



Knox/East TN Healthcare Coalition Water Contamination Tabletop Exercise

Situation Manual

November 12, 2015

EXERCISE OVERVIEW

Exercise Name	Knox/East Tennessee Healthcare Coalition Water Contamination Tabletop Exercise (KET HCC Water Contamination TTX)
Exercise Dates	November 12, 2015
Scope	This exercise is a tabletop exercise, planned for 4 hours at Lighthouse Event Center in Knoxville, TN. Exercise play is limited to healthcare coalition members, partner water utility organizations, dialysis centers, and water vendors.
Mission Area(s)	Response and Recovery
Core Capabilities	HPP Capabilities 1: Healthcare System Preparedness, 2: Healthcare System Recovery, 3: Emergency Operations, 5: Fatality Management, 6: Information Sharing; and 10: Medical Surge
Objectives	<ul style="list-style-type: none">• Discuss the internal and external communications systems utilized during such events.• Evaluate the resource needs and methods for requesting additional support.• Define the organization’s ability to coordinate with outside agencies.• Discuss how to manage and recover from a water utility outage in the healthcare system.
Threat or Hazard	Natural water contamination event secondary to severe weather and flooding.
Scenario	The local community has been experiencing a series of heavy rains and storms with flooding, which ultimately results in the municipal water system being contaminated with E.coli.
Sponsor	Knox/East TN Healthcare Coalition utilizing ASPR grant funding.
Participating Organizations	Region-wide hospitals, public health, water utility districts, dialysis centers, potable water vendors, etc.

**Point of
Contact**

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GENERAL INFORMATION

Exercise Objectives and Core Capabilities

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to core capabilities, which are distinct critical elements necessary to achieve the specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the Exercise Planning Team.

Exercise Objective	Core Capability
Discuss internal and external communications systems utilized during such events.	HPP: 1, 2, 3, 5, 6
Evaluate the resource needs and methods of requesting additional support.	HPP: 1, 2, 3, 5, 10
Define the organization's ability to coordinate with outside agencies.	HPP 1, 2, 6
Discuss how to manage and recover from a water utility outage.	HPP 1, 2, 3, 5, 6, 10

Table 1. Exercise Objectives and Associated Core Capabilities

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

- **Players.** Players are personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **Observers.** Observers do not directly participate in the exercise. However, they may support the development of player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.
- **Facilitators.** Facilitators provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also may assist with facilitation as subject matter experts (SMEs) during the exercise.
- **Evaluators.** Evaluators are assigned to observe and document certain objectives during the exercise. Their primary role is to document player discussions, including how and if those discussions conform to plans, policies, and procedures.

Exercise Structure

This exercise will be a multimedia, facilitated exercise. Players will participate in the following three modules:

- Module 1: Initial Notification/Actions

- Module 2: 48-72 Hours
- Module 3: 96 Hours and Recovery

Each module begins with a multimedia update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in functional group discussions of appropriate issues. For this exercise, the functional groups will follow county and/or water utility district lines.

After these functional group discussions, participants will engage in a moderated plenary discussion in which a spokesperson from each group will present a synopsis of the group's actions, based on the scenario.

Exercise Guidelines

- This exercise will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.
- Respond to the scenario using your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your training.
- Decisions are not precedent setting and may not reflect your organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.
- Issue identification is not as valuable as suggestions and recommended actions that could improve prevention, mitigation, preparedness, response, and/or recovery efforts. Problem-solving efforts should be the focus.

Exercise Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted and/or account for logistical limitations. Exercise participants should accept that assumptions and artificialities are inherent in any exercise, and should not allow these considerations to negatively impact their participation. During this exercise, the following apply:

- The scenario is plausible, and event discussions occur as they are presented.
- There is no hidden agenda, and there are no trick questions.
- All players receive information at the same time.
- The water contamination event is located in each organization's individual water utility district.

Exercise Evaluation

Evaluation of the exercise is based on the exercise objectives and aligned capabilities, capability targets, and critical tasks, which are documented in Exercise Evaluation Guides (EEGs). Evaluators have EEGs for each of their assigned areas. Additionally, players will be asked to

complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After-Action Report (AAR).

MODULE 1: INITIAL NOTIFICATION AND ACTIONS

November 12, 2015: (30 mins caucus and 15 mins brief-back)

November 12: The local community is experiencing a series of heavy rains and storms with flooding. There has been a power outage at the local water treatment plant. Utility operations suspects that there could be a significant water main break (i.e. decreasing tank levels, low pressure/no water calls) that may be concealed due to the flooding within the community. Utility Operations indicate that the repair/recovery timeline is unclear and that this could be a sustained event. Healthcare operations may also be experiencing a loss of water pressure due to the event.

Brief Group Discussion

At what point do Utility Operations issue a Precautionary Boil Water Advisor based on the above information?

For the purpose of this exercise, Utility Operations HAVE issued a Precautionary Boil Water Advisory

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 1. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

- 1. What are your initial actions following the Precautionary Drinking Water Advisory? Do you have the resources to operationalize?**

4. What actions need to take place to assure you have fiscally managed the situation (consider receiving and NOT receiving federal assistance)?

APPENDIX A: EXERCISE SCHEDULE

Time	Activity
November 12, 2015	
0800	Facilitator/Evaluator Briefing
0830	Registration
0900	Welcome and Opening Remarks
0915	Module 1: Briefing, Caucus Discussion, and Brief-Back
1000	Break
1010	Module 2: Briefing, Caucus Discussion, and Brief-Back
1110	Lunch
1145	Module 3: Briefing, Caucus Discussion, and Brief-Back
1235	Break
1245	Hot Wash

APPENDIX B: WATER OUTAGE/CONTAMINATION DECISION GUIDE

Water Associated Systems	Potential to Reach Patient	Ability to Isolate	Effects of Water Loss	Contaminant Effect on Equipment	Process for Flushing Contaminant	Disinfectant Effect on Equipment	Process for Flushing Disinfectant
Filtration Systems							
Water Softeners							
Chillers							
Water Storage Tanks							
Water Heaters							
Patient Care Equipment							
Lab Processing Equipment							

Water Associated Systems	Potential to Reach Patient	Ability to Isolate	Effects of Water Loss	Contaminant Effect on Equipment	Process for Flushing Contaminant	Disinfectant Effect on Equipment	Process for Flushing Disinfectant
Sterile Processing Equipment							
Scope washers/UV Tubes							
Dishwashers							
Water/Ice Machines							
Drinking Fountains							
Coffee Makers (Plumbed)							
Sinks, Showers, Tubs							
Toilets							

Water Associated Systems	Potential to Reach Patient	Ability to Isolate	Effects of Water Loss	Contaminant Effect on Equipment	Process for Flushing Contaminant	Disinfectant Effect on Equipment	Process for Flushing Disinfectant
Laundry Equipment							
EVS Mixing Stations							
Fire Suppression Systems							
Outdoor Faucets							
Irrigation Systems							

APPENDIX C: SAMPLE UTILITY WATER ADVISORIES

(Precautionary Boil Water Advisory, Boil Water Advisory, and Lifted Boil Water Advisory)

MEDIA ADVISORY

[Draft / Example]

[Date]

To: Local Media Representatives

From: Local Utility

Re: Precautionary Boil Water Alert

Due to the recent event involving [enter event or emergency situation], the local utility, in conjunction with the local health department and the Tennessee Department of Environment and Conservation, is advising customers within the utility's water system [or x portion of the system] to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

Although emergency personnel have not verified any water contamination at this time, the utility advises that customers boil water before drinking as a precaution. [Optional - It is possible that water outages were experienced during this emergency. Any customer who has experienced a water outage must boil water prior to drinking.]

Achieve a full, rolling boil for one (1) minute and let the water cool before using. Boiled or bottled water should be used for drinking, making ice, brushing teeth, and food preparation until further notice [or enter timeframe when situation will be resolved].

On [date], [enter brief description of situation].

Again, this alert is precautionary, meaning emergency personnel have not verified any water contamination. It has been determined that this emergency could lead to possible contaminants entering the water distribution system.

Some people may be more vulnerable to potential contaminants than the general population. Those who are immune-compromised, including cancer patients undergoing chemotherapy, people who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk for infection. Those people should seek advice about drinking water from their health care provider.

[Enter description of other ways the utility is responding to the situation, as applicable. E.g., sampling, flushing - Example: Water emergency personnel will continuously test the water quality, monitor the system, and make necessary repairs as quickly as possible. The utility is taking the steps necessary to verify that the water is safe in order to rescind the precautionary alert as soon as possible.]

Optional: This alert only applies to X portion of the distribution system. The area affected by the precautionary alert is located at [insert facility or applicable roads affected]. Other parts of the distribution system are deemed safe.

Customers can help by sharing this information with others located within the service territory, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

For more information, please contact the local utility at (865) 555-1234. General guidelines on ways to lessen the risk of infection by microbes are available from the U.S. Environmental Protection Agency Safe Drinking Water Hotline at 1-800-426-4794, Poison Control Center at 1-800-288-9999, and the local health department at (865) 555-1235.

THIS IS AN EXERCISE. THIS ADVISORY IS AN EXAMPLE FOR DISCUSSION PURPOSES.

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MEDIA ADVISORY

[Draft / Example]

[Date]

To: Local Media Representatives

From: Local Utility

Re: Boil Water Alert

Due to the recent event involving [enter event or emergency situation], the local utility, in conjunction with the local health department and the Tennessee Department of Environment and Conservation, is advising customers within the utility's water system [or x portion of the system,

pending TDEC's written approval] to use boiled tap water or bottled water for drinking and cooking purposes.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Achieve a full, rolling boil for one minute and let it cool before using. Boiled or bottled water should be used for drinking, making ice, brushing teeth, and food preparation **until further notice** [or enter timeframe when situation will be resolved or compliance will be achieved].

On [date], [enter brief description of violation or situation]. This event affected [or may have affected] the water system with [enter contaminant(s) and any known level(s)]. [Enter description of what the utility is doing to correct the violation or situation - Example: Water emergency personnel will continuously test the water quality, monitor the system, and make necessary repairs as quickly as possible. The utility is taking the steps necessary to verify that the water is safe in order to rescind the alert as soon as possible.]

[Enter potential health effects and any populations at risk, including the standard language within 0400-45-01-19 Appendix B – Standard Health Effects for Public Notification].

If you experience any of these symptoms and they persist, seek medical advice. Some people may be more vulnerable to potential contaminants than the general population. Those who are immune-compromised, including cancer patients undergoing chemotherapy, people who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk for infection. Those people should seek advice about drinking water from their health care provider.

Potable water is available at the following locations: [enter locations]. [Optional: Please bring a clean water container with a lid].

Customers can help by sharing this information with others located within the service territory, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

For more information, please contact the utility at (865) 555-1234. General guidelines on ways to lessen the risk of infection by microbes are available from the U.S. Environmental Protection Agency Safe Drinking Water Hotline at 1-800-426-4794, Poison Control Center at 1-800-288-9999, and the local health department at (865) 555-1235.

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MEDIA ADVISORY

[Draft / Example]

[Date]

To: Local Media Representatives

From: Local Utility

Re: Boil Water Notice Lifted

As of [time] on [date], utility water customers **no longer need to boil water** before drinking, making ice, brushing teeth, and food preparation.

Testing of water quality has been completed and the water within the distribution system meets drinking water standards. Customers are advised, however, to flush their plumbing for approximately three minutes before using for drinking and cooking purposes. We apologize for any inconvenience and thank you for your patience.

The boil water requirement has been in effect since [date], after [insert incident details]. Residents were asked to boil water as a safety precaution until laboratory tests could confirm the water was safe for drinking purposes. Customers are advised to flush each internal plumbing fixture (e.g., showers, faucets, etc.) for approximately 3 minutes prior to using. Customers such as schools, apartments, and multi-story buildings may need additional flush time.

Customers can help by sharing this information with others located within the service territory, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

For more information, please contact the local utility or the local health department.

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