

One Health Harmful Algal Bloom System (OHHABS)



Environmental Form Guidance

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1. Introduction

This is the One Health Harmful Algal Bloom System (OHHABS) guide for the Environmental Form. This document is a reference manual for local, state, and territorial public health professionals who report harmful algal blooms (HABs) or HAB toxins in water or food. For the purpose of providing guidance in this document, the term “HAB event” will be used to describe both HABs and HAB toxins in water or food.

This guidance document provides an overview of how to complete the Environmental Form and descriptions of each field in the Environmental Form. The Environmental Form contains six sections (tab name):

- General Information section (General)
- Bloom Description section (Bloom Description)
- Laboratory Testing section (Laboratory Testing)
- Links to Other Systems section (Other Systems)
- Supplemental Information section (Supplemental Info)
 - No personally identifiable information is collected within the Environmental Form. Supporting documents related to a HAB event (e.g., picture of a bloom, water monitoring data detecting HAB toxins) can be appended to the Environmental Form in the Supplemental Information Section.
- Author and Agency Information section (Author and Agency).

The Environmental Form is intended to capture environmental information about a HAB event in fresh, marine, or brackish water bodies. When a HAB affects human or animal health, the environmental form collects information that will provide a better understanding of the HAB event resulting in human or animal illnesses. A HAB event without any identified human or animal illnesses may also be reported in the Environmental Form (e.g., a HAB occurred in a lake and no human or animal illnesses were identified). HAB-associated illnesses with no observed HAB may also be reported by identifying the location of the seafood catch/harvest.

*Tip for Reporting:

- States or territories where the HAB event (e.g., HAB in a lake, HAB toxins in water or food) occurred can report environmental data in the Environmental Form.
- When reporting in the Environmental form, fields will automatically save when information is entered or selected. To ensure fields within the form are saved, please click on the “Save” button when changes have been made.

A guide to getting started with OHHABS, along with other OHHABS resources can be found at the CDC’s [OHHABS website](#).

2. General Information Section (General)

This section collects general information about a HAB event in three tabs: the Dates tab, Geographic Description tab, and Water Body Characteristics tab. **There are two required fields in this section: at least one of the three date fields in the Dates tab (the “Date bloom was first observed”, the “Date of notification to Local, Territory, Tribal, or State Health Authorities”, or the “If no bloom date is available”) and “State/Jurisdiction” in the Geographic Description tab.**

2.1 Dates Tab

The Dates Tab collects date information for a HAB event using the format MM/DD/YYYY. **At least one of the three date fields is required for this section, either the “Date bloom was first observed”, the “Date of notification to Local, Territory, Tribal, or State Health Authorities”, or “If no bloom date is available”.**

The screenshot shows the 'Dates' tab of the OHHABS Environmental Form. The form has a top navigation bar with tabs: General (selected), Bloom Description, Laboratory Testing, Other Systems, Supplemental Info, and Author and Agency. Below this is a sub-navigation bar with tabs: Dates (selected), Geographic Description, and Water Body Characteristics. The main form area contains three date input fields, each with a calendar icon to its right. The first field is labeled 'Date bloom was first observed' and contains '8/15/2015'. The second field is labeled 'Date of notification to Local, Territory, Tribal, or State Health Authorities:' and also contains '8/15/2015'. Below these is a dropdown menu with the text 'If no bloom date is available, select one below and explain in Date Remarks:'. Below the dropdown is a large text area labeled 'Date Remarks:'. A blue 'Save' button is located in the top right corner of the form area.

- **Date bloom was first observed** – If an algal bloom was observed (e.g., by environmental staff, beach staff, park staff, the general public), indicate the date it was first observed.
- **Date of bloom notification to Local, Territorial, Tribal, or State Health Authorities** – If a notification of an algal bloom was sent to a health authority (e.g., state public health department, local health department), indicate the date the first bloom notification was sent.
- **If no bloom date available** (Select an option that best describes the event) – If no bloom observation or notification dates are available, report on the other evidence of an algal bloom by selecting one or more items in the picklist:
 - **Foodborne intoxication** – Select “Foodborne intoxication” if HAB-associated illnesses occurred in humans or animals due to the consumption of food, including but not limited to seafood, shellfish, or dietary supplements. Please provide more information in the “Date Remarks” field about why this picklist value was selected. For more information about how to report foodborne events and illnesses in OHHABS, refer to the OHHABS Foodborne Guidance document.

- **Other evidence of harmful algae toxicity** – Select “Other evidence of harmful algae toxicity” if there were other indications that a HAB was present. Please provide more information in the “Date Remarks” field about why this picklist value was selected.
- **Date Remarks** – Describe any relevant date information that was not documented above. For example, if the no bloom date option was selected, please explain details in this section.

2.2. Geographic Description Tab

The Geographic Description Tab collects geographic information about a HAB event. In general, this will be the location where a bloom was initially observed or for foodborne events, the location where the food was caught/harvested.

The screenshot shows the 'Geographic Description' tab in the OHHABS Environmental Form. The form is divided into several sections:

- Location:** A dropdown menu for 'State/Jurisdiction' is set to 'Ohio'. A 'Counties (select all that apply):' list includes Adams, Allen, Ashland, Ashtabula, Athens (highlighted), Auglaize (highlighted), Belmont (highlighted), Brown, and Butler.
- Other states (select all that apply):** A list of states including CDC, Alabama, Alaska, Arizona, Arkansas, California, Colorado, and Connecticut.
- Official Name of Water Body:** 'Blue Lake' is entered in the text box.
- Common Name of Water Body:** This text box is empty.
- Specific location name:** 'Blue Lake Bay' is entered in the text box.
- Nearest city/town:** 'Athens' is entered in the text box.

At the top right of the form, there is a 'Save' button. At the bottom left, there are radio buttons for 'Did an algal bloom impact water quality in any other states?' with options: Yes, No, Unknown, and Not applicable (selected).

Tips for reporting the Location of a HAB event:

- The state or territory where the HAB event (e.g., HAB in a lake, HAB toxins in water or food) occurred can report the location of the HAB event. For example, if a HAB occurred in a lake in State A, State A can report the location information of the HAB.
- For a HAB event that affects more than one state (e.g., HAB in a lake that borders two states), indicate “Yes” in the “Did an algal bloom impact water quality in any other states” field and select all states that were affected in the “Other states” field. Please provide a description of the geographic location of the HAB in the “Geographic Description Remarks” field. For additional assistance with multistate reporting, refer to the OHHABS Multistate Reporting Guidance document available on the [OHHABS website](#).
- If the HAB event occurs on private property (e.g., private residence), please do not include information that could be used to identify the property (e.g., address, property name) or persons, either in this form or in the Human Form or Animal Form.
- For a HAB event located in a larger water body (e.g., lake, ocean), if possible, report the specific location of the bloom. For example, if a HAB event was observed near Whitefish Bay in Lake Michigan, report Whitefish Bay as the “Specific Location Name” and Lake Michigan as the “Official Name of Water Body”.
- For “Foodborne intoxication”, report where the food was caught or harvested. For a food-related example, if a HAB-associated illness occurred in State A, State A can report location information about where the food was harvested or caught in the Environmental Form. For more information about how to report foodborne events and illnesses in OHHABS, refer to the OHHABS Foodborne Guidance document available on the [OHHABS website](#).

Location:

- **State/Jurisdiction** – Indicate the state or jurisdiction in which the HAB event occurred. This field is auto-populated with the state or territory that creates the OHHABS report (also known as the reporting state). If “Foodborne Intoxication” is selected, the location of where food was caught or harvested may be changed. **This is a required field.**
- **Counties** – Indicate the county or counties in which the HAB event occurred. Select all counties that apply.
- **Did an algal bloom impact water quality in any other states/jurisdictions?** – Indicate if the HAB event affected or had an influence on the quality of water in any other states. This field helps the CDC OHHABS Team identify multistate events and link related OHHABS reports that might be entered by multiple reporting sites.
 - Select “Yes” if more than one state was affected by a HAB event. If “Yes” is selected, select all the other states affected in the “Other States” field.
 - Select “No” if no other state was affected by the HAB event.
 - Select “Unknown” if you are unsure if other states were affected by the HAB event. Please describe in the “Geographic Description Remarks” field.

- Select “Not Applicable” if there is a HAB event that would not affect another state’s water quality (e.g., inland HAB event within a state that would not affect another state).
- **If yes, what other states were affected?** – If other states or territories were affected by a HAB event, indicate the other states or territories that were affected. More than one state or territory can be selected.
- **Other states** – If “Yes” was selected for the “Did an algal bloom impact water quality in any other states/jurisdiction?” field, select all states that were affected.
- **Official name of water body** – Indicate the widely accepted, government-standardized, or the dominantly used name of the water body in which the HAB event occurred. For more information on official water body names or to search for official water body names, visit the United States Geological Survey (USGS) Website for [Geographic Names](#). An example of an official water body is Lake Huron.
- **Common name of water body** – Indicate the local or regional name in which the water body is commonly referred where the HAB event occurred. This may not be the official or government-standardized name. An example of a common water body is Tawas Bay, a localized part of Lake Huron.
- **Specific location name** – Indicate the exact location where the HAB event was observed or documented. This may refer to localized areas of the water body (e.g., bays, inlets, channels) or near the water body (e.g., beaches). Example of a specific location name are Sturgeon Point, Paradise Beach, or East Tawas Bay Beach on Lake Huron.
- **Nearest city/town** – Indicate the nearest city or town to the water body where the HAB event occurred.

If additional assistance is needed when reporting the HAB event location, please contact CDC OHHABS staff at NORSWater@cdc.gov.

Location coordinates:

- **Coordinate format** – This field affects how the latitude and longitude values of a location are reported in OHHABS. Select one of the two formats, “Degrees Minutes Seconds” or “Decimal Degrees”, to enter the latitude and longitude of a HAB event. When a format is selected, the “Latitude” and “Longitude” fields will appear below the “Coordinate format” options to collect coordinate data.
 - **Degrees Minutes Seconds** – Enter the location coordinate in the written format, [+/-DD]° [MM]’ [SS]” (e.g., +55° 26’ 50”, -40° 44’ 54”).
 - **Decimal Degrees** – Enter the location coordinate in written format [+/-DD.xxxxxx] for the latitude or [+/- DDD.xxxxxx] for the longitude (e.g., +45.282025, -73.376111).

Tip: To find the coordinates for a location, visit the [USGS Earth Explorer Website](#).

- **Latitude** – Degrees Minutes Seconds format [+/-DD]° [MM]’ [SS]” or Decimal Degrees format [+/-DD.xxxxxx]
 - North is positive (+) above the Equator.
 - South is negative (-) below the Equator.
 - The degrees should range from 0-90.
 - The minutes should range from 0-60 (for Degrees Minutes Seconds only).
 - The seconds should range from 0-60 (for Degrees Minutes Seconds only).
- **Longitude** – Degrees Minutes Seconds format [+/-DD]° [MM]’ [SS]” or Decimal Degrees format [+/-DDD.xxxxxx]
 - (+) East is positive of the Prime Meridian.
 - (-) West is negative of the Prime Meridian.
 - The degrees should range from 0-180.
 - The minutes should range from 0-60 (for Degrees Minutes Seconds only).
 - The seconds should range from 0-60 (for Degrees Minutes Seconds only).

For more information on coordinate formats, latitude, and longitude, visit:

- United States Geological Survey’s (USGS) Guide - [Teaching about and Using Coordinate Systems](#)
- The Environmental Protection Agency’s (EPA) Website - [Latitude and Longitude](#)

- **Hydrologic Unit Code (HUC)** –The HUC is a standard code used across federal and state agencies to identify a hydrologic feature like a river, lake, or watershed (basin). This field collects the two digit HUC code for the 21 major regions in the United States. For more information about HUCs, please visit the USGS website on [Hydrologic Unit Maps](#).

2.3. Water Body Characteristics Tab

The Water Body Characteristics Tab collects descriptive information about the water body where a HAB event occurred.

The screenshot shows the 'Water Body Characteristics' tab selected. It contains the following elements:

- Navigation tabs: General, Bloom Description, Laboratory Testing, Other Systems, Supplemental Info, Author and Agency.
- Sub-tabs: Dates, Geographic Description, Water Body Characteristics.
- Water Type (select one): Lake/Reservoir/Impoundment
- Water Salinity (select one): Fresh
- What is the water body, or if applicable, the area of the water body where the bloom was located, used for (select all that apply)?
 - Agriculture
 - Aquaculture
 - Industrial/Occupational
 - Public drinking water system
 - Raw Water, Non-potable
 - Recreation
 - Other
 - None
 - Unknown
- Geographic Description remarks: (Text area)
- Save button

- **Water Type** – Select the “Water Type” that best describes the water body in which the HAB event occurred. For example if a HAB occurred in a lake, select “Lake/Reservoir/Impoundment.”
- **Water Salinity** – Select the “Water Salinity” that best describes the water body in which the HAB event occurred. The “Water Salinity” refers to the saltiness or salt content of the body of water.
- **What is the water body, or if applicable, the area of the water body where the bloom was located, used for?** – Check all uses that apply to the water body or for large water bodies, the specific area of the water body where the HAB event occurred. An example of a specific area of a water body being used would be if water from Maumee Bay in Lake Erie is used to supply a public drinking water system. If additional information about the specific area or uses of the water body is available, please describe in the “Geographic Description Remarks” field.
 - **Agriculture** – Select “Agriculture” if the water body is used for agricultural or farming purpose. This includes the water body used for crops, farms, and livestock.
 - **Aquaculture** – Select “Aquaculture” if the water body is used for cultivating fish or shellfish for water-based harvesting purposes.
 - **Industrial/Occupational** – Select “Industrial/Occupational” if the water body is used for manufacturing, transportation, or for a job or professional purposes other than agricultural uses.
 - **Public drinking water system** – Select “Public drinking water system” if the water body is used as source for public water systems. This category includes community water systems, non-transient non-community water systems, and transient non-community water systems. For more information about public water systems, please refer to the CDC’s Drinking Water website (<http://www.cdc.gov/healthywater/drinking/public/>).

- **Community water system:** A public water system that has ≥ 15 service connections used by year-round residents or regularly serves ≥ 25 year-round residents. A community water system might be owned by a private or public entity providing water to a community, subdivision, or mobile home park.
- **Nontransient Noncommunity Water System:** A public water system that is not a community system. A nontransient noncommunity water system has ≥ 15 service connections or serves ≥ 25 of the same persons for >6 months/year (e.g. a factory or school) but does not serve year-round residents.
- **Transient Noncommunity Water System:** A public water system that is not a community system. A transient noncommunity water system has ≥ 15 service connections or serves an average of ≥ 25 people for ≥ 60 days/year where persons do not remain for long periods of time (e.g. restaurants, highway rest stations, and parks).
- **Raw/Non-potable water use** – Select “Raw/Non-potable water use” if the water body is from a source (e.g., lake) that has not been treated (e.g., disinfected, filtered) for consumption and is not being used for consumption purposes. Examples of uses that fall into this category are lawn care and car washing.
- **Recreation** – Select “Recreation” if the water body is used for recreational purposes (e.g. swimming, boating, recreational fishing).
- **Other** – Select “Other” if the water body is used for other purposes not described in any of the options. If “Other” is selected, please describe the water body use in the “Geographic Description Remarks” field.
- **None** – Select “None” if the water body is not used for any purpose.
- **Unknown** – Select “Unknown” if the use of the water body is not known.
- **Geographic Description Remarks** – Describe any relevant geographic description information that may not have been captured in Geographic Description section. This can include additional descriptions about the location of a HAB event.

3. Bloom Description Section (Bloom Description)

This section collects general information about the HAB event in two tabs: the Health Advisories/Warnings Tab and the Observational Data Tab.

3.1. Health Advisories/Warnings Tab

The Health Advisories/Warnings Tab collects information for any health advisories or public warnings implemented by local or state public health authorities, park managers, beach managers, or other public authority. Although this tab is designed to collect information about issued health advisories or warnings, users may add information about advisories that were not issued by selecting an “Advisory or Warning Type” and selecting “No” in the “Response” field.

If an “Advisory or Warning Type” is selected, please fill out the adjacent fields describing the “Advisory or Warning Type”. If there is more than one “Advisory or Warning Type” to report, please create and complete a new row to collect this information. A new row for an “Advisory or Warning Type” can be created by clicking on the “Add Row” button. To delete a row and all of the corresponding information in that row, click on the “Delete Row” button. If a row or multiple rows were deleted and the data need to be restored, click on the “Undo Delete” button to retrieve the previously deleted row(s). The “Undo Delete” button will only appear if a row has been deleted and will be present until you leave the tab or click Save.

- **Advisory or Warning Type:**
 - **Health advisory** – A “Health advisory” or public health advisory is a statement or notice to the public about a significant risk to human health. This can include but is not limited to “Do not drink” advisories.
 - **No contact warning** – A “No contact warning” is a statement or notice to the public that advises limited contact or no contact for a water body (e.g. Do not enter the water, Do not wade in the water).
 - **Water body closure (recreational activity)** – A “Water body closure (recreational activity)” is a statement or notice to the public that a water body is closed for public use (e.g. No swimming).
 - **Water body closure (fish/shellfish)** – A “Water body closure (fish/shellfish)” is a statement or notice to the public that a water body is closed for fishing or the collection of shellfish.
 - **Other** – If an unlisted advisory or warning was issued, please report it as “Other” and describe it in the “General Remarks” field.

- **Response** – The Response indicates whether the “Advisory or Warning Type” was issued. If an “Advisory or Warning Type” was issued, select “Yes”. If no “Advisory or Warning Type” was issued, select “No.” If it is unknown whether an “Advisory or Warning Type” was issued for a water body, select “Unknown.”
- **Issuing agency** – If an “Advisory or Warning Type” was issued, provide the name of the agency or authority that issued or released it.
- **Criteria/Reason(s) for issue** – The “Criteria/Reason for issue” is a brief explanation of why an advisory or warning was issued (e.g., bloom occurred, algal toxin detected). Reasons for issuance are helpful for national surveillance as they may vary by state/jurisdiction.
- **Start date** – The Start date is the date when an advisory or warning was issued.
- **End date** – The End date is the date when an advisory or warning ended.

3.2. Observational Data Tab

The Observational Data Tab collects observational data about the water body in which a HAB event occurred. Observational data may be the first data to be collected about a potential HAB event and may inform environmental or health authorities of the presence of a bloom in the absence of routine monitoring or water sampling. Observational data can also help provide information to inform whether a HAB event may have played a role in any associated human or animal illnesses. Initial HAB event observations may come from a variety of sources including beach managers, the general public, park rangers, environmental staff, or public health staff.

If there is a “Date documented” for an observation, please fill out the adjacent fields in the row for the “Date documented”. Multiple observations (e.g., on multiple dates) may be reported in separate rows. A new row for “Date documented” can be created by clicking on the “Add Row” button. To delete a row and all of the corresponding information in that row, click on the “Delete Row” button. If a row or multiple rows were deleted and the data need to be restored, click on the “Undo Delete” button to retrieve the previously deleted row(s). The “Undo Delete” button will only appear if a row has been deleted and will be present until you navigate away from the tab or click Save.

	Date documented	Documented by	Scum or algal matter observed?	Water color	Water clarity	Water odors (if yes, describe in remarks)	Water flow	Tidal conditions
<input type="button" value="Delete Row"/>	8/15/2015	DNR	Yes	Blue-green	Clear	Yes	Stagnant	Low tide
<input type="button" value="Add Row"/>								

- **Date documented** – Indicate the “Date Documented” for an observation about a HAB event. The “Date Documented” may include initial observations of a suspected HAB event as well as follow-up observations at later points in time. Please provide any additional comments in the “General Remarks” field in the Supplemental Information Section.

- **Documented by** – Indicate the party that observed and documented a HAB event. Observations of HAB events can come from a variety of sources including but not limited to the general public, citizen scientists, environmental staff, public health staff, park rangers, or beach managers. Please provide any additional comments in the “General Remarks” field in the Supplemental Information Section.
- **Scum or algal matter observed?** – Indicate if any scum or algae (including mats of algae) was present in or near the water body at the time of the observation. Please provide any additional comments in the “General Remarks” field in the Supplemental Information Section.
- **Water color** – Indicate the color of the water body at the time of the observation.
- **Water clarity** – Indicate the water clarity (i.e., clear, muddy) of the water body at the time of the observation.
- **Water odors** – Indicate if the water body had any odors or smell at the time of observation. If “Yes”, please describe in the “General Remarks” field in the Supplemental Information Section.
- **Water flow** – If applicable, indicate the water flow (i.e., moving, stagnant, unknown) of the water body at the time of observation.
- **Tidal conditions** – If applicable, indicate the type of “Tidal condition” of the water body at the time of observation. A brief description of each type is described below. More information about tidal conditions can be found in the National Oceanic and Atmospheric Administration (NOAA) [Tide and Current Glossary](#). For assistance in determining a tide, please visit the NOAA [Tides and Water Levels website](#). The Great Lakes are considered to be non-tidal; for more information please refer to the NOAA [Great Lakes Tides Facts website](#). For water bodies with no tidal conditions, please select “None”.
 - **Ebb tide/current** – Indicate “Ebb tide/current” if the water was an outgoing flow moving away from the shore.
 - **Flood tide/current** – Indicate “Flood tide/current” if the water was an incoming tidal flow towards the shore.
 - **High tide** – Indicate “High tide” if the water was at the maximum height of the rising tide water.
 - **Longshore current** – Indicate “Longshore current” if there was a current that paralleled the shore.
 - **Low tide** – Indicate “Low tide” if the water was at the minimum height of the fading tide.
 - **Rip current** – Indicate “Rip current” if there was an intense narrow current moving away from the shore.
 - **Slack tide** – Indicate “Slack tide” if there was period between the ebb tide and flood tide with little to no water flow.
 - **Other** – If the “Tidal Condition” is not listed, indicate “Other” and describe the condition in the Remarks field.
 - **None** – If the water body does not have a tide or tidal conditions are not applicable to the water body, select “None”.
 - **Unknown** – Indicate “Unknown” if “Tidal condition” was not determined at the time of observation.

4. Laboratory Testing Section (Laboratory Testing)

This section collects information about any laboratory testing performed for the HAB event in two tabs: the Algae, Algal Toxins or Components Testing Tab and the Laboratory Results Tab.

4.1. Algae, Algal Toxins, or Components Testing Tab

This tab collects information about any laboratory testing performed on samples collected from the environment (e.g., water samples, air samples, food samples).

The screenshot shows a web form with several tabs: General, Bloom Description, Laboratory Testing (selected), Other Systems, Supplemental Info, and Author and Agency. Below the tabs, there are two sub-tabs: Algae, Algal Toxins or Components Testing (selected) and Laboratory Results. A blue Save button is located in the top right corner. The form contains the following sections:

- Which of the following was tested for algae, algal toxins or components (select all that apply)?**
 - Air
 - Algal
 - Finished drinking water
 - Food
 - Raw water/Ambient
 - No Testing
 - Other
 - Unknown
- If testing was conducted,**
 - 1) Why was it tested (select all that apply)?**
 - Fish illness/kill*
 - Animal health event response*
 - Citizen complaint
 - Human health event response*
 - Monitoring
 - Odor
 - Other
 - Unknown
- *Please create a human and/or animal case report if a human or animal illness occurred (including fish kills)**
 - 2) If water was tested, was it tested for any of the following (select all that apply)?**
 - Algal
 - Algal toxins
 - Chlorophyll
 - Copper sulfate
 - Enterococci
 - Fecal coliforms
 - Other

- **Which of the following was tested for algae, algal toxins, or components?** – Indicate any environmental samples that were tested to detect algae, algal toxins, or other algal components in environmental samples. Testing may include environmental or routine water quality monitoring tests. Check all options that apply.
 - **Air** – Indicate “Air” if air samples were tested.
 - **Algal** – Indicate “Algal” if algae samples were tested.
 - **Finished drinking water** – Indicate “Finished drinking water” if treated drinking water (e.g., water used for showering, cooking, drinking) was tested.
 - **Food** – Indicate “Food” if food samples (e.g., meal remnants, dietary supplements) were tested.
 - **Raw water/Ambient** – Indicate “Raw water/Ambient” if untreated water (e.g., lake water prior to filtration or disinfection) was tested.
 - **No Testing** – Indicate “No Testing” if no environmental samples were tested.
 - **Other** – Indicate “Other” if the type of sample tested is not listed in as an option. If “Other” is selected, please describe in the “Laboratory Testing Remarks” field.
 - **Unknown** – Indicate “Unknown” if information about sample type(s) or testing is unavailable or not known.

- **If testing was conducted,**
 - **1) Why was it tested?** – Indicate the reason(s) that samples were tested. Check all options that apply.
 - **Fish illness/kill***- Indicate “Fish illness/kill” if testing was performed due to fish illnesses/deaths in water body. **If “Fish illness/kill” is selected, please create an Animal Form in this report to document the fish illnesses/deaths.*
 - **Animal health event response*** - Indicate “Animal health event response” if testing was performed as a result of illnesses or deaths in animals other than fish (e.g., ducks, dogs, cattle). **If “Animal health event response” is selected, please create Animal Form(s) in this report to document animal illnesses or deaths.*
 - **Citizen complaint** – Indicate “Citizen complaint” if a verbal or written statement of complaint from a citizen is raised to a local or state authority about a water body and resulted in testing. Local or state authorities may include but are not limited to public health departments, environmental agencies, park management staff, or beach management staff. If “Citizen complaint” is selected, please describe the complaint and why it prompted testing in the “Laboratory Testing Remarks” section.
 - **Human health event response*** - Indicate “Human health event response” if environmental samples were tested as a result of human illness related to a water body or a HAB event (e.g., food, recreational water, drinking water). **If “Human health event response” is selected, please create and include a Human Form in this report to document the human case(s) of illness.*
 - **Monitoring** – Indicate “Monitoring” if testing was performed as a result of any monitoring efforts, including but not limited to routine water quality monitoring, seafood or shellfish monitoring, or other environmental monitoring.
 - **Odor** – Indicate “Odor” if testing was performed as a result of odor complaints or notifications for a water body. This includes but is not limited to the general public, public health departments, environmental agencies, park management staff, or beach management staff. If “Odor” is selected, please describe why it prompted testing in the “Laboratory Testing Remarks” field.
 - **Other** – Indicate “Other” if testing was performed as a result of a reason not listed above. If “Other” is selected, please describe the reason and why it prompted laboratory testing in the “Laboratory Testing Remarks” field.
 - **Unknown** – Indicate “Unknown” if testing was performed, but the reason for testing was not known.
 - **2) If water was tested, was it tested for any of the following?** – This question is specific to water samples. Indicate the type(s) of testing performed for water samples. Check all options that apply.
 - **Algae** – Indicate “Algae” if the water was tested for any genera or species of algae.
 - **Algal toxins** – Indicate “Algal toxins” if water was tested for any type of algal toxin.

- **Chlorophyll** – Indicate “Chlorophyll” if water was tested for chlorophyll content.
- **Copper sulfate** – Indicate “Copper sulfate” if water was tested for copper sulfate.
- **Enterococci** – Indicate “Enterococci” if water was tested for enterococci, a Gram-positive bacteria (cocci), contamination.
- **Fecal coliforms** – Indicate “Fecal coliforms” if water was tested for coliform bacteria associated with the possible presence of disease causing organisms found in fecal matter.
- **Other** – Indicate “Other” if water was tested for the presence of an agent (e.g., pathogen, chemical, other non-algal toxin) not listed above. If “Other” is selected, please describe the type of water testing in the “Laboratory Testing Remarks” field.
- **Unknown** – Indicate “Unknown” if water testing was performed, but the type of testing is not known.

4.2. Laboratory Results Tab

The Laboratory Results Tab collects detailed information about test results for environmental samples tested in a table. Refer to laboratory result data to report sample testing data. Test results can include any laboratory testing performed to identify algae or algal toxins. Please report results that provide evidence of a HAB event. Related attachments can include environmental or water monitoring data that reflects changes in levels of toxins or other HAB event indicators. To improve understanding of a HAB event, identify events leading to a HAB event, or to provide additional context about existing water conditions before a HAB event, laboratory tests with negative results may be reported in this section.

The fields in a single row describe one test result (e.g., testing was performed for *Microcystis aeruginosa* in a water sample, testing for saxitoxin was performed in food samples from a meal remnant). If there is more than one laboratory test result for a sample, please create and complete a new row to document the test result. In the table, a new row for the test result can be created by clicking on the “Add Row” button. To delete a row and all of the corresponding information in that row, click on the “Delete Row” button. If a row or multiple rows were deleted and the data need to be restored, click on the “Undo Delete” button to retrieve the previously deleted row(s). The “Undo Delete” button will only appear if a row has been deleted.

The screenshot displays the 'Laboratory Testing' tab within the OHHABS form. At the top, there are navigation tabs: 'General', 'Bloom Description', 'Laboratory Testing' (which is active), 'Other Systems', 'Supplemental Info', and 'Author and Agency'. Below these, there are sub-tabs: 'Algae, Algal Toxins, or Components Testing' and 'Laboratory Results'. A 'Save' button is located in the top right corner of the form area.

A text prompt reads: "Please report information that characterizes algal testing results in environmental or food samples (more extensive results may be attached to the report)".

The main data area is a table with the following columns: Classification, Genus or toxin, Species, Subspecies, Detected in?, Sample description, Concentration (and unit), Test type, Sample collection date, and Sample collection time.

	Classification	Genus or toxin	Species	Subspecies	Detected in?	Sample description	Concentration (and unit)	Test type	Sample collection date	Sample collection time
Delete Row	Cyanobacteri	Microcystis			Air Food Other Unknown	water sample	13054 Cells	Microscopy (Bri)	09/17/2015	01:00 PM
Delete Row	Toxin	Ciguatoxin			Air Food Other Unknown	meal remnant	10.005 ppm (mg)	Gas Chromatog	09/12/2015	10:30 AM

Below the table is an 'Add Row' button and a 'Laboratory Testing Remarks' text area.

- **Classification** – Indicate the “Classification” or the broadest description of the algae or algal toxin tested for in an environmental sample. For more information on the classification of algae and toxins, please refer to the OHHABS Algae, Algal Toxins, and Other Pathogens Lists at www.cdc.gov/nors/ohhabs.

The options for classification include:

- Cyanobacteria
 - Diatoms
 - Dinoflagellates
 - Gonyaulacales
 - Gymnodiniales
 - Peridinales
 - Prorocentrales
 - Raphidophyceans
 - Toxins – Only algal toxins.
- **Genus or toxin** – Indicate the “Genus or toxin” name for the algae or algal toxin tested for in the environmental sample. This field is dependent on what is selected in the Classification field. For more information about the Genus list in OHHABS, please refer to the OHHABS Algae, Algal Toxins, and Other Pathogens Lists at www.cdc.gov/nors/ohhabs.
 - **Species** – Indicate the “Species” name for the algae or other pathogen tested for in a clinical specimen. This field is dependent on what is selected in the Genus or toxin field. For more information about the Species list in OHHABS, please refer to the OHHABS Algae, Algal Toxins, and Other Pathogens Lists at www.cdc.gov/nors/ohhabs.
 - **Sub-species/Serotype/Genotype** – If applicable, indicate the “Sub-species/Serotype/Genotype” name for the algae tested for in the environmental sample. This field is dependent on what is selected in the species field. For algae, here are various abbreviations for subspecies or taxonomic rankings below the algae species for botanical nomenclature:
 - **var.** – variety
 - **f.** – forma
 - **subsp.** – subspecies

For more information on algal nomenclature, visit the [International Code of Nomenclature for algae, fungi, and plants](#).

For more information about the sub-species list in OHHABS, please refer to the OHHABS Algae, Algal Toxins, and Other Pathogens Lists at www.cdc.gov/nors/ohhabs.

- **Detected in?** – Indicate the type of environmental sample in which the algae or algal toxin was detected.
- **Sample Description** – Provide a brief explanation of the environmental sample. The “Sample Description” can include general descriptive information about the sample (e.g., lake water sample, meal remnant sample, shellfish monitoring sample).
- **Concentration** – If applicable, indicate the “Concentration” of the algae or algal toxin detected in the environmental sample up to 3 decimal places (e.g., 0.123).

- **Concentration Unit** – Indicate the “Concentration unit” of the algae or algal toxin detected in the environmental sample.
- **Test Type** – Indicate the type of laboratory test used to detect the algae or algal toxin in the environmental sample. If more information about the “Test type” (e.g., the specific name of the kit, the lot number, the specific test type such as ELISA or PCR) or testing performed on the environmental sample is available, please describe in the “Laboratory Testing Remarks” field. “Test type” options include:
 - **Biological Assay (ELISA, neurochemical, PCR, DNA or RNA probe)** – Indicate “Biological Assay” if testing was performed to detect algae or algal toxins using any type of biological testing assay including but not limited to enzyme linked immunosorbent assay (ELISA), enzyme immunoassay (EIA), neurochemical assays, polymerase chain reaction (PCR), or DNA/RNA probes for detection.
 - **Gas Chromatography with Flame Ionization (GC/FID)**
 - **Gas Chromatography with Mass Spectrometry (GC/MS)**
 - **Liquid Chromatography/ Ultraviolet-Visible Detection (LC/UV or HPLC)**
 - **Liquid Chromatography/ Fluorescence (LC/FL)**
 - **Liquid Chromatography Ion Trap Mass Spectrometry (LC/IT MS)**
 - **Liquid Chromatography Time-of-Flight Mass Spectrometry (LC/TOF MS)**
 - **Liquid Chromatography Single Quadrupole Mass Spectrometry (LC/MS)**
 - **Liquid Chromatography Triple Quadrupole Mass Spectrometry (LC/MS/MS)**
 - **Culture** – Indicate “Culture” if testing was performed to detect algae or algal toxins through microbial growth in a nutritional solid (e.g., agar) or liquid medium (e.g., liquid nutrient broth).
 - **Fluorometer** – Indicate “Fluorometer” if testing was performed to detect algae by detecting chlorophyll through fluorescence.
 - **Microscopy (Brightfield, Phase, DIC, Epifluorescence, EM)** – Indicate “Microscopy” if testing was performed to detect algae or algal toxins through imaging methods, including but not limited to bright field microscopy, phase contrast microscopy, differential interference contrast (DIC) microscopy, epifluorescence microscopy, confocal microscopy, or electron microscopy.
 - **DNA or RNA sequencing** – Indicate “DNA or RNA sequencing” if testing was performed to detect algae, algal toxins, or other pathogens by identifying the specific DNA or RNA sequences with sequencing techniques including, but not limited to, next-generation sequencing (NGS), whole genome sequencing (WGS), or Sanger sequencing.
 - **Other** – Indicate “Other” if testing was performed to detect algae or algal toxins but the type of test is not listed as an option. If “Other” is selected”, please describe in the “Laboratory Testing Remarks” field.
 - **Unknown** – Indicate “Unknown” if testing was performed but the “Test Type” was not known.
- **Laboratory Testing Remarks** - Describe any relevant information not captured above regarding samples or laboratory testing.

5. Links to Other Systems Section (Other Systems)

This section collects information about other systems that may contain relevant information related to or about the HAB event or HAB related-illnesses in table. This information may help link existing data from other systems to OHHABS reports. If more than one system contains information relevant to this OHHABS report, please create a new row to report each system. In the table, a new row for the test result can be created by clicking on the “Add Row” button. To delete a row and all of the corresponding information in that row, click on the “Delete Row” button. If a row or multiple rows were deleted and the data need to be restored, click on the “Undo Delete” button to retrieve the previously deleted row(s). The “Undo Delete” button will only appear if a row has been deleted and will be present until you navigate away from the tab or click Save.

	System type	System name	System report ID number	Brief description of linked information
Delete Row	Federal	NORS	IN_HAB_Exposure_15Oct2015	Five individuals with HAB-related illnesses
Add Row				

- **System type** – Indicate the “System type” or the type of system (i.e., Federal, State) in which information related to this report (e.g., routine water quality monitoring data, environmental sampling data, illness related data) has been collected.
- **System name** – Indicate the “System name” or the exact name of the system in which information related to this report (e.g., routine water quality monitoring data, environmental sampling data, illness related data) has been collected (e.g., NORS, State EPA).
- **System report ID number** – Indicate the “System report ID number” used within the other system. For example, if an interview for a HAB-associated illness is in a state system, provide the unique identifier (e.g., number or name of the entry). If the “System report ID number” contains personal identifiers, please provide an alternative name for the document that will still support state users in linking the document with the OHHABS report. For environmental reports or drinking water monitoring results, provide the unique identifier or report name for the specific report that contains HAB-associated data.
- **Brief description of linked information** – Provide a brief description of what information is reported or linked to the other system. Please do not report any personally identifiable information. Some examples of brief descriptions about the document can include but are not limited to “routine water quality monitoring data”, “interview data”, or “park data for a lake”.

6. Supplemental Information Section (Supplemental Info)

This section collects supplementary information for the HAB event that may not have been captured elsewhere in the form or report. There are two tabs in the section, the Remarks Tab and the Attachments Tab.

6.1. Remarks Tab

This section collects descriptive information that may not have been collected elsewhere in the form.

- **General Remarks** – Provide a description of any relevant information that may not have been collected in the form or report. Do not include any personally identifiable information (e.g., address for a private property).

6.2. Attachments Tab

Please attach any relevant information about the HAB event not captured in the form. Do not include any personally identifiable information (e.g., address for a private property). Attachments may include additional information about the water body, observation, or testing not already captured in the form (e.g., images of a HAB, laboratory testing documents for algae or algal toxins, routine water quality monitoring data). File types that can be attached include images (e.g., jpg, png), documents (e.g., Word, PDF), or other data file types such as Excel.

Document Name	Document Length (bytes)	Document Type	Upload Date
WaterQualityMonitoringData.xlsx	7,653	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet	11/02/2015

7. Author and Agency Information Section (Author and Agency)

This section is automatically populated with the author’s information and does not require any additional information.

General	Bloom Description	Laboratory Testing	Other Systems	Supplemental Info	Author and Agency
Report Author and Agency Information					
					Save
Report Author:	JYu				
Reporting Site Name:	CDC				
Agency Name:	CDC				
Agency Contact Name:	NORS Admin				
Agency Contact Title:	Epidemiologist				
Agency Contact Phone:	555-5555				
Agency Contact Fax:	555-5555				
Agency Contact Email:	NORSAdmin@cdc.gov				