

One Health Harmful Algal Bloom System (OHHABS)

Animal Form Guidance

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1. Introduction

This is the One Health Harmful Algal Bloom System (OHHABS) guide for the Animal Form. This guidance document is a reference manual for local, state, and territorial public health professionals who will report cases of animal illness or groups of animal illnesses associated with a harmful algal bloom (HAB) or a HAB event (e.g., waterborne exposures to a HAB or HAB toxins, foodborne intoxication with HAB toxins). 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 Animal Form and descriptions of each field in the Animal Form. The Animal Form contains six sections (tab name):

- General Information (General)
- Animal Exposure Information (Exposure Description)
- Signs of Illness and Health Outcomes (Illness and Outcomes)
- Clinical Testing (Clinical Testing)
- Supplemental Information (Supplemental Info)
 - No personally identifiable information is collected within the Animal Form. Supporting documents related to the animal illness (e.g., picture of fish kill, veterinary medical report for the animal case) can be appended to the Animal Form in the Supplemental Information Section.
- Author and Agency Information (Author and Agency).

HABs can affect animals through a variety of exposure pathways (e.g., dermal contact, inhalation, ingestion) making it important to identify exposure activities to better understand HAB-associated signs and symptoms of illness and health outcomes. The Animal Form is intended to capture exposure and illness information for single cases of animal illness as a result of a HAB-associated exposure as well as for large groups of animals (e.g., fish kill, flock of birds) where an investigator is not able to provide data for individual animals.

*Tips for Reporting:

- States or territories where the exposure occurred can report animal illness information in the Animal Form (i.e., the exposure state is the same as the reporting state).
- When reporting in the Animal 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.
- If an Animal Form is created first for an OHHABS report, an Environmental Form will automatically be created to capture data about the HAB event (e.g., HAB in a lake, location where contaminated fish/shellfish were harvested) related to the animal case(s).

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

1.1 Single Animal or Group of Animals

The Animal Form is used to report a HAB-associated illness for a single animal case. It is the best practice to create an Animal Form for each animal case to improve the understanding of HAB-associated exposures and illnesses with case-level data. In some scenarios, the Animal Form may instead be used to report HAB-associated illnesses for a large group of animals in aggregate. This additional flexibility is provided in the system to facilitate mass illness and mortality reporting (e.g., fish kill or flock of birds where an investigator is not able to provide data for individual animals). In Table 1, examples of best reporting practices for single animal case(s) or a group of animals are provided.

Table 1. When to report a single animal case(s) or a group of animals

Example	How to Report	Description
One dog (a companion animal) became ill after swimming in a lake with a HAB.	Create a single Animal Form for the single animal case.	There is only one animal to report; therefore, a single Animal Form can be created to document this animal case.
Three dogs (companion animals) became ill after drinking water in a lake with a HAB. The three dogs belonged to different owners but were at the same lake.	Create three Animal Forms , one for each of the single animal cases.	Multiple Animal Forms can be created to document the individual animal cases, including the exposure, signs of illness, and outcomes for each animal case.
Two dogs (companion animals) became ill after swimming in a lake and eating algae with a HAB. The two dogs belonged to the same owner.	Create two Animal Forms , one for each of the single animal cases.	Multiple Animal Forms can be created to document the individual animal cases, including the exposure, signs of illness, and outcomes for each animal case.
One dog (a companion animal) became ill after drinking water in a lake with a HAB event. A duck was also found dead near the same lake.	Create two Animal Forms , one for each of the single animal cases.	Multiple Animal Forms can be created to document the individual animal cases as the type of animals are different and the exposure, signs of illness, and outcomes may differ for each animal case.
A large fish kill was found on the beach near a lake.	Create a single Animal Form for the group of animals.	Fish kills or large groups of animals can be reported into a single Animal Form as a group of animals.

2. General Information Section (General)

This section collects general information about the animal case or a group of animal cases in two tabs: the Animal Description Tab and the Dates Tab. **There are two fields in the General Section which are required: “Does this illness report describe a single animal or a group of animals?” (Animal Description tab) and at least one of three date fields, either the “Date of discovery”, the “Date of illness onset”, or the “Date of death” (Dates tab).**

2.1 Animal Description Tab

The Animal Description Tab collects descriptive information about the animal case or group of animals that were exposed to a HAB event.

The screenshot shows the 'General' tab of the OHHABS Animal Form, specifically the 'Animal Description' sub-tab. The form contains the following elements:

- Navigation tabs: General (selected), Exposure Description, Illness and Outcomes, Clinical Testing, Supplemental Info, Author and Agency.
- Sub-tab navigation: Animal Description (selected), Dates.
- A 'Save' button in the top right corner.
- Two dropdown menus:
 - 'What is the category of animal(s) being reported?' with 'Wildlife' selected.
 - 'What type of animal(s) are you reporting?' with 'Bird' selected.
- A text input field for 'Additional animal description (e.g. dog or cat breed, type of bird, amphibian, reptile, other, and other mammal)?' containing the text 'Mallard ducks'.
- Radio buttons for 'Does this illness report describe a single animal or a group of animals (i.e., fish kills, flocks, or herds)?':
 - 'Single animal' (selected)
 - 'Group of animals'

- **What is the category of animal(s) being reported?** – The category of animals is a general description of the single animal or group of animals. Categories of animals include:
 - **Domestic pet** – “Domestic pets” or companion animals are animals that have been domesticated by humans and kept primarily for social benefit. Domestic pets might include arthropods, amphibians, caged birds, cats, chinchillas, dogs, ferrets, fish, guinea pigs, hamsters, horses, mice, poultry, rabbits, rats, and reptiles.
 - **Livestock** – “Livestock” or alternative livestock are animals that have been domesticated and are raised or used on a farm for leisure or profit. Livestock or farm animals might include cattle, sheep, pigs, goats, or poultry. Alternative livestock animals are non-traditional animals raised on a farm or property that might include emus, ostriches, llamas, alpacas, rabbits, antelope, or buffalo.
 - **Wildlife** – “Wildlife” includes any non-domesticated animal living in the wild including those hunted for food, sport, or profit. Wildlife might include a variety of birds, mammals, fish, reptiles, amphibians, and invertebrates.

- **Other** – “Other” includes any category of animal not described in this list. If selected, please provide an additional description in the “Additional animal description?” field.
- **Unknown** – Select “Unknown” if the category of animal was undetermined.

For more information on categories of animals, please visit CDC’s [Healthy Pets Healthy People Website](#).

- **What type of animal(s) are you reporting?** – The type of animal is a more specific description of the animal case or group of animals. Animal types include:
 - **Amphibian** – “Amphibian” can include animals such as frogs or salamanders.
 - **Bird** – “Bird” can include domestic birds (e.g., parrots, cockatiels, parakeets) or wildlife (e.g., ducks, geese, raptors).
 - **Cat** – “Cat” can include domestic cats (i.e., companion animals) or wildlife (e.g., cougars, bobcats, ocelots, lynx).
 - **Cattle** – “Cattle” can include domestic bovine animals (e.g., cows, oxen, buffalo).
 - **Dog** – “Dog” can include domestic dogs (i.e., companion animals) or wildlife (e.g., coyotes, foxes, wolves).
 - **Fish** – “Fish” can include freshwater fish or marine water fish.
 - **Horse/donkey** – “Horse/donkey” can include domestic or wild horses, donkeys, or zebra.
 - **Other** – “Other” includes any type of non-mammal animal not described in this list. If selected, please provide an additional description in the “Additional animal description?” field.
 - **Other mammal** – “Other mammal” can include domestic animals (e.g., ferrets, guinea pigs, mice) or wildlife (e.g., raccoon, armadillo, rabbit, sea lion, sea otter, dolphin, whale) that do not fall under any of the animal types in this list. If selected, please provide an additional description in the “Additional animal description?” field.
 - **Reptile** – “Reptile” can include domestic animals (e.g. pet snakes, pet lizards, pet turtles, pet geckos) or wildlife (e.g., alligators, snakes, turtles, geckos).
- **Additional animal description?** – Provide any additional description information about the animal case(s). This can include specifics about the breed of the animal or the species of the animal (e.g., beagle, pelican).

- **Does this illness report describe a single animal or a group of animals?** – Indicate whether a single animal or group of animals is being described in this form. A follow-up set of questions will appear, dependent upon the answer provided here. **This field is required.**

General	Exposure Description	Illness and Outcomes	Clinical Testing	Supplemental Info	Author and Agency
Animal Description	Dates				
What is the category of animal(s) being reported?		What type of animal(s) are you reporting?			
Select animal category <input type="button" value="v"/>		Select animal type <input type="button" value="v"/>			
Additional animal description (e.g. dog or cat breed, type of bird, amphibian, reptile, other, and other mammal)?					
<input type="text"/>					
Does this illness report describe a single animal or a group of animals (i.e., fish kills, flocks, or herds)?					
<input type="radio"/> Single animal		<input type="radio"/> Group of animals			

2.1.1 Single Animal Fields

When “Single animal” is selected, fields collecting information about the single animal illness appear.

The screenshot shows the OHHABS Animal Form interface. The top navigation bar includes tabs for General, Exposure Description, Illness and Outcomes, Clinical Testing, Supplemental Info, and Author and Agency. The 'Animal Description' tab is active, with sub-tabs for Animal Description and Dates. The form contains several fields: 'What is the category of animal(s) being reported?' (dropdown), 'What type of animal(s) are you reporting?' (dropdown), 'Additional animal description (e.g. dog or cat breed, type of bird, amphibian, reptile, other, and other mammal)?' (text area), and a section highlighted with a red box. This red box contains the question 'Does this illness report describe a single animal or a group of animals (i.e., fish kills, flocks, or herds)?' with radio buttons for 'Single animal' (selected) and 'Group of animals'. Below this are fields for 'What is the age of the animal?' (text input with 'years' label), 'What is the weight of the animal?' (text input with 'Select unit of measure' dropdown), 'Did the animal die?' (radio buttons for Yes, No, Unknown), and 'What condition was the animal found in? (check all that apply)' with checkboxes for Alive, Fresh, Scavenged, Decomposed, Unknown, and Not Applicable.

- **Single animal** – If the illness report describes a single animal, please answer the following questions.
 - **What is the age of the animal?** – If known, indicate the age of the animal in years (numeric values only). If an exact age of the animal is unknown, indicate the approximate age (e.g., 3-4 years can be reported as 4 years). For an animal less than a year of age, the age in months can be entered as the decimal age of the animal by dividing the age in months by 12 (e.g., 9 months can be entered as 0.75). For ages that are more than 3 decimal places, round up to the third decimal place.
 - **What is the weight of the animal?** – If known, indicate the known or approximate weight of the animal and select the appropriate unit for weight
 - **Did the animal die?** – If known, indicate if the animal died.
 - **What condition was the animal found in?** – If known, indicate the condition that the animal was found in. Check all options that apply.

2.1.2 Group of Animal Fields

When “Group of animals” is selected, fields collecting information about the group of animals appear.

General	Exposure Description	Illness and Outcomes	Clinical Testing	Supplemental Info	Author and Agency
Animal Description		Dates			
What is the category of animal(s) being reported? Select animal category <input type="text"/>			What type of animal(s) are you reporting? Select animal type <input type="text"/>		
Additional animal description (e.g. dog or cat breed, type of bird, amphibian, reptile, other, and other mammal)? <input type="text"/>					
Does this illness report describe a single animal or a group of animals (i.e., fish kills, flocks, or herds)?					
<input type="radio"/> Single animal		<input checked="" type="radio"/> Group of animals			
How many animals were affected?			<input type="text"/>		
Did any animals die?					
<input type="radio"/> Yes		<input type="radio"/> No		<input type="radio"/> Unknown	
How many dead animals were counted?			<input type="text"/>		
What condition were they found in? (check all that apply)					
<input type="checkbox"/> Alive		<input type="checkbox"/> Fresh		<input type="checkbox"/> Scavenged	
<input type="checkbox"/> Decomposed		<input type="checkbox"/> Unknown		<input type="checkbox"/> Not Applicable	

- **Group of animals** –If the illness report describes multiple animal, please answer the following questions.
 - **How many animals were affected?** – Identify the known or approximate number of animals that were affected. This includes animals with signs of illness or that were deceased at time of discovery.
 - **Did any animals die?** – Indicate if any animals in the group of animals died.
 - **How many dead animals were counted?** – If any of the affected animals died, indicate the known or approximate number of dead animals.
 - **What condition were they found in?** – If known, indicate the condition that the animals were found in. Check all options that apply.

2.2 Dates Tab

The Dates Tab collects date information for the animal case(s) that were exposed to a HAB event. **At least one of three date fields is required for this tab, either the “Date of discovery”, the “Date of illness onset”, or the “Date of death”.**

- **Did the animal have exposure to algae and/or algal toxins on a single date or multiple dates? –** Check the option that best describes the animal(s) exposure to algae or algal toxins. If the animal case(s) were exposed on a single day, check “Single date”. If the animal case(s) were exposed multiple times over several days, check “Multiple dates”.
- **Date of first exposure (DD/MM/YYYY) –** Indicate the date when the animal case(s) had their first exposure to algae or algal toxins. For an animal with multiple exposure dates, indicate the first exposure date.
 - **AM/PM –** Select “AM” or “PM” for the time of first exposure. If the exact “Time” is known, please include this information in the “Date Remarks” field. AM is from midnight to 11:59AM, and PM is from noon to 11:59PM.
- **Date of last exposure (DD/MM/YYYY) –** Indicate the date when the animal case(s) had their last exposure to a HAB or HAB event. For an animal with a single exposure in a single day, this will be the same as the “Date of first exposure”. For an animal with multiple exposures within a single

day, report the date and time of the last exposure if known. For an animal with multiple exposure dates, indicate the last date of exposure.

- **AM/PM** – Select “AM” or “PM” for the time of last exposure. If the exact “Time” is known, please include this information in the “Date Remarks” field. AM is from midnight to noon, and PM is from noon to midnight.
- **Date of discovery (DD/MM/YYYY)** – The “Date of discovery” is the date when an animal was first found ill or first discovered if the animal was deceased. Indicate the date when the animal case(s) were discovered. If multiple animals were discovered on different dates, report the first date of discovery.
 - **AM/PM** – Select “AM” or “PM” for the time of last exposure. If the exact “Time” is known, please include this information in the “Date Remarks” field. AM is from midnight to noon, and PM is from noon to midnight.
- **Date of illness onset (DD/MM/YYYY)** – Indicate the date when the animal(s) first displayed signs of illness. If multiple animals displayed signs of illnesses, report the first date of illness.
 - **AM/PM** – Select “AM” or “PM” for the time of last exposure. If the exact “Time” is known, please include this information in the “Date Remarks” field. AM is from midnight to noon, and PM is from noon to midnight.
- **Date of death (DD/MM/YYYY)** – If the animal case(s) died, indicate the date of death. If multiple animals died, report the first date of death.
 - **AM/PM** – Select “AM” or “PM” for the time of last exposure. If the exact “Time” is known, please include this information in the “Date Remarks” field. AM is from midnight to noon, and PM is from noon to midnight.
- **Date of notification to Local, Territorial, Tribal, or State Health Authorities (DD/MM/YYYY)** - If a notification about the animal illness(es) was sent to a health authority, indicate the date the notification was sent.
- **Date remarks** – Describe any other relevant date information that was not documented above.

3. Exposure Description Section (Exposure Description)

This section collects exposure information about the animal case(s) in three tabs: the Location Tab, the Activities Tab, and the Exposure Routes and Remarks Tab. **There is one required field in the Exposure Description Section and Location Tab: “State(s) where exposure occurred?”**

3.1 Location Tab

The Location Tab collects information on where the animal case(s) were exposed to a HAB event. **One field is required in this tab, the “State(s) where exposure occurred?”.**

The screenshot shows the OHHABS Animal Form interface. The main tabs are General, Exposure Description (active), Illness and Outcomes, Clinical Testing, Supplemental Info, and Author and Agency. Under the Exposure Description tab, there are three sub-tabs: Location (active), Activities, and Exposure Routes and Remarks. The Location sub-tab contains the following fields:

- State(s) where exposure occurred?**: A dropdown menu with options: Massachusetts, Michigan, Minnesota (selected), Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire.
- Count(ies) where exposure occurred? (select all that apply):**: A dropdown menu with options: Aitkin, Anoka, Becker, Beltrami, Benton (selected), Big Stone, Blue Earth, Brown, Carlton.
- Setting(s) of the exposure:**: A dropdown menu with options: Other, Park - Community/Municipal, Park - Forestry Service, Park - National Park, Park - State Park (selected), Park - Unknown, Private Residence, Public Outdoor Area, Resort.
- Specific location name:**: A text input field.

A blue 'Save' button is located in the top right corner of the form area.

- **State(s) where exposure occurred?** – Indicate the state(s) or jurisdiction(s) where the animal’s exposure occurred. If the exposure occurred in multiple states, select all states that apply. **This is a required field.** For guidance on multistate exposures or foodborne exposures, please refer to the OHHABS Multistate Guidance document or the OHHABS Foodborne Guidance document at <http://www.cdc.gov/nors/ohhabs>.
- **Count(ies) where exposure occurred?** – Counties displayed are dependent on the “State(s) where the exposure occurred”. If more than one state is selected, the corresponding states’ counties will appear alphabetically by state. Indicate in which count(ies) the animal’s exposure occurred. If the exposure occurred in multiple counties, select the counties that apply.
- **Setting(s) of the exposure?** – Indicate the setting(s) where the animal(s) may have been exposed to algae or algal toxins. More than one setting may be selected.

- **Specific location name** – The “Specific location name” is the specific name of a beach, park, or water body where the animal(s) may have been exposed to algae or algal toxins.

3.2 Activities Tab

The Activities Tab collects information on activities resulting in exposure to algae or algal toxins for the animal case(s). If an “Exposure source” is selected, please complete the corresponding fields in the row. If there is more than one “Exposure activity”, please create and complete a new row to collect information about each “Exposure activity”. A new row for the “Exposure activity” 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.

	Exposure source	Exposure activity	Water type (if applicable)	Food type (if applicable)	Duration (and unit)
Delete Row	Water	swimming in water	Pond		1.50 Hours
Delete Row	Food	eating fish	Pond	Minnows	0.50 Minutes
Add Row					

- **Exposure source** – Indicate a single source of exposure (e.g., food, water) to algae or algal toxins. The following fields in this tab further characterize the exposure source and related activities. Add a new row for a different single “Exposure source”.
- **Exposure activity** – Provide a brief description of the “Exposure activity” related to the “Exposure source” (e.g., swimming in water, eating fish).
- **Water type** – If applicable, select the “Water type” that best describes the “Exposure source”. For example if the exposure occurred in a Lake, select “Lake/Reservoir/Impoundment”.
- **Food type** – Indicate the “Food type” for the food item implicated. This list supports reporting general and more specific reporting of types of fish. For example, if an exposure occurred from eating grouper but the specific type is not listed, select “Grouper, other”. However, if the fish was determined to be tiger grouper, a specific type of grouper, select “Grouper, tiger”. If the type of food is not listed, select “Other” and explain in the “Exposure Remarks” field. If the food item is unknown, select “Unknown” and explain in the “Remarks” field.

- **Duration** – Indicate the amount of time the animal case(s) performed the “Exposure activity”. Estimates of duration may be included. For repeated exposure activities in a single day (e.g., swam in a lake twice in one day), the total duration time may be reported. For exposures that occurred on multiple days, create a new row to document each day’s duration (e.g., swimming one day (4 hours) and swimming second day for (6 hours), if known. If only the total duration time is known, report the total duration time (e.g., swimming on 2 different days for a total of 6 hours) and describe further the in the “Remarks” field.
 - **Number** –Indicate the number for duration in this field up to two decimal places (e.g., 2.25)
 - **Unit** – Indicate the unit of time for duration in this field (e.g., Minutes, Hours, Days).

3.3. Exposure Routes and Remarks Tab

The Exposure Routes and Remarks Tab collects information regarding the route of exposure for the animal case(s).

The screenshot shows a web form with several tabs: General, Exposure Description (active), Illness and Outcomes, Clinical Testing, Supplemental Info, and Author and Agency. Under the 'Exposure Description' tab, there are sub-tabs: Location, Activities, and Exposure Routes and Remarks (active). A blue 'Save' button is in the top right. The main content area asks 'What were the routes of exposure? (select all that apply)' and includes checkboxes for Ingestion, Inhalation, Skin contact, Other (describe in remarks), and Unknown. Below this is a text box for 'Exposure Remarks (e.g. additional description of single or multiple exposures)'.

- **What were the routes of exposure?** – Identify all known and suspected routes of exposure that may have occurred. Select all that apply.
 - **Ingestion** – “Ingestion” includes eating food contaminated with algae or algal toxins, eating supplementary dietary pills contaminated with algae or algal toxins, swallowing water that containing algae or algal toxins, or eating other materials (e.g., scum, algae mats, dead fish, etc.).
 - **Inhalation** – “Inhalation” includes breathing in any mist or airborne particles that contain algae or algal toxins.

- **Skin contact** – “Skin contact” includes any direct skin contact with algae or algal toxins or with water containing algae or algal toxins.
- **Other** – “Other” may include any other route not listed above. If “Other” is selected, please describe the other route of exposure in the remarks.
- **Unknown** – Select “Unknown” if the animal case had an exposure to algae or algal toxins but the route of exposure was not identified.
- **Exposure Remarks** – Describe any additional information regarding the animal case’s exposure (e.g., known exposure, suspected exposure, multiple exposures).

4. Signs of Illness and Health Outcomes Section (Illness and Outcomes)

This section collects information about any illnesses or health outcomes experienced by the animal case(s) in three tabs: the Signs of Illness Tab, the Medical Care and Health Outcomes Tab, and the Health History and Differential Diagnosis Tab.

4.1 Signs of Illness Tab

The Signs of Illness Tab collects information about signs of illness displayed by the animal case(s) in the table and a question. In the table, please fill out the subsequent fields in a row for each “Sign”. If more than one “Sign” of illness was displayed by the animal(s), add a new row to report more information about a different “Sign”. In the table, a new row for a “Sign” 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.

Sign	Time to onset	Onset unit	Duration of symptoms	Duration unit	Recurrence following multiple exposures?
Ataxia (stumbling, loss of bale)			4.5	Hours	Unknown
Labored breathing			30	Minutes	No

Were the signs of illness consistent with the route of exposure (e.g. location of rash consistent with exposed body parts)? If no, please describe in remarks.

Yes
 No
 Unknown

- **Sign** – Select the “Sign” of illness in the picklist that best describes any illnesses in the animal(s). Signs of illness can include those observed by a non-veterinary practitioner or those diagnosed by a veterinary practitioner (e.g., veterinarian, veterinary technician). If a “Sign” of illness is not listed, please select “Other” and describe the sign in the “Remarks” field.
- **Time to onset** – Enter the numeric value of “Time to onset” up to 2 decimal places (e.g., 2.15) in this field. “Time to onset” is the time between exposure to algae or algal toxins and when the signs or symptoms of illness began in minutes, hours, or days.
- **Onset unit** – Indicate the unit of time for the “Time to onset” (i.e., Minutes, Hours, Days).

- **Duration of signs** – Enter the numeric value for the duration of a “Sign” of illness up to 2 decimal places for the duration in this field (e.g., 2.15). “Duration of signs” is the length of time the sign of illness lasted. For example, if a rescued bird had symptoms that appeared on July 4th and resolved on July 7, the duration of illness would be 4 days (July 4–7).
- **Duration unit** – Indicate the unit of time for the “Duration of signs” (i.e., Minutes, Hours, Days).
- **Recurrence following multiple exposures?** – If multiple exposures recurred (e.g., swimming in the same lake on different days), indicate whether the “Sign” of illness reoccurred after the additional exposures. If “Yes”, please describe in the “Medical Care and Health Outcomes Remarks” field.
- **Were the signs consistent with the routes of exposure?** – Indicate whether the signs of illness were consistent with the route of exposure. An example of a consistent sign and route of exposure may include animal(s) that experienced gastrointestinal issues such as vomiting or diarrhea after eating algae on the beach. If it is not possible to determine whether the signs/symptoms were consistent, select “Unknown.”

4.2. Medical Care and Health Outcomes Tab

The Medical Care and Health Outcomes Tab collects information on any medical care that the animal(s) received and health outcomes of the animal(s).

The screenshot shows the OHHABS Animal Form interface. At the top, there are six main tabs: General, Exposure Description, Illness and Outcomes (highlighted in green), Clinical Testing, Supplemental Info, and Author and Agency. Below these, there are three sub-tabs: Signs of Illness, Medical Care and Health Outcomes (highlighted in green), and Health History and Differential Diagnosis. A blue 'Save' button is located in the top right corner of the form area.

The form contains the following questions and options:

- Did the animal(s) receive veterinary medical care or treatment?
 - Yes
 - No
 - Unknown
- Did the animal(s) get admitted to a veterinary facility?
 - Yes
 - No
 - Unknown
- Do you have additional information about medical care or health outcomes for the animal(s)?
 - Yes
 - No

If Yes, please attach supplemental documents or comment in the remarks.

At the bottom, there is a text area labeled "Medical Care and Health Outcomes Remarks:".

- **Did the animal(s) receive veterinary medical care or treatment?** – Indicate whether the animal(s) received any veterinary medical care or treatment for their exposure or subsequent signs of illness.
- **Did the animal(s) get admitted to a veterinary facility?** – Indicate if the animal(s) were admitted to a veterinary facility for any span of time (e.g., a couple of hours, overnight, several days).
- **Do you have additional information about medical care or health outcomes for the animal(s)?** – Indicate if there is any additional information about the medical care or health outcomes for the reported animal(s). If “Yes”, please include this information in the “Medical Care and Health Outcome Remarks” field or attach it to the form.
- **Medical Care and Health Outcome Remarks** – Provide any other relevant information about the animal(s)’ medical care or health outcome that may not have been captured in this subsection. For companion animals, please do not include personally identifiable information about the companion animal’s owners (e.g., owner’s name, owner’s address).

4.3 Health History and Differential Diagnosis Tab

The Health History and Differential Diagnosis Tab collects information on the animal case(s)’ health history and differential diagnosis. If the response is “Yes” to any of the following questions in this tab, please enter related information in the “Health History and Differential Diagnosis Remarks” field.

General	Exposure Description	Illness and Outcomes	Clinical Testing	Supplemental Info	Author and Agency
Signs of Illness	Medical Care and Health Outcomes	Health History and Differential Diagnosis			
Save					
If Yes to any of the questions below, describe in remarks.					
Did the animal(s) have any pre-existing medical conditions or disabilities?					
<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Unknown					
Did the animal(s) receive any medications in the month before illness onset?					
<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown					
Were other causes of the illness investigated?					
<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown					
Were environmental samples tested to rule out other possible causes (e.g. mushrooms)?					
<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown					
Health History and Differential Diagnosis Remarks					
<div style="border: 1px solid gray; padding: 5px;"> The dog appeared healthy with no history of pre-existing medical conditions. The dog received monthly oral heartworm and flea medication. </div>					

- **Did the animal(s) have any pre-existing medical conditions or disabilities?** – Indicate if the animal(s) had any pre-existing medical conditions (e.g., acute illnesses, chronic illnesses, injuries, non-infectious conditions).
- **Did the animal(s) receive any medications in the month before illness onset?** – Indicate if the animal(s) had taken any medication within the month prior to their illness. Medications may include but are not limited to any oral medications, injections, or topical medications such as flea or tick medication.
- **Were other causes of the illness investigated?** – Indicate if other causes of illness were considered during medical treatment or care.
- **Were environmental samples tested to rule out other possible causes?** – Identify if environmental samples (e.g., mushrooms, water, food) were tested to rule out other possible causes of illness.

5. Clinical Testing Section (Clinical Testing)

The Clinical Testing Tab collects information about any clinical testing performed for animal(s) in three tabs: the Clinical Testing Tab, the Test Results Tab, and the Clinical Testing Remarks Tab.

5.1 Clinical Testing Tab

The Clinical Testing Tab collects information on any testing performed on clinical specimens collected from the animal(s).

General Exposure Description Illness and Outcomes **Clinical Testing** Supplemental Info Author and Agency

Clinical Testing Test Results Clinical Testing Remarks

Save

Were clinical specimens tested?

Yes No Unknown

What type(s) of clinical testing was done to diagnose the illness or rule out other causes of illness? (select all that apply)

Bloodwork Culture Fecal analysis Histopathology

Skin biopsy Stomach content analysis Toxicology Urinalysis

X-ray Other (describe in remarks) Unknown None

- **Were clinical specimens tested?** – Indicate if clinical specimens were collected and tested.
- **What type(s) of clinical testing was done to diagnose the illness or rule out other causes of illness?** – If clinical specimens from the animal(s) were tested, check all types that were performed.

5.2 Test Results Tab

The Test Results Tab includes a table to collect detailed information about test results for clinical specimens. Refer to laboratory result data for specimen testing results. In the absence of routine clinical testing for algae and algal toxins, users may report test results for other pathogens as this information can further help to rule out other causes of illness.

The fields in a single row describe one test result. If there is more than one clinical specimen test result, 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.

	Classification	Genus or toxin	Species	Subspecies/Serotype/Genotype	Detected in clinical specimen?	Detected in which types of specimens?	Concentration (and unit)	Test type
Delete Row	Toxin	Domoic acid			Yes	Autopsy specimen Biopsy Blood - plasma Blood - serum	10.5 ppm (mg/L)	Serological/Immun
Delete Row	Other	Pesticides			No	Blood - serum Bronchial Alveolar Lavage (BAL) Cerebrospinal fluid (CSF) Conjunctival/Eye swab		Other
Add Row								

- Classification** – Indicate the “Classification” or the broadest description of the algae, algal toxin, or other pathogen tested for in a clinical specimen. For more information on the classification of algae, toxins, and other pathogens please refer to the OHHABS Algae, Algal Toxins, and Other Pathogens List on the [OHHABS website](#).

The options for classification include:

- Cyanobacteria
- Diatoms
- Dinoflagellates
- Gonyaulacales
- Gymnodiniales
- Peridinales
- Prorocentrales
- Raphidophyceans
- Toxin – Algal toxins
- Other – Other microbial pathogens, chemical, and non-algal toxins

- **Genus or toxin** – Indicate the “Genus or toxin” name for the algae, algal toxin, or other pathogen tested for in clinical specimen. 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 on the [OHHABS website](#).
- **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 on the [OHHABS website](#).
- **Sub-species/Serotype/Genotype** – If applicable, indicate the “Sub-species/Serotype/Genotype” name for the algae or other pathogen tested for in a clinical specimen. 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 on the [OHHABS website](#).

- **Detected in clinical specimen?** – Indicate if the algae, algal toxin, or other pathogen was detected in a clinical specimen.
- **Detected in which types of specimens?** – Identify the type of clinical specimen in which the testing for algae, algal toxins, or other pathogens was performed. Multiple specimen types can be selected.
- **Concentration** – If applicable, indicate the concentration of the algae, algal toxin, or other pathogen detected in the clinical specimen up to 3 decimal places (e.g., 0.123).
- **Concentration Unit** – Indicate the concentration unit of the algae, algal toxin, or other pathogen detected in the clinical specimen.
- **Test Type** – Indicate the type of clinical test used to detect the algae, algal toxins, or other pathogens in a clinical specimen. If more information about the “Test type” (e.g., the specific name of the kit, the lot number) or testing performed on the clinical specimen is available, please describe in the “Clinical Testing Remarks” field. “Test type” options include:
 - **Culture** – Indicate “Culture” if testing was performed to detect algae, algal toxins, or other pathogens through microbial growth in a nutritional solid (e.g., agar) or liquid medium (e.g., liquid nutrient broth).
 - **DNA or RNA Amplification/Detection (PCR, RT-PCR)** – Indicate “DNA or RNA Amplification/Detection” if testing was performed to detect algae, algal toxins, or other

pathogens through the amplification of DNA or RNA specific sequences (e.g., amplifying a DNA sequence of a specific algae in a blood sample) with PCR and RT-PCR methods.

- **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.
- **Microscopy (Fluorescent, EM)** – Indicate “Microscopy” if testing was performed to detect algae, algal toxins, or other pathogens through imaging methods including but not limited to bright field microscopy, phase contrast microscopy, fluorescent microscopy, confocal microscopy, or electron microscopy.
- **Other** – Indicate “Other” if testing was performed to detect algae, algal toxins, or other pathogens but is not listed as an option. If “Other” is selected”, please describe in the “Clinical Testing Remarks” field.
- **Serological/Immunological Test (ELISA, EIA)** – Indicate “Serological/Immunological Test” if testing was performed to detect algae, algal toxins, or other pathogens through the use of antibodies including, but not limited to, ELISA or EIA testing (e.g., ELISA for anatoxin-a or microcystins).
- **Unknown** – Indicate “Unknown” if testing was performed but the “Test Type” was not known.

5.3 Clinical Testing Remarks Tab

The Clinical Testing Remarks Tab collects any additional information regarding testing performed on clinical specimens from an animal case or group of animals.

The screenshot displays a web-based form interface with a top navigation bar containing tabs: General, Exposure Description, Illness and Outcomes, Clinical Testing (highlighted in green), Supplemental Info, and Author and Agency. Below this, a sub-navigation bar includes Clinical Testing, Test Results, and Clinical Testing Remarks (highlighted in green). A blue Save button is located in the top right corner of the main content area. The main content area contains a text input field with the label "Clinical Testing Remarks (please add in any other testing results or attach additional testing reports)".

- **Clinical Testing Remarks** – Describe any relevant information not captured above regarding clinical testing performed on the animal case(s)' specimens. For companion animals, do not include personally identifiable information about the companion animal's owner(s) (e.g., owner's name or address).

6. Supplemental Information Section (Supplemental Info)

This section collects supplementary information for the animal illness that may not have been captured elsewhere in the form. There are two tabs in the section, the General Remarks Tab and the Attachments Tab.

6.1 General Remarks Tab

This General Remarks Tab collects descriptive information that may not have been collected elsewhere in the form.

The screenshot shows the 'Supplemental Info' tab selected in the top navigation bar. Below it, the 'General Remarks' sub-tab is active. A large text area labeled 'General Remarks:' is provided for input. A blue 'Save' button is located in the top right corner of the form area.

- General Remarks** – Describe any relevant information not captured in the animal form. For companion animals, do not include personally identifiable information about the companion animal's owners (e.g., owner's name or address).

6.2 Attachments Tab

Please attach any relevant information about the animal case not captured in the form. For companion animals, do not include personally identifiable information (e.g. owner's name or address). Attachments may include information that further characterizes the animal illness (e.g., information about exposures, illness, clinical findings, health outcomes, etc). 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.

The screenshot shows the 'Supplemental Info' tab selected in the top navigation bar. Below it, the 'Attachments' sub-tab is active. A text area contains the instruction: 'Any additional information may be attached to this form (e.g. state summaries)'. Below this text area is a 'Browse...' button and an 'Upload' button. A blue 'Save' button is located in the top right corner of the form area.

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

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

General	Exposure Description	Illness and Outcomes	Clinical Testing	Supplemental Info	Author and Agency
Report Author and Agency Information					
Save					
Report Author:	VRoberts				
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				