[Exercise Name]

**\*Note: Items highlighted in gray will or may need to be changed to reflect the details of your exercise. Delete this text box before producing and distributing this situation manual.**

Situation Manual

[Date]

[This Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. Some exercise material is intended for the exclusive use of exercise planners, facilitators and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan].

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# Exercise Overview

| **Exercise Name** | [Insert the formal name of exercise, which should match the name in the document header] |
| --- | --- |
| **Exercise Dates** | [Indicate the start and end dates of the exercise] |
| **Scope** | This exercise is a tabletop exercise, planned for [exercise duration] at [exercise location]. Exercise play is limited to [exercise parameters]. |
| **Mission Area(s)** | [Prevention, Protection, Mitigation, Response and/or Recovery] |
| **Objectives** | [List exercise objectives; see page 2] |
| **Threat or Hazard** | Source Water Contamination |
| **Scenario** | [Insert a brief overview of the exercise scenario, including scenario impacts (2-3 sentences)] |
| **Sponsor** | [Insert the name of the sponsor organization, as well as any grant programs being utilized, if applicable] |
| **Participating Organizations** | [Insert a brief summary of the total number of participants and participation level (e.g., federal, state, local, tribal, non-governmental organizations (NGOs) and/or international agencies). Consider including the full list of participating agencies in Appendix B. Delete Appendix B if not required.] |
| **Point of Contact** | [Insert the name, title, agency, address, phone number and email address of the primary exercise POC (e.g., exercise facilitator)] |

# General Information

## Exercise Objectives

The following exercise objectives in Table 1 describe the expected outcomes for the exercise.

| **Exercise Objectives** |
| --- |
| [Define or refine participants’ roles and responsibilities for managing the consequences of a source water contamination incident, which should be reflected in their ***plans, policies and procedures*** and other preparedness elements currently in place or under development] |
| [Build relationships between utilities and stakeholders] |
| [Determine neighboring utility water infrastructure capabilities and needs] |
| [Identify other needed enhancements related to ***training and exercises*** and other preparedness elements currently in place or under development] |
| [Insert objective] |

Table 1. Exercise Objectives

The exercise schedule is in Appendix A.

## 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 (Appendix B), 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] scenario modules:

Module 1: [Upstream Contamination Occurs]

Module 2: [Contamination Nears Drinking Water Intake]

Module 3: [Contamination Reaches Drinking Water Intake and Facilities]

Each module begins with a multimedia update that summarizes key events occurring within that time period.

The facilitator will guide participants through a discussion period, developed using the scenario modules, to describe their actions, decisions and notifications as necessitated by the change in situation or resource status. Players are encouraged to ask questions of other players. Immediately following the discussion period, the facilitator will lead a “hot wash” session among participants to highlight key elements and develop a list of action items.

## 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, protection, mitigation, response or recovery] efforts. Problem-solving should be the focus.
* Assume there will be cooperation and support from other responders and agencies.
* The basis for discussion consists of the scenario narrative and modules, your experience, your understanding of your Emergency Response Plan (ERP), your intuition and other utility resources included as part of this material or that you brought with you.
* Treat the scenario as if it will affect your area.

## 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 exercise is conducted in a no-fault learning environment wherein capabilities, plans, systems and processes will be evaluated.]
* [The exercise scenario is plausible, and events occur as they are presented.]
* [All players receive information at the same time.]

# Module 1: [Upstream Contamination Occurs]

## Scenario

[August 24, 2017]: [0300 hrs]

[It is late summer, and the region is experiencing moderate drought conditions. The drinking water utility in the area relies on the local river as its source water. The utility also has a small back up reservoir, but its levels are lower than usual due to the drought.

The river where the intakes are located is bordered on one side by conservation land and on the other side by a large highway. The highway serves as a major thoroughfare for transportation of oil and other materials between industrial and urban centers in the region.

A tank truck driver from Quality Trucking, Inc. is driving into the city from the north when he falls asleep and crashes his truck, rolling from the road into a ditch. Due to the truck’s fast speed and high momentum, the tanker of the truck continues to roll and comes to a stop near the shoreline of the river. The driver survives the impact but remains unconscious. There are no witnesses. Forty-five minutes later, an on-duty police officer drives past the site of the crash and notices the truck cab in the ditch. She calls for emergency medical services, but remains with the driver rather than investigating the surroundings. When emergency response staff arrive, medical staff attend to the driver while police and fire personnel assess the scene of the accident. They notice that the tanker, further downhill, seems to be spilling its contents into the river.

Meanwhile, operators for the city’s drinking water plant are waking up and heading to work. The lead operator hears news of the crash and spill on the local AM radio station as he drives to work. When he arrives at the plant, he is notified by the night shift operator that the state environmental agency notified the plant that a spill of an unknown substance occurred upstream of the plant’s intake.]

## Key Issues

* [The drinking water utility has one intake.]
* [Water treatment consists of coagulation, flocculation, sedimentation, filtration and disinfection. In addition, softening, pH adjustment and fluoridation are also performed.]
* [A sample of the leaking substance is collected, but it will take some time before decisive analytical results are reported. The truck’s manifest has not been located. First responders noted that the spilled liquid smelled like gasoline or another petroleum product and initial screening testing performed by fire hazmat personnel indicated a petroleum product as well.]

## 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. [How and from whom would your utility receive notice of a spill incident that may impact your source water?]
2. [What information would be helpful in coordinating your response to a spill?]
3. [Does your utility have a Source Water Protection Plan? What information is in this plan that may be able to help you?]
4. [What source water contamination warning measures have been implemented at your utility?]
5. [What response options does your utility have to manage a source water contamination incident (e.g., spill diversion, alternate intakes, interconnections with other utilities)?]
6. [Does your utility have procedures or agreements in place to arrange for emergency laboratory analyses in the case of a suspected water contamination incident?]
7. [What initial response actions would you take? Do you have response plans, procedures or checklists in place to address source water contamination?]
8. [How does your utility coordinate with any upstream and downstream utilities?]

# Module 2: [Contamination Nears Drinking Water Intake]

## Scenario

[August 24, 2017]: [0900 hrs]

[A visible sheen now coats the width of the river directly downstream of the crash site and it is expanding. EPA and the state environmental agency are assessing the situation. They determine the leak was composed of an unknown quantity of number 2 fuel oil (a distillate home heating oil) based on communication with the trucking company. The Army Corps of Engineers conducts surveillance by helicopter to assess the extent of the sheen and the speed at which it is moving down the river. Based on their observations and knowledge of oil spill management, they calculate the sheen will arrive at the city’s intake in approximately 8 hours.

The utility determines protective actions should be initiated, but because of the low reservoir levels and high summer water demands, they decide to wait until contamination is imminent to shut the city’s intake.]

## Key Issues

* [The utility owns several inflatable booms that can protect intake pipes from contaminants that are less dense than water.]
* [Based on a river time of travel model maintained by local emergency management, the contaminant is expected to arrive at the city’s intake at 1700 hours. But, predictions of contaminant arrival time are inexact and may change depending on weather conditions.]

## Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 2. 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. [How and from whom will your utility continue to receive updated information as the situation evolves?]
2. [What protective actions can be implemented at your utility to prevent contamination, especially since the intake is still active?]
3. [What response partner agencies will be involved in these protective actions? How will communication between response partners be carried out and coordinated?]
4. [What sampling and analysis procedures does your utility have in place to address the incident? What laboratory capabilities will be required in response to this incident? How will the laboratories you work with be impacted by the increased demand for testing resulting from this incident?]
5. [What would your water quality message be to the public, as some may be concerned that the river (and therefore their drinking water) has been polluted? What strategies do you employ for encouraging short term water conservation?]
6. [What communication mechanisms are available to utilities to disseminate information to the public?]
7. [Who at your utility would keep any upstream and downstream utilities informed of the evolving situation?]

# Module 3: [Contamination Reaches Drinking Water Intake]

## Scenario

[August 24, 2017]: [1400 hrs]

[Suddenly, the wind’s direction shifts and its strength increases. Whitecaps begin to form on the river.

The increase in wind speed has caused the sheen to move more quickly than anticipated toward the intake. Instead of arriving at the intake as predicted around 1700, the sheen is now predicted to arrive within the hour. Utility and local emergency management agency staff race to boom off the drinking water intake from the floating product.

Utility employees rush to turn off the intake’s pump, but lags in communication cause a delay in shutdown procedures.]

## Key Issues

* [Utility staff estimates that in the time before pump shut down, about 10,000 gallons of contaminated water entered the intake.]
* [The capacity of the existing treatment system to treat petroleum contamination is unknown.]
* [The city may now have to rely solely on water in system storage until it can be determined how treatable the contaminated water is.]
* [Decontamination of parts of the water treatment plant may be necessary.]

## Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 3. 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. [How would your utility be represented in the Emergency Operations Center for this incident?]
2. [What precautions would your utility take so that contaminated water does not enter the distribution system? Does your utility have plans in place in the event that contaminated water does enter the distribution system?]
3. [How long could your utility maintain adequate pressure in the system using only water in the pipes and storage facilities? What water conservation procedures can your utility implement with customers to help ensure that storage is maximized for emergencies such as fires?]
4. [Does your utility have an alternate drinking water supply plan? If not, who in the jurisdiction is planning on providing and distributing alternate drinking water?]
5. [Does your utility have remediation and recovery plans in place? What decontamination resources are available for the intake and the water treatment plant? If your utility has no plans, where would the technical expertise come from to develop a remediation and recovery plan?]

# Appendix A: Exercise Schedule

**Note:** Because this information is updated throughout the exercise planning process, appendices may be developed as stand-alone documents rather than as part of the SitMan.

| Time | Activity |
| --- | --- |
|  | **[Month Day, Year]** |
| 00:00 | Registration |
| 00:00 | Welcome and Opening Remarks |
| 00:00 | Module 1: Discussions |
| 00:00 | Break |
| 00:00 | Module 2: Discussions |
| 00:00 | Lunch |
| 00:00 | Module 3: Discussions |
| 00:00 | Break |
| 00:00 | Hot wash |
| 00:00 | Closing Comments |

# Appendix B: Exercise Participants

| Participating Organizations |
| --- |
| **Federal** |
| [Participating organization] |
| [Participating organization] |
| [Participating organization] |
| **State** |
| [Participating organization] |
| [Participating organization] |
| [Participating organization] |
| **[Jurisdiction A]** |
| [Participating organization] |
| [Participating organization] |
| [Participating organization] |
| **[Jurisdiction B]** |
| [Participating organization] |
| [Participating organization] |
| [Participating organization] |

# Appendix C: Relevant Plans

[Insert excerpts from relevant plans, policies or procedures to be tested during the exercise.]

# Appendix D: Acronyms

| Acronym | Term |
| --- | --- |
| DHS | U.S. Department of Homeland Security |
| HSEEP | Homeland Security Exercise and Evaluation Program |
| SitMan | Situation Manual |
| SME | Subject-Matter Expert |
| TTX | Tabletop Exercise |
| [Acronym] | [Term] |
| [Acronym] | [Term] |
| [Acronym] | [Term] |
| [Acronym] | [Term] |
| [Acronym] | [Term] |