

**0920-0004 National Disease Surveillance Program II-Disease Summaries**

**(expiration 8/31/14)**

**Change Request**

**April 5, 2013**

**Amy McMillen**

**CDC/NCEZID**

**1600 Clifton Rd**

**Atlanta GA 30333**

**404-639-1045**

**[Auh1@cdc.gov](mailto:Auh1@cdc.gov)**

## List of Attachments

**National Outbreak Reporting System (NORS) – CDC 52.13 form**

**National Outbreak Reporting System (NORS) – CDC 52.12 form**

**Human Infection with Novel Influenza A Virus Case Report Form**

**Antiviral-Resistant Influenza Case Report Form**

**National Outbreak Reporting System (NORS) – CDC 52.13 form, Circumstances of Change Request for OMB 0920-0004**

This is a nonmaterial/non-substantive change request for #0920-0004, which received a 3-year extension through August 2014 for the reporting of foodborne, enteric person-to-person, animal contact, environmental contamination other than food/water, and other/unknown modes of transmission outbreak data from 59 reporting jurisdictions (50 states, and 9 territories) to the National Outbreak Reporting System (NORS).

Although foodborne outbreaks surveillance has occurred since the 1970's, NORS was launched in 2009 as the CDC Form 52.13, and collects aggregate outbreak data on foodborne, enteric person-to-person, animal contact, environmental contamination other than food/water, and other/unknown modes of transmission outbreaks. Data elements requiring change will improve clarification and readability of the data collection form; see table below. The settings or locations of the outbreak are routinely summarized in annual summaries and have been the subject of inquiry from the reporting agencies as well as US federal regulatory agencies. The setting or location where the outbreak occurred is important and essential to inform targeted intervention strategies, regardless of the primary mode of transmission. Currently, settings or locations of the outbreak are collected for animal contact, foodborne, and person-to-person outbreaks. However, the settings for environmental contamination other than food/water and other/unknown outbreaks are not collected. In response to the importance of the settings or locations of those outbreaks, reporting sites will be asked to complete an additional section, 'Settings', (formerly named 'Person-to-Person'); no data collection fields will be added or changed to this section. The data collection changes are summarized in the table below.

**Changes for clarification and readability**

Section	Current Question/Item	Requested Change																																																						
<p>General Section, Primary Mode of Transmission</p>	<p><b>General Section</b> [highlighted]</p> <p><b>Primary Mode of Transmission</b> (check one)</p> <p><input type="checkbox"/> Food (complete General, Lab, and Food tabs)      <input type="checkbox"/> Person-to-person (complete General, Lab, and Person-to-Person tabs)</p> <p><input type="checkbox"/> Water (complete CDC 52.12)      <input type="checkbox"/> Environmental contamination other than food/water (complete General and Lab tabs)</p> <p><input type="checkbox"/> Animal contact (complete General, Lab, and Animal Contact tabs)      <input type="checkbox"/> Indeterminate/Other/Unknown (complete General and Lab tabs)</p>	<p><b>General Section</b> - complete for all modes of transmission except Water [highlighted]</p> <p><b>Primary Mode of Transmission</b> (check one)</p> <p><input type="checkbox"/> Food (complete General, Etiology, and Food tabs)      <input type="checkbox"/> Person-to-person (complete General, Etiology, and Settings tabs)</p> <p><input type="checkbox"/> Water (complete CDC 52.12)      <input type="checkbox"/> Environmental contamination other than food/water (complete General, Etiology, and Settings tabs)</p> <p><input type="checkbox"/> Animal contact (complete General, Etiology, and Animal Contact tabs)      <input type="checkbox"/> Other/Unknown (complete General, Etiology, and Settings tabs)</p>																																																						
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Secondary Cases	<p><b>Secondary Cases</b></p> <p>Mode of secondary transmission (check all that apply)</p> <p><input type="checkbox"/> Food  <input type="checkbox"/> Water  <input type="checkbox"/> Animal contact  <input type="checkbox"/> Person-to-person  <input type="checkbox"/> Environmental contamination other than food/water  <input type="checkbox"/> Indeterminate/Other/Unknown</p>	<p><b>Secondary Cases</b></p> <p>Mode of secondary transmission (check all that apply)</p> <p><input type="checkbox"/> Food  <input type="checkbox"/> Water  <input type="checkbox"/> Animal contact  <input type="checkbox"/> Person-to-person  <input type="checkbox"/> Environmental contamination other than food/water  <input type="checkbox"/> Other/Unknown</p>																								
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Food	<p><b>Food Section</b> - complete for foodborne primary mode of transmission</p> <p><input type="checkbox"/> Food vehicle undetermined</p>	<p><b>Food Section</b></p> <p><input type="checkbox"/> Food vehicle undetermined</p>																								
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- Food Section sub-header was added for more detailed instructions

### Changes in data collection related to Settings

Section	Current Question/Item	Requested Change
Primary Mode of Transmission	<p><b>Primary Mode of Transmission (check one)</b></p> <p><input type="checkbox"/> Food (complete General, Lab, and Food tabs)      <input type="checkbox"/> Person-to-person (complete General, Lab, and Person-to-Person tabs)</p> <p><input type="checkbox"/> Water (complete CDC 52.12)      <input type="checkbox"/> Environmental contamination other than food/water (complete General and Lab tabs)</p> <p><input type="checkbox"/> Animal contact (complete General, Lab, and Animal Contact tabs)      <input type="checkbox"/> Indeterminate/Other/Unknown (complete General and Lab tabs)</p>	<p><b>Primary Mode of Transmission (check one)</b></p> <p><input type="checkbox"/> Food (complete General, Etiology, and Food tabs)      <input type="checkbox"/> Person-to-person (complete General, Etiology, and Settings tabs)</p> <p><input checked="" type="checkbox"/> Water (complete CDC 52.12)      <input type="checkbox"/> Environmental contamination other than food/water (complete General, Etiology, and Settings tabs)</p> <p><input type="checkbox"/> Animal contact (complete General, Etiology, and Animal Contact tabs)      <input type="checkbox"/> Other/Unknown (complete General, Etiology, and Settings tabs)</p>
	<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>Instructions added for 'Environmental contamination other than food/water' and 'Other/Unknown' to complete the 'Settings' tab</li> </ul>	
Page 3 Header	<p>Laboratory      <b>Person-to-Person</b>      Animal Contact</p>	<p>Etiology      <b>Settings</b>      Animal Contact</p>
	<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>'Person-to-Person' tab has been changed to 'Settings'</li> </ul>	
Settings Section	<p><b>Person-to-Person Section</b></p> <p>Major setting of exposure (choose one)</p> <p><input type="checkbox"/> Camp      <input type="checkbox"/> Hotel      <input type="checkbox"/> Private setting (residential home)</p> <p><input type="checkbox"/> Child day care      <input type="checkbox"/> Nursing home      <input type="checkbox"/> Religious facility</p> <p><input type="checkbox"/> Community-wide      <input type="checkbox"/> Prison or detention facility      <input type="checkbox"/> Restaurant</p> <p><input type="checkbox"/> Hospital      <input type="checkbox"/> Other, please specify: _____</p>	<p><b>Settings Section</b> (complete for person-to-person, environmental contamination, and other/unknown primary mode of transmission)</p> <p>Major setting of exposure (choose one)</p> <p><input type="checkbox"/> Camp      <input type="checkbox"/> Hotel      <input type="checkbox"/> Private setting (residential home)      <input type="checkbox"/> School</p> <p><input type="checkbox"/> Child day care      <input type="checkbox"/> Nursing home      <input type="checkbox"/> Religious facility      <input type="checkbox"/> Ship</p> <p><input type="checkbox"/> Community-wide      <input type="checkbox"/> Prison or detention facility      <input type="checkbox"/> Restaurant      <input type="checkbox"/> Workplace</p> <p><input type="checkbox"/> Hospital      <input type="checkbox"/> Other, please specify: _____</p>
	<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>Settings Section sub-header was added for more detailed instructions</li> <li>This will be considered a new section for 'Environmental contamination other than food/water' and 'Other/Unknown' primary mode of transmission outbreaks</li> </ul>	

At the national level, the outbreak surveillance data are used to describe outbreaks and their characteristics through publications and data inquiries, identify trends in common exposures (including foodborne attribution and burden of illness estimates), inform public health policies, determine reporting metrics, and grant funding allocation.

## Burden

The annualized burden hours and cost to reporting agencies to submit this data to CDC will not change significantly, if at all, from the estimates providing during the 2008 Paperwork Reduction Act Change Worksheet OMB 83-C (E) for OMB #0920-0004. The change to the annualized burden hours and cost is minimal because the reporting agencies currently collect these data elements for foodborne, person-to-person, and animal contact outbreaks. In addition, the setting or location where the outbreak occurred is a common data element reporting agencies track for internal documentation. Therefore, the effort to include these additional data elements does require a minimal up-front cost in hours. In addition, the changes to the annual submissions to CDC are not expected to change after these changes are implemented. The burden hours were based on the average time to complete the common data collection fields by multiple team members. In addition, the burden cost was based on the form being completed by master-level staff at the reporting site.

### Estimates of Annualized Burden Hours (no change)

Type of Respondents	Form name	Number of Respondents	Number of Responses per Respondent	Average Burden Per Response (in hours)	Total Burden (in hours)
State or local governments	CDC Form 52.13	50	33.5	20/60	558
Territories	CDC Form 52.13	9	2.9	20/60	9
<b>Total</b>					567

### Estimates of Annualized Cost Burden (no change)

Respondents	Number of Respondents	Number of Responses per Respondent	Average Burden Per Response (in hours)	Hourly Wage Rate	Respondent Cost
State or local governments	50	33.5	20/60	\$19.92	\$11,122

Territories	9	2.9	20/60	\$19.92	\$173.30
<b>Total</b>					\$11,295.30

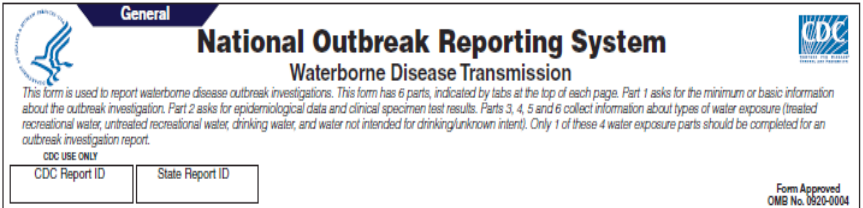
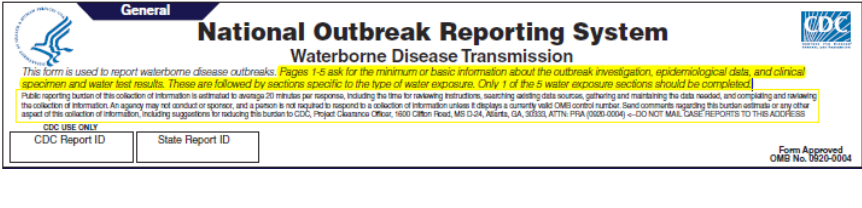
Privacy Impact Assessment

No individually identifiable information is being collected.

## **National Outbreak Reporting System (NORS) – CDC 52.12 form, Circumstances of Change Request for OMB 0920-0004**

The Waterborne Disease and Outbreak Surveillance System (WBDOSS) is a collaboration between the Centers for Disease Control (CDC), the Council of State and Territorial Epidemiologists (CSTE), and the Environmental Protection Agency (EPA). This system tracks and analyzes waterborne disease outbreaks in the United States. WBDOSS has received disease outbreak reports through the electronic National Outbreak Reporting System (NORS) since a revised form was approved by the Office of Management and Budget (OMB) in 2009. NORS variables correspond to variables in the CDC 52.12 form. The CDC 52.12 (rev 01 2010) has been revised to improve overall data quality and usability by local, state and national partners. Feedback from state and federal epidemiologists was solicited prior to making these changes. The most substantial changes on the revised form (CDC 52.12, rev 02 2013) are: 1) the simplification of an existing section that is used to report outbreak etiology; 2) the consolidation of questions about water sampling; and 3) the addition of a checkbox to better characterize exposures that cause waterborne disease outbreaks. Changes to the layout of the form are detailed in the table below. Neither the actual annual number of reports nor the burden hours for users are expected to increase or decrease as a result of the changes present in the CDC 52.12 (rev 01 2010), however a change has been made to how the numbers are calculated. This change is also described below.



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- Instructions have been updated based on changes throughout the form.
- Information about the public reporting burden has been moved from the bottom of page 14 (rev 01 2010) to the beginning of page 1 (rev 02 2013)

No additional questions have been added

- All checkboxes and text for modes of transmission besides 'Water' have been greyed out because this information is collected through a different reporting form (the CDC 52.13 form).
- The instructions following the 'Water' checkbox have been updated to correspond with renamed or new sections of the form. 'Indeterminate/Other/Unknown' has been changed to 'Other/Unknown' because use of the word 'indeterminate' was repetitive and caused some confusion.

No additional questions have been added

- The title 'Primary Case Outcomes' has been added as a sub-header to show that the section is separate from the section called 'Number of primary cases.' The sub-header further clarifies that the section only collects data about primary cases. The revision date for the form has been updated in the bottom left corner of page 1 and all subsequent pages.

General Section, Incubation Period	<b>Incubation Period (select appropriate units)</b>			<b>Duration of Illness (among recovered cases-select appropriate units)</b>			<b>Incubation Period (Select appropriate units)</b>			<b>Duration of Illness (Among recovered cases-select appropriate units)</b>		
	Shortest	Min, Hours, Days		Shortest	Min, Hours, Days		Shortest	Min, Hours, Days		Shortest	Min, Hours, Days	
	Median	Min, Hours, Days		Median	Min, Hours, Days		Median	Min, Hours, Days		Median	Min, Hours, Days	
	Longest	Min, Hours, Days		Longest	Min, Hours, Days		Longest	Min, Hours, Days		Longest	Min, Hours, Days	
	Total # of cases for whom info is available			Total # of cases for whom info is available			Total # of cases for whom info is available			Total # of cases for whom info is available		
<input type="checkbox"/> Unknown incubation period			<input type="checkbox"/> Unknown duration of illness			<input type="checkbox"/> Unknown incubation period			<input type="checkbox"/> Unknown duration of illness			

No additional questions have been added

- Two rectangles have been greyed out to more clearly illustrate no information should be reported in those areas.

Signs or Symptoms	<b>Signs or Symptoms</b>			<b>Signs or Symptoms</b>		
	<b>Feature</b>	<b># Cases with signs or symptoms</b>	<b>Total # cases for whom info available</b>	<b>Feature</b>	<b># Cases with signs or symptoms</b>	<b>Total # cases for whom info available</b>
	Vomiting			Vomiting		
	Diarrhea			Diarrhea		
	Bloody stools			Bloody stools		
	Fever			Fever		
	Abdominal cramps			Abdominal cramps		
	HUS			HUS		
	Asymptomatic			Asymptomatic		

No new questions have been added

- An extra row has been added to the Signs or Symptoms table based on a review of outbreaks reported to CDC in 2009-2010, in which it was found that more than three additional symptoms had been reported in multiple waterborne disease outbreak reports.

Secondary Cases	<b>Secondary Cases</b>			<b>Secondary Cases</b>				
	<b>Mode of Secondary Transmission (check one)</b>		<b>Number of Secondary Cases</b>		<b>Mode of Secondary Transmission (Check all that apply)</b>		<b>Number of Secondary Cases</b>	
	<input type="checkbox"/> Food <input type="checkbox"/> Water <input type="checkbox"/> Animal contact <input type="checkbox"/> Person-to-person <input type="checkbox"/> Environmental contamination other than food/water <input type="checkbox"/> Indeterminate/Other/Unknown		Lab-confirmed secondary cases	#	<input type="checkbox"/> Food <input type="checkbox"/> Water <input type="checkbox"/> Animal contact <input type="checkbox"/> Person-to-person <input type="checkbox"/> Environmental contamination other than food/water <input type="checkbox"/> Other/Unknown		Lab-confirmed secondary cases	#
			Probable secondary cases	#			Probable secondary cases	#
			Estimated total secondary cases	#			Estimated total secondary cases	#
Estimated total cases (Primary + Secondary)			#	Estimated total cases (Primary + Secondary)			#	

No additional questions have been added

- 'Indeterminate/Other/Unknown' has been changed to 'Other/Unknown' because use of the word 'indeterminate' was repetitive and caused some confusion.

Environmental Health Specialists Network	<b>Environmental Health Specialists Network (if applicable)</b>			<b>Environmental Health Specialists Network (if applicable)</b>		
	EHS-Net Evaluation ID: 1.) _____ 2.) _____ 3.) _____			EHS-Net Evaluation ID: 1.) _____ 2.) _____ 3.) _____ 4.) _____		

No new questions have been added

- An extra field has been added to the Environmental Health Specialists Network section to facilitate the linking of waterborne disease outbreak reports with environmental health assessments in an electronic database.

Waterborne Disease and Outbreaks - General

**Waterborne Disease and Outbreaks - General**  
 Type of Water Exposure (check ONE box)

Water intended for recreational purposes – treated venue (e.g., pool, spa/whirlpool/hot tub, spray pad)

Water intended for recreational purposes – untreated venue (e.g., freshwater lake, hot spring, marine beach)

Water intended for drinking (includes water used for bathing/showering)

Water not intended for drinking or water of unknown intent (e.g., cooling/industrial, occupational, decorative/display)

**Water - General section**  
 Type of Water Exposure (Check ONE box)

Treated recreational water (e.g., in manufactured venues such as pools, spas/whirlpools, hot tubs, spray pads, at-home kiddie pools)

Untreated recreational water (e.g., water in natural venues such as a freshwater lakes, hot springs, marine beaches/oceans)

Drinking water in public or individual water systems (e.g., municipal system, private well, commercially-bottled water, water kiosk), regardless of the exposure pathway (i.e., not limited to ingestion).

Other water (e.g., cooling/industrial, water reuse, irrigation, occupational, decorative/display; includes water consumed from sources such as back-country streams)

Unknown water uses (i.e., the intended purpose or use of the water is unknown or the water exposure category could not be determined)

- The header has been shortened from 'Waterborne Disease and Outbreaks – General' to 'Water – General section'
- Revisions have been made to the text associated with the first three check boxes, based on feedback that the meaning of the original text was not always clear.
- The text associated with the fourth check box has been revised for clarity. Further, while it initially combined two different categories of information, it now only describes one category. A fifth check box option has been added to describe the final category. The changes to the text and the addition of the fifth check box are based on feedback from public health professionals who report waterborne disease outbreaks to CDC.

Epidemiologic Data

**Epidemiologic Data**

1. Estimated total number of persons with primary exposure: \_\_\_\_\_

2. Were data collected from comparison groups to estimate risk?  Yes (specify in table below)  No  Unknown  
 If **No** or **Unknown**, was water the **only** common source shared by persons who were ill?  Yes  No  Unknown

Exposure (Vehicle/Setting) <i>(e.g., pool—waterpark; hot spring; well water)</i>	Total # Exposed (A)	# Ill Exposed (B)	Total # Not Exposed	# Ill Not Exposed	Attack Rate (%) (B/A)	Odds Ratio	Relative Risk	p-Value <i>(provide exact value)</i>	95% Confidence Interval

Attack rate for residents of reporting state: \_\_\_\_\_%      Attack rate for non-residents of reporting state: \_\_\_\_\_%

**Epidemiologic Data**

1. Estimated total number of persons with primary water exposure: \_\_\_\_\_

2. Were data collected from comparison groups to estimate risk?  Yes (specify in table below)  No  Unknown  
 If **No** or **Unknown**, was water the common source shared by persons who were ill?  Yes  No  Unknown

Exposure in epidemiologic investigation <i>(e.g., pool, waterpark, hot spring, well water)</i>	Total # Exposed (A)	# Ill Exposed (B)	Total # Not Exposed	# Ill Not Exposed	Attack Rate (%) (B/A)	Odds Ratio	Relative Risk	p-Value <i>(provide exact value)</i>	95% Confidence Interval

Attack rate for residents of reporting state: \_\_\_\_\_%      Attack rate for non-residents of reporting state: \_\_\_\_\_%

- No additional questions have been added
- The Epidemiologic Data section has been moved higher up on Page 3. It now follows the Type of Water Exposure section.
  - The word 'only' has been removed from question 2 for clarity.
  - The first column in the table has been renamed from 'Exposure' to 'Exposure in epidemiologic investigation'

Geographic location, Symptoms

**Geographic Location**

Percent of **primary cases** living in reporting state : \_\_\_\_\_%

**Geographic Location**

Percent of **ill persons (primary cases)** living in reporting state: \_\_\_\_\_%

- No additional questions have been added
- Geographic Location – This section has been moved down on page 3 and is now positioned below the Epidemiologic Data section
  - Geographic location – The question has been reworded from 'Percent of primary cases living in reporting state' to 'Percent of ill persons (primary cases) living in reporting state' for clarity

<b>Symptoms</b>	<b>Symptoms/Conditions</b>
<p>For each category, indicate # of persons with:</p> <p>Gastrointestinal symptoms/ conditions _____</p> <p>Respiratory symptoms/ conditions _____</p> <p>Skin symptoms/conditions _____</p> <p>Ear symptoms/conditions _____</p> <p>Eye symptoms/conditions _____</p> <p>Neurologic symptoms/ conditions _____</p> <p>Wound infections _____</p> <p>Other, specify (e.g., hepatitis A, leptospirosis): _____</p>	<p>For each category, indicate the # of ill persons (primary cases) with:</p> <p>Gastrointestinal symptoms/ conditions _____</p> <p>Respiratory symptoms/ conditions _____</p> <p>Skin symptoms/conditions _____</p> <p>Ear symptoms/conditions _____</p> <p>Eye symptoms/conditions _____</p> <p>Neurologic symptoms/ conditions _____</p> <p>Wound infections _____</p> <p>Other, specify (e.g., hepatitis A, leptospirosis): _____</p>

- Symptoms - This section has been moved down on page 3 and is now positioned below the Epidemiologic Data section
- Symptoms - The header has been changed from 'Symptoms' to 'Symptoms/Conditions'
- Symptoms - The question has been revised for clarity. It was originally worded 'For each category, indicate # of persons with:' It now asks 'For each category, indicate the # of ill persons (primary cases) with:'

No additional questions have been added

- The tab at the top of the page has been changed from 'Water-General' to 'Water- Etiology & Lab' to better describe the type of information being requested. The page has been reorganized to place high-priority questions about the outbreak etiology first, followed by questions about outbreak isolates, clinical specimens, and a new section call test type. The changes are detailed below.

Clinical Specimens - Laboratory Results

**Clinical Specimens - Laboratory Results** *(refer to the laboratory findings from the outbreak investigation)*

1. Were clinical diagnostic specimens taken from persons?  Yes  No *(go to next tab)*  Unknown *(go to next tab)*  
 If Yes, from how many persons were specimens taken? \_\_\_\_\_

Specimen Type*	Specimen Subtype**	Tested for † (list all that apply)

\* Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomit, 16-Wound Swab, 17-Unknown  
 \*\* Specimen Subtype: 1-Bladder, 2-Brain, 3-Dura, 4-Hair, 5-Intestine, 6-Kidney, 7-Liver, 8-Lung, 9-Nails, 10-Skin, 11-Stomach, 12-Wound, 13-Other, 14-Unknown  
 † Tested for: 1-Bacteria, 2-Chemicals/Toxins, 3-Fungi, 4-Parasites, 5-Viruses

**Clinical Specimens**

1. Were clinical diagnostic specimens taken from persons?  Yes  No  Unknown  
 If Yes, from how many persons were specimens taken? \_\_\_\_\_

Specimen Type†	Specimen Subtype‡	Tested for* (list all that apply)

† Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify subtype), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomit, 16-Wound Swab, 17-Other (describe in the general remarks), 18-Unknown  
 ‡ Specimen Subtype: 1-Bladder, 2-Brain, 3-Dura, 4-Hair, 5-Intestine, 6-Kidney, 7-Liver, 8-Lung, 9-Nails, 10-Skin, 11-Stomach, 12-Wound, 13-Other, 14-Unknown  
 \* Tested for: 1-Bacteria, 2-Chemicals/Toxins, 3-Fungi, 4-Parasites, 5-Viruses, 6-Other (describe in general remarks), 7-Unknown

No additional questions have been added

- The header 'Clinical Specimens - Laboratory Results' has been shortened, as a reference to laboratory results is now part of the new tab name.
- The Clinical specimens has been moved down and is now table three on page 4.
- Four additional rows have been added to the table to accommodate information and to fill out white space on the page.
- The footnote symbols have been updated.
- The footnote for the 'Specimen Type' field has been updated to add a new value for specimen types that might not match the provided list. '17- Other (describe in the general remarks)' has been added and '17-Unknown' has been changed to '18- Unknown'
- The footnote for the 'Tested for' field has been updated to add two additional values. '6- Other (describe in general remarks)' and '7- Unknown' have been added.



<p>Isolates</p>	<table border="1"> <thead> <tr> <th colspan="4">Isolates</th> </tr> <tr> <th>Which system contains this isolate profile? (e.g., PulseNet, State Lab)</th> <th>Lab Isolate ID</th> <th>Specimen Profile</th> <th>Lab Method Used (e.g., PFGE, MLVA, GP60, PCR)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Isolates				Which system contains this isolate profile? (e.g., PulseNet, State Lab)	Lab Isolate ID	Specimen Profile	Lab Method Used (e.g., PFGE, MLVA, GP60, PCR)													<table border="1"> <thead> <tr> <th colspan="5">Outbreak Isolates (Links data about molecular characterization across multiple systems. For each pathogen, provide a representative for each distinct molecular designation)</th> </tr> <tr> <th>Which CDC system contains this isolate profile? (e.g., PulseNet, CalcitNet)</th> <th>CDC Lab System Outbreak Number (e.g., PulseNet tracking number)</th> <th>State Lab ID (i.e., Lab tracking number)</th> <th>Molecular Designation 1</th> <th>Molecular Designation 2</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Outbreak Isolates (Links data about molecular characterization across multiple systems. For each pathogen, provide a representative for each distinct molecular designation)					Which CDC system contains this isolate profile? (e.g., PulseNet, CalcitNet)	CDC Lab System Outbreak Number (e.g., PulseNet tracking number)	State Lab ID (i.e., Lab tracking number)	Molecular Designation 1	Molecular Designation 2																				
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<ul style="list-style-type: none"> <li>The Isolates table has been renamed 'Outbreak Isolates' and corresponding guidance has been added for clarity, based on feedback from public health professionals who use the form.</li> <li>The Outbreak Isolates table has been moved to the middle of page 4, but remains directly after the Outbreak Etiology table.</li> <li>The column, 'Which system contains this isolate profile?' has been reworded to 'Which CDC system contains this isolate profile?' in order to focus on linking data in NORS with CDC laboratory data systems.</li> <li>To support linking of laboratory systems at both CDC and state levels, 'Lab Isolate ID' has been replaced by two distinct questions: 'CDC Lab System Outbreak Number' (a new field) and 'State Lab ID'</li> <li>'Specimen profile' has been renamed 'Molecular Designation 1' for clarity.</li> <li>'Lab Method Used' has been inconsistently filled out and has been used by some people as a field to enter a second molecular designation. This question has been replaced with a field for a second molecular designation, called 'Molecular Designation 2'</li> <li>Two additional rows have been added to this table to provide more fields for reporting molecular data.</li> </ul>																																																				
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<p>A section called Test Types has been added to the bottom of page 4.</p> <ul style="list-style-type: none"> <li>This section has replaced a column in the Outbreak Etiology table. It simplifies how test type information is reported. Previously, it was necessary to enter multiple rows of data in the etiology table and to select one test type for each row. Now multiple test types can be reported more easily by marking the appropriate checkboxes within this section.</li> <li>The Test Type options have not changed. The options were formerly listed in a footnote for the Outbreak Etiology table. The list has been used to create the new set of checkboxes.</li> </ul>																																																				

Laboratory Section

**Laboratory Section - Recreational Water Samples from Treated Venues**

Was water from treated recreational water venues tested?  Yes (specify in table below)  No  Unknown

Results Sample	1	2	3	4	5
Source of Sample <i>(e.g., swimming pool, hot tub)</i>					
Additional Description <i>(e.g., time of day, backwash sample, etc.)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
Combined Disinfectant Level <i>(if total and free disinfectant levels given, total - free = combined)</i>	Number				
	Unit				
pH					

**Laboratory Section - Recreational Water Samples from Untreated Venues**

Was water from untreated recreational water venues tested?  Yes (specify in table below)  No  Unknown

Results Sample	1	2	3	4	5
Source of Sample <i>(e.g., lake or stream)</i>					
Additional Description <i>(e.g., specific location, time of day, etc.)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				

**Laboratory Section - Drinking Water**

Was drinking water tested?  Yes (specify in table below)  No  Unknown

Results Sample	1	2	3	4	5
Source of Sample					
Additional Description <i>(e.g., kitchen faucet, well, reservoir)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
pH					
Turbidity (NTU)					

**Laboratory Section - Water Not Intended for Drinking of Water of Unknown Intent**

Was the implicated water tested?  Yes (specify in table below)  No  Unknown

Results Sample	1	2	3	4	5
Source of Sample					
Additional Description <i>(e.g., time of day, specific location, etc.)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
Turbidity (NTU)					
pH					

**Water Samples**

**Water Samples** (Provide representative data about water quality testing, chemical or pathogen testing. Additional sample data can be described in the remarks or attached)

Was water tested?  Yes (specify in table below)  No  Unknown

Results Sample Number	1	2	3	4	5
Source of Sample <i>(e.g., swimming pool, lake)</i>					
Additional Description <i>(e.g., time of day, location of sample collection)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
Combined Disinfectant Level <i>(if total and free disinfectant levels given, total - free = combined)</i>	Number				
	Unit				
pH					
Turbidity (NTU)					



No additional questions have been added

- Previously, there were four different sections about water sampling in the form. One section would be filled in per report, depending on the type of water exposure selected at the top of page 3 (i.e., Recreational water – treated, Recreational water – untreated, Drinking Water, and Water Not Intended for Drinking or Unknown). Each water sample section collected the same type of information. As a result, the sections were very similar. The four sections have been removed and consolidated into one section and page. The consolidated section and page have been labeled as a new tab called Water Samples. The Water Samples page, which can be used for any outbreak report, has been placed on page 5 so that it precedes sections of the form that are specific to the type of water exposure categories.

The four water sample tables (below, at left) have been combined into one (below, at right):

- The multiple choice question that preceded every water sample table has been reworded to be more general, so that it asks about any water testing, rather than water testing for specific types of water exposures. This better reflects the original intent of the question and makes the question generalizable across all types of waterborne disease outbreaks.
- The header has been changed from ‘Laboratory Section’ to ‘Water Samples.’ Additional guidance has been provided after the header.
- The consolidated water sample table has been placed at the top of page 5.
- All of the fields from the original tables on pages 5, 7, 9, and 13 have been consolidated into one table. The final table contains some fields that may not apply to all reports but provides more flexibility for reporting water samples if multiple types of water samples are collected during an outbreak investigation.
- The final table contains all variables listed in the four source tables: ‘Sample (number)’, ‘Source of Sample’, ‘Additional Description’, ‘Date’, ‘Volume Tested w/Number and Unit’, ‘Temperature w/Number and Unit’, ‘Residual/Free Disinfectant level w/Number and Unit’, ‘pH’, and ‘Turbidity’.

Water Quality Indicator

Water Quality Indicator			
Sample Number	Type (e.g., fecal coliforms)	Concentration (numerical value)	Unit

Water Samples - Water Quality Indicators (Might not be applicable for treated recreational water samples)			
Sample Number	Type (e.g., fecal coliforms)	Concentration (numerical value)	Unit

The three water quality indicator tables have been combined into one (below, at right). The left side of table shows an example of the original tables, because all three tables are the same:

- The header has been changed from ‘Water Quality Indicator’ to ‘Water Samples – Water Quality Indicator’ with corresponding guidance. This table was previously not available for treated recreational water outbreaks. The guidance explains that these questions may not apply for those outbreaks but does not prevent the use of this table.
- All of the fields from the original tables on pages 7, 10, and 13 have been consolidated into one table.
- Two additional rows have been added to allow for the submission of more water quality data.

Microbiology or Chemical/Toxin Analysis

Microbiology or Chemical/Toxin Analysis <i>(refer to the laboratory findings from the outbreak investigation)</i>					
Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern
Sample Number	Test Results Positive?	Concentration (numerical value)	Unit	Test Type*	Test Method (reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a> )
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

Water Samples - Microbiology or Chemical/Toxin Analysis <i>(Provide both positive and negative test results)</i>					
Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern
Sample Number	Test Results Positive?	Concentration (numerical value)	Unit	Test Type*	Test Method (reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a> )
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay, 8-Other (describe in the general remarks), 9-Unknown

The four microbiology or chemical/toxin analysis tables have been combined into one (below, at right). The left side of table shows an example of the original tables, because all four tables are the same:

- The header has been changed from 'Microbiology or Chemical/Toxin Analysis' to 'Water Samples - Microbiology or Chemical/Toxin Analysis' with corresponding guidance.
- The guidance following the header has been revised in response to questions and data received from form users.
- All of the fields from the original tables on pages 7, 10, and 14 have been consolidated into one table.
- Four additional rows have been added to allow for the submission of additional water testing results.

**Recreational Water – Treated Venue, Recreational Water Vehicle Description**

Recreational Water – Treated Venue Recreational Water Vehicle Description			
Water Vehicle Number	Water Type <i>(e.g., spa/whirlpool/hot tub; pool- swimming pool; pool- waterpark)</i>	Water Subtype <i>(select indoor, outdoor, or unknown)</i>	Setting of Exposure <i>(e.g., club, requiring membership; hotel/motel/lodge/inn; waterpark)</i>
1			
2			
3			
Water Vehicle Number <i>(reference the appropriate Water Vehicle Number)</i>	USUAL Water Treatment Provided at Venue <i>(e.g., no treatment; coagulation; disinfection; flocculation; filtration (pool); unknown)</i>	Venue Treatment Subtype <i>(disinfection or pool filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>	Chlorination Subtype <i>(chlorine disinfection only- e.g., gaseous; sodium hypochlorite; cyanurates (stabilized chlorine))</i>
Water Vehicle Number <i>(reference the appropriate Water Vehicle Number)</i>	Fill Water Type <i>(e.g., public water supply; sea water; untreated ground or surface water; unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, USUAL Water Treatment Provided for Fill Water Before Coming to the Venue <i>(e.g., no treatment; disinfection; filtration (treatment plant); unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, Fill Water Treatment Subtype <i>(disinfection or filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>

Recreational Water – Treated Venue Implicated Water - Recreational Water Venue Description			
Venue Number <i>(use this number to link the venue with water treatment or fill water data below)</i>	Water Venue <i>(e.g., spa/whirlpool/hot tub; pool- swimming pool; pool- waterpark)</i>	Water Venue Subtype <i>(select indoor, outdoor, or unknown)</i>	Setting of Exposure <i>(e.g., club, requiring membership; hotel/motel/lodge/inn; waterpark)</i>
1			
2			
3			
4			
5			
6			
Venue Number <i>(Reference the appropriate Venue Number from above)</i>	USUAL Water Treatment Provided at Venue <i>(e.g., no treatment; coagulation; disinfection; flocculation; filtration (pool); unknown)</i>	Venue Treatment Subtype <i>(disinfection or pool filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>	Chlorination Subtype <i>(chlorine disinfection only: e.g., gaseous; sodium hypochlorite; cyanurates (stabilized chlorine))</i>
Venue Number <i>(Reference the appropriate Venue Number from above)</i>	Fill Water Type <i>(e.g., public water supply; sea water; untreated ground or surface water; unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, USUAL Water Treatment Provided for Fill Water Before Coming to the Venue <i>(e.g., no treatment; disinfection; filtration (treatment plant); unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, Fill Water Treatment Subtype <i>(disinfection or filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>

No additional questions have been added

- The sub-header description has been changed from ‘Recreational Water Vehicle Description’ to ‘Implicated Water – Recreational Water Venue Description’
- All ‘Water Vehicle Number’ column names have been changed to ‘Venue Number’
- References to ‘Water Type’ and ‘Water Subtype’ in the first table have been changed to ‘Water Venue’ and ‘Water Venue Subtype’, respectively.
- Three additional rows have been added to the first table to allow for the submission of more data.

Five additional rows have been added to both the second and third tables to allow for the submission of more data. More rows were added to these two tables because for a single row in the first table, multiple rows of data may be filled out in second and third tables.

**Recreational Water Quality**

**Recreational Water Quality**

Did the venue meet state or local recreational water quality regulations?  Yes  No  Unknown  Not applicable

If No, explain: \_\_\_\_\_

Was there a pool operator on the payroll with state-approved training or certification?  Yes  No  Unknown

**Recreational Water Quality**

Did the venue meet state or local recreational water quality regulations?  Yes  No  Unknown  Not applicable

If No, explain: \_\_\_\_\_

Was there a pool operator on the payroll with state-approved training or certification?  Yes  No  Unknown

- No additional questions have been added. The question beginning with ‘If No, explain’ has been indented to clarify that it is only applicable if the

previous question has been answered 'No'.

- Additional lines have been added after this question to provide more space for an explanation.

Laboratory Section –  
Recreational Water Samples from Treated Venues

Laboratory Section - Recreational Water Samples from Treated Venues					
Was water from treated recreational water venues tested? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Results Sample	1	2	3	4	5
Source of Sample <i>(e.g., swimming pool, hot tub)</i>					
Additional Description <i>(e.g., time of day, backwash sample, etc.)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
Combined Disinfectant Level <i>(if total and free disinfectant levels given, total - free = combined)</i>	Number				
	Unit				
pH					

- This section has been deleted from page 5 and consolidated into a section called Water Samples (described previously).

Microbiology or Chemical/Toxin Analysis

Microbiology or Chemical/Toxin Analysis (refer to the laboratory findings from the outbreak investigation)					
Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern
Sample Number	Test Results Positive?	Concentration <i>(numerical value)</i>	Unit	Test Type*	Test Method (reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a> )
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

- This section has been deleted from page 6 and consolidated into a section called Water Samples (described previously).

Factor Contributing to Recreational Water Contamination and/or Increased Exposure in Treated Venues

Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Treated Venues		
Factors (check all that apply)**	Documented/ Observed***	Suspected***
<b>PEOPLE</b>		
Exceeded maximum bather load	<input type="checkbox"/>	<input type="checkbox"/>
Primary intended use of water is by diaper/toddler-aged children (e.g., kiddie pool)	<input type="checkbox"/>	<input type="checkbox"/>
Heavy use by child care center groups	<input type="checkbox"/>	<input type="checkbox"/>
Fecal/vomitus accident	<input type="checkbox"/>	<input type="checkbox"/>
Patrons continued to swim when ill with diarrhea	<input type="checkbox"/>	<input type="checkbox"/>
Operator error	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
<b>FACILITY DESIGN</b>		
Combined pool filtration/recirculation systems led to cross-contamination	<input type="checkbox"/>	<input type="checkbox"/>
Hygiene facilities (e.g., toilets, diaper changing facilities) inadequate or distant	<input type="checkbox"/>	<input type="checkbox"/>
Some spray feature water bypasses filtration/treatment system and returns to feature unfiltered/untreated	<input type="checkbox"/>	<input type="checkbox"/>
No supplemental disinfection installed that would have inactivated pathogen (e.g., <i>Cryptosporidium</i> )	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature >30°C (>86°F)	<input type="checkbox"/>	<input type="checkbox"/>
Cross-connection with wastewater or non-potable water	<input type="checkbox"/>	<input type="checkbox"/>
Disinfectant control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
Incorrect settings on disinfectant control system	<input type="checkbox"/>	<input type="checkbox"/>
pH control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
Incorrect settings on pH control system	<input type="checkbox"/>	<input type="checkbox"/>
Filtration system malfunctioning or inadequate (e.g., low flow rate)	<input type="checkbox"/>	<input type="checkbox"/>
Supplemental disinfection system malfunctioning or inadequate (e.g., ultraviolet light, ozone)	<input type="checkbox"/>	<input type="checkbox"/>
<b>MAINTENANCE</b>		
Insufficient system checks so breakdown detection delayed	<input type="checkbox"/>	<input type="checkbox"/>
No preventive equipment maintenance programs to reduce breakdowns	<input type="checkbox"/>	<input type="checkbox"/>
Ventilation insufficient for indoor aquatic facilities	<input type="checkbox"/>	<input type="checkbox"/>
Chemical handling error (e.g., chemical hookup, improper mixing or application)	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance chemicals not flushed from system before opening to swimmers	<input type="checkbox"/>	<input type="checkbox"/>
Recirculation pump off or restarted with swimmers in water	<input type="checkbox"/>	<input type="checkbox"/>
Low or zero water flow combined with continuous feed of chemicals resulted in excess chemicals in water	<input type="checkbox"/>	<input type="checkbox"/>
Extensive slime/biofilm formation	<input type="checkbox"/>	<input type="checkbox"/>
Recent construction	<input type="checkbox"/>	<input type="checkbox"/>
Cyanurate level excessive	<input type="checkbox"/>	<input type="checkbox"/>
Lack of draining/cleaning	<input type="checkbox"/>	<input type="checkbox"/>
Stagnant water in spa piping was aerosolized	<input type="checkbox"/>	<input type="checkbox"/>
No aquatic operators on payroll who have completed state/local training	<input type="checkbox"/>	<input type="checkbox"/>
Untrained/inadequately trained staff on duty	<input type="checkbox"/>	<input type="checkbox"/>
Remote monitoring system replaces on-site water quality testing	<input type="checkbox"/>	<input type="checkbox"/>
Unclear communication chain for reporting problems	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate water quality monitoring (e.g., inadequate test kit, inadequate testing frequency)	<input type="checkbox"/>	<input type="checkbox"/>
Employee illness policies absent or not enforced	<input type="checkbox"/>	<input type="checkbox"/>
No or inadequate policies on good chemical handling and storage practices	<input type="checkbox"/>	<input type="checkbox"/>
No operator on duty at the time of incident	<input type="checkbox"/>	<input type="checkbox"/>
Facility fails outside aquatic health code	<input type="checkbox"/>	<input type="checkbox"/>
No shock/hyperchlorination policy	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>
** Only check off what was found during investigation.		
*** The release of sewage does not have to occur at the property/venue/setting where the people were exposed. The sewage may have occurred at a distant site but still affected the property/venue/setting in question.		

Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Treated Venues		
Contributing Factors (Check all that apply)*	Documented/ Observed†	Suspected†
<b>PEOPLE</b>		
Exceeded maximum bather load	<input type="checkbox"/>	<input type="checkbox"/>
Primary intended use of water is by diaper/toddler-aged children (e.g., kiddie pool)	<input type="checkbox"/>	<input type="checkbox"/>
Heavy use by child care center groups	<input type="checkbox"/>	<input type="checkbox"/>
Fecal/vomitus accident	<input type="checkbox"/>	<input type="checkbox"/>
Patrons continued to swim when ill with diarrhea	<input type="checkbox"/>	<input type="checkbox"/>
Operator error	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
<b>FACILITY DESIGN</b>		
Combined pool filtration/recirculation systems led to cross-contamination	<input type="checkbox"/>	<input type="checkbox"/>
Hygiene facilities (e.g., toilets, diaper changing facilities) inadequate or distant	<input type="checkbox"/>	<input type="checkbox"/>
Some spray feature water bypasses filtration/treatment system and returns to feature unfiltered/untreated	<input type="checkbox"/>	<input type="checkbox"/>
No supplemental disinfection installed that would have inactivated pathogen (e.g., <i>Cryptosporidium</i> )	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature >30°C (>86°F)	<input type="checkbox"/>	<input type="checkbox"/>
Cross-connection with wastewater or non-potable water	<input type="checkbox"/>	<input type="checkbox"/>
Disinfectant control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
Incorrect settings on disinfectant control system	<input type="checkbox"/>	<input type="checkbox"/>
pH control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
Incorrect settings on pH control system	<input type="checkbox"/>	<input type="checkbox"/>
Filtration system malfunctioning or inadequate (e.g., low flow rate)	<input type="checkbox"/>	<input type="checkbox"/>
Supplemental disinfection system malfunctioning or inadequate (e.g., ultraviolet light, ozone)	<input type="checkbox"/>	<input type="checkbox"/>
<b>MAINTENANCE</b>		
Insufficient system checks so breakdown detection delayed	<input type="checkbox"/>	<input type="checkbox"/>
No preventive equipment maintenance programs to reduce breakdowns	<input type="checkbox"/>	<input type="checkbox"/>
Ventilation insufficient for indoor aquatic facilities	<input type="checkbox"/>	<input type="checkbox"/>
Chemical handling error (e.g., chemical hookup, improper mixing or application)	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance chemicals not flushed from system before opening to swimmers	<input type="checkbox"/>	<input type="checkbox"/>
Recirculation pump off or restarted with swimmers in water	<input type="checkbox"/>	<input type="checkbox"/>
Low or zero water flow combined with continuous feed of chemicals resulted in excess chemicals in water	<input type="checkbox"/>	<input type="checkbox"/>
Extensive slime/biofilm formation	<input type="checkbox"/>	<input type="checkbox"/>
Recent construction	<input type="checkbox"/>	<input type="checkbox"/>
Cyanurate level excessive	<input type="checkbox"/>	<input type="checkbox"/>
Lack of draining/cleaning	<input type="checkbox"/>	<input type="checkbox"/>
Stagnant water in spa piping was aerosolized	<input type="checkbox"/>	<input type="checkbox"/>
No aquatic operators on payroll who have completed state/local training	<input type="checkbox"/>	<input type="checkbox"/>
Untrained/inadequately trained staff on duty	<input type="checkbox"/>	<input type="checkbox"/>
Remote monitoring system replaces on-site water quality testing	<input type="checkbox"/>	<input type="checkbox"/>
Unclear communication chain for reporting problems	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate water quality monitoring (e.g., inadequate test kit, inadequate testing frequency)	<input type="checkbox"/>	<input type="checkbox"/>
Employee illness policies absent or not enforced	<input type="checkbox"/>	<input type="checkbox"/>
No or inadequate policies on good chemical handling and storage practices	<input type="checkbox"/>	<input type="checkbox"/>
No operator on duty at the time of incident	<input type="checkbox"/>	<input type="checkbox"/>
Facility fails outside aquatic health code	<input type="checkbox"/>	<input type="checkbox"/>
No shock/hyperchlorination policy	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>
* Only check off what was found during investigation.		
† Documented/Observed refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.		

No additional questions have been added

- The sub-header text has been changed 'Factors' to 'Contributing Factors'
- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.
- A correction has been made to the second footnote, which should have provided guidance on reporting suspected contributing factors but instead provided guidance from another section about contributing factors related to sewage releases.

Remarks

Remarks

Remarks

No additional questions have been added

- The remarks section has been expanded to make use of the remaining space at the end of the page.

<b>Recreational Water – Untreated Venue.</b> Recreational Water Vehicle Description	<table border="1"> <thead> <tr> <th colspan="3">Recreational Water – Untreated Venue</th> </tr> <tr> <th colspan="3">Recreational Water Vehicle Description</th> </tr> <tr> <th>Water Type <i>(e.g., canal; lake; river/stream; ocean)</i></th> <th>IF SPRING OR HOT SPRING, Water Subtype <i>(select indoor, outdoor or unknown)</i></th> <th>Setting of Exposure <i>(e.g., beach-public; camp/cabin/recreational area)</i></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Recreational Water – Untreated Venue			Recreational Water Vehicle Description			Water Type <i>(e.g., canal; lake; river/stream; ocean)</i>	IF SPRING OR HOT SPRING, Water Subtype <i>(select indoor, outdoor or unknown)</i>	Setting of Exposure <i>(e.g., beach-public; camp/cabin/recreational area)</i>										<table border="1"> <thead> <tr> <th colspan="3">Recreational Water – Untreated Venue</th> </tr> <tr> <th colspan="3">Implicated Water - Recreational Water Venue Description</th> </tr> <tr> <th>Water Venue <i>(e.g., canal; lake; river/stream; ocean)</i></th> <th>IF SPRING OR HOT SPRING, Water Venue Sub-type <i>(select indoor, outdoor or unknown)</i></th> <th>Setting of Exposure <i>(e.g., beach-public; camp/cabin/recreational area)</i></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Recreational Water – Untreated Venue			Implicated Water - Recreational Water Venue Description			Water Venue <i>(e.g., canal; lake; river/stream; ocean)</i>	IF SPRING OR HOT SPRING, Water Venue Sub-type <i>(select indoor, outdoor or unknown)</i>	Setting of Exposure <i>(e.g., beach-public; camp/cabin/recreational area)</i>																																					
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Recreational Water Quality	<table border="1"> <thead> <tr> <th colspan="2">Recreational Water Quality</th> </tr> </thead> <tbody> <tr> <td>Did the venue meet state or local recreational water quality regulations?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable</td> </tr> <tr> <td>If No, explain: _____</td> <td>_____</td> </tr> <tr> <td>Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable</td> </tr> <tr> <td>If No, explain: _____</td> <td>_____</td> </tr> </tbody> </table>	Recreational Water Quality		Did the venue meet state or local recreational water quality regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable	If No, explain: _____	_____	Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable	If No, explain: _____	_____	<table border="1"> <thead> <tr> <th colspan="2">Recreational Water Quality</th> </tr> </thead> <tbody> <tr> <td>Did the venue meet state or local recreational water quality regulations?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable</td> </tr> <tr> <td>If No, explain: _____</td> <td>_____</td> </tr> <tr> <td>Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable</td> </tr> <tr> <td>If No, explain: _____</td> <td>_____</td> </tr> </tbody> </table>	Recreational Water Quality		Did the venue meet state or local recreational water quality regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable	If No, explain: _____	_____	Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable	If No, explain: _____	_____																																												
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Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable																																																																	
If No, explain: _____	_____																																																																	
No additional questions have been added <ul style="list-style-type: none"> <li>The questions have been reformatted to appear side by side.</li> </ul>																																																																		
Laboratory Section – Recreational Water Samples from Untreated Venues	<table border="1"> <thead> <tr> <th colspan="6">Laboratory Section - Recreational Water Samples from Untreated Venues</th> </tr> <tr> <td colspan="6">Was water from untreated recreational water venues tested? <input type="checkbox"/> Yes <i>(specify in table below)</i> <input type="checkbox"/> No <input type="checkbox"/> Unknown</td> </tr> <tr> <th>Results</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>Sample</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Source of Sample <i>(e.g., lake or stream)</i></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Additional Description <i>(e.g., specific location, time of day, etc)</i></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Date <i>(mm/dd/yyyy)</i></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td rowspan="2">Volume Tested</td> <td>Number</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Unit</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td rowspan="2">Temperature</td> <td>Number</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Unit</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Laboratory Section - Recreational Water Samples from Untreated Venues						Was water from untreated recreational water venues tested? <input type="checkbox"/> Yes <i>(specify in table below)</i> <input type="checkbox"/> No <input type="checkbox"/> Unknown						Results	1	2	3	4	5	Sample						Source of Sample <i>(e.g., lake or stream)</i>						Additional Description <i>(e.g., specific location, time of day, etc)</i>						Date <i>(mm/dd/yyyy)</i>						Volume Tested	Number					Unit					Temperature	Number					Unit					
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Remarks	<b>Remarks</b>	<b>Remarks</b>
<p>No additional questions have been added</p> <ul style="list-style-type: none"><li>• The space for the remarks section has been reduced to fit within the remaining space on the page.</li></ul>		



**Drinking Water Vehicle Description**

Drinking Water Vehicle Description						
Water Type* <i>(e.g., commercially-bottled water, community water system, individual water system)</i>	Public Water System EPA ID Number**	Water Source <i>(select ground water, surface water or unknown)</i>	Water Source Description <i>(e.g., spring; well; lake)</i>	Setting of Exposure <i>(e.g., airport, mobile home park)</i>	USUAL Water Treatment Provided <i>(e.g., no treatment, disinfection, home filtration)</i>	Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i>

\*Water system definitions: Community and noncommunity water systems are public water systems that have ≥ 15 service connections or serve an average of ≥ 25 residents for ≥ 60 days/year. A community water system serves year-round residents of a community, subdivision, or mobile home park. A noncommunity water system serves an institution, industry, camp, park, hotel, or business and can be nontransient or transient. Nontransient systems serve ≥ 25 of the same persons for ≥ 6 months of the year but not year-round (e.g., factories and schools), whereas transient systems provide water to places in which persons do not remain for long periods (e.g., restaurants, highway rest stations, and parks). Individual water systems are small systems not owned or operated by a water utility that have < 15 connections or serve < 25 persons.

\*\* Number used for EPA reporting that uniquely identifies the water system within a specific state. The water system ID number can be found at <http://www.epa.gov/safewater/dwinfo/index.html> by first selecting a state and then selecting a county.

Drinking Water Implicated Water - Drinking Water System Description						
Water System* <i>(e.g., commercially-bottled water, community water system, individual water system)</i>	Public Water System EPA ID Number <sup>1</sup>	Water Source <i>(select ground water, surface water or unknown)</i>	Water Source Description <i>(e.g., spring; well; lake)</i>	Setting of Exposure <i>(e.g., airport, mobile home park)</i>	USUAL Water Treatment Provided <i>(e.g., no treatment, disinfection, home filtration)</i>	Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i>

\*Water system definitions: Community and noncommunity water systems are public water systems that have ≥ 15 service connections or serve an average of ≥ 25 residents for ≥ 60 days/year. A community water system serves year-round residents of a community, subdivision, or mobile home park. A noncommunity water system serves an institution, industry, camp, park, hotel, or business and can be nontransient or transient. Nontransient systems serve ≥ 25 of the same persons for ≥ 6 months of the year but not year-round (e.g., factories and schools), whereas transient systems provide water to places in which persons do not remain for long periods (e.g., restaurants, highway rest stations, and parks). Individual water systems are small systems not owned or operated by a water utility that have < 15 connections or serve < 25 persons.

<sup>1</sup> Number used for EPA reporting that uniquely identifies the water system within a specific state. The water system ID number can be found at <http://www.epa.gov/safewater/dwinfo/index.html> by first selecting a state and then selecting a county.

No additional questions have been added

- The header has been changed from Drinking Water Vehicle Description to Drinking Water.
- The sub-header description has been changed from 'Drinking Water Vehicle Description' to 'Implicated Water - Drinking Water System Description'
- The reference to 'Water Type' in the first column has been changed to 'Water System'
- Two additional rows have been added to allow for the submission of more water system data.
- A footnote symbol has been updated as part of an effort to make the footnotes more consistent throughout the form.

**Drinking Water Quality**

**Drinking Water Quality**

Did the drinking water system have any monitoring violations in the 1 month prior to the outbreak?  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

Did the drinking water system have any maximum contaminant level (MCL) violations in the 1 month prior to the outbreak?  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

Did the drinking water system have any violations in the 12 months prior to the outbreak?\*\*\*  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

\*\*\*Sources of information about past violations can be obtained from utility records, consumer confidence reports (water quality reports), or violation records from state or local health departments

**Drinking Water Quality**

Did the drinking water system have any monitoring violations in the 1 month prior to the outbreak?  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Did the drinking water system have any maximum contaminant level (MCL) violations in the 1 month prior to the outbreak?  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Did the drinking water system have any violations in the 12 months prior to the outbreak?\*\*\*  
 Yes  No  Unknown  Not applicable

If Yes, explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*\*\*Sources of information about past violations can be obtained from utility records, consumer confidence reports (water quality reports), or violation records from state or local health departments

No additional questions have been added

- Additional lines have been added following all three questions that begin with 'If Yes, explain' in order to provide more space for the explanations.
- A footnote symbol has been updated as part of an effort to make the footnote symbols more consistent throughout the form.

Laboratory Section – Drinking Water

Laboratory Section - Drinking Water					
Was drinking water tested? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Results Sample	1	2	3	4	5
Source of Sample					
Additional Description <i>(e.g., kitchen faucet, well, reservoir)</i>					
Date <i>(mm/dd/yyyy)</i>					
Volume Tested	Number				
	Unit				
Temperature	Number				
	Unit				
Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number				
	Unit				
pH					
Turbidity (NTU)					

- This section has been deleted from page 9 and consolidated into a section called Water Samples (described previously).

Water Quality Indicator

Water Quality Indicator			
Sample Number	Type <i>(e.g., fecal coliforms)</i>	Concentration <i>(numerical value)</i>	Unit

- This section has been deleted from page 10 and consolidated into a section called Water Samples (described previously).

Microbiology or Chemical/Toxin Analysis

Microbiology or Chemical/Toxin Analysis <i>(refer to the laboratory findings from the outbreak investigation)</i>					
Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern
Sample Number	Test Results Positive?	Concentration <i>(numerical value)</i>	Unit	Test Type*	Test Method <i>(reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a>)</i>
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				
	<input type="checkbox"/> Yes				

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

- This section has been deleted from page 10 and consolidated into a section called Water Samples (described previously).

Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water Source Water Factors

Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water		
Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Source Water Factors (check all that apply)**	Documented/ Observed***	Suspected***
Sanitary sewer overflow (SSO) ****	<input type="checkbox"/>	<input type="checkbox"/>
Combined sewer overflow (CSO) ****	<input type="checkbox"/>	<input type="checkbox"/>
Malfunctioning on-site wastewater treatment system **** ≠	<input type="checkbox"/>	<input type="checkbox"/>
Sewage treatment plant malfunction ****	<input type="checkbox"/>	<input type="checkbox"/>
Sewer line break **	<input type="checkbox"/>	<input type="checkbox"/>
Poor siting/design of on-site wastewater treatment system **** ≠	<input type="checkbox"/>	<input type="checkbox"/>
Nearby biosolid/land application site (e.g., human or animal waste application)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination from agricultural chemical application (e.g., fertilizer, pesticides)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination from chemical pollution not related to agricultural application	<input type="checkbox"/>	<input type="checkbox"/>
Contamination by a chemical that the current treatment methods were not designed to remove	<input type="checkbox"/>	<input type="checkbox"/>
Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets)	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Birds	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Mammals	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Fish kill	<input type="checkbox"/>	<input type="checkbox"/>
Flooding/heavy rains	<input type="checkbox"/>	<input type="checkbox"/>
Algal bloom	<input type="checkbox"/>	<input type="checkbox"/>
Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading)	<input type="checkbox"/>	<input type="checkbox"/>
Low water table (e.g., drought, over-pumping)	<input type="checkbox"/>	<input type="checkbox"/>
Ground water under direct influence of surface water (e.g., shallow well) ≠	<input type="checkbox"/>	<input type="checkbox"/>
Contamination through limestone or fissured rock (e.g., karst)	<input type="checkbox"/>	<input type="checkbox"/>
Contaminated recharge water	<input type="checkbox"/>	<input type="checkbox"/>
Use of an alternate source of water by a water utility	<input type="checkbox"/>	<input type="checkbox"/>
Mixing of raw water from different sources	<input type="checkbox"/>	<input type="checkbox"/>
Improper construction or location of a well or spring	<input type="checkbox"/>	<input type="checkbox"/>
Water system intake failure (e.g., cracked well casing, cracked intake pipe)	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

\*\* Only check off what was found during investigation.

\*\*\* "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

\*\*\*\* The release of sewage does not have to occur on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

≠ "On-site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on-site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place due to migration of contaminants from malfunctioning systems or poor siting and design.

≠ = Any water beneath the surface of the ground with substantial occurrence of insects or other macroorganisms, algae, or large-diameter pathogens (e.g., *Giardia intestinalis* or *Cryptosporidium*), or substantial and relatively rapid shifts in water characteristics (e.g., turbidity, temperature, conductivity, or pH) that closely correlate with climatologic or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the state.

No additional questions have been added

- The multiple choice question has been numbered '1' because it is the first of four questions. The sub-header text has been changed from 'Source Water Factors' to 'Source Water Contributing Factors'.
- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.
- This section now begins at the top of page 10 so any footnote text has been moved to the bottom of the page (see next section).

Treatment Factors

Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water		
Did a problem with the water treatment prior to entry into a house or building contribute to the disease or outbreak? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Treatment Factors (check all that apply)*	Documented/ Observed**	Suspected**
Change in treatment process (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
No disinfection	<input type="checkbox"/>	<input type="checkbox"/>
Temporary interruption of disinfection	<input type="checkbox"/>	<input type="checkbox"/>
Chronically inadequate disinfection	<input type="checkbox"/>	<input type="checkbox"/>
No filtration	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate filtration	<input type="checkbox"/>	<input type="checkbox"/>
Deficiencies in other treatment processes	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during construction or repair of pipes/components	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of pipes/components without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Operator error	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

\* Only check off what was found during investigation.

\*\* "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

≠ The release of sewage does not have to occur on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

≠ "On-site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on-site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place due to migration of contaminants from malfunctioning systems or poor siting and design.

\*\* Any water beneath the surface of the ground with substantial occurrence of insects or other macroorganisms, algae, or large-diameter pathogens (e.g., *Giardia intestinalis* or *Cryptosporidium*), or substantial and relatively rapid shifts in water characteristics (e.g., turbidity, temperature, conductivity, or pH) that closely correlate with climatologic or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the state.

No additional questions have been added

- The multiple choice question has been numbered '2' because it is the second of four questions.
- The sub-header text has been changed from 'Treatment Factors' to 'Treatment Contributing Factors'.

Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water		
1 Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Source Water Contributing Factors (Check all that apply)*	Documented/ Observed†	Suspected†
Sanitary sewer overflow (SSO) ‡	<input type="checkbox"/>	<input type="checkbox"/>
Combined sewer overflow (CSO) ‡	<input type="checkbox"/>	<input type="checkbox"/>
Malfunctioning on-site wastewater treatment system ‡ †	<input type="checkbox"/>	<input type="checkbox"/>
Sewage treatment plant malfunction ‡	<input type="checkbox"/>	<input type="checkbox"/>
Sewer line break ‡	<input type="checkbox"/>	<input type="checkbox"/>
Poor siting/design of on-site wastewater treatment system ‡ †	<input type="checkbox"/>	<input type="checkbox"/>
Nearby biosolid/land application site (e.g., human or animal waste application)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination from agricultural chemical application (e.g., fertilizer, pesticides)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination from chemical pollution not related to agricultural application	<input type="checkbox"/>	<input type="checkbox"/>
Contamination by a chemical that the current treatment methods were not designed to remove	<input type="checkbox"/>	<input type="checkbox"/>
Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets)	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Birds	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Mammals	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife contamination - Fish kill	<input type="checkbox"/>	<input type="checkbox"/>
Flooding/heavy rains	<input type="checkbox"/>	<input type="checkbox"/>
Algal bloom	<input type="checkbox"/>	<input type="checkbox"/>
Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading)	<input type="checkbox"/>	<input type="checkbox"/>
Low water table (e.g., drought, over-pumping)	<input type="checkbox"/>	<input type="checkbox"/>
Ground water under direct influence of surface water (e.g., shallow well)**	<input type="checkbox"/>	<input type="checkbox"/>
Contamination through limestone or fissured rock (e.g., karst)	<input type="checkbox"/>	<input type="checkbox"/>
Contaminated recharge water	<input type="checkbox"/>	<input type="checkbox"/>
Use of an alternate source of water by a water utility	<input type="checkbox"/>	<input type="checkbox"/>
Mixing of raw water from different sources	<input type="checkbox"/>	<input type="checkbox"/>
Improper construction or location of a well or spring	<input type="checkbox"/>	<input type="checkbox"/>
Water system intake failure (e.g., cracked well casing, cracked intake pipe)	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

† Only check off what was found during investigation.

† "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

‡ The release of sewage does not have to occur on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

† "On-site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on-site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place due to migration of contaminants from malfunctioning systems or poor siting and design.

\*\* Any water beneath the surface of the ground with substantial occurrence of insects or other macroorganisms, algae, or large-diameter pathogens (e.g., *Giardia intestinalis* or *Cryptosporidium*), or substantial and relatively rapid shifts in water characteristics (e.g., turbidity, temperature, conductivity, or pH) that closely correlate with climatologic or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the state.

Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water		
2 Did a problem with the water treatment prior to entry into a house or building contribute to the disease or outbreak? <input type="checkbox"/> Yes (specify in table below) <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Treatment Contributing Factors (Check all that apply)*	Documented/ Observed†	Suspected†
Change in treatment process (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
No disinfection	<input type="checkbox"/>	<input type="checkbox"/>
Temporary interruption of disinfection	<input type="checkbox"/>	<input type="checkbox"/>
Chronically inadequate disinfection	<input type="checkbox"/>	<input type="checkbox"/>
No filtration	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate filtration	<input type="checkbox"/>	<input type="checkbox"/>
Deficiencies in other treatment processes	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during construction or repair of pipes/components	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of pipes/components without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Operator error	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

\* Only check off what was found during investigation.

† "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

‡ The release of sewage does not have to occur on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

† "On-site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on-site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place due to migration of contaminants from malfunctioning systems or poor siting and design.

\*\* Any water beneath the surface of the ground with substantial occurrence of insects or other macroorganisms, algae, or large-diameter pathogens (e.g., *Giardia intestinalis* or *Cryptosporidium*), or substantial and relatively rapid shifts in water characteristics (e.g., turbidity, temperature, conductivity, or pH) that closely correlate with climatologic or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the state.

- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.
- This section has been moved from the top of page 11 to the bottom of page 10 and is followed by all of the footnote text for this page.

**Distribution and Storage Factors**

Did a problem with the distribution system contribute to the disease or outbreak?  Yes (specify in table below)  No  Unknown  
 (NOTE: For a community water system, the distribution system refers to the pipes and storage infrastructure under the jurisdiction of the water utility prior to the water meter (or property line if the system is not metered). For noncommunity and nonpublic water systems, the distribution system refers to the pipes and storage infrastructure prior to entry into a building or house)

Distribution and Storage Factors (check all that apply)*	Documented/ Observed**	Suspected**
Cross-connection of potable and nonpotable water pipes resulting in backflow	<input type="checkbox"/>	<input type="checkbox"/>
Low pressure or change in water pressure in the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Change in water flow direction in the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Mixing of treated water from different sources	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of mains during construction or repair	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of mains without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Scheduled flushing of the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of storage facility	<input type="checkbox"/>	<input type="checkbox"/>
Aging water distribution components (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature $\geq 30^{\circ}\text{C}$ ( $\geq 86^{\circ}\text{F}$ )	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

3. Did a problem with the distribution system contribute to the disease or outbreak?  Yes (specify in table below)  No  Unknown  
 (NOTE: For a community water system, the distribution system refers to the pipes and storage infrastructure under the jurisdiction of the water utility prior to the water meter (or property line if the system is not metered). For noncommunity and nonpublic water systems, the distribution system refers to the pipes and storage infrastructure prior to entry into a building or house)

Distribution and Storage Contributing Factors (Check all that apply)†	Documented/ Observed‡	Suspected‡
Cross-connection of potable and nonpotable water pipes resulting in backflow	<input type="checkbox"/>	<input type="checkbox"/>
Low pressure or change in water pressure in the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Change in water flow direction in the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Mixing of treated water from different sources	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of mains during construction or repair	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of mains without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Scheduled flushing of the distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of storage facility	<input type="checkbox"/>	<input type="checkbox"/>
Aging water distribution components (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature $\geq 30^{\circ}\text{C}$ ( $\geq 86^{\circ}\text{F}$ )	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

No additional questions have been added

- The multiple choice question has been numbered '3' because it is the third of four questions.
- The sub-header text has been changed from 'Distribution and Storage Factors' to 'Distribution and Storage Contributing Factors'
- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.

**Factors Not Under the Jurisdiction of a Water Utility or Factors at the Point of Use**

Did a problem occur after the water meter or outside the jurisdiction of a water utility that contributed to the disease or outbreak? (e.g., in a service line leading to a house/building, in the plumbing inside a house/building, during shipping/hauling, during storage other than in the distribution system, at the point of use, involving commercially-bottled water)  
 Yes (specify in table below)  No  Unknown

Factors Not Under the Jurisdiction of a Water Utility or Factors at the Point of Use (check all that apply)*	Documented/ Observed**	Suspected**
Legionella species in water system	<input type="checkbox"/>	<input type="checkbox"/>
Cross-connection of potable and nonpotable water pipes resulting in backflow	<input type="checkbox"/>	<input type="checkbox"/>
Lack of backflow prevention in plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Low pressure or change in water pressure in the plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Change in water flow direction in the plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Aging plumbing components (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of plumbing during construction or repair	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of plumbing without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Deficiency in building/home-specific water treatment after the water meter or property line	<input type="checkbox"/>	<input type="checkbox"/>
Deficiency or contamination of equipment/devices using or distributing water	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during commercial bottling	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during shipping, hauling, or storage	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Tap	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Hose	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Commercially-bottled water	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Container, bottle, or pitcher	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Unknown	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature $\geq 30^{\circ}\text{C}$ ( $\geq 86^{\circ}\text{F}$ )	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

\* Only check off what was found during investigation.  
 \*\* "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

4. Did a problem occur after the water meter or outside the jurisdiction of a water utility that contributed to the disease or outbreak? (e.g., in a service line leading to a house/building, in the plumbing inside a house/building, during shipping/hauling, during storage other than in the distribution system, at the point of use, involving commercially-bottled water)  
 Yes (specify in table below)  No  Unknown

Factors Not Under the Jurisdiction of a Water Utility or Contributing Factors at the Point of Use (Check all that apply)†	Documented/ Observed‡	Suspected‡
Legionella species in water system	<input type="checkbox"/>	<input type="checkbox"/>
Cross-connection of potable and nonpotable water pipes resulting in backflow	<input type="checkbox"/>	<input type="checkbox"/>
Lack of backflow prevention in plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Low pressure or change in water pressure in the plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Change in water flow direction in the plumbing	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion in or leaching from pipes or storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/component failure or break (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Aging plumbing components (e.g., pipes, tanks, valves)	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of plumbing during construction or repair	<input type="checkbox"/>	<input type="checkbox"/>
Construction or repair of plumbing without evidence of contamination	<input type="checkbox"/>	<input type="checkbox"/>
Deficiency in building/home-specific water treatment after the water meter or property line	<input type="checkbox"/>	<input type="checkbox"/>
Deficiency or contamination of equipment/devices using or distributing water	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during commercial bottling	<input type="checkbox"/>	<input type="checkbox"/>
Contamination during shipping, hauling, or storage	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Tap	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Hose	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Commercially-bottled water	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Container, bottle, or pitcher	<input type="checkbox"/>	<input type="checkbox"/>
Contamination at point of use – Unknown	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature $\geq 30^{\circ}\text{C}$ ( $\geq 86^{\circ}\text{F}$ )	<input type="checkbox"/>	<input type="checkbox"/>
Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>

† Only check off what was found during investigation.  
 ‡ "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

No additional questions have been added

- The multiple choice question has been numbered '4' because it is the fourth of four questions.
- The sub-header text has been changed from 'Factors Not Under the Jurisdiction of a Water Utility or Factors at the Point of Use' to 'Factors Not Under the Jurisdiction of Water Utility or Contributing Factors at the Point of Use'
- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.

Remarks

Remarks

Remarks

No additional questions have been added

- The space for the remarks section has been reduced to fit within the remaining space on the page.

Section	Current Question/Item	Requested Change																																																																														
<b>Water Not Intended for Drinking or Water of Unknown Intent</b>	<div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">WNID/WUI</div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; border: 1px solid black;"> <b>Water Not Intended for Drinking or Water of Unknown Intent (WNID/WUI)</b> </div>	<div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Other or Unknown Water</div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; border: 1px solid black;"> <b>Other or Unknown Water</b> </div>																																																																														
	<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>The tab at the top of page 12 has been renamed from 'Water Not Intended for Drinking or Water of Unknown Intent' to 'Other or Unknown Water' in order to match the revisions to the type of water exposure categories on page 3.</li> <li>The header has been changed from Water Not Intended for Drinking or Water of Unknown Intent (WNID/WUI) to Other or Unknown Water.</li> </ul>																																																																															
<b>Intent for Use</b>	<div style="background-color: #2c3e50; color: white; padding: 2px;"><b>Intent for Use</b></div> <p>What was the intended use for the implicated water? <i>(check all that apply)</i></p> <p><input type="checkbox"/> Cooling/Air Conditioning (e.g., cooling tower, swamp cooler)</p> <p><input type="checkbox"/> Mister (e.g., produce in grocery store, public cooling system)</p> <p><input type="checkbox"/> Ornamental (e.g., a decorative non-interactive fountain intended for public display and not designed for swimming or recreational use)</p> <p><input type="checkbox"/> Industrial/Occupational (e.g., steam cleaner)</p> <p><input type="checkbox"/> Agricultural Irrigation</p> <p><input type="checkbox"/> Waste water</p> <p><input type="checkbox"/> Other (specify): _____</p> <p><input type="checkbox"/> Unknown</p>	<div style="background-color: #2c3e50; color: white; padding: 2px;"><b>Intent for Use</b></div> <p>What was the intended use for the implicated water? <i>(check all that apply)</i></p> <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Cooling/Air Conditioning (e.g., cooling tower, swamp cooler)</td> <td><input type="checkbox"/> Industrial/Occupational (e.g., steam cleaner)</td> </tr> <tr> <td><input type="checkbox"/> Mister (e.g., produce in grocery store, public cooling system)</td> <td><input type="checkbox"/> Agricultural Irrigation</td> </tr> <tr> <td><input type="checkbox"/> Ornamental (e.g., a decorative non-interactive fountain intended for public display and not designed for swimming or recreational use)</td> <td><input type="checkbox"/> Waste water</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other (specify): _____</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Unknown</td> </tr> </table>	<input type="checkbox"/> Cooling/Air Conditioning (e.g., cooling tower, swamp cooler)	<input type="checkbox"/> Industrial/Occupational (e.g., steam cleaner)	<input type="checkbox"/> Mister (e.g., produce in grocery store, public cooling system)	<input type="checkbox"/> Agricultural Irrigation	<input type="checkbox"/> Ornamental (e.g., a decorative non-interactive fountain intended for public display and not designed for swimming or recreational use)	<input type="checkbox"/> Waste water		<input type="checkbox"/> Other (specify): _____		<input type="checkbox"/> Unknown																																																																				
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<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>The section has been reformatted to reduce the total amount of space required.</li> </ul>																																																																																
<b>Water Description</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #2c3e50; color: white;"> <th colspan="4">Water Description</th> </tr> <tr> <th style="font-size: small;">Water Type <i>(e.g., cooling tower; drainage ditch; fountain-ornamental)</i></th> <th style="font-size: small;">Setting of Exposure <i>(e.g., airport; hospital/health care facility, nursing home; park-state park)</i></th> <th style="font-size: small;">USUAL Water Treatment Provided <i>(e.g., no treatment; disinfection; settling/sedimentation)</i></th> <th style="font-size: small;">Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr style="border: 2px solid yellow;"><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Water Description				Water Type <i>(e.g., cooling tower; drainage ditch; fountain-ornamental)</i>	Setting of Exposure <i>(e.g., airport; hospital/health care facility, nursing home; park-state park)</i>	USUAL Water Treatment Provided <i>(e.g., no treatment; disinfection; settling/sedimentation)</i>	Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i>																					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #2c3e50; color: white;"> <th colspan="4">Implicated Water - Water Description</th> </tr> <tr> <th style="font-size: small;">Water Type <i>(e.g., cooling tower; drainage ditch; fountain-ornamental)</i></th> <th style="font-size: small;">Setting of Exposure <i>(e.g., airport; hospital/health care facility, nursing home; park-state park)</i></th> <th style="font-size: small;">USUAL Water Treatment Provided <i>(e.g., no treatment; disinfection; settling/sedimentation)</i></th> <th style="font-size: small;">Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Implicated Water - Water Description				Water Type <i>(e.g., cooling tower; drainage ditch; fountain-ornamental)</i>	Setting of Exposure <i>(e.g., airport; hospital/health care facility, nursing home; park-state park)</i>	USUAL Water Treatment Provided <i>(e.g., no treatment; disinfection; settling/sedimentation)</i>	Water Treatment Subtype <i>(disinfection or filtration: e.g., boiling; chlorine; rapid sand filter; reverse osmosis)</i>																																										
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<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>The sub-header has been changed from 'Water Description' to 'Implicated Water - Water Description'</li> <li>One additional row has been added to allow for the submission of more data.</li> </ul>																																																																																
<b>Laboratory Section - Water Not Intended for Drinking or Water of Unknown Intent</b>	<div style="background-color: #2c3e50; color: white; padding: 2px;"><b>Laboratory Section - Water Not Intended for Drinking or Water of Unknown Intent</b></div> <p>Was the implicated water tested? <input type="checkbox"/> Yes <i>(specify in table below)</i> <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr style="background-color: #2c3e50; color: white;"> <th colspan="6">Results</th> </tr> <tr style="background-color: #2c3e50; color: white;"> <th>Sample</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>Source of Sample</td> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Additional Description <i>(e.g., time of day; specific location, etc.)</i></td> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Date <i>(mm/dd/yyyy)</i></td> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Volume Tested</td> <td>Number</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td></td> <td>Unit</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Temperature</td> <td>Number</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td></td> <td>Unit</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i></td> <td>Number</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td></td> <td>Unit</td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>Turbidity (NTU)</td> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>pH</td> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </tbody> </table>	Results						Sample	1	2	3	4	5	Source of Sample						Additional Description <i>(e.g., time of day; specific location, etc.)</i>						Date <i>(mm/dd/yyyy)</i>						Volume Tested	Number						Unit					Temperature	Number						Unit					Residual/Free Disinfectant Level <i>(if total and combined disinfectant levels given, total - combined = free)</i>	Number						Unit					Turbidity (NTU)						pH						
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Water Quality Indicator	Water Quality Indicator			
	Sample Number	Type (e.g., fecal coliforms)	Concentration (numerical value)	Unit

- This section has been deleted from page 13 and consolidated into a section called Water Samples (described previously).

Microbiology or Chemical/Toxin Analysis	Microbiology or Chemical/Toxin Analysis (refer to the laboratory findings from the outbreak investigation)					
	Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern
Sample Number	Test Results Positive?	Concentration (numerical value)	Unit	Test Type*	Test Method (reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a> )	
	<input type="checkbox"/> Yes					
	<input type="checkbox"/> Yes					
	<input type="checkbox"/> Yes					
	<input type="checkbox"/> Yes					

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

- This section has been deleted from page 14 and consolidated into a section called Water Samples (described previously).

Factors Contributing to Contamination and/or Increased Exposure to Contaminated Water	Factors Contributing to Contamination and/or Increased Exposure to Contaminated Water			Factors Contributing to Contamination and/or Increased Exposure to Contaminated Water		
	Factors (check all that apply)*	Documented/Observed**	Suspected**	Contributing Factors (Check all that apply)*	Documented/Observed†	Suspected†
	Cooling tower/evaporative condenser – shutdown for >3 days without draining to waste	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – shutdown for >3 days without draining to waste	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – lack of a maintenance program	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – lack of a maintenance program	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – lack of a qualified water quality specialist	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – lack of a qualified water quality specialist	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – presence of scale or corrosion	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – presence of scale or corrosion	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – presence of dirt, organic matter, or other debris in the cold water basin	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – presence of dirt, organic matter, or other debris in the cold water basin	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – absence of drift eliminators	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – absence of drift eliminators	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – presence of damaged drift eliminators	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – presence of damaged drift eliminators	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – history of recent repairs to the device	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – history of recent repairs to the device	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – siting of device near building air intakes	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – siting of device near building air intakes	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – siting of device near windows that can be opened	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – siting of device near windows that can be opened	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – siting of device in immediate area of kitchen exhaust fans, live plants, truck bays, or other sources of organic matter	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – siting of device in immediate area of kitchen exhaust fans, live plants, truck bays, or other sources of organic matter	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – construction on the premises of the device within 6 months before the index case	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – construction on the premises of the device within 6 months before the index case	<input type="checkbox"/>	<input type="checkbox"/>
	Cooling tower/evaporative condenser – construction within 100 meters of the premises of the device within 6 months before the index case	<input type="checkbox"/>	<input type="checkbox"/>	Cooling tower/evaporative condenser – construction within 100 meters of the premises of the device within 6 months before the index case	<input type="checkbox"/>	<input type="checkbox"/>
Ornamental fountain – presence of submerged lighting	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – presence of submerged lighting	<input type="checkbox"/>	<input type="checkbox"/>	
Ornamental fountain – lack of a written cleaning and maintenance program	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – lack of a written cleaning and maintenance program	<input type="checkbox"/>	<input type="checkbox"/>	
Ornamental fountain – presence of dirt, organic matter, or other debris in the water basin	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – presence of dirt, organic matter, or other debris in the water basin	<input type="checkbox"/>	<input type="checkbox"/>	
Broken/damaged sewer pipe	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – intended as an ornamental fountain but utilized as an interactive fountain	<input type="checkbox"/>	<input type="checkbox"/>	
Recycling of water	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – inadequate disinfection for recreational use	<input type="checkbox"/>	<input type="checkbox"/>	
Water temperature ≥30°C (≥86°F)	<input type="checkbox"/>	<input type="checkbox"/>	Ornamental fountain – inadequate filtration for recreational use	<input type="checkbox"/>	<input type="checkbox"/>	
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>	Broken/damaged sewer pipe	<input type="checkbox"/>	<input type="checkbox"/>	
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	Recycling of water	<input type="checkbox"/>	<input type="checkbox"/>	
			Water temperature ≥30°C (≥86°F)	<input type="checkbox"/>	<input type="checkbox"/>	
			Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>	
			Unknown	<input type="checkbox"/>	<input type="checkbox"/>	

\* Only check off what was found during investigation.

\*\* Documented/Observed\*\* refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

† Documented/Observed† refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

- The sub-header text has been changed from 'Factors' to 'Contributing Factors'
- The footnote symbols have been updated as part of an effort to make them more consistent throughout the form.
- Three additional contributing factors have been added for outbreaks involving ornamental fountains:
  - Ornamental fountain – intended as an ornamental fountain but utilized as an interactive fountain
  - Ornamental fountain – inadequate disinfection for recreational use
  - Ornamental fountain – inadequate filtration for recreational use

<p>Remarks</p>	<p>Remarks</p> <p>Epidemic and laboratory assistance for the investigation of a waterborne disease outbreak is available upon request by the State Health Department to the Centers for Disease Control and Prevention. Please enter this report into the National Outbreak Reporting System (NORS). State/Local investigation reports and questionnaires can also be attached to the report in the electronic system. Communications and requests for epidemic and laboratory assistance may be directed to: Waterborne Disease and Outbreak Surveillance Coordinator, Division of Parasitic Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases, Coordinating Center for Infectious Diseases, CDC, 4770 Buford Highway, NE, MS F-22, Atlanta, GA, 30341-3724 or (770) 488-7775</p> <p>Public reporting burden of this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to CDC, Impact Clearance Office, 1600 Clifton Road, MS-D-04, Atlanta, GA, 30333, ATTN: PRA (3033-0008) ← DO NOT MAIL. CASE REPORTS TO THIS ADDRESS.</p>	<p>Remarks</p>
<p>No additional questions have been added</p> <ul style="list-style-type: none"> <li>• The information about how to access epidemic and laboratory assistance has been removed.</li> <li>• The information about the public reporting burden has been moved to the beginning of page 1 and deleted from the end of the form.</li> </ul>		





## Purpose and Use of Information Collection

At the national level, waterborne outbreak surveillance data are used to describe outbreaks and their characteristics through publications and data inquiries; identify trends in common exposures; and inform public health policies and interventions. WBD OSS has collected data since 1971. No other United States public health surveillance system collects aggregate data about waterborne disease outbreaks and human illness at a national level.

## Burden

The annualized burden hours and cost to reporting agencies that submit waterborne disease outbreak data to CDC will not change significantly, if at all, from the estimates provided previously in 2010. The change to the annualized burden hours and cost is minimal because the form asks the same questions but has been revised to be easier to use. Additional fields or data table rows have been added based on form user feedback, reporting practices, or for convenience where extra space was available on a page. In addition, the form has been shortened by two pages, therefore, if any change in burden and cost were anticipated, the result would likely be a lower cost and burden. The number of annual submissions to CDC is not expected to change as a result of the modifications to form.

The burden hours and cost below are based on the calculations from the previous CDC 52.12 form OMB submission in 2010. The tables have been revised. The 2010 OMB paperwork described 57 respondents (50 states and 7 other reporting jurisdictions). NORS currently supports outbreak reporting by 59 sites (50 US states, the District of Columbia, five US territories, and three Freely Associated States), however, not all states or other reporting jurisdictions report waterborne disease outbreaks each calendar year. The burden hours have therefore increased from 19 to 23 but this represents a maximum value. The cost burden has also increased from \$1,322.40 to \$1,368.80 but this also represents a maximum value.

## Privacy Impact Assessment

No individually identifiable information is being collected.

Estimates of Annualized Burden Hours (change to the total number of reporting sites from NORS, but no actual change in burden hours because not all reporting sites submit an outbreak report annually)

Type of Respondents	Form name	Number of Respondents	Number of Responses per Respondent	Average Burden Per Response (in hours)	Total Burden (in hours)
State governments	CDC Form 52.12	50	1	20/60	17
Territories, District of Columbia, Freely-associated states	CDC Form 52.12	9	1	20/60	3
<b>Total</b>					20

Estimates of Annualized Cost Burden (change to the total number of reporting sites from NORS, but no actual change in cost burden because not all reporting sites submit an outbreak report annually)

Respondents	Number of Respondents	Number of Responses per Respondent	Average Burden Per Response (in hours)	Cost Per Response	Respondent Cost
State governments	50	1	20/60	\$23.20	\$386.67
Territories, District of Columbia, Freely-associated states	9	1	20/60	\$23.20	\$69.60
<b>Total</b>					\$456.27

Influenza – Revision of one form, addition of 1 form.

#### Novel influenza A virus:

In 2007, the Council of State and Territorial Epidemiologists (CSTE) adopted a position statement making human infection with a novel influenza A virus a nationally notifiable condition. Novel influenza A virus infections include all human infections with influenza A viruses that are different from currently circulating human influenza H1 and H3 viruses. These viruses include those that are subtyped as nonhuman in origin and those that are unsubtypeable with standard methods and reagents. Rapid reporting of human infections with novel influenza A viruses will facilitate prompt detection and characterization of influenza A viruses.

From 2005 to early 2012, only 36 cases of variant (v) influenza virus infection were reported to the Centers for Disease Control and Prevention (CDC). From July–September 2012, however, 306 cases of H3N2v were reported in 10 states, representing the largest outbreak of human infections with a variant influenza virus since the 2009 H1N1 pandemic. A majority of cases had self-limited illness, but hospitalizations were more prevalent among those with young age and the presence of underlying medical conditions. Most cases reported prolonged and direct exposure to swine at an agricultural fair, suggesting that was the primary risk factor for illness.

This outbreak highlighted the assertion that every case of variant influenza virus infection has epidemic potential and must be investigated thoroughly and rapidly. Therefore, a working group was convened to identify and incorporate additional data elements that will be instrumental in the efficient and rapid investigations of all variant influenza virus infections. The additional elements include new sections to assess the signs and symptoms associated with the illness, the clinical course of the illness, the exposures to agricultural fairs and animals prior to illness onset, and the potential for human-to-human transmission, especially among household members and healthcare workers. These additional elements will accelerate the understanding of the basic epidemiology of new variant influenza viral infections and the implementation of effective public health responses, thereby preventing additional morbidity and mortality.

The Human Infection with Novel Influenza A Virus Case Report Form, is a standardized case questionnaire which contains detailed questions on relevant clinical and epidemiologic features of influenza, was developed by CSTE and CDC. State or territorial influenza surveillance epidemiologists report these data over the Internet on the Secure Data Network (SDN). The title of this form has been slightly revised from its original title of the Novel Human Influenza A Virus Infection Case Report Form.

#### Privacy Impact Assessment

Personal identifiers are collected by state or local public health officials and maintained at the state or local health department before submission to CDC.

### Estimated Burden

The annualized total burden hours did increase from the previous approval. A significant increase in the number of human infections from novel influenza A virus were identified during 2012, compared to previous influenza seasons. The increase in the number of responses per respondent was needed to more accurately portray the burden on respondents. The annualized burden to complete one case report form did not change from the previous approval.

### Human Infections with Novel Influenza A Virus

Type of Respondents	Form Name	No. of Respondents	No. of Responses per Respondent	Hrs/response	Total Burden in hrs.
State and Local Governments	Human Infection with Novel Influenza A Virus Case Report Form	57	6	30/60	171 hours

### Antiviral resistance form

Antiviral drugs are the second line of defense against influenza viruses. Currently, only 2 drugs are licensed for use and active against circulating viruses, oseltamivir and zanamivir; oral oseltamivir is used for almost all infections in the US. There are limited treatment options for an infection with an oseltamivir-resistant viruses, experimental drug use would be required; thus widespread circulation of resistant viruses is a public health emergency requiring special guidance and testing. After a resistant virus is identified by the laboratory, it is necessary to obtain key information from the infected patient to determine whether the resistant virus was circulating in the community or whether the resistant virus developed during treatment. This information is critical to antiviral recommendations and guidance. Over the past several seasons since the pandemic 2009 virus began circulating, we have seen a small but steady increase in the circulation of oseltamivir-resistant viruses. Any additional and significant increase will require new guidance and health alerts. This new form, Antiviral Resistant Influenza Infection Case Report Form, will be critical to the collection of information that is essential to antiviral use guidance. Since circulating viruses are constantly changing, annual monitoring is needed.

### Privacy Impact Assessment

Personal identifiers are collected by state or local public health officials and maintained at the state or local health department before submission to CDC.

Antiviral Resistant Influenza Infection

Type of Respondents	Form Name	No. of Respondents	No. of Responses per Respondent	Hrs/response	Total Burden in hrs.
State and Local Governments	Antiviral Resistant Influenza Infection Case Report Form	57	3	30/60	86 hours