health programs. The magnitude and extent of a HAB event will determine which and how many of the CHD counties will be responding. CHD would also, if needed, request the assistance of other public health agencies such as the Georgia Department of Public Health (DPH), Centers for Disease Control and Prevention (CDC) and other sister public health agencies during a response.

Georgia Department of Natural Resources (DNR)
- With its variety of divisions, DNR will be the natural resource agency involved with a HAB event response in coastal Georgia. Some of DNR’s divisions and current responsibilities include:
  - Wildlife Resources Division (WRD): Game Management, Nongame Conservation, Fisheries Management and enforcement of applicable laws
  - Coastal Resources Division (CRD): Activities include but are not limited to beach and shellfish water testing for bacteria levels, education and outreach, saltwater finfish and crustacean research and surveys, and marsh and seashore protection.
  - Environmental Protection Division (EPD): Activities include but are not limited to protection of natural resources connected to air, water, and land not addressed in other DNR divisions, regulation of hazardous waste, and permitting of different types of water treatment systems and solid waste management facilities.
Depending on the type and scope of the HAB event would determine what DNR divisions would be involved in any part of the response efforts

NOAA’s Center for Coastal Environmental Health and Biomolecular Research
- This center houses the Phytoplankton Monitoring Network (PMN) which is a research-based monitoring program utilizing volunteers to monitor phytoplankton abundance and distribution, evaluate environmental conditions, and detect HABs. The center also houses the Analytical Response Team (ART) which responds to marine toxin events and can provide toxin analysis when needed. The PMN network links the general public to laboratory scientists to accomplish the following goals:

1. Monitor and maintain an extended survey area along coastal waters throughout the year
2. Create a comprehensive list of harmful algal species inhabiting coastal marine waters
3. Promote increased awareness and education to the public on HABs
4. Identify general trends where HABs are more likely to occur
5. Isolate areas prone to harmful algal blooms (HABs) for further study by Marine Biotoxins researchers in effort to assist state managers in mitigating the affects of HABs
6. Create a working relationship between volunteers and Marine Biotoxins researchers
7. Increase the public's awareness of research conducted by federal workers on HABs

Intelligence

To help provide a timely discovery and effective response to a HAB event, credible intelligence needs to be gathered through the following means:

- Surveillance
- Routine sampling and testing
- Investigation
Surveillance

Passive surveillance for a HAB event can be accomplished from groups and individuals who work and play in and around coastal Georgia waters. As they go about their normal day-to-day activities in proximity to coastal waters, discovery of one the following incidents can trigger an inquiry:

- Marine mammal kill or stranding
- Turtle kill
- Fish kill
- An unusual amount of people in one area reporting a sudden onset of respiratory problems
- An unusual color in the water such as red tide

The following groups will have, through continued public awareness campaigns and risk communication, the knowledge to take their discovery and form an inquiry that they suspect a HAB in coastal Georgia waters:

- The general public
- Georgia DNR divisions conducting year-round work such as water sampling, finfish and crustacean research and surveys, non-game management activities and other research activities
- Coastal research institutes
- College or university groups involved in marine education
- U.S. Coast Guard
- Fishing groups
- Medical offices
- Beach patrol/lifeguards
- Local county maintenance departments

Continued HAB educational outreach and risk communications to the aforementioned groups will provide a network of individuals that can perform passive surveillance for potential HAB events and present that inquiry to the proper agency.

One method of surveillance for red tide blooms that has been in place is spelled out in DNR’s *Georgia’s Contingency Plan for the Control of Shellfish Potentially Contaminated by Marine Biotoxin*. With the early warning system in Georgia’s shellfish plan, obvious offshore discoloration of surface waters and massive fish kills are reported to groups such as:

- Georgia DNR Law Enforcement officers
- The U.S. Coast Guard
- Commercial fishermen
- Recreational fishermen
Florida Marine Research will generally take offshore red tide samples for research purposes and DNR’s Coastal Resources Division also relies on red tide data from Florida and South Carolina to assess proximity of a red tide event to coastal Georgia waters. The early warning system in the shellfish plan is needed to assess the possibility of an offshore event moving inshore and possibly contaminating shellfish beds.

During a suspected event that may endanger shellfish beds, sampling is coordinated by DNR’s Coastal Resources Division and laboratory analysis is provided by Florida Marine Research Institute. Once a HAB event is determined, information for notification is disseminated to:

- Affected Industry – Direct notification by Georgia DNR and Georgia Dept. Agriculture personnel
- Health agencies such as Georgia Coastal Health District – Direct and written notification by Georgia DNR
- Other states – Direct notification
- Public – Georgia DNR’s Coastal Resources Division and Georgia Dept. of Agriculture notify and educate the media and public

Georgia Department of Agriculture’s Consumer Protection Division, in conjunction with the Seafood Safety Office, would also coordinate needed recalls of affected seafood product.

Once Georgia Coastal Health District is notified from DNR of their findings, other potential public health risks of the HAB will be assessed by Coastal Health District for appropriate response. Response would include informing the public and media of the dangers of the HAB and how to protect themselves from the harmful effects. Risk communication from all departments will need to be coordinated to avoid conflicting information. Epidemiology staff from the Coastal Health District would also be put on notice internally to assess any reported illnesses possibly associated with the HAB event and compile related records.

The Florida Department of Health and its Aquatic Toxins Program, along with county health departments throughout Florida, monitor and manage HAB events along Florida’s coast. The office that coordinates the Aquatic Toxins Program in Florida will directly contact the Georgia Coastal Health District’s point of contact if they suspect a HAB event is moving towards the Georgia coast from Florida.

Another surveillance tool that is available to coastal managers is the NOAA HAB Forecast System that can be accessed at http://tidesandcurrents.noaa.gov/hab/#bulletin. The forecast system relies on satellite imagery, field observations, models, public health reports and buoy data to provide the large spatial scale and high frequency of observations required to assess and predict bloom conditions, location and movements. Coastal managers can sign up to receive HAB bulletins twice a week via e-mail. This tool can provide alerts to possible HAB events that could move into coastal Georgia waters from east Florida.
Routine sampling and testing

Credible intelligence on potential HAB’s in coastal Georgia can also be obtained through routine sampling and testing of surface waters for phytoplankton. The NOAA Phytoplankton Monitoring Network (PMN) provides that type of routine monitoring at each sampling site at least twice a month. The PMN is composed of volunteer groups that routinely take samples of coastal surface water at land-based sampling sites. While collecting field samples, other environmental data is logged by the volunteers. Volunteers are trained by PMN staff to count and identify marine phytoplankton. Once all field and lab data is collected and recorded it is entered in the PMN Database by the volunteer. PMN staff review the submitted data, makes edits if necessary, and publish the data collection to the PMN Database. Once published the data is available and downloadable for the public. The PMN Database is managed by the National Coastal Data Development Center.

http://www.ncddc.noaa.gov/website/PMN/viewer.htm

Currently, there are 9 land-based sampling sites in Georgia:

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<td>Savannah</td>
<td>University of Georgia</td>
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<td>Oatland Island Dock</td>
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<td>Tybee Island Pier</td>
<td>Savannah</td>
<td>Independent Volunteer</td>
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<tr>
<td>Priest Landing@ Wilmington River</td>
<td>Savannah</td>
<td>Gray’s Reef National Marine Sanctuary</td>
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<td>Post Office Creek</td>
<td>Sapelo Island</td>
<td>NOAA, NERR, UGA, Independent Volunteer</td>
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<td>Georgia Coastal DNR@ Georgia DNR Dock</td>
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Recruitment by NOAA PMN staff for new volunteers and sampling sites is continuous, so additional sites may be added at a later date.

Coordination of the PMN is accomplished through NOAA’s Center for Coastal Environmental Health and Biomolecular Research in Charleston, South Carolina.

If a HAB is detected through one of the PMN sites along the Georgia coast, NOAA PMN staff will directly contact all of the following state of Georgia agency offices:

- Director of Coastal Resources Division of Georgia DNR
- Director of Environmental Protection Division of Georgia DNR
- District Environmental Health Director of Coastal Health District 9-1, Georgia Department of Public Health

After notification from PMN staff, each agency will assess the HAB details and then develop an appropriate coordinated response and public notification. The type of response will depend on factors such as what species of phytoplankton has formed the HAB, the geographic location of the event, and size of the bloom.

Finally, routine monitoring of the PMN database by coastal Georgia agencies can also provide an early warning of HABs that have formed off of coastal water areas in neighboring states. If one agency notices a HAB event of concern in another state, they will directly contact the other participating agencies in this plan to be on alert status.

**Investigation**

If an inquiry has been made through passive surveillance and a HAB is suspected, an investigation will need to be conducted. Ideally, the investigation will include sampling and testing the surface water for a HAB where the discovery was made (i.e. the location of a fish kill, an area of unusual discoloration of the water, or an area where a cluster of complaints of respiratory distress have been reported).

If an agency has received an inquiry about a suspected HAB, the office of the District Environmental Health Director for the Coastal Health District shall be contacted. CHD will then make contact with the Atlantic Coordinator of the NOAA PMN with the details of the inquiry. The NOAA PMN staff will then determine if a PMN volunteer can be deployed to investigate the area and possibly obtain a sample of surface water to be analyzed. If a sample can be taken and sent for analysis, the phytoplankton species can be identified and appropriately counted within 24 hours. If the identified species is potentially toxic, a toxin analysis will determine the toxin type and concentration. Of course lab staffing, delivery times and day-of-week delivery could shorten or lengthen reporting times.
Inquiry/Surveillance

Dept. of Natural Resources/Environmental Protection/Coastal Resources/Wildlife Resources

Georgia Coastal Health District

Other agency

NOAA PMN

Testing and/or Evaluation

Investigation Results/Confirmed HAB Event?

Yes

Response to Inquiry

Notification to HAB Response Plan agencies and divisions plus other relevant agencies and groups

Coordinated response between relevant agencies possibly to include:
- Public notification by risk communication departments to media and public information websites
- Assessment of seafood industry that could be affected, to be lead by Georgia CRD/Shellfish Program/bed closures and Georgia Dept. of Agriculture/Seafood Safety office/coordinate recall of affected seafood
- Public health risk assessments by Georgia Coastal Health District
- Appropriate actions by all response agencies to protect public health and natural resources

No/Undetermined

Factors guiding response:
- Species type
- Geographic location
- Size of bloom
- Weather patterns
Post event response and follow-up

Coastal Health District will compile, in compliance with patient privacy laws, any illness records associated with the event. Georgia DNR and its divisions will compile any natural resource records such as any type of mass aquatic animal kill data and any data related to closures of seafood harvesting areas as related to the HAB shellfish plan. Also, Georgia Department of Agriculture’s Consumer Protection Division, Seafood Safety Office, will compile any recall information of affected seafood product in commerce.

All data will be compiled to form an After Action Report (AAR) of the event and, if needed, an inter-agency meeting will be scheduled to discuss lessons learned needed for update of this response plan.
## Current Contact Information

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<tr>
<th>Name</th>
<th>Office/Position</th>
<th>Address</th>
<th>Phone Numbers</th>
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<tbody>
<tr>
<td>Todd A. Driver</td>
<td>District Environmental Health Director</td>
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<td>Coastal Health District</td>
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<td>Matt Brim</td>
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<td>Coastal Resources Division</td>
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<td>DNR WRD Fisheries</td>
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<tr>
<td>Elizabeth Cheney</td>
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Current Contact Information continued

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Daniel Esoe, CPD Recall Coordinator, Georgia Department of Agriculture, 19 MLK Jr. Drive, Room 312, Atlanta, GA 30334, Office: 404-656-3621, Fax: 404-463-6428, daniel.esoe@agr.georgia.gov

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Steve Morton, Ph.D., Principal Investigator, Center for Coastal Environmental Health and Biomolecular Research, 24 Oglethorpe Professional Boulevard, P.O. Box 14257, Savannah, GA 31406, Office: 912-644-5232, Cell: 912-224-7518, rathornton@dhr.state.ga.us, Fax: 843-762-8656, steve.morton@noaa.gov

Andrew Reich MS, MSPH, Coordinator, Aquatic Toxins Program, Florida Department of Health, 4052 Bald Cypress Way, Bin # A08, Tallahassee, Florida 32399-1712, andy_reich@doh.state.fl.us, 850.245.4187, www.myfloridaEH.com, Aquatic Toxins Hotline 1.888.232.8635
Outreach Resources

The following documents can be accessed individually for reference by the general public at the Georgia Coastal Health District website, www.gachd.org, under the Environmental Health section. The documents will contain links to other HAB websites that can provide even more detailed information on HAB’s and their public health and natural resource effects.
Frequently Asked Questions About Red Tide and Associated Toxins

Q: What is Red Tide?
A: Red tide is caused by microscopic algae (plant-like microorganism) called *Karenia brevis* or *K. brevis*. The organism produces a toxin that can affect the central nervous system of fish, birds, mammals and other animals.

Q: Is Red Tide, Red?
A: At high concentrations (called blooms), the organisms may discolor the water – sometimes red, light or dark green, brown, or clear.

Q: Where does Red Tide occur?
A: Red tides or Harmful Algal Blooms (HABs) occur worldwide. *K. brevis* is found almost exclusively in the Gulf of Mexico but has been found on the east coast of Florida and off the coast of North Carolina.

Q: How long does it last?
A: Red tide blooms can last days, weeks or months and can also change daily due to wind conditions. Onshore winds normally bring it near the shore and offshore winds drive it out to sea.

Q: What causes Red Tide?
A: A red tide bloom needs biology (the organisms), chemistry (natural or man-made nutrients for growth), and physics (concentrating and transport mechanisms). No one factor causes it. Tests are being conducted to see if coastal nutrients enhance or prolong blooms.

Q: Can I swim in water affected by Red Tide?
A: Most people can swim in red tide but it can cause skin irritation and burning eyes. If your skin is easily irritated, avoid red tide water. If you experience irritation, get out and thoroughly wash off with fresh water. Swimming near dead fish is not recommended.
Q: What are the symptoms I can get from Red Tide?
A: Symptoms from breathing red tide toxins are normally coughing, sneezing and teary eyes. These are usually temporary when red tide toxins are in the air. Wearing a particle filter mask may lessen the affects, and using over-the-counter antihistamines may decrease your symptoms. Check the marine forecast. Fewer toxins are in the air when the wind is blowing offshore.

Q: Are their people who are more sensitive to the toxins?
A: People with respiratory problems (like asthma or bronchitis) should avoid red tide areas, especially when winds are blowing toxins onto the shore. If you go to the beach, take your short acting inhaler with you. If you have symptoms, leave the beach and seek air conditioning.

Q: Who do I call if I think I have become sick from Red Tide?
A: Please consult with your primary care physician and also contact the Coastal Health District at 912-262-2342.

Q: Can I eat seafood at restaurants during a Red Tide?
A: Commercial seafood found in restaurants and grocery stores is safe because it comes from red tide free water and is monitored by the government for safety.

Q: Can I eat seafood from recreational harvesting during a Red Tide?
A: Recreational fisherman must be careful:
Do not eat mollusks (clams or oysters) taken from red tide waters, as they contain toxins that cause a food poisoning called NSP (Neurotoxic Shellfish Poisoning). Finfish caught live and healthy can be eaten if filleted.
Use common sense! Harvesting distressed or dead animals is not advised under any circumstances. Edible parts of other animals commonly called shellfish (crabs, shrimp and lobsters), are not affected by the red tide organisms and can be eaten. Do not eat the tamale (green stuff, hepatopancreas).

Q: Whom can I contact to report a Red Tide bloom or to get more information about water quality?
A: Georgia Environmental Protection Division at (912) 264-7284
Georgia Coastal Resources Division at (912) 264-7218
Georgia Coastal Health District (912) 262-2342

Q: Are there web sites for more information about Red Tide or other harmful algal blooms (HAB’s)?
A: www.cdc.gov/hab/
www.chbr.noaa.gov/pmn/
www.whoi.edu/redtide/
oceanservice.noaa.gov/hazards/hab/
www.cop.noaa.gov/stressors/extremeevents/hab/default.aspx
Frequently Asked Questions About
Blue-Green Algae (Cyanobacteria) and Their Toxins

Q: What are blue-green algae (cyanobacteria)?
A: Blue-green algae are a group of organisms that are among the oldest on the planet. They can live in freshwater, salt-water or in mixed "brackish" water. Most of us know them as "pond scum." These "blue-green" algae can actually be many colors including red, orange, green, or brown. They also have been found to share some characteristics of bacteria, which has led to them being referred to as "cyanobacteria."

Q: What causes these organisms to form "blooms"?
A: When blue-green algae grow rapidly over a short time it is called a "bloom." It is known that light, temperature, and the water's nutrient content play roles in bloom formation. Under the right conditions a large bloom can form overnight, and rise to the surface as a huge unsightly mat of pond scum. A blue-green algae bloom can also lie below the surface of the water. If the bloom is harmful, it is considered a cyanoHAB. Blooms can disappear or move to different parts of a pond or lake.

Q: What causes some blooms to be toxic?
A: Scientists do not know why some blue-green algae produce toxins. Most blue-green algae do not produce chemicals harmful to humans or animals. However, some types make natural substances called cyanotoxins. It is not possible to tell just by looking at a bloom. Over time, these toxins are diluted and eventually break down and disappear.

Q: How can I be affected by blue-green algae toxins?
A: Blue-green algae toxins can affect the liver, nervous system, and skin. Most problems happen when water containing high toxin amounts is ingested. Abdominal cramps, nausea, diarrhea, and vomiting may occur if untreated water is swallowed. Rashes can happen when skin is exposed to the algae when swimming.

Q: How can I prevent exposure to these toxins?
A: Most people avoid a blue-green algae bloom because they tend to be icky-looking and smelly. It is important that pets and children are kept away from blue-green algae blooms. Children are generally more vulnerable to environmental toxins than adults. Boiling water does not remove or destroy these toxins.
Ways To Limit Your Contact With Blue-green Algal Toxins

1) Do not drink, cook or shower with untreated water from lakes, ponds or streams.
2) Do not allow pets or livestock to swim in or drink scummy water.
3) If you or your animals accidentally get into a blue-green algae bloom, wash with fresh water and soap after skin contact, and avoid swallowing or inhaling water. Wash animals’ fur thoroughly before they start to groom themselves.
4) Avoid exposure to irrigation water drawn from untreated sources.
5) Notify your local water quality officials if you notice unusual changes in the taste or smell of your tap water.

Q: Can blue-green algae supplements (such as Spirulina) contain toxins?
A: Blue-green algae sold as health food are themselves non-toxic. However, some manufacturers collect their blue-green algae from the wild where many types (toxic and nontoxic) can grow together. A recent study found most of the products tested had blue-green algae toxin. The U.S. FDA has received complaints from consumers about nausea, diarrhea and other symptoms after taking blue-green algae supplements but these cases have not been confirmed as being caused by the supplements. At this time, people who choose to use these products should exercise caution. If you take them, you might ask the manufacturer if they monitor their products for the presence of toxins and if they culture their blue-green algae or collect it from the wild. Children, pregnant women and people with impaired liver function should avoid these products until their safety has been proven.

Q: Are there any drinking water standards for these toxins?
A: There are currently no standards for blue-green algae toxin levels in drinking water in the U.S. Other countries and the World Health Organization have developed guidelines for drinking water.

Q: Whom can I contact to report a blue-green algae bloom or to get more information about water quality?
A: Georgia Environmental Protection Division at (912) 264-7284
Georgia Coastal Resources Division at (912) 264-7218
Georgia Coastal Health District (912) 262-2342

Q: Are there web sites for more information about blue-green algae?
A: www-cyanosite.bio.purdue.edu/
www.cdc.gov/hab/cyanobacteria/
Public Health and Media Releases

Media releases designed for an event will be based on a varying number of factors such as species of the bloom, and size and location of the HAB.

The following can help develop an effective press release regarding HAB events:

- Always answer who, what, when, where, why, and how.

- Present specific information about the current event. Indicate what occurred (fish kills, water discoloration, respiratory irritation), where and when it occurred, and who is responding. Example: On Saturday morning, hundreds of dead mullet and catfish washed ashore on St. Pete Beach. FWC researchers responded to investigate the cause of the fish kill.

- Identify the effect on the public. Health effects are generally the public’s (and reporter’s) first concern. How humans are affected (e.g., ingestion of contaminated seafood, respiratory irritation, aesthetics of dead fish and smell) should be clearly identified.

- Avoid alarmist and irrelevant information. Stick to the facts about this occurrence. Provide common sense, non-alarmist information.

- Provide only necessary, uncontroversial and well-documented information. Be prepared to provide historical, supplementary information for those reporters who do in-depth or human-interest articles.

- Avoid speculation—it can be misleading.

- Press releases should always include the name and phone number of a contact person.

- Quotes are building blocks for news stories. Reporters prefer press releases that contain at least one quote by a reliable source from the distributing agency.
The following documents can provide a framework that public health and/or natural resource information officers can use to develop an effective media release that will be accurate and easily understandable by the general public.
FOR IMMEDIATE RELEASE: CONTACT: Health Dept. Public Information Office

Red Tide Health Advisory

Applicable geographic area – Due to recent citizen reports of respiratory distress – such as persistent cough and watery eyes – while at __________ area beaches, the ____________ County Health Department is issuing a health advisory for red tide. To date, citizen reports are from the ____________ area; however the health department is monitoring the situation and will issue additional health advisories if needed.

A red-tide event does not produce urgent public health concerns, but may result in mild and short-lived respiratory symptoms such as eye, nose, and throat irritation similar to cold symptoms. Exposure to red tide can lead to varying degrees of eye, nose, and throat irritation similar to cold symptoms. Health officials recommend that people experiencing these symptoms stay away from beach areas -- once a person leaves the red tide area, the symptoms usually go away. People with severe or chronic respiratory conditions such as asthma or chronic lung disease are cautioned to avoid red tide areas which, to date, are reported by citizens as the ____________ beach area.

Precautions should be taken when preparing and cooking fish caught in local waters in proximity to the affected area, and individuals should not eat locally-harvested molluscan shellfish such as oysters, clams, and coquinas when red tide may be present. Red tide may also cause fish kills.

Residents living in beach areas are advised to close windows and run the air conditioner (making sure that the A/C filter is maintained according to manufacturer's specifications). If outdoors, residents may choose to wear paper filter masks, especially if onshore winds are blowing. For people with long-term exposure, such as beach workers or fishermen, a more properly fitted mask is recommended.

Red tide can affect humans if they consume contaminated molluscan shellfish or come into contact with the organism through the water or the beach air. During a red tide, bivalve shellfish, including clams and oysters, can concentrate the toxin and cause neurotoxic shellfish poisoning (NSP) in humans if eaten. Both mild gastrointestinal and neurological symptoms occur in NSP, which can include tingling and numbness of lips, tongue, and throat, muscular aches, dizziness, reversal of the sensations of hot and cold, diarrhea, and vomiting. Onset of this illness occurs within a few minutes to a few hours; duration is fairly short, from a few hours to several days. Recovery is complete with few after effects; no fatalities have been reported.

Cooking does not eliminate the toxin. Only clams and oysters collected in shellfish harvesting areas monitored and open for harvesting, as determined by the Georgia Department of Natural Resources, Coastal Resources Division, should be eaten. Any healthy finfish harvested from red tide affected waters should be carefully filleted and cooked fresh, avoiding consumption of roe and internal organs. The meat of fresh, healthy fish should be safe to eat.
The other human effects of red tide are temporary, with no long-term health effects. Individuals with severe chronic respiratory conditions such as emphysema or asthma should avoid beach areas and contact with water spray during red tide conditions. Susceptible people may experience varying degrees of eye, nose, and throat irritation similar to cold symptoms when coming into contact with salt water spray (such as from water skiing, prop turbulence, windsurfing). A rash can sometimes occur after contact with affected water, and usually goes away within 24 hours. After swimming in an affected area, it is a good idea to rinse off with clean fresh water. Swallowed water is unlikely to cause health effects.

Many questions are asked about what to do with the fish that have died during red tide conditions. Contact with fish killed in a red tide event does not produce any red tide associated symptoms. However, these fish can present a nuisance, in that they have an unpleasant odor, and attract flies and vermin. These fish may be disposed of according to local solid waste practices. It is recommended that gloves or tools be used to collect any fish and to use double-lined plastic bags for disposal.

(Attach a summary of common questions and answers about red tide.) (or as a possible website link)

For more information on red tide and its associated health effects, contact __________County Health Department at ________________.

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Applicable geographic location – {DATE}, the {applicable testing agency} has tested the water along the {body of water} for toxins resulting from the blue-green algae bloom. The test results indicate high concentrations of toxin. The bloom affects the {body of water} in ____________ County and extends through ______ and______ Counties.

Health effects can occur when surface scum or water containing high levels of blue-green algal toxins are swallowed, through contact with the skin, or when airborne droplets containing toxins are inhaled while swimming, bathing or showering. Direct contact or breathing airborne droplets containing high levels of algal toxins during swimming or showering can cause irritation of the skin, eyes, nose and throat and inflammation in the respiratory tract.

The Health Department recommends people refrain from recreational use of the {body of water} this {time period} that could result in ingestion of and/or skin exposure to river water. Children should also not be allowed to play along the shoreline where they might be exposed to clumps of algae or drink water from the {body of water}. It is unclear as to whether ingestion of fish from the river poses a health risk.

Livestock and pet deaths have occurred when animals consume large amounts of accumulated algal scum from along shorelines. Do not allow pets to eat clumps of algae that accumulate along the shoreline.

The {applicable testing agency} will retest the affected areas on ____________.

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FOR IMMEDIATE RELEASE  
Contact: ___________________

DATE  
Public Information Officer
Phone: _____________

***HEALTH ADVISORY***

Applicable geographic location – State health officials continue to monitor the most recent fish kill on the {body of water}. Teams from the {list all applicable agencies such as natural resources, public health, county government/EMA, etc.} continue to investigate the situation. The cause of the kill has not yet been determined.

Fish kills can be caused by low dissolved oxygen in the water, algal blooms, chemical spills and other events. To ensure the public’s safety, the _________ County Health Department advises common-sense precautions and to avoid algae blooms and fish kill areas.

If you see a fish kill of more than a few fish that are dead, dying, acting erratically or have sores:

- Stay away from the immediate area and the fish while those conditions exist.
- Do not eat, use or collect any fish, crabs, other life or items from the immediate area.
- Do not let pets swim in or eat fish from those waters.
- Report the areas of sick or dead fish to the Georgia Department of Natural Resources, Wildlife Resources Division Fisheries for freshwater or Coastal Resources Division for saltwater.

If you come in contact with the water where there is an algae bloom or where fish are dead, dying, appear sick, or have sores:

- Remove wet clothing and keep separate from other items until it is washed.
- Wash any body part (except the eyes) that comes in contact with the waters, using soap and clean water. Rinse eyes with lots of clear, clean water.
- Use waterproof gloves when handling pets and items that have come in contact with algae and the water.
- Keep your pets away from the algae and do not let them eat algae or lick their fur after contact with the water.
- See your doctor or healthcare provider if you experience any symptoms that might be caused by exposure to these waters, such as burning eyes, respiratory irritation, or a skin rash.
- Report any illness from exposure to harmful algae to the {appropriate agency}.

State and local agencies are continuing to collect samples for analysis in response to reports of fish kills in the {body of water}.

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Credits


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