

National Outbreak Reporting System (NORS): Water Intended for Drinking (Drinking Water), Water Not Intended for Drinking and Water of Unknown Intent (WNID/WUI)

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1 INTRODUCTION

This training session will provide an overview on how to complete the Drinking Water and Water Not Intended for Drinking or Water of Unknown Intent tabs. This training assumes that you have watched the Login and Main Features training, the General section training, the Water-General training, and the Treated and Untreated Recreational Water training. This session will review the tabs for Water-Drinking, Water-Drinking Contributing Factors, Water-Unknown Intent and Water-Unknown Contributing Factors. Please see the Water Sample Laboratory Data training to learn how to complete the Water-Drinking Lab and Water-Unknown Lab tabs.

2 WATER-DRINKING TAB

We will start on the Water-Drinking tab, where we will enter data about an outbreak of *Salmonella* at a restaurant. For this scenario, let's assume that only the people who drank ice water with their meals became ill. We need to describe the drinking water system and answer questions related to drinking water quality violations.

The Drinking Water Vehicle Description section describes the water that was the vehicle for disease transmission. Let's click on 'Add Vehicles' to get started. The data entry table is split in two and stacked so that we won't need to scroll far across the screen as we enter data.

The first field, Water Type, is where the type of water system should be reported. This may be a public system, a private system or bottled water. Water systems are further defined in the guidance document. We will say that this restaurant outbreak involved a public water system and that the outbreak investigation identified it as a non-transient noncommunity water system.

Next, enter the Public Water System EPA ID Number if you are reporting a water type that is a public water system. The EPA ID number is used by EPA to uniquely identify public water systems within each state. Since this example does not reflect a real system, the field has been left blank, however, if you want to enter an EPA ID number and it is not available from the outbreak investigation, the guidance document lists a website where you can look it up.

Next, let's say that this drinking water system uses surface water only and that the water comes from a lake. Select 'surface water' from the pick list for Water Source. This will limit the options

for Water Source Description to surface water descriptions so that we can go to the next line of fields and select 'Lake/Reservoir/Impoundment' for the Water Source Description.

The final three fields describe the setting of exposure, the usual water treatment and the water treatment subtype. Setting of Exposure is the combined category of 'Restaurant/Cafeteria'. Let's select 'disinfection' as the Usual Water Treatment Provided. Remember to enter the usual water treatments regardless of whether or not the treatments were operating correctly at or just prior to the time of the outbreak.

The 'Water Treatment Subtype' field is only used to describe disinfection or filtration treatments. For example, we can select a disinfection subtype of 'chlorine from the pick list. Click 'Save'.

If a water system uses more than one type of treatment, enter a second row of data, repeating the information about the water system and the setting of exposure, and entering new information about the water treatment method. If more than one water system was involved in the outbreak, such as one public and one private—or individual—water system, report each water system in a separate data row.

Next, let's go to the Drinking Water Quality section. This section contains three questions about drinking water system violations that may have occurred prior to the outbreak. Information about water system violations is frequently available from utility records, consumer confidence or water quality reports, as well as from violation records at state and local health departments. If the answer to a question is 'yes', a brief explanation should be provided in the space following the question. Please do not answer 'yes' or add comments if the correct answer is 'no', 'unknown' or 'not applicable'

The first question asks if there were there any monitoring violations in the month leading up to the outbreak. Click the radio button next to 'No'.

The second question asks if there were any maximum contaminant level violations in the month prior to the outbreak. Let's click the radio button next to 'Unknown'.

For the third question, which asks if there were any violations in the 12 months prior to the outbreak, let's answer is 'yes' and type in "An MCL violation was documented 11 months prior to the outbreak."

Next, click on the Water-Drinking Contributing Factors tab.

3 WATER – DRINK. CON. FAC. TAB

This tab is used to report Contributing Factors for the outbreak. Factors can be labeled as either confirmed or documented factors, or as suspected factors. As mentioned for the recreational water trainings, please only report factors that you know or suspect contributed to the outbreak. If there is other information that you would like to report, please write it in the remarks or upload it as an attachment to the report instead.

For this report, assume that local weather reports showed that there were heavy rains shortly before the exposure period that had increased run-off into the lake, and that in the past, heavy rainfall had had an adverse effect on the quality of the lake water. The investigators strongly suspect but do not have evidence to support that there was also a temporary interruption of

disinfection right around this time period, which allowed contaminated water to enter the distribution system.

First, let's click the radio button next to 'Yes' for the question that asks us if a problem with the source water contributed to the outbreak. Then, let's add 'Flooding/heavy rains' as a suspected factor.

The second question asks if a problem with the water treatment prior to entry into a house or building contributed to the outbreak. The answer is 'Yes' and we can report 'Temporary interruption of disinfection' as a suspected factor.

The third question asks if a problem with the distribution system contributed to the outbreak. The answer to this question is dependent on the type of water system, so you may find it helpful to refer to the available guidance. Let's answer 'unknown' and go directly to the next question.

The fourth question asks if a problem after the water meter or outside the jurisdiction of a water utility contributed to the outbreak. The examples directly below the question may be helpful. Let's assume that the answer was determined to be 'No' and again leave the list of contributing factors blank.

Finish the report by typing any additional details in the Remarks field.

Remember to click 'Save Changes' or navigate to another tab before logging out.

4 WATER-UNKNOWN INTENT TAB

For the last report type, let's start on the Water-Unknown Intent tab, where we will enter data about an outbreak of *Giardia* involving a group of campers who drank water from a stream in a state park. We need to indicate the intended use of the water, as well as provide a description of the water associated with the outbreak.

The Intent for Use section asks 'What was the intended use for the implicated water?'. We can highlight one or more values or add a new value. The stream wasn't designed to have a specific use but let's describe it here as 'Wilderness', since we know that the group chose a campsite to spend time in an undeveloped, natural setting.

The Water Description section describes the water that was the vehicle for disease transmission. Let's click 'Add Vehicles' and complete this table. We can select 'River/Stream' for Water Type, and select 'Park-State Park' as the Setting of Exposure. The Usual Water Treatment Provided will be 'no treatment' and therefore, Water Treatment Subtype can be left blank.

Water Treatment Subtype is only filled in when the response to Usual Water Treatment Provided is 'disinfection' or 'filtration'. Also, for outbreaks involving treated water, remember to enter the usual water treatments regardless of whether or not the treatments were operating correctly at or just prior to the time of the outbreak.

Now, let's click 'Save' and go to the Water-Unknown Contributing Factors tab.

5 WATER-UNKN. CON. FAC. TAB

Let's report Contributing Factors for the outbreak as we have done for the previous sections. Remember to report factors that are confirmed or documented factors, and factors that are

suspected to have contributed to the outbreak. Factors that were not documented, observed or suspected should not be reported here.

Several common contributing factors are already listed in NORS, however, the initial list of factors focuses on outbreaks involving cooling towers and ornamental fountains. Although there may be other factors for this outbreak, let's just use 'wildlife contamination' as the example here and list it as a suspected factor.

Add up to 1500 characters of text in the Remarks section to finish the report.

This is the end of the training. Please remember to watch the training for Water Sample Laboratory Data before completing an outbreak report. Refer to the online guidance or contact NORSadmin@cdc.gov with feedback or additional questions.