

DROUGHT

SEVERE SEASONAL HAZARD RESPONSE | SEOC QUICK REFERENCE

Unlike rapid-onset hazards, droughts are insidious creeping disasters characterized by a prolonged, compounding period of low precipitation that damages municipal water supplies, commercial agriculture, and the environment. Effective response demands the long-term, sustained coordination of water management strategies, agricultural support programs, and the monitoring of public reservoirs.

APPENDIX PURPOSE

Coordinates the multi-agency response to severe and prolonged drought conditions. Staff use this appendix to synchronize water management strategies, support agricultural relief programs, manage the deployment of emergency drinking water, and mitigate wildland fire risks.

LEAD AGENCY

MEMA & U.S. Geological Survey (USGS)

MEMA manages the SEOC, synchronizes public information, and advises the Governor. USGS collects scientific data, monitors groundwater levels, and tracks precipitation deficits.

SEOC TIMELINE, TRIGGERS, & ACTIONS

Enhanced Monitoring (L3)

- USDM indicates D0 (Abnormally Dry) conditions
- Drought Task Force convenes
- Establish operational readiness
- Conduct interagency coordination call

Partial Activation (L2)

- USDM classifies regions as D1 (Moderate Drought) or D2 (Severe Drought) – MEMA Director Determination
- Request voluntary water conservation
- Elevate wildland fire readiness postures

Full Activation (L1)

- USDM classifies regions as D3 (Extreme Drought) or D4 (Exceptional Drought) – MEMA Director Determination
- Coordinate the deployment of emergency potable water buffaloes
- Request federal agricultural disaster relief

CRITICAL INFORMATION REQUIREMENTS

CRITICAL WATER SUPPLY FAILURE

Do rural communities lack groundwater entirely, and do they require state-level deployments of emergency water buffaloes?

AGRICULTURAL THRESHOLDS

Do sustained crop and livestock losses reach the financial thresholds required to trigger USDA disaster designations?

INDUSTRY STOPPAGE

Does streamflow drop to levels that force the mandatory shutdown of hydroelectric facilities and paper mills?

HAZARD FOCUS



DROUGHT

ESSENTIAL ELEMENTS OF INFORMATION

<p>Universal Impacts</p> <ul style="list-style-type: none"> • Drought Status: Weekly geographic categorization of counties (D0-D4). • Public Systems: Reservoir capacity percentages and days-of-supply. • Dry Wells: Tracked number and geographic clustering of failed residential wells. • Fire Danger: Keetch-Byram Drought Indices and number of active wildland fires. 	<p>Hazard-Specific Data</p> <ul style="list-style-type: none"> • Yield Estimates: Verified percentages of crop loss calculated by DACF. • Soil Moisture: Standard Precipitation Index percentages indicating root-zone dryness. • Groundwater: Depth-to-water measurements from USGS telemetry networks. • Restrictions: Estimated public compliance rates for mandatory water conservation.
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CRITICAL DEFINITIONS FOR PLANNING

Agricultural Drought	Condition where precipitation deficits and reduced groundwater impact agricultural yields.
Hydrologic Drought	Condition where low water supply occurs in streams, reservoirs, and groundwater levels
Keetch-Byram Index	Continuous reference scale used by the Maine Forest Service to estimate soil and duff layer dryness.
Meteorological Drought	Condition where dry weather patterns dominate an area and disrupt continuous rainfall cycles.
U.S. Drought Monitor	Weekly map identifying the geographic footprint and severity classification of drought conditions.

DROUGHT SEVERITY & INTENSITY CATEGORIES

Drought Category	Typical Damage Observations
D0 - Abnormally Dry	Short-term dryness slowing the planting and growth of crops or pastures. This typically represents a region going into a drought or some lingering water deficits for a region coming out of a drought.
D1 - Moderate Drought	Some visible damage to crops and pastures occurs. Streams, reservoirs, or local wells run low. Minor water shortages develop, and state agencies typically request voluntary water-use restrictions.
D2 - Severe Drought	Crop or pasture losses become likely. Streams, reservoirs, and wells reach low levels. Widespread water shortages develop, and state authorities may implement localized mandatory water-use restrictions.
D3 - Extreme Drought	Major crop and pasture losses occur. Widespread water shortages exist across multiple counties, resulting in enforced mandatory water restrictions and the mobilization of emergency water assets.
D4 - Exceptional Drought	Exceptional and devastating crop and pasture losses occur. Shortages of water in reservoirs, streams, and private wells create total water emergencies, requiring federal intervention and emergency drinking water distribution.

Citation: <https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx>