



Maine Drought Task Force 2020 Conference

After-Action Report/Improvement Plan

March 31, 2021

Maine Emergency Management Agency

# EXERCISE OVERVIEW

<b>Exercise Name</b>	Maine Drought Task Force 2020
<b>Exercise Dates</b>	May to December 2020
<b>Scope</b>	The role of Maine Drought Task Force (DTF) is to facilitate communication and situational awareness of drought, provide an assessment of the situation, develop recommendations on potential responses, and to provide reports on drought situations. The primary responsibilities of DTF are to gather necessary information, assess the impact of dry conditions, and make recommendations to the Governor’s Office, or others as needed.
<b>Mission Area(s)</b>	Mitigation, Planning, Response, Recovery
<b>Core Capabilities</b>	Operational Coordination; Operational Communications; Situational Assessment; Situational Awareness; Public Information and Warning; and Planning.
<b>Objectives</b>	<p>Improvement Plan objectives were determined based on feedback from participants during and upon completion of DTF conferences. Questions related to these objectives were provided in a survey designed specifically to support the After-Action Report.</p> <ol style="list-style-type: none"><li>1. Improve agency and community situational awareness of drought conditions in Maine.</li><li>2. Facilitate effective communication between DTF participants and provide a model approach for combining multiple agency reports into a unified drought assessment.</li><li>3. Demonstrate an effective scope of response for drought monitoring in Maine.</li></ol>
<b>Threat or Hazard</b>	Drought
<b>Scenario</b>	DTF convened in 2020 in response to below average rainfall, streamflow, and groundwater levels from May to September of that year. As reported by the U.S. Geological Survey, record-low streamflow and groundwater levels were recorded throughout the state and the larger New England region <sup>1</sup> , and the U.S. Department of Agriculture declared Aroostook County a crop disaster area by September <sup>2</sup> . The scarce amount of precipitation that did fall during the summer came in a few scattered storms separated by long dry periods. Drought conditions were expansive and dry wells were reported across all counties. By

<sup>1</sup> Lombard, P.J., Barclay, J.R., and McCarthy, D.E., 2020, 2020 drought in New England (ver. 1.1, February 2021): U.S. Geological Survey Open-File Report 2020–1148, 12 p., <https://doi.org/10.3133/ofr20201148>.

<sup>2</sup> U.S. Department of Agriculture, 2020, USDA designates Aroostook County, Maine, as a primary natural disaster area: U.S. Department of Agriculture web page, accessed October 2, 2020, at [https://www.fsa.usda.gov/newsroom/emergency-designations/2020/ed\\_2020\\_0911\\_rel\\_0188](https://www.fsa.usda.gov/newsroom/emergency-designations/2020/ed_2020_0911_rel_0188).



October 2020, the Farm Service Agency began providing varying drought assistance to 12 of 16 counties<sup>3</sup>. In northern and central Maine the onset of drought was particularly rapid and required several community water supplies to place mandatory water restrictions.

**Sponsor**

Maine Emergency Management Agency

**Participating Organizations**

Maine Emergency Management Agency, National Weather Service Gray and Caribou offices, U.S. Geological Survey, Maine Geological Survey, Department of Agriculture, Conservation, and Forestry, Department of Health and Human Services, Maine Public Utilities Commission, Maine Rural Water Association, Maine Water Utilities Association, Maine Department of Environmental Protection, the US department of Agriculture, and all EMA offices of counties impacted by the drought.

**Point of Contact**

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**Definition of Terms**

DTF                                      Drought Task Force  
POC                                      Point of Contact  
EMA                                      Emergency Management Agency

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<sup>3</sup> “Maine Delegation, Governor Mills Welcome Critical Drought Assistance for Maine Farmers”  
<https://content.govdelivery.com/accounts/MEGOV/bulletins/2a6db3b>

# ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

**Table 1. Summary of Core Capability Performance**

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Improve agency and community situational awareness of drought conditions in Maine.	Operational Communications Situational Awareness Public Information and Warning	P			
Facilitate effective communication between DTF participants.	Operational Coordination Operational Communications Situational Assessment Planning		S		
Demonstrate an effective scope of response for drought monitoring in Maine.	Operational Coordination Operational Communications Situational Assessment Planning	P			

**Ratings Definitions:**

- Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

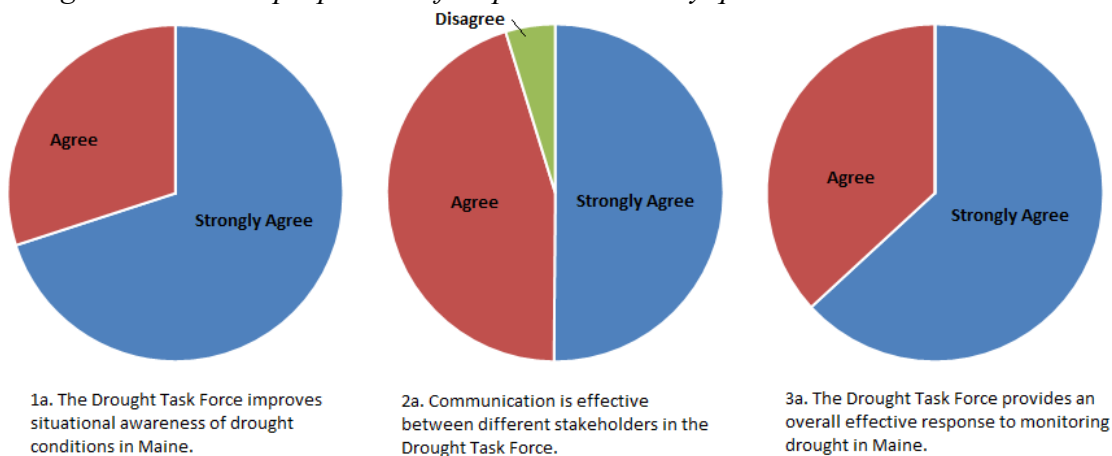
## Methods of Assessing Performance

Two months after the conclusion of DTF in December 2020, a survey was designed to draw feedback from DTF participants that would be used to further enhance coordinated processes during and in preparation for drought events. The DTF Point of Contact (POC) designed and distributed an after-action survey using the ArcGIS software Survey123. Twenty-one responses were received electronically within two weeks of distribution to all DTF participants. The survey consisted of three Likert-scale questions (responding in agreement or disagreement) and three longer written responses (Table 1). The POC then aggregated the Likert-scale questions to provide a quantitative performance assessment of DTF, while written responses were used to illustrate current challenges and suggested strategies for improvement of future DTF activations.

<i>Table 1: Maine Drought Task Force After Action Report Survey questions</i>				
<b>1a.</b> The Drought Task Force improves situational awareness of drought conditions in Maine.				
Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>1b.</b> Please provide some suggestions for how the Drought Task Force can improve situational awareness in the future.				
<b>2a.</b> Communication is effective between different stakeholders in the Drought Task Force.				
Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>2b.</b> How do you feel we can improve communications between each stakeholder (e.g., emergency management, water utilities, agriculture, etc.) in the Drought Task Force?				
<b>3a.</b> The Drought Task Force provides an overall effective response to monitoring drought in Maine.				
Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>3b.</b> Do you have any further suggestions for improving the overall effectiveness of the Drought Task Force?				

Quantitative performance analysis (Figure 1) indicates generally strong agreement that the DTF performed well in situational awareness and communication objectives. According to survey results, DTF is particularly effective at improving situational awareness, but is also seen overall as an effective method for responding to drought in Maine. Written responses from survey participants provide more detailed feedback and appear to hit upon three major themes of improvement: strengthening communication among DTF member organizations, enhancing approaches to report findings to the public, and reassessing the scope of DTF roles during activation. Here survey feedback is summarized, and action items developed for each objective to help resolve future issues related to DTF operations and objectives.

*Figure 1: Relative proportion of responses to survey questions.*



## **Objective 1: Improve agency and community situational awareness of drought conditions in Maine.**

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

**Core Capabilities:** Operational Communications; Situational Awareness; Public Information and Warning

### **Strengths**

The capability level can be attributed to the following strengths:

**Strengths:** Situational assessment and awareness are crucial for DTF operation, as indicated by survey respondents. The 2020 DTF conference performed well without challenges for improving situational awareness of DTF participants. All respondents agree or strongly agree that press releases did a good job communicating general information and resources to a broad audience.

### **Areas for Improvement**

The following areas require improvement to achieve or maintain the full capability level:

- Ensure that press releases get widely distributed to improve overall situational awareness. Drought did not seem to be a primary topic of concern during COVID response, this may not be the case in a “normal” year.
  - Currently, DTF press releases are shared with all mainstream news outlets and social media platforms. DTF will pursue any new opportunities for media distribution should they emerge.
  - The timing of press releases relative to other, higher profile events (such as the State COVID response) is an important consideration to ensure that DTF news is not overshadowed. The current strategy for DTF press releases is to avoid times around regularly scheduled COVID press releases/briefings.
- Infographics would greatly improve communication/interpretation of scientific data.
  - Present this idea to participants during the next DTF activation and gauge the degree of interest, time, capacity, and skills to support this effort.
  - POC will assess the potential benefits of including infographics into the DTF reports released monthly during activations.
- Similarly, there is interest in providing an executive summary report on broad drought impacts (e.g. dry wells, agriculture, fisheries, forests), and presenting notes as a more formal report, compiled after meetings and including graphics and drought outlook.
  - Identify overlaps between these suggestions and the 2020 New England Drought Report published by the U.S. Geological Survey at the conclusion of the drought event: [https://www.usgs.gov/centers/new-england-water/science/new-england-drought-2020?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/new-england-water/science/new-england-drought-2020?qt-science_center_objects=0#qt-science_center_objects)
  - The POC will consider including an executive summary or reassessing the organization of DTF reports released after each monthly meeting.

- Consider doing public virtual meetings
  - Present this idea to participants during the next DTF activation and gauge the degree of interest, time, capacity, and skills to support this effort.

## **Objective 2: Facilitate effective communication between DTF participants and provide a model approach for combining multiple agency reports into a unified drought assessment.**

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

**Core Capabilities:** Operational Coordination; Operational Communications; Situational Assessment; Planning

### **Strengths**

The capability level can be attributed to the following strengths:

Communication between DTF participants performed well but with some challenges. Communication between a large gathering of organizations with a diversity of expertise and methodologies is often a difficult process, but many potential communication challenges were already overcome during the 2020 DTF activation. One respondent described the DTF as a “model approach” for efficiently combining reports from multiple organizations into a unified conversation on drought monitoring and response. All respondents acknowledged this success, but also indicate that to ensure this approach continues, it will be necessary to address the following areas of improvement and suggested action items.

### **Areas for Improvement**

The following areas require improvement to achieve or maintain the full capability level:

- Ensure the DTF contact list is regularly updated and distributed to primary agencies.
  - This is the responsibility of Maine Emergency Management Agency, contact list updates are curated in Outlook and will be conducted annually or as needed by the POC.
  - Additional challenges involve rates of turnover for state, county, and local EMA offices. Provide the POC with notification of personnel changes relevant to DTF.
- Establishing stronger means of communication between County EMAs and public water suppliers, thereby improving communication with assistance and resource providers that maintain close relationships with impacted communities and can directly support implementation of solutions. Align drought planning/response priorities at different jurisdictions/levels of authority (e.g., federal, state, county). Issues include the sensitivity of Public Water Suppliers to sharing protected water data. There are a number of suggestions to resolve the hesitancy of public water suppliers to engage in DTF:
  - Facilitate tabletop preparedness exercises with County EMAs, public water supply staff, and other participants to help strengthen lines of communication and build trust between participants. Facilitators would include participants from Maine Emergency Management Agency (namely an exercise officer) and Maine Drinking Water Program. Funding to support this effort would come from the Drinking Water State Revolving Fund.
  - Provide opportunities for less structured engagement through regional stakeholder meetings, or any additional activities that bring County EMAs and Public Water Suppliers to the same table. This can be facilitated initially by Maine Emergency Management Agency or by County EMAs.
  - During activations, current practice requires a DTF representative to convene a separate meeting with public water suppliers, and report a summary to the larger group during DTF meetings. This information will require broader dissemination by all DTF



participants to improve situational awareness. The summary should provide aggregated data by county/region to protect local water suppliers' confidentiality. This scale of water supply data would be adequate for DTF and public situational awareness. As the focus on drought is statewide there is no need to identify or share data from individual water suppliers.

### **Objective 3: Demonstrate an effective scope of response for drought monitoring in Maine.**

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

**Core Capabilities:** Operational Coordination; Operational Communications; Situational Assessment; Planning

#### **Strengths**

The capability level can be attributed to the following strengths:

The 2020 DTF conference performed well without challenges for demonstrating an effective response for drought monitoring in Maine. All respondents agree or strongly agree that the scope of DTF is adequate and fulfills needs for State drought monitoring. The following Areas for Improvement are suggestions to help ensure this scope remains adequate for future activations.

#### **Areas for Improvement**

The following areas require improvement to achieve or maintain the full capability level:

- Providing a organizational chart of DTF activities/responsibilities would be helpful for coordinating efforts across agencies.
  - POC to draft a Standard Operating Procedure and flow chart document and distribute to participants for DTF activations.
- More discussion and comparison of drought activations to historic drought events, annual trends, and recovery forecasts. Explore longer term drought projections and consequences.
  - Revisit past DTF reports to identify historic response trends.
  - Consult with U.S. Geological Survey and National Weather Service participants to gauge feasibility and validation of longer-term projections.
- Consider citizen science opportunities for filling data gaps for regions that are hardest hit during drought periods. Continue to identify these hard-hit regions.
  - Present this idea to participants during the next DTF activation and gauge the degree of interest, time, capacity, and skills to support this effort and its potential benefits.
- Consider the task force approach as a means for facilitating connections across member organizations even when DTF is not meeting, where there could be mutual/unified responses in challenge areas.
  - Present this idea to participants prior to DTF activation and gauge the degree of interest, time, capacity, and skills to support this effort and its potential benefits.