

APPENDIX A- DESCRIPTION OF CHANGES TO CDC 52.12

Background

The Waterborne Disease and Outbreak Surveillance System (WBDOSS) is a collaboration between 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. The data are used routinely to inform CDC recommendations and the system supplies data for EPA decision-making regarding existing and new regulations related to drinking water safety.

WBDOSS data are currently collected through a paper-based system that uses CDC form 52.12 (Waterborne Disease Outbreak Report form); however, CDC has been working towards reporting through the electronic National Outbreak Reporting System (NORS). NORS, which will be similar to the existing electronic Foodborne Outbreak Reporting System (EFORS), will simplify data collection and entry for state partners. Many of the waterborne disease outbreak coordinators already report foodborne disease outbreaks to CDC; by partnering with the foodborne disease surveillance team in the development of NORS, it has been possible to develop a shared section, based on eFORS, to ask common questions about outbreaks, thereby minimizing the burden on outbreak coordinators who will need to become familiar with revised CDC 52.12 and CDC 52.13 forms. Neither the number of reports nor the burden hours for users of the CDC 52.12 form are expected to increase or decrease as a result of the transition to NORS. The CDC 52.12 form has also been restructured to enhance usability. The changes to the CDC 52.12 form are discussed in further detail in the following paragraphs.

As with the current CDC 52.12, the revised CDC 52.12 form will capture the etiologic agents responsible for the outbreaks and identify the water system deficiencies associated with outbreaks in order to improve prevention efforts. Data collected will continue to ask about: type of exposure, location of outbreak, date of outbreak, number of persons exposed and ill, symptoms, incubation period, duration of illness, etiologic agent, epidemiologic results such as attack rates, laboratory results of human specimens and water samples, characteristics of the water system and its deficiencies, and factors contributing to the

contamination of the water; however, only **Reporting State** and **Date first case became ill** will be required data entry fields in the electronic system.

The CDC 52.12 has been revised to reflect changes made in NORS to improve the quality of the data and its usability by local, state and national partners. Data reporting will take a more systematic and detailed approach, substantially improving the ability to evaluate and incorporate environmental elements and contributing factors into waterborne disease outbreak prevention efforts. To improve the standardization of data, the majority of fields in the electronic version of NORS contain dropdown menus with comprehensive picklists.

In response to confusion by users about how to report information for different types of water exposure (e.g. drinking water vs. recreational water) on the current CDC 52.12, the revised form has also been reorganized so that the types of water exposure are divided into separate parts. The pages on the paper form have been numbered. Tabs have been placed at the top of each page to indicate the shared General part, a water-specific Water-General part, and parts for the four types of water exposure: Rec(reational)-Treated, Rec(reational)-Untreated, Drinking Water, and WUI/WNID (water not intended for drinking/water of unknown intent). Only one of the four water exposure tabs is completed for one outbreak report. The electronic system has tabs for each of the parts described above; users will only see the tabs for the type of water exposure involved in the outbreak that is being reported.

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Underlined text= Tab name (e.g. General)
 Italicized text= Section name (e.g. Primary Mode of Transmission)
 Bold text= Field name (e.g. Comments)

Description of Changes

Current Record	New Record
<i>Title</i>	The title has changed from Waterborne Diseases Outbreak Report to: National Outbreak Reporting System Waterborne Disease Transmission
<i>Color</i>	In the electronic version, <u>General</u> has brown headings. The color theme for all sections of the revised CDC 52.12 paper form is blue to be consistent with the original form. Multiple shades of blue clearly identify sections and subsections. The revised form has been tested for readability by printing the form in color and in grayscale. Headings use white or black text and the data entry fields use black text.
<i>Logos</i>	The CDC logo has been moved from lower right corner to upper right corner. The DHHS logo has been added in upper left corner and replaces the DHHS mailing address.
<i>Form description</i>	The form description was: This form should be used to report outbreaks of illness after consumption or use of water intended for drinking, as well as outbreaks associated with exposure (ingestion, contact or inhalation) of recreational water. The form description has been reworded, as follows: This form is used to report waterborne disease outbreak investigations. This form has 6 parts, indicated by tabs at the top of each page. Part 1 asks for the minimum or basic information about the outbreak investigation. Part 2 asks for epidemiological data and clinical specimen test results. Parts 3, 4, 5 and 6 collect information about types of water exposure (treated recreational water, untreated recreational water, drinking water, and water not intended for drinking/water of unknown intent). Only 1 of these 4 water exposure parts should be completed for an outbreak investigation report."
<i>CDC Use Only Report ID field</i>	The CDC Use Only field has been renamed CDC Report ID and has been moved from the upper right corner to the upper left corner (below the DHHS logo) A State Report ID field has been added to the right of the CDC Report ID field for an ID number that may have been assigned by the reporting state.
<i>1. Type of Exposure</i>	<i>Type of Exposure</i> has been renamed <i>Type of Water Exposure</i> and has been moved from the beginning of page 1 to the beginning of the <u>Water-General</u> tab on page 3. The options have been reordered and additional options have been provided. Descriptive examples have been provided for each type of water exposure. Recreational water has been divided into two responses: Water intended for recreational purposes- treated and Water intended for recreational purposes- untreated . Drinking water is now described as Water intended for drinking . Other has been changed to Water not intended for drinking or water of unknown intent (WNID/WUI) .
	<i>Type of Exposure</i> - NEW SECTION:

	<p>The first question on page 1 of the revised form is <i>Primary Mode of Transmission</i>. Multiple surveillance systems will share the <u>General</u> tab in NORS. Each will have its own mode of transmission for outbreak reporting. State reporters will select Water on the CDC 52.12 to identify water as the mode of transmission that resulted in the outbreak.</p> <p>Page 2 has a section titled <i>Secondary Cases</i> where users can select a secondary mode of transmission and enter information about illness associated with the secondary mode of transmission (e.g. an individual who became ill from a water exposure may then transmit the disease agent to other individuals via person-to-person contact).</p>
<p>2. <i>Location of Outbreak</i></p>	<p><i>Location of Outbreak</i> has been renamed <i>Geographic Location</i> (page 1)</p> <p>This section has been expanded so that state reporters can clearly differentiate between the state and county that reported the outbreak and any additional states or counties that were also involved in the outbreak.</p> <p>For the reporting state, three additional fields have been added: Exposure occurred in multiple states, Exposure occurred in a single state, but cases resided in multiple states, and Other states: _____.</p> <p>Similarly, for the reporting county, three additional fields have been added: Exposure occurred in multiple counties, Exposure occurred in a single county, but cases resided in multiple counties in the reporting state, and Other counties: _____.</p> <p>City or town has been changed to City/Town/Place of exposure. <i>Do not include proprietary or private facility names</i> has been added to discourage the entry of unique identifiers of business establishments.</p>
	<p><i>Location of Outbreak</i>- NEW SECTION:</p> <p>A new section titled <i>Geographic Location</i> has been included in the <u>Water-General</u> tab on page 3. The field Percent of primary cases living in the reporting state: _____% requests the proportion of cases who reside in the reporting state only.</p>
<p>3. <i>Date of Outbreak (Date first case became ill)</i></p>	<p><i>Date of Outbreak</i> has been renamed <i>Dates</i> (page 1). This section contains new fields to help state reporters better define the start and end of an outbreak using the data available for a given outbreak. <i>Date of Outbreak</i> contained the field Date first case became ill. The new fields in the <i>Dates</i> section are: Date last case became ill, Date of initial exposure and Date of last exposure. Additional information about the <i>Dates</i> section is described on page 12 of this document with reference to <i>Date investigation initiated</i> in the current 52.12 record.</p>
	<p><i>Date of Outbreak</i>- NEW SECTION:</p> <p>An <i>Associated Events</i> section has been added to the <u>Water-General</u> tab on page 3. <i>Associated Events</i> captures additional information about exposure dates that will be valuable when dates of first and last illness or exposure are not known. State reporters may answer the following questions to describe an event (e.g. wedding reception, pool party) and to provide the time interval for an event with which an outbreak was considered to have been associated:</p> <p>Was exposure associated with a specific event or gathering? (yes, no, unknown)</p> <p>If yes, what type of event or gathering was involved? _____</p> <p>If outbreak occurred during a defined event, dates of event:</p>

	<p>Start date: ___/___/___ End date: ___/___/___</p>
<p>4. Numbers of: persons exposed, ill, hospitalized and fatalities (actual and estimated)</p>	<p><i>Numbers of: persons exposed, ill, hospitalized and fatalities (actual and estimated)</i> has been revised. This question is now asked in two sections: <i>Primary Cases</i>, for which count data have historically been collected (page 1) and <i>Secondary Cases</i> (page 2), which is summarized above in 1. <i>Type of Exposure- NEW SECTION</i>.</p> <p>The table <i>Number of Primary Cases</i> requests the following information: # Lab-confirmed cases, # Probable cases, # Estimated total primary ill. The fields # Visited Emergency Room and # Visited health care provided (excluding ER visits) have been added following # Died, # Hospitalized. Actual and Estimated have been replaced with # Cases and Total # of cases for whom info is available.</p> <p>In accordance with eFORS, the <i>Primary Cases</i> section on page 1 has been revised to contain two additional tables:</p> <p>A table for Sex data requests the percentage of cases who are male and female with the following fields: Male and Female</p> <p>A table for Age data (% per age group) has the following fields: <1 year, 1-4 years, 5-9 years, 10-19 years, 20-49 years, 50-74 years, ≥75 years, Unknown.</p> <p>The table <i>Number of Secondary Cases</i> requests the following information: # Lab-confirmed cases, # Probable cases, Total # of secondary cases and Total # of cases (Primary+Secondary).</p>
	<p>Information about the number of people exposed is now requested in <u>Water- General</u> under the section <i>Epidemiologic Data</i> (page 3), which is described for 10a. <i>Epidemiologic data</i> (current record) below.</p> <p>The first field in this section has been worded as follows: Estimated total number of persons with primary exposure? _____. This will provide an approximation (or actual number, if known) of people who were at risk of becoming ill from the primary mode of transmission and provides a context for the data reported from an epidemiological study.</p>
<p>5. History of Exposed Persons (Enter the no. of persons with the following symptoms):</p>	<p><i>History of Exposed Persons</i> historically collected information about individual symptoms and categories of symptoms at the same time. The two fields that collected information about the number of interviewed persons were No. of Persons Interviewed and No. of Interviewed Persons Who Were Ill. The numbers entered into these two fields frequently referred to ill persons only. State reporters were not able to indicate if the number of persons interviewed varied by symptom reported.</p> <p><i>History of Exposed Persons</i> has been separated into two sections, described below. Respondents may enter data into one or both sections, depending on the data available from the outbreak:</p> <p><i>Signs or Symptoms (General</i>, page 2) will allow state reporters to enter information about the number of cases with specific symptoms in the following fields: # Cases with signs or symptoms and Total # of cases for whom info available. <i>Signs or Symptoms</i> provides valuable information about proportion of cases with a particular symptom. This is the reporting format currently used in eFORS.</p> <p><i>Symptoms (Water- General</i>, page 3) will allow state reporters to enter the total number of individuals within a category of symptoms (e.g. Gastrointestinal symptoms/conditions _____, Respiratory symptoms/conditions _____). <i>Symptoms</i> summarizes case count data to present a picture of the illness distribution for an outbreak. This is the format that has historically been used to discuss data in WBD OSS reports.</p>
<p>6. Incubation Period</p>	<p><i>Incubation Period</i> has been moved to page 2. Mean incubation period has been deleted.</p>

	<p>Minutes has been added as a time unit option. Unknown incubation period has been added as a checkbox field.</p>
7. <i>Duration of Illness</i>	<p><i>Duration of Illness</i> has been moved to page 2. Mean duration of illness has been deleted. Minutes has been added as a time unit option. Unknown duration of illness has been added as a checkbox field.</p>
8. <i>Specimens Examined from Patients</i>	<p><i>Specimens Examined from Patients</i> has been moved to <u>Water-General</u> (pages 3-4) and renamed <i>Clinical Specimens - Laboratory Results</i>.</p> <p>The first field is worded as follows:</p> <p>Were clinical diagnostic specimens taken from persons?’ (responses: yes, no, unknown) If yes, from how many persons were specimens taken? ____</p>
	<p>Three data tables have replaced the single specimen data table for this section.</p> <p>The first table (page 4) expands on Specimen, a general field in <i>Specimens Examined from Patients</i> from the current CDC 52.12 record. More detailed information is collected using the following new fields: Specimen Type, Specimen Subtype and Tested for (e.g. bacteria, chemicals/toxins, fungi, parasites or viruses).</p> <p>The second table replaces No. Persons and Findings in <i>Specimens Examined from Patients</i>, to more accurately describe the number of specimens that were tested and the results for any tests that were conducted. The second table contains the following fields: Genus/Chemical/Toxin, Species, Serotype/Serogroup/Serovar, Genotype/Subtype, Confirmed as Etiology?, Concentration, Unit, Specimen Type, Specimen Subtype, Test Type, Total # People Tested, and Total # People Positive.</p> <p>A third data table has been added to capture the results of laboratory tests that determine the molecular profiles of microorganisms using standardized, nationally approved tests. The third table contains the following fields: State Lab Isolate ID, Specimen Profile 1 and Specimen Profile 2.</p>
9. <i>Etiology of Outbreak</i>	<p><i>Etiology of Outbreak</i> has been incorporated into the second table described in 8. <i>Specimens Examined from Patients</i>. State reporters can now indicate that a microorganism or toxin was the etiologic agent in an outbreak by checking the box Confirmed as Etiology? when they enter clinical specimen results for that microorganism or toxin in the table.</p>
10a. <i>Epidemiologic data</i>	<p><i>Epidemiologic data</i> has been moved to <u>Water-General</u> (page 4). The data table is preceded by three fields. The first field was discussed in 4. <i>Numbers of: persons exposed, ill, hospitalized and fatalities (actual and estimated)</i>: Estimated total number of persons with primary exposure?_____.</p> <p>The remaining two fields divide the statement from a checkbox at the bottom of the current data table into two elements. The original field was written as follows: No data were collected from comparisons groups to estimate risk but water was the only common source shared by persons who were ill.</p> <p>The revisions divide this statement into: Were data collected from comparison groups to estimate risk? (responses: yes, no, unknown) and If No or Unknown, was water the only common source shared by persons who were ill? (responses: yes, no, unknown)</p>
	<p>The data table for <i>Epidemiologic data</i> has been revised. Total now precedes the fields that</p>

	<p>fall under the headings Number of Persons Exposed and Number of Persons Not Exposed in the current CDC 52.12 record. The two fields named Total have been renamed Total # Exposed (A) and Total # Not Exposed, respectively. Exposed- Not Ill and Not Exposed- Not Ill have been deleted. Attack Rate has been added. Odds Ratio/Risk Ratio has been separated into two fields: Odds Ratio and Risk Ratio. Similarly, p-Value or Confidence Interval has been separated into p-Value and 95% Confidence Interval.</p>
	<p>Two attack rate fields have been added below the epidemiologic data table to differentiate between reporting state residents and non-residents. The fields are: Attack rate for residents of reporting state: _____% and Attack rate for non-residents of reporting state: _____%.</p>
	<p><i>Epidemiologic data- NEW SECTION</i></p> <p>Additional information about the epidemiological methods, as well as other methods (e.g. environmental methods) used have been added in a checklist on page 1 under <i>Investigation Methods</i>. Important methods for the <i>Epidemiologic data</i> section in this list are: Interviews only of ill persons, Case-control study and Cohort study.</p>
10b. Comments	<p><i>Comments</i> for epidemiologic data and methods has been moved directly after <i>Investigation Methods</i> (page 1). Additional comments may be added under <i>Remarks</i> on page 2.</p>
11. Water Supply Characteristics	<p><i>Water Supply Characteristics</i> combined questions for drinking water and recreational water. State reporters also used this section to provide information about outbreaks that involved other types of water exposure.</p> <p>To simplify the reporting process, the content from this section has been reorganized. <i>Water Supply Characteristics</i> does not appear in one shared location on the revised form. The fields have instead been included for each type of water exposure, where appropriate. Fields have been added to capture details that were previously reported in the margins of the paper form.</p> <p>The changes to <i>Water Supply Characteristics</i> are detailed in 11a, 11b, and 11c below.</p>
	<p><i>Water Supply Characteristics- NEW SECTION:</i></p> <p><i>Traceback</i> has been added to <u>General</u> on page 2 . This section contains the following fields: Please check if traceback conducted; Source name; Source type; Location of source (State, Country); and Comments.</p> <p><i>Traceback</i> will only be used to provide the water source for waterborne disease outbreaks involving bottled water. This information may be shared with the Food and Drug Administration (FDA). <i>Traceback</i> is shared with the foodborne disease surveillance team and will be used more often by state reporters completing CDC 52.13.</p>
	<p><i>Water Supply Characteristics- NEW SECTION:</i></p> <p><i>Intent for Use</i> has been added to <u>Water Not Intended For Drinking/Water of Unknown Intent</u> at the beginning of page 13. This section provides information about water supply characteristics for water that is not recreational water or drinking water.</p> <p>The <i>Intent for Use</i> section is worded as follows:</p>

	<p>What was the intended use for the implicated water (<i>check all that apply</i>)</p> <p><input type="checkbox"/> Cooling/Air Conditions (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>
<p><i>11a. Type of Drinking Water Supply</i></p>	<p><i>Type of Drinking Water Supply</i> has been moved to <u>Drinking Water</u> on page 9. A table titled Drinking Water Vehicle Description contains the field Water Type for state reporters to record EPA-regulated water supplies (e.g. community system) and FDA-regulated water supplies (bottled water) that are listed in <i>Type of Drinking Water Supply</i>. Subcategories of these drinking water supplies (e.g. school, restaurant, hotel) are now included in the Setting of Exposure field described in further detail below (<i>11b. Water Source or Setting</i>). An additional field for Public Water System EPA ID Number has been added to the table so that respondents can directly associate a public water system with existing EPA records.</p>
<p><i>11b. Water Source or Setting</i></p>	<p><i>Water Source or Setting</i> has been expanded into two-three fields, dependent on the type of water exposure.</p> <p>Water Type refers to the source of the water in <u>Recreational Water-Treated</u> (page 5), <u>Recreational Water-Untreated</u> (page 7) and <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (page 13).</p> <p>In <u>Drinking Water</u>, the source of water will be collected on page 9 in the fields Water Source and Water Source Description.</p> <p>In <u>Recreational Water-Treated</u>, Water Subtype follows Water Type on page 5. This field will detail whether the water source was indoor, outdoor or unknown.</p> <p>In <u>Recreational Water-Untreated</u>, If Spring or Hot Spring, Water Subtype follows Water Type on page 7. This field will detail whether the water source was indoor, outdoor or unknown.</p> <p>In <u>Recreational Water-Treated</u> (page 5), <u>Recreational Water-Untreated</u> (page 7), <u>Drinking Water</u> (page 9) and <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (page 13), the table that will collect data for <i>Water Source or Setting</i> has an additional field titled Setting of Exposure. This field will collect descriptive data about the outbreak setting, such as: camp; hospital; membership club.</p>
	<p>Fill Water Type has been added in the third row of the Recreational Water Vehicle Description table for <u>Recreational Water-Treated</u> (page 5). This variable will collect supplemental water source data that was not asked previously in <i>Water Source or Setting</i>.</p>
<p><i>11c. Water Treatment Provided</i></p>	<p><i>Water Treatment Provided</i> has been included in <u>Recreational Water-Treated</u> (page 5), <u>Drinking Water</u> (page 9) and <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (page 13). The variables and options have been tailored to each type of water exposure and new variables, listed below, have been created to capture treatment subtypes that were already listed on the CDC 52.12 form.</p> <p>In <u>Recreational Water-Treated</u> (page 5), the Recreational Water Vehicle Description table contains the following fields: Usual Water Treatment Provided at Venue, Venue</p>

	<p>Treatment Subtype, Chlorination Subtype, If Public Water Was Used to Fill, Usual Water Treatment Provided for Fill Water Before Coming to the Venue and If Public Water Was Used to Fill, Fill Water Treatment Subtype.</p> <p>In <u>Drinking Water</u> (page 9), the Drinking Water Vehicle Description table contains the following fields: Usual Water Treatment Provided and Water Treatment Subtype.</p> <p>In <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (page 13), the Water Description table contains the following fields: Usual Water Treatment Provided and Water Treatment Subtype.</p>
<i>12. Factors Contributing to Drinking Water Contamination</i>	<i>Factors Contributing to Drinking Water Contamination</i> has been moved to pages 10 and 11. The factors are listed under <i>Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water</i> .
<i>12a. Contamination at the water source</i>	<p><i>Contamination at the water source</i> has been moved to page 10. Checklist options have been expanded. The following field has been placed before the checklist:</p> <p>Did a problem with the source water (i.e. ground water or surface water) contribute to the disease or outbreak? (responses: yes, no, unknown)</p>
<i>12b. Water treatment deficiencies</i>	<p><i>Water treatment deficiencies</i> has been moved to page 11. Checklist options have been expanded. The following field has been placed before the checklist:</p> <p>Did a problem with the water treatment prior to entry into a house or building contribute to the disease or outbreak? (responses: yes, no, unknown)</p>
<i>12c. Contamination in the water distribution system or home plumbing</i>	<p><i>Contamination in the water distribution system or home plumbing</i> has been moved to page 11 and divided into two checklists. Checklist options have been expanded for both lists.</p> <p>Checklist 1 addresses distribution system factors, and includes storage factors.</p> <p>Checklist 2 addresses home plumbing, as well as other factors not under the jurisdiction of a water utility or factors at the point of use.</p>
	<p><i>Contamination in the water distribution system or home plumbing</i>- Checklist 1 (page 11) is preceded by the following field:</p> <p>Did a problem with the distribution system contribute to the disease or outbreak? (responses: yes, 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 to entry into a building or house).</p>
	<p><i>Contamination in the water distribution system or home plumbing</i>- Checklist 2 (page 11) is preceded by the following statement:</p> <p>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)? (responses: yes, no, unknown).</p>
<i>12d. Other Reasons/contributing</i>	<i>Other Reasons/contributing factors for contamination of water (e.g. Corrosive water)</i> has been replaced with <i>Remarks</i> on page 12.

<p><i>factors for contamination of water (e.g. Corrosive water)</i></p>	<p>In addition, each checklist for the questions described in 12a-12c includes the option Other, specify:_____.</p>
<p><i>13. Route of Entry for Recreational Exposure</i></p>	<p><i>Route of Entry for Recreational Exposure</i> has been moved to <u>Water-General</u> on page 3 and renamed <i>Route of Entry</i>. The section will apply to all types of water exposure instead of just recreational water exposures.</p> <p>Accidental ingestion and intentional ingestion have been combined into a single field called Ingestion. The distinction between accidental and intentional ingestion can be difficult to make and does not add substantial value within the current reporting system.</p>
<p><i>14. Factors Contributing to Recreational Water Contamination</i></p>	<p><i>Factors Contributing to Recreational Water Contamination</i> has been moved to page 6 in <u>Recreational Water-Treated</u> and page 8 in <u>Recreational Water-Untreated</u>.</p> <p><u>Recreational Water-Treated</u>: The factors are listed in the section titled: <i>Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Treated Venues</i>. Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Untreated Venues.</p> <p><u>Recreational Water-Untreated</u>: The factors are listed in the section titled: <i>Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Untreated Venues</i>.</p>
<p><i>14a. Fresh or marine water</i></p>	<p><i>Fresh or marine water</i> has been moved to page 6. Checklist options have been expanded.</p> <p>The checklist has been ordered and grouped in the following categories, which are indicated through shading and text on the revised form: People, Facility Design, Maintenance and Policy and Management. Options for Other, specify:_____ and Unknown have also been included.</p>
<p><i>14b. Filtered and/or disinfected swimming venues</i></p>	<p><i>Filtered and/or disinfected swimming venues</i> has been moved to page 8. Checklist options have been expanded.</p> <p>The checklist has been ordered and grouped in the following categories, which are indicated through shading and text on the revised form: People, Swim Area Design, Water Quality and Policy and Management. Options for Other, specify:_____ and Unknown have also been included.</p>
<p><i>15. Water specimens examined</i></p>	<p><i>Water specimens examined</i> was designed to collect data about water quality and provide information about pathogens/agents in water samples. It has been expanded and included in <u>Recreational Water-Treated</u> (pages 5-6), <u>Recreational Water-Untreated</u> (page 7), <u>Drinking Water</u> (pages 9-10) and <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (pages 13-14). Additional information about the changes are summarized below and then discussed in further detail for each of the four types of water exposure.</p> <p>Water Quality- NEW SECTION Additional fields will assess water quality, and the impact of policy and management on water quality. These fields have been written as questions, and will be particularly helpful when no water samples were collected or analyzed during the outbreak. Water quality questions have been included in <u>Recreational Water-Treated</u> (page 5), <u>Recreational Water-Untreated</u> (page 7) and <u>Drinking Water</u> (page 9). These questions precede the sections about laboratory data and pathogen/agent results.</p> <p>The three water quality sections have been titled:</p>

	<ol style="list-style-type: none"> 1. <i>Recreational Water Quality</i> 2. <i>Recreational Water Quality</i> 3. <i>Drinking Water Quality</i> <p>Laboratory Section Laboratory sections have been standardized so that data will be reported consistently across all sections; however, some fields are not in all laboratory sections because they do not apply to all types of water exposure (e.g. Untreated recreational venues do not use disinfectants; therefore a field for disinfectant level measurements would not be relevant).</p> <p>The four laboratory sections have been titled:</p> <ol style="list-style-type: none"> 1. <i>Laboratory Section- Recreational Water Samples from Treated Venues</i> 2. <i>Laboratory Section- Recreational Water Samples from Untreated Venues</i> 3. <i>Laboratory Section- Drinking Water</i> 4. <i>Laboratory Section</i> <p>The laboratory sections begin by asking if water was tested and contain two-three tables, depending on the type of water exposure.</p> <p>Table one is the Results table. This table has been included in all laboratory sections. Table one contains five vertical columns for individual water samples. All Results tables have the following fields: Source of Sample, Additional Description of Source of Sample, Date, Volume Tested (Unit, Number) and Temperature (Unit, Number).</p> <p>Table two is the Water Quality table. This table has been included in all laboratory sections except <i>Laboratory Section- Recreational Water Samples from Treated Venues</i>. Table two contains the following fields: Sample Number, Type, Concentration and Unit.</p> <p>Table three is the Microbiology or Chemical/Toxin Analysis table. This table has been included in all laboratory sections. Table three contains the following fields: Sample Number, Genus/Chemical/Toxin, Species, Serotype/Serogroup/Serovar, Genotype/Subtype, PFGE Pattern, Test Results Positive?, Concentration, Unit, Test Type and Test Method.</p>
	<p><u>Recreational Water-Treated</u></p> <p><i>Recreational Water Quality</i> is on page 5.</p> <p>The added questions are:</p> <p>Did the venue meet state or local recreational water quality regulations? (responses: yes, no, unknown, not applicable) (if No, explain) and Was there a pool operator on the payroll with state-approved training or certification? (responses: yes, no, unknown, not applicable).</p> <p><i>Laboratory Section- Recreational Water Samples from Treated Venues</i> is on pages 5-6.</p> <p>The first field is: Was water from treated recreational water venues tested? (responses: yes, no, unknown)</p> <p>Table 1 contains the additional fields Residual/Free Disinfectant Level (Number, Unit), Combined Disinfectant Level (Number, Unit) and pH.</p> <p>Table 2 is not included in this section. Table 3 is on page 6.</p>
	<p><u>Recreational Water-Untreated</u></p>

	<p><i>Recreational Water Quality</i> is on page 7.</p> <p>The added questions are:</p> <p>Did the venue meet state or local recreational water quality regulations? (responses: yes, no, unknown, not applicable) (if No, explain) and Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards? (responses: yes, no, unknown).</p> <p><i>Laboratory Section- Recreational Water Samples from Untreated Venues</i> is on page 7.</p> <p>The first field is: Was water from untreated recreational water venues tested? (responses: yes, no, unknown)</p> <p>Table 1 is on page 7.</p> <p>Table 2 and Table 3 are on page 7.</p>
	<p><u>Drinking Water</u></p> <p><i>Drinking Water Quality</i> is on page 9.</p> <p>The added questions are:</p> <p>Did the drinking water system have any monitoring violations in the 1 month prior to the outbreak? (responses: 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?(responses: yes, no, unknown, not applicable) (if Yes, explain); and Did the drinking water system have any violations in the 12 months prior to the outbreak? (responses: yes, no, unknown, not applicable) (if Yes, explain).</p> <p><i>Laboratory Section- Drinking Water</i></p> <p>The first field is: Was drinking water tested? (responses: yes, no, unknown)</p> <p>Table 1 contains the additional fields Residual/Free Disinfectant Level (Number, Unit), pH and Turbidity.</p> <p>Table 2 and Table 3 are on page 10.</p>
	<p><u>Water Not Intended for Drinking/Water of Unknown Intent</u></p> <p>Water Quality- There is no section for water quality questions. Water samples for these types of exposure are not likely to have a single set of regulations or standards by which water quality would be assessed. For this reason, standard questions were not developed and the section was omitted.</p> <p><i>Laboratory Section</i></p> <p>The first field is: Was the implicated water tested? (responses: yes, no, unknown)</p> <p>Table 1 contains the additional fields Residual/Free Disinfectant Level (Number, Unit), Turbidity and pH.</p> <p>Table 2 is on page 13. Table 3 is on page 14.</p>
<p>16. Remarks</p>	<p>Remarks is included at the bottom of page 2 in <u>General</u>. The following note has been added:</p>

	Briefly describe important aspects of the outbreak not covered above. Please indicate if any adverse outcomes occurred in special populations (e.g. pregnant women, immunocompromised persons).
	Additional comments may be added in <i>Remarks</i> at the end of <u>Recreational Water-Treated</u> (page 6), <u>Recreational Water-Untreated</u> (page 8), <u>Drinking Water</u> (page 12) and <u>Water Not Intended for Drinking/Water of Unknown Intent</u> (page 14).
<i>Person to contact for information about water quality or water system</i>	<p>The contact information for <i>Person to contact for information about water quality or water system</i> is at the bottom of page 2 in <u>General</u>; however, <i>Person to contact for information about water quality or water system</i> has been combined with <i>Person completing the form</i> and renamed <i>Reporting Agency</i>.</p> <p>The fields for <i>Reporting Agency</i> are: Agency name, Contact name, Phone no., E-mail, Contact title and Fax no.</p>
<i>Person completing the form</i>	<p>The contact information for <i>Person completing the form</i> is at the bottom of page 2 in <u>General</u>; however, <i>Person completing the form</i> has been combined with <i>Person to contact for information about water quality or water system</i> and renamed <i>Reporting Agency</i>.</p> <p>The fields for <i>Reporting Agency</i> are: Agency name, Contact name, Phone no., E-mail, Contact title and Fax no.</p>
<i>Date investigation initiated</i>	<i>Date investigation initiated</i> provided information about the timeliness of the response to the outbreak. It has been deleted and is captured in <i>Dates</i> on page 1 in <u>General</u> . The two fields that will capture information about the timeliness of the response are Date of report to CDC (other than this form) and Date of notification to State/Territory or Local/Tribal Health Authorities .
<i>Note (Epidemic and laboratory assistance)</i>	<p>The note was:</p> <p>Epidemic and laboratory assistance for the investigation of a waterborne outbreak is available upon request by the State Health Department to the Centers for Disease Control and Prevention. To improve national surveillance of outbreaks of waterborne diseases, please send a copy of this report, your internal report, and the questionnaire used in the epidemiologic investigation (if available) to:</p> <p>The note has been reworded as follows:</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 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:</p>
<i>Contact information</i>	<p>The contact information was:</p> <p>Centers for Disease Control and Prevention, Division of Parasitic Diseases, Attention: Waterborne Disease Coordinator, 4770 Buford Highway, NE, Mailstop F-22, Atlanta, GA, 30341-3724</p> <p>The contact information has been reworded as follows:</p>

	Waterborne Disease and 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.
New section # 1- Supplement to questions 11, 12, 14	<p><u>General- Environmental Health Specialists Network</u></p> <p><i>Environmental Health Specialists Network</i> has been added on page 2. This section is an extension of questions 11, 12 and 14, which ask for information about environmental factors involved in waterborne disease outbreaks. The EHS-Net Evaluation ID will enable a state reporter to link an outbreak report to an environmental evaluation conducted by state members of the federally-funded Environmental Health Specialists Network program.</p>
New section # 2	<p><u>General- Recall</u></p> <p><i>Recall</i> is on page 2. This section contains the following fields: Please check if any food or bottled water product was recalled; Type of item recalled; and Comments.</p> <p><i>Recall</i> will only be used in waterborne disease outbreaks involving bottled water. This information may be shared with the Food and Drug Administration (FDA). <i>Recall</i> is shared with the foodborne disease surveillance team and will be used more often by state reporters completing CDC 52.13.</p>
New section # 3- Extension of questions 12, 14	<p><u>Water Not Intended For Drinking/Water of Unknown Intent- Factors Contributing to Contamination and/or Increased Exposure to Contaminated Water</u></p> <p><i>Factors Contributing to Contamination and/or Increased Exposure to Contaminated Water</i> is a checklist of factors on page 14. This checklist was created by examining past outbreak reports. The checklist is an extension of questions 12 and 14. It has been designed to capture similar information about water not intended for drinking/water of unknown intent.</p>