

National Outbreak Reporting System (NORS)

User Training Document – Drinking Water Section

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1. INTRODUCTION – DRINKING WATER SECTION

This is a National Outbreak Reporting System (NORS) training guide for waterborne disease outbreak reports. The document provides a brief overview of how to complete the Drinking water section in NORS. Training guides for the other types of water sections are available in separate training documents.

In the Water Section, after you have selected “Drinking water in public or individual water systems” as the “Type of Water Exposure” and completed the tabs in that section, go to the Drinking Section.

The screenshot shows the 'Type of Water Exposure' form in the NORS interface. At the top, there are navigation tabs: 'General Section', 'Water', 'Etiology & Lab', 'Drinking', and 'Attachments'. Below these, there are sub-tabs: 'Type of Water Exposure' and 'Epidemiologic Data'. The main heading is 'Step 9 : Type of Water Exposure'. The form contains five radio button options. The third option, '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)', is selected and highlighted with a red rectangular box. A blue question mark icon is visible in the top right corner of the form area.

In the Drinking Section, you can enter data about the type of water system, the water quality, any contributing factors, and remarks from the outbreak investigation.

The screenshot shows the navigation tabs for the 'Drinking' section. The tabs are 'General Section', 'Water', 'Etiology & Lab', 'Drinking', and 'Attachments'. The 'Drinking' tab is highlighted with a red rectangular box. Below the main tabs, there are sub-tabs: 'Water System', 'Water Quality', 'Contributing Factors', and 'Remarks'.

If you need additional guidance or have other report questions, click on the Quick Help icon, a blue button with the question mark near the top of each question box within the NORS interface, the NORS-Water Guidance Document at www.cdc.gov/nors/forms.html.

2. WATER SYSTEM TAB

Begin with the Water System Tab. This Water System tab collects information about the type of water system, including the EPA ID number for public water systems, the water source, the setting of exposure, and the usual water treatment for water implicated in the outbreak investigation in the Water System Description Section.

General Section

Water

Etiology & Lab

Drinking

Attachments

Water System

Water Quality

Contributing Factors

Remarks

Step 16 : Drinking Water - Water System Description

PreviousNext

Water System Description

+

Add System

To add information about a water system to the Water System Description Section, click on the “Add System” link and enter information into the pop-up window. Report the “Water System” (e.g., Community, Private), the “Public Water System EPA ID Number” (if applicable), the “Water Source” (e.g., ground water, surface water), the “Water Source Description”, the “Setting of Exposure”, and the “USUAL Water Treatment Provided” (e.g., disinfection, coagulation). If the “USUAL Water Treatment” provided is “Disinfection” or “Filtration”, select the “Water Treatment Subtype”. Click the “Save” button to complete the entry and close the pop-up window. If multiple water systems were implicated in an outbreak, or if a water system used multiple water treatments or sub treatments, enter the data in additional rows by repeating the process. If the response to any of the questions is “Other,” report additional information in the Remarks tab.

The screenshot shows the 'Add Water System' pop-up window overlaid on the 'Water System Description' section of the NORS interface. The background interface includes a 'Primary Mode: Water' header, a 'General Section' tab, and a 'Water System' tab. The 'Add Water System' window contains the following fields:

- Water System:** Community (dropdown menu)
- EPA ID Number:** 123 (text input)
- Water Source:** Surface Water (dropdown menu)
- Water Source Description:** Lake/Reservoir/Impoundment (dropdown menu)
- Setting of Exposure:** Community/Municipality (dropdown menu)
- USUAL Water Treatment:** Disinfection (dropdown menu)
- Water Treatment Subtype:** Chlorine (dropdown menu)

At the bottom of the pop-up window are 'Cancel' and 'Save' buttons. In the background, the 'Add System' link is highlighted with a red box, and the 'Previous' and 'Next' buttons are visible on the right side of the interface.

3. WATER QUALITY TAB

The Water Quality Tab collects information on whether a drinking water system had any monitoring violations in the 1 month prior to the outbreak, any maximum contaminant level (MCL) violations in the 1 month prior to the outbreak, or any violations in the 12 months prior to the outbreak.

Click on the appropriate radio button to answer whether the drinking water system had any monitoring violations in the 1 month prior to the outbreak. If the answer is “Yes”, explain the circumstances in the text window below the question. The text window is unavailable for responses other than “Yes”.

Click on the appropriate radio button to answer whether the drinking water system had any maximum contaminant level (MCL) violations in the 1 month prior to the outbreak. If the answer is “Yes”, explain the circumstances in the text window below the question. The text window is unavailable for responses other than “Yes”.

Click on the appropriate radio button to answer whether the drinking water system had any violations in the 12 months prior to the outbreak. If the answer is “Yes”, explain the circumstances in the text window below the question. The text window is unavailable for responses other than “Yes”.

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:

characters left: 1500

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:

characters left: 1500

Did the drinking water system have any violations in the 12 months prior to the outbreak?***

☒ Yes
 ☐ No
 ☐ Unknown
 ☐ Not Applicable

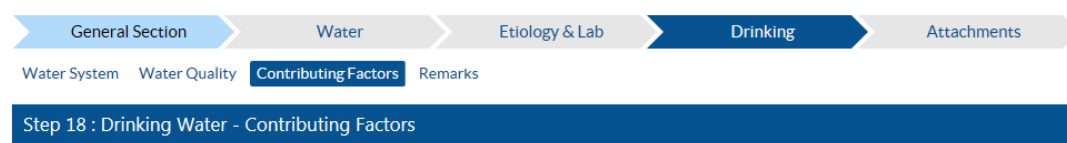
If Yes, explain:

characters left: 1500

*** 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.

4. CONTRIBUTING FACTORS TAB

The Contributing Factors Tab is used to report any documented or suspected factors that contributed to the outbreak. The tab is divided into four sections for factors contributing to drinking water contamination, each of which contains a question and list of contributing factors. The four sections are: Source Water Factors, Treatment Factors, Distribution and Storage Factors, and Factors Not Under the Jurisdiction of a Water Utility.



For each of the four contributing factors sections identify if a factor contributed to the disease or outbreak. If the answer is “Yes”, proceed to the corresponding list to select related contributing factors. Select a factor by clicking on the corresponding radio button to label it as “Confirmed/Documented” or “Suspected.” To undo a selection, click on “Clear” at the beginning of the row. If a contributing factor is not displayed in this list, it can be manually added. To manually add a contributing factor, scroll to the end of the list and write the contributing factor in the “Factor not found?” field. Click on the “Add Factor” button to add the factor to the list. Once a new value has been added, it will be included in list of options available to all NORS users.

The Source Water Factors Section is used to report any contributing factors for drinking water contamination in source water.

1. Factors Contributing to Drinking Water Contamination - Source Water Factors

Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak?
☒ Yes ☐ No ☐ Unknown

| Confirmed/Documented or Suspected | Factor Name |
|---|--|
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Water system intake failure (e.g., cracked well casing, cracked intake pipe) |
| Clear <input checked="" type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Wildlife contamination - Birds |
| Clear <input checked="" type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Wildlife contamination - Fish kill |
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Wildlife contamination - Mammals |

Factor not found?

The Treatment Factors Section is used to report any identified contributing factors in the outbreak investigation for drinking water contamination due to water treatment factors prior to entry into a house or building.

2. Factors Contributing to Drinking Water Contamination - Treatment Factors

Did a problem with the water treatment prior to entry into a house or building contribute to the disease or outbreak?
☒ Yes ☐ No ☐ Unknown

| Confirmed/Documented or Suspected | Factor Name |
|---|--|
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Other |
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Pipe/component failure or break (e.g., pipes, tanks, valves) |
| Clear <input checked="" type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Temporary interruption of disinfection |
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Unknown |

Factor not found?

The Distribution and Storage Factors Section is used to report any contributing factors for drinking water contamination due to water distribution and storage factors.

3. Factors Contributing to Drinking Water Contamination - Distribution and Storage Factors

Did a problem with the distribution system contribute to the disease or outbreak?

☒ Yes ☐ No ☐ Unknown

| Confirmed/Documented or Suspected | Factor Name |
|--|--|
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Pipe/component failure or break (e.g., pipes, tanks, valves) |
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Scheduled flushing of the distribution system |
| Clear <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Unknown |
| Clear <input type="radio"/> Confirmed/Documented <input checked="" type="radio"/> Suspected | Water temperature >=30°C (>=86°F) |

Factor not found?

The Factors Not Under the Jurisdiction of a Water Utility Section is used to report any contributing factors for drinking water contamination due to factors outside of the jurisdiction of the water utility. The question includes several examples of where these factors might occur.

4. Factors Contributing to Drinking Water Contamination - Factors Not Under the Jurisdiction of a Water Utility

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
 ☐ No
 ☐ Unknown

| | Confirmed/Documented or Suspected | Factor Name |
|-----------------------|--|---|
| Clear | <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Pipe/component failure or break (e.g., pipes, tanks, valves) |
| Clear | <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | Unknown |
| Clear | <input type="radio"/> Confirmed/Documented <input type="radio"/> Suspected | unpredictable weather |
| Clear | <input type="radio"/> Confirmed/Documented <input checked="" type="radio"/> Suspected | Water temperature $\geq 30^{\circ}\text{C}$ ($\geq 86^{\circ}\text{F}$) |

Factor not found?

5. REMARKS TAB

The Remarks Tab contains a single text field for any additional comments about the waterborne disease outbreak investigation. Add remarks up to 5000 characters in the window provided.

The screenshot displays the NORS interface for the Drinking Section. At the top, a navigation bar includes tabs for General Section, Water, Etiology & Lab, Drinking (which is highlighted), and Attachments. Below this, a sub-navigation bar shows links for Water System, Water Quality, Contributing Factors, and Remarks (which is highlighted). The main content area is titled "Step 19 : Drinking Water - Remarks" and includes a "Previous" link and a "Next" button. The Remarks section features a large text input field with a light blue header labeled "Remarks" and a help icon. At the bottom left of the text field, it indicates "characters left: 5000".

6. ATTACHMENTS SECTION

Attach any relevant information to the NORS report in the Attachments Section. Do not include any personally identifiable information (e.g., private property's address). The maximum file size acceptable is 4 MB. File types that can be attached include images (e.g., jpeg, png), documents (e.g., Word, PDF), or other file types with information (e.g., Excel). To attach a file, click on the “Browse” button to locate the file, and click the “Upload” button to upload the attachment to the NORS report.

The attached file will appear in a summary table if the file was uploaded successfully.

| Document Name | Document Length (bytes) | Document Type | Upload Date |
|---------------|-------------------------|---|-------------|
| Test.docx | 12,717 | application/vnd.openxmlformats-officedocument.wordprocessingml.document | 09/04/2014 |

You have now finished reviewing the Drinking Section of a waterborne disease outbreak report. Make sure to click the “Save Report” button near the top of the screen before exiting the report.

If you need assistance in completing other sections of NORS, please refer to the online technical and guidance documents located at <http://www.cdc.gov/nors/>.

For further assistance or for questions or comments, please email NORSWater@cdc.gov.