Situation Manual

NEMA-Idaho Petroleum Shortage Tabletop Exercise (TTX)

July 15, 2021

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Document Handling Instructions

The title of this document is the Situation Manual (SitMan) for the Idaho Petroleum Shortage Tabletop Exercise (TTX). The SitMan provides participants with the necessary information to participate in meaningful discussions to explore and validate plans, policies, and procedures for operational coordination in the event of an earthquake that disrupts Idaho's fuel supply, as well as subsequent cyberattacks on energy and state communications systems. All participants may view the SitMan.

This exercise was funded through a grant from the National Emergency Management Association (NEMA), as part of the Western Petroleum Shortage Response Collaborative (WPSRC) initiative.

Exercise Overview

Exercise Name	NEMA-Idaho Petroleum Shortage Tabletop Exercise
Exercise Date and Time	July 15, 2021, 10:30 a.m. – 2:30 p.m. MT
Exercise Location	**In-Person** Idaho Emergency Operations Center* 4040 W Guard Street Building 600 Gowen Field Boise, Idaho **Virtual** Cisco WebEx *See Appendix A for exercise logistics and communications information.* *All those wishing to attend this event on the installation who do not have the appropriate entry credentials (i.e., either a state or federal ID) will need to notify Brent Larson (208-994-9338) to arrange for access.
Mission Area(s)	Response
FEMA Core Capabilities	Operational Coordination
Objective	Discuss operational coordination with state and local emergency management partners, energy providers, and other private sector stakeholders in response to petroleum supply shortages.
Threat or Hazard	Earthquake, Cyberattack
Scenario	An earthquake temporarily disrupts fuel supply from Utah and an opportunistic adversary conducts cyberattacks on both pipeline supervisory control and data acquisition (SCADA) systems and information technology (IT) systems that serve the state's Emergency Operations Center (EOC). *Real-world wildfires and the fuel shortages they are causing will also be discussed as a part of module 1.*
Sponsor	Idaho Office of Emergency Management (IOEM)

Participating Organizations	See Appendix A for all participating agencies.
Points of Contact	**For the Idaho Office of Emergency Management:** Brent Larson Operations Branch Chief Idaho Office of Emergency Management brent.larson@imd.idaho.gov 208-994-9338 **For Exercise Design, Facilitation, and Evaluation Support:** Sam Currie Managing Associate Hagerty Consulting sam.currie@hagertyconsulting.com 607-351-4583

Exercise Information

Exercise Rationale

Idaho is committed to improving its readiness for and resilience against petroleum shortages. Idaho is a member of the Western Petroleum Shortage Response Collaborative (WPSRC) initiative, a joint program between the National Emergency Management Agency (NEMA), the National Association of State Energy Officials (NASEO), the U.S. Department of Energy (DOE) Office of Cybersecurity, Energy Security, and Emergency Response (CESER), and Hagerty Consulting. The WPSRC aims to improve regional coordination in response to petroleum shortages. As part of the WPSRC initiative, NEMA chose Idaho for a pilot petroleum shortage tabletop exercise.

Core Capabilities and Associated Objectives

The exercise objectives outlined below in Table 1 describe the expected outcomes for the exercise. The objectives are linked to the Federal Emergency Management Agency (FEMA) Core Capabilities, which are distinct critical elements necessary to achieve the specific mission areas of FEMA's National Preparedness Goal. The objectives and aligned core capabilities were selected by the Exercise Planning Team (EPT).

Table 1. Core Capabilities – Aligned Objectives

Core Capability	Objectives
Operational Coordination	▪ Discuss operational coordination with state and local emergency management partners, energy providers, and other private sector stakeholders in response to petroleum supply shortages.
	▪ Develop a better understanding of how cyberattacks could cause or impact existing energy supply disruption and how they could impact operational coordination.
Operational Communications*	▪ Understand the state's ability to leverage backup communications systems and platforms to coordinate and share information with incident response stakeholders during an outage.
Logistics and Supply Chain Management*	▪ Discuss the processes to allocate, assign, deploy, and share resources (materials, equipment, and personnel) and capabilities effectively during a petroleum shortage.
Situational Assessment*	▪ Develop a better understanding for how data can be analyzed and shared between stakeholders to promote data-driven, informed response and recovery efforts.

* Associated with an exercise sub-objective.

Table 2 provides the definitions of the FEMA Core Capabilities utilized for this exercise.

Table 2. Core Capabilities Defined

Core Capability	Definition
Operational Coordination	Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.
Operational Communications	Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.
Logistics and Supply Chain Management	Deliver essential commodities, equipment, and services in support of impacted communities and survivors, to include emergency power and fuel support, as well as the coordination of access to community staples. Synchronize logistics capabilities and enable the restoration of impacted supply chains.
Situational Assessment	Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Evaluation

The EPT created Exercise Evaluation Guides (EEGs) to document critical tasks, exercise objectives, and aligned core capabilities. At the conclusion of this tabletop exercise, participants will be asked to complete participant feedback forms. These documents will be used to evaluate the exercise and then be compiled in an After-Action Report/Improvement Plan (AAR/IP), which will be presented to the EPT at the After-Action Meeting (AAM) for approval.

Exercise Structure

Exercise Agenda

This exercise is a discussion based TTX, which will take place over a period of four hours. The exercise is comprised of an introductory briefing, two modules with distinct but related themes, and a group hot wash to discuss strengths and lessons learned during the exercise. Table 3 provides a breakdown of exercise activities:

Table 3. Exercise Agenda

Time (MT)	Activity
10:30 a.m. – 10:45 a.m.	Welcome and Introductions
10:45 a.m. – 11:00 a.m.	Exercise Briefing
11:00 a.m. – 12:45 p.m.	Module 1 (Earthquake, Cyber Disruptions to Petroleum Terminals, & Wildfires)
12:45 p.m. – 1:15 p.m.	Break
1:15 p.m. – 2:00 p.m.	Module 2 (Cyberattacks on State EOC IT Systems)
2:00 p.m. – 2:30 p.m.	Hot Wash

Exercise Conduct

- This exercise will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.
- Participants are expected to participate actively in the conversations during each module using their knowledge of current plans and capabilities.
- 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 potential solutions.
- Problem-solving efforts should be the focus of this exercise. Issue identification is not as valuable as defining recommended actions that could improve response procedures moving forward.

Assumptions and Artificialities

In any exercise, including discussion-based exercises, assumptions and artificialities may be necessary to complete activities in the time allotted. Attendees should accept the assumptions and artificialities as inherent in any exercise and should not allow these considerations to negatively impact their participation. During this exercise, the following assumptions and artificialities apply:
- The scenario developed for this exercise is plausible. Participants are encouraged not to fight the scenario and adhere to the rules of the exercise.
- The exercise will be presented in module format to foster focused discussions and critical thinking.

- Players will answer all discussion questions to the best of their ability and will not fight questions that are asked or lead participant away from the discussion at hand.
- The earthquake does not disrupt the generation, transmission, or distribution of electric power in Idaho.
- The State EOC is activated to a level two in response to the incident.

Participant Roles and Responsibilities

While every individual at this exercise is an attendee, there are four classifications and expected roles in exercise play:

- **Players:** Players have an active role during the exercise. Players will discuss their agencies' roles, responsibilities, and actions based on the unfolding exercise scenario.
- **Facilitators:** Facilitators will provide scenario updates and moderate the discussions. They will also provide additional information, answer questions, or resolve issues, as needed.
- **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.
- **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, polices, and procedures.

Facilitators will take an active role in guiding exercise play for the group of participants they are assigned to. It is expected that participants adhere to the guidance provided by the facilitator.

Module 1: Disruptions to Energy Systems

Scenario

At 7:06 a.m. MT on July 15th, 2021, 6.5 magnitude earthquake along the Wasatch Front near Salt Lake City, Utah causes major damage to pipelines and refineries that supply fuel from Utah, temporarily disrupting fuel supply into Idaho. The earthquake also disrupts highway traffic along Interstate 15, as inspectors must inspect overhead bridges before traffic can resume.

Approximately three hours later, around 10:15 a.m. MT, an opportunistic adversary conducts cyberattacks on petroleum terminal supervisory control and data acquisition (SCADA) systems, further impacting energy resources.

Module Objective

Help players identify any critical issues, decisions, requirements, and actions they would take in the event of major disruptions to petroleum supplies.

Key Issues

- Petroleum shortages
- Earthquake response
- Cybersecurity
- Operational coordination

Discussion Questions

Facilitators will use the discussion questions to guide participants' conversations throughout Module 1 of the TTX. The questions are provided as suggested subjects that participants may address and are not meant to constitute a definitive list of concerns to be addressed. Facilitators are not required to address every question.

Earthquake

1. How would you be notified of the fuel disruption from the earthquake?
   a. At what point would you feel confident enough to contact the State or Federal partners for support?
2. What immediate actions would you be taking in response to the earthquake?
3. What information would you be seeking from your external partners? What information might they be seeking from you? What information are you able to provide?
4. How would you assess the current supply of and demand for petroleum in the short term? Medium term? Long term?
5. Would the state be reaching out to neighboring states at this point? If so, what agreements and coordination mechanisms are in place to do so?
6. How would public and private sector partners coordinate?
7. If the Governor has not yet done so, would they proclaim a state of emergency?

Cyberattack on SCADA Systems

1. How would you be notified of the cyberattacks on petroleum terminal SCADA systems?
2. How would this development impact your organization's response to the scenario?
3. What resources and other sources of support, if any, can your organization provide petroleum terminal companies?
4. What information would you be seeking from your external partners? What information might they be seeking from you? What information are you able to provide?
5. Would the state be reaching out to neighboring states at this point? If so, what agreements and coordination mechanisms are in place to do so?
6. What role does the private sector play in obtaining additional petroleum supplies?

Wildfires

Overview

Given the real-world wildfires occurring in Idaho at this time, the planning team has elected to add questions centered around petroleum transportation, storage, and distribution. These discussions will be specific to supporting firefighting activities under a state disaster declaration.

Scenario

There are currently several areas where aviation fuel issues are impacting firefighting activities. Airports are reporting jet fuel shortages and are concerned they will need to wave off planes and helicopters that drop fire retardants in the near future.

Sporadic shortages at some tanker bases in Oregon, Utah, and Arizona have already been reported.

Discussion Questions

1. What local, state, and regional partners are able to support the growing fuel issues?
    a. How are they supporting?
    b. What immediate actions would you take in coordination with these partners?
    c. What current agreements, plans, policies, and procedures are in place to help guide agencies through these fuel shortage issues?
2. What federal assets may be available?
3. How is fuel being transported and from where?
    a. What concerns do you have (i.e., lack of drivers)?
    b. What agreements are in place for redundant supply?
4. How can you bolster your supply chain to make it as efficient and effective as possible?
5. Once fuel has arrived, where is it being stored?
6. How are decisions made on where fuel is allocated?
7. How are you supporting rural communities and areas that are not supplied by a pipeline?

Module 2: Disruptions to IT Systems

Scenario Update

Two hours after the cyberattack on pipeline SCADA systems, around 12:15 p.m. MT, the same adversary conducts a distributed denial of service (DDoS) attack on the state EOC's IT systems, further hampering emergency response and recovery efforts.

Module Objective

Help players identify any critical issues, decisions, requirements, and actions they would take if an adversary disrupted the state EOC's IT and communications systems during the response to a petroleum shortage.

Key Issues

- Communications disruptions
- Cybersecurity
- Challenges to operational coordination and information sharing

Discussion Questions

Facilitators will use the discussion questions to guide participants' conversations throughout Module 2 of the TTX. The questions are provided as suggested subjects that participants may address and are not meant to constitute a definitive list of concerns to be addressed. Facilitators are not required to address every question.

1. How would the cyberattack on the state's EOC IT systems affect your response operations, if at all?
2. Who would be responsible for sharing information on attack impacts, severity, and expected recovery times?
3. How would disruptions to the state's EOC IT systems impact interagency and cross-functional coordination bodies (e.g., ESF#12)?
4. How will you maintain situational awareness and a common operating picture?
5. How would your organization communicate with its partners if your primary sources of communication are disrupted?
6. Do your partners have contact information for your backup communications systems and platforms?
7. Have you tested interoperability of backup systems with your partners, including the private sector?

Hot Wash

Facilitated Hot Wash

After completion of the two modules, facilitators will lead a group hot wash for all attendees to participate in. The following questions will guide the hot wash discussion:

- What strengths did you observe during the exercise?
- What areas for improvement did you observe during the exercise?
- Is there anything you plan to implement in the future based on lessons learned from today (e.g., plans, trainings, exercises)?

Participant Feedback Forms

Exercise staff will provide attendees with a Participant Feedback Form. Each attendee should complete and return this Participant Feedback Form to further inform after-action reporting for the exercise.

Appendix A: Exercise Logistics & Communications

The TTX will be executed in a hybrid format, meaning participants will be attending in-person at the Idaho EOC, or joining virtually via Cisco WebEx.

Appendix B: Participating Agencies

Participating Agencies
FEMA Region X
Hagerty Consulting
Idaho Department of Lands
Idaho Governor's Office of Energy and Mineral Resources
Idaho Office of Emergency Management
Idaho Petroleum Marketers and Convenience Store Association
Idaho Public Utilities Commission
Idaho State Police
Idaho Transportation Department
Marathon Pipe Line
National Emergency Management Agency
Phillip 66
United States Department of Energy
Veterans Health Administration

Appendix C: Relevant Plans and Documents

Relevant Plans and Documents
Idaho Emergency Operations Plan
Department of Homeland Security (DHS) Regional Resiliency Assessment Program (RRAP) – Idaho Fuels Resilience Assessment

Appendix D: Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AAM	After-Action Meeting
AAR/IP	After-Action Report/Improvement Plan
CESER	(Office of) Cybersecurity, Energy Security, and Emergency Response
DHS	Department of Homeland Security
DOE	Department of Energy
EOC	Emergency Operations Center
EPT	Exercise Planning Team
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
HSEEP	Homeland Security Exercise and Evaluation Program
IOEM	Idaho Office of Emergency Management
IT	Information Technology
MT	Mountain Time
NASEO	National Association of State Energy Officials
NEMA	National Emergency Management Agency
RRAP	Regional Resiliency Assessment Program
SCADA	Supervisory Control and Data Acquisition
TTX	Tabletop Exercise
WPSRC	Western Petroleum Shortage Response Collaborative