

Portland Metropolitan Area Water Sector Black Sky Tabletop Exercise

Situation Manual

March 12, 2020

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EXERCISE OVERVIEW

Exercise Name	Portland Metropolitan Area Water Sector Black Sky Tabletop Exercise (TTX)
Exercise Date	March 12, 2020: 1:00 PM – 3:45 PM
Scope	This exercise is a facilitated discussion at City of Portland Emergency Coordination Center & Water Bureau EOC, 9911 SE Bush Street, Portland, OR 97266
Mission Area(s)	Protection, Mitigation, Response and/or Recovery
Core Capabilities	Community Resilience, Long-term Vulnerability Reduction, Infrastructure Systems, Public Health, Healthcare and Emergency Medical Services
Objectives	<ol style="list-style-type: none"> 1. Identify and discuss alternative and temporary emergency power resources and plans. 2. Discuss and define challenges and strategies for managing long duration rolling power outages. 3. Discuss and define challenges and strategies for managing long duration partial or patchwork power outages.
Threat or Hazard	Black sky event
Scenario	A long duration, regional power outage affecting water and wastewater utilities in the Portland metropolitan area.
Sponsor	United States Environmental Protection Agency (EPA)
Participating Organizations	<p>The target audience for this TTX is:</p> <ul style="list-style-type: none"> • Area water and wastewater utilities • Area electric and gas utilities • Area public health agencies • State and local emergency management agencies • Federal and state agencies <p>See Appendix B for a full list of participants.</p>
Point of Contact	<p>Lauren Wisniewski, EPA Phone: 202-564-2918 Email: wisniewski.lauren@epa.gov</p>

GENERAL INFORMATION

Exercise Objectives and Core Capabilities

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

Exercise Objectives	Core Capability
Identify and discuss alternative and temporary emergency power resources and plans	Community Resilience, Long-term Vulnerability Reduction, Infrastructure Systems
Discuss and define challenges and strategies for managing long duration rolling power outages.	Community Resilience, Long-term Vulnerability Reduction, Infrastructure Systems
Discuss and define challenges and strategies for managing long duration partial or patchwork power outages.	Community Resilience, Long-term Vulnerability Reduction, Infrastructure Systems, Public Health, Healthcare and Emergency Medical Services

Table 1. Exercise Objectives and Associated Core Capabilities

Participant Roles and Responsibilities

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 their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **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 during the exercise.

Exercise Structure

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

- Module 1: Four hours post event: no power, just notified 24 hours to restoration.
- Module 2: Twenty-four hours post event: no power, just notified that rolling power outages will commence for one week – water utilities will have power from 1000-1300 and again from 1900-2100.
- Module 3: Two weeks post event: either no power or full power based on where you are in the grid.

The event utilizes the guiding principles of the Homeland Security Exercise and Evaluation Program (HSEEP), which provides a common approach to exercise program management, design and development, conduct, evaluation and improvement planning. HSEEP exercise and evaluation doctrine is flexible, adaptable, designed for use by stakeholders across the whole community and is applicable for exercises across all mission areas – prevention, protection, mitigation, response and recovery. More information about HSEEP is available at <https://hseep.preptoolkit.org/>.

Exercise participants are comprised of the following functional groups:

- Area water and wastewater utilities
- Area electric and gas utilities
- Area public health agencies
- State and local emergency management agencies
- Federal and state agencies

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 protection, mitigation, 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.

Exercise Evaluation

Players will be asked to complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise in terms of its value to participants.

MODULE 1: FOUR HOURS POST EVENT

Situation: Water and wastewater utilities have just been notified by their electric utility that power restoration is expected to take 24 hours.

Questions

The following questions are provided to encourage and guide discussions. 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 happens to your water or wastewater utility?
 - a. Emergency power?
 - i. Administration buildings?
 - ii. Treatment and distribution?
 - b. System pressure?
 - c. Are you delivering water? Collecting wastewater? Can you continue this for 24 hours?
 - d. What are your first three notifications?
 - e. What role does your primacy agency play?
 - f. Any security concerns?
 - g. What about your ability to communicate (customers and personnel)?
2. What happens at your electrical utility?
 - a. Emergency power?
 - i. Administration buildings?
 - b. Are you delivering electricity anywhere?
 - c. What are your first three notifications?
 - d. Any security concerns?
 - e. What about your ability to communicate (customers and personnel)?
3. What happens at emergency management agencies?
 - a. Emergency power?
 - b. What are your first three notifications?
 - c. What about your ability to communicate?
 - d. Would EOCs be activated? What is the trigger?
4. Are there any public health concerns or actions to take at this point?
5. Do processes or procedures exist to guide your actions, and if not, which ones would be helpful to develop?

MODULE 2: TWENTY-FOUR HOURS POST EVENT

Update: Water and wastewater utilities have just been notified by their electric utility that although power is being restored, rolling outages will be necessary for the next week. Each utility can expect to have full power from 1000-1300 and 1900-1200 each day during this timeframe, but it may not be to all parts of their system each day.

Questions

The following questions are provided to encourage and guide discussions. 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 operational challenges does rolling power present for water utilities?
 - a. What other information from your electrical utility provider would you want to know?
 - b. What procedures or protocols would help to manage this situation, or do these need to be identified and developed?
2. What challenges does rolling power present for emergency management agencies?
 - a. Can you assist the water utilities in any way?
 - b. What procedures or protocols would help to manage this situation, or do these need to be identified and developed?
3. What concerns do public health agencies have?
 - a. At the residential level (e.g., in-home sanitation and hygiene)?
 - b. At the institutional level (e.g., hospitals, schools)?
4. What fuel types are needed to run utility generators?
 - a. How much fuel do you have on-site?
 - b. How long can you operate on back-up power with the fuel you have on-site?
 - c. How much fuel can you get to continue operations after on-site supplies run out?
 - d. Who provides the fuel? Under what kind of arrangement?
 - e. Who else can help utilities to obtain fuel at the local, state and federal levels?
5. Water and wastewater utilities, what do you want to tell the public at this point?
6. Emergency management, what do you want to tell the public at this point?
7. Public health, what do you want to tell the public at this point?
8. Electric utilities, what are you telling the public at this point?

MODULE 3: TWO WEEKS POST EVENT

Update: Water and wastewater utilities have just been notified by their electric utility that the rolling outages are over. However, as full repairs to the grid proceed, some areas will have power, and some will not. In effect, the region's grid will look like a patchwork quilt until full service to all parts of the grid can be restored.

Questions

The following questions are provided to encourage and guide discussions. 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 strategies can water utilities put into practice to help manage this situation?
 - a. Moving and maintaining generators?
 - b. Opening interconnects with other systems?
 - c. Changing source waters?
 - d. Curtailing treatment? If so, what is the state primacy agency role?
 - e. What questions do you have for the electric utility?
2. What are emergency management agency plans for this kind of situation?
 - a. Establishment of shelters or warming/cooling centers?
 - b. Establishing and maintaining Points of Distribution (PODs) in key areas?
 - c. Helping with generator fuel supplies?
 - d. Public outreach and communication assistance?
3. What are public health agency plans for this kind of situation?
 - a. How will water and wastewater services be provided in hospitals that may be in no power zones?
 - b. What are the chief concerns for the general populace?
4. How do electric utilities restoring power depend on water services, if at all?
 - a. Are there plans in place to replace these services on an emergency basis?
 - b. How do you use water and wastewater services at your power plants?

APPENDIX A: EXERCISE SCHEDULE

Time	Activity
1:00 – 2:30 PM	Modules 1 and 2
2:30 – 2:45	Break
2:45 – 3:45	Module 3
3:45 – 4:00	Wrap-up
4:00 PM	Adjourn

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