

The CDC 52.12 form for NORS, Module 3: Treated Recreational Water (Rec - Treated)

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1 INTRODUCTION

This module will show you how to complete the Treated Recreational Water tabs. After you have selected treated recreational water as the type of water exposure in the Water-General section and entered data for this section, go to the Rec Water-Treated tab to enter data about the water venue, water quality and testing, as well as any contributing factors known or suspected to be associated with the outbreak.

Data entry for the Water-General tabs and the tabs for other types of water exposure are covered in separate training modules. Please review the trainings for each section before completing it for the first time. If you have additional questions about this form, a guidance document for the paper form is available online. This document also contains pick-lists to help you complete several of the fields. Please contact your agency or reporting site administrator if you have questions about the reporting process for your site.

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For the Treated Recreational Water tabs, we will review data from a practice report that describes an outbreak of cryptosporidiosis following a wedding. The report includes information about a hotel pool that was implicated in the outbreak.

The Recreational Water Vehicle Description section describes the water that was the vehicle for disease transmission. Three separate tables are linked by a field called Water Vehicle Number. Descriptive information about a water venue can be entered once in Table 1 and referenced repeatedly in Table 2 and Table 3.

In this report, the existing data row shows that the NORS user assigned the number one for the venue's 'Water Vehicle Number'. For 'Water Type' and 'Water Subtype', 'pool- swimming pool' and 'indoor' were reported. The 'Setting of Exposure' is listed using the category 'hotel/motel/lodge/inn'.

Table 2 describes treatment methods at the venue. Two completed data rows are shown here. The 'Water Vehicle Number' in each row is 1, linking these data rows to the data in Table 1. For the first row, the 'Usual Water Treatment' is 'filtration'. The next field, 'Venue Treatment Subtype', is only used if disinfection or filtration treatments are reported. The filtration method reported here is 'cartridge filter'. 'Chlorination Subtype' is blank because chlorine treatment is not being described in this data row.

For the second row, the 'Usual Water Treatment' is 'disinfection' and the 'Venue Treatment Subtype' is 'chlorine'. A chlorination subtype of 'gaseous' is reported in the 'Chlorination Subtype' field.

Table 3 describes the fill water at a venue. Here, the 'Water Vehicle Number' again refers back to the one row of data entered in Table 1. The 'Fill Water Type' is 'Public water supply'. The next two fields should only be completed for public water supplies. In this example, the 'Usual Water Treatment' provided before the water reached the pool is listed as 'filtration'. If 'filtration' or 'disinfection' is the usual water treatment, the 'Fill Water Treatment Subtype' should also be completed. 'Unknown' has been selected here. If more than one type of fill water is used, or a public water system has more than one treatment type or subtype, enter as many data rows as you need to enter the information.

The Recreational Water Quality section contains two questions. The first question asks whether the venue met state or local recreational water quality regulations. Check the box next to the appropriate response. The answer in this report is 'No' and an explanation of "Did not maintain a water quality log" has been provided on the line below the question.

The second question asks if there was a pool operator on the payroll who had state-approved training or certification. The answer is again 'no'.

Now we will go to the Laboratory Section to review how data from water sampling and testing are reported. The first question asks 'Was water from treated recreational venues tested?'. For this example, 'yes' has been checked.

Since water was tested, let's next move to the Water Quality Results table. Data are entered here in columns instead of rows. We will look at the existing column about a swimming pool backwash sample. This column has a 'Sample Number' of '1'. We will refer to the sample number again in the next table.

'Source of Sample' has been reported as 'swimming pool'. 'Additional Description...' should be a brief description about where and how the sample was collected and any treatments applied to the sample before it went to the laboratory. Here, it has been documented that a backwash sample was collected, which was treated with sodium thiosulfate and sent on ice to the laboratory. For 'Date', July 26, 2007, is the date that the sample was collected.

The results for the remaining fields should be collected at the time of sampling, before any treatment has been applied to the sample. In this example, the volume was 1 liter, the temperature was 80 degrees Fahrenheit, the residual level was 1.5 parts per million, the combined disinfectant level was 3 parts per million and the pH was 7.2.

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Next, let's go to the top of the second page to look at the Microbiology or Chemical/Toxin Analysis table. This table is similar to the Clinical Specimens table that was reviewed in the Water-General training module. The data should include both positive and negative findings, which means that if water was tested for a specific pathogen or chemical, the pathogen or chemical should be reported its own data row, along with whether or not the test results were positive. Secondly, there should be a row for each level of testing performed, as we will see below for *Cryptosporidium hominis*.

In this example, the 'Sample Number' is '1', and corresponds to the sample above. The genus is '*Cryptosporidium*' and the fields for 'Species', 'Serotype..', 'Genotype/Subtype' and 'PFGE Pattern' are blank because the laboratory did not look for that information in the first round of testing. 'Test Results Positive?' is checked off to indicate that *Cryptosporidium* was found in the sample. This is different from the Clinical Specimens table, where the field for confirmed etiology is only checked off for the most detailed description of the etiologic agent. The 'Concentration' reported by the laboratory was '5' with a 'Unit' of 'oocysts/L'. The 'Test Type' used by the laboratory was 'Microscopy'. Refer to the list directly below the table for additional assistance with the 'Test Type' field. 'Test Method' is a field that refers to standard laboratory testing procedures used to isolate or detect a microbe or chemical. This is a field that laboratory staff may be able to assist with, and further information can also be found in the guidance document for the form.

The second row contains results for the testing that identified the species of *Cryptosporidium*. Again, the 'Sample Number' is '1'. '*Cryptosporidium*' is listed for 'Genus and the 'Species' is '*hominis*'. The box for 'Test Results Positive?' has been checked because oocysts from the water sample were identified as *Cryptosporidium hominis*. Advanced testing procedures may not have 'Concentration' or 'Unit' measurements, and in this example, both of these fields have been left blank. The 'Test Type' listed here is 'DNA/RNA Amplification/Detection'. The 'Test Method' field indicates that the laboratory used EPA method 1623 followed by a genotyping technique.

The next section of the form is used to report Contributing Factors for the outbreak. Factors can be labeled as confirmed or documented factors, or as suspected factors. To report a factor, check the box for either 'Documented/Observed' or 'Suspected' on the same line as the factor. Please do not report factors that were not documented, observed or suspected.

Several common contributing factors are already listed, organized into five categories: People, Facility Design, Maintenance, Policy and Management, and Other/Unknown. For this outbreak, two existing factors are checked off. The first, 'Fecal/vomit accident', is listed as a suspected factor. The second, 'No supplemental disinfection installed that would have inactivated the pathogen' is listed as a documented factor.

Finish the report by entering up to 1500 characters of text in the 'Remarks' field.

Thank you for reviewing the information contained in this module. This is the end of the training for the Treated Recreational Water section of the CDC 52.12 waterborne disease outbreak reporting form. Please refer to the guidance document for the form or the other online training modules before completing additional sections of the form.