

STATE OF OHIO EMERGENCY OPERATIONS PLAN

DROUGHT INCIDENT ANNEX

PRIMARY AGENCY: Ohio Emergency Management Agency (OEMA)

SUPPORT AGENCIES: Ohio Office of Budget and Management
Ohio Department of Natural Resources (ODNR)
Ohio Environmental Protection Agency (OEPA)
Ohio Department of Health (ODH)
Ohio Department of Agriculture (ODA)
Public Utilities Commission of Ohio (PUCO)
Ohio State University – Extension Office (OSU-EXT)
State of Ohio Climatologist (SOC)

FEDERAL SUPPORT AGENCIES:

U.S. Department of Agriculture – Farm Service Agency
(USDA-FSA)
U.S. Army Corps of Engineers (USACE)
National Weather Service (NWS)

I. PURPOSE

The purpose of the Drought Incident Annex is to provide an effective and systematic means for the State of Ohio to assess and respond to a drought.

II. SITUATION AND ASSUMPTIONS

A. Situation

1. Drought is defined as a prolonged period of abnormally dry weather, where the lack of sufficient precipitation causes a serious hydrologic imbalance, having economic and/or social consequences which may affect all or a portion of the State of Ohio. Drought severity depends upon the degree of moisture deficiency, the duration, and the size of the affected area. Drought is considered a meteorological phenomenon rather than the result of underdeveloped public water supply systems.
2. Drought is a cyclical weather phenomenon, which can have a profound effect upon the State of Ohio. It is progressive in nature, and its presence may not be recognized until it has reached a severe level. Drought impacts the State with a variety of complex problems, which, if identified and evaluated, can be dealt with in a well-organized manner.

3. The most significant impacts, which confront the State, are in the areas of agriculture, forestry, fish and wildlife, recreation and tourism, public and private water supplies, water quality, and economic impacts.
4. This plan is based upon current legislation and authorities, which do not provide for the mandatory allocation of water supplies by the State. The population of Ohio is equally dependent on public ground water systems or private wells and surface water for their water supply.
5. The State of Ohio monitors precipitation, groundwater levels, stream flows, snowpack, and water quality and utilizes the Palmer Drought Severity Index and other indices to ascertain drought potential. Ohio receives an annual average of 37.98 inches of precipitation, which recharges ground water and reservoirs. Extended droughts severely diminish the amount of water in streams, reservoirs and aquifers.
6. Ohio is divided into ten climatological divisions, as shown in Attachment 1.

B. Assumptions

1. Drought will create unusual management problems due to the uncertainty surrounding its occurrence, duration, magnitude and severity.
2. Local preparedness, community action and cooperation will be keys to coping with a water shortage.
3. Local governments will cooperate fully with water conservation recommendations made by the State of Ohio.

III. CONCEPT OF OPERATIONS

A. General

1. Droughts can be categorized into three different types, each one affecting the other: Agricultural, Hydrological, and Mathematical.
 - a. **Agricultural Drought** is a moisture deficiency seriously injurious to crops, livestock, or other agricultural commodities.
 - b. **Hydrological Drought** is evidenced by reductions in stream flow and in lake and reservoir levels, depletion of soil moisture, a lowering of the ground-water table and consequently a decrease in ground-water discharge to streams and lakes.

- c. **Mathematical Drought** is a computation that is expressed as a degree of rainfall deficiency.
2. Three indicators are frequently utilized, along with specific water resource information, to determine drought conditions.
 - a. The **Crop Moisture Index** measures soil moisture to a depth of approximately five feet (5') and is most commonly used indicator of short-term drought affecting agriculture and field operations.
 - b. The **Palmer Drought Severity Index** depicts prolonged abnormal dryness or wetness over a period of months or years. The index reflects long-term moisture, runoff, recharge, precipitation, deep percolation and evapotranspiration. It is useful in measuring disruptive effects or prolonged dryness or wetness on water sensitive economies, designating disaster areas of drought or wetness, and reflecting the general water supplies in reservoirs and streams. Standardized Precipitation Index (SPI)
 - c. The **Standard Precipitation Index** (SPI) is based on the probability of precipitation for any time scale. The SPI can be computed for different time scales and can provide early warning of drought and help assess drought severity.

The SPI was designed to quantify the precipitation deficit for multiple time scales. These time scales reflect the impact of drought on the availability of the different water resources. Groundwater, streamflow, and reservoir storage reflect the longer-term precipitation anomalies. The SPI is generally calculated for 3, 6, 12, 24, and 48-month time scales.

An SPI calculation for any location is based on the long-term precipitation record for a desired period. Positive SPI values indicate greater than median precipitation, and negative values indicate less than median precipitation. A drought event occurs any time the SPI is continuously negative and reaches an intensity of -1.0 or less. The event ends when the SPI becomes positive. The positive sum of the SPI for all the months within a drought event can be termed the drought's "magnitude".

- d. Indices values are presented in Attachment 2.

B. Phases of the Drought Response System

State of Ohio response to a drought situation whether agricultural and/or hydrological has been divided into four phases:

1. Phase I- Normal Conditions

- a. A drought monitoring and assessment system is required to provide enough lead time for State and local decision-makers to take appropriate actions.
- b. During normal conditions, the Department of Natural Resources (DNR), the National Weather Service (NWS), and the Environmental Protection Agency (EPA) will supply water monitoring information to the Ohio Emergency Management Agency (Ohio EMA) as required.

2. Phase II- Drought Alert

- a. The Drought Alert Phase may begin when Drought Severity Indices observations in any of Ohio's ten Climatological Divisions indicate that stream flows, reservoir levels, and ground-water levels may be below normal over a several month period. The Drought Assessment Committee (DAC) may determine Phase II activities as listed in Attachment 6 are required based upon an assessment of drought conditions. Based upon the recommendation of the DAC the Governor may be requested to make a drought alert declaration.
- b. A Drought Alert may be issued for all or a portion of the State of Ohio based on data collected and observations that are made. For a drought alert to be declared, conditions would indicate the potential for a serious water shortage or for an agricultural emergency with below normal precipitation and declining stream flows and ground water levels.
- c. Drought Assessment Committee (DAC)

The Executive Director of Ohio EMA will activate and will appoint a chair for the DAC. The Committee will consist of one-or-more representatives from the following agencies:

- i. Ohio Department of Natural Resources (ODNR), Division of Soil and Water Resources
- ii. Environmental Protection Agency (OEPA), Division of Drinking and Ground Waters
- iii. Ohio Department of Agriculture (ODA)
- iv. Ohio Emergency Management Agency (Ohio EMA)
- v. Ohio State University Extension

- vi. State of Ohio Climatologist
 - vii. National Weather Services (NWS) (Wilmington)
 - viii. United States Department of Agriculture, Farm Service Agency (USDA-FSA)
 - ix. Public Utilities Commission of Ohio (PUCO)
 - x. United States Army Corps of Engineers
 - xi. Ohio Department of Health (ODH)
- d. The Drought Assessment Committee shall carry out these and other tasks as assigned:
- i. Regularly issue reports on drought status through Phases II-IV of a drought.
 - ii. Identify resource information gaps and make recommendations for improvement.
 - iii. Provide appropriate water availability reporting that includes information on observed and expected precipitation, stream flow, reservoirs and ground-water levels; and reports of dry or impacted wells. Ohio EMA will provide compile and distribute consolidated situational reports to the Governor and to other identified agencies and individuals.
 - iv. Place continuous emphasis on improving the capability to provide accurate and timely assessments of water availability or agricultural deficiencies.
 - v. Recommend the activation of, and coordinate with representatives of Impact Task Forces for the development of additional assessment information and for the identification of emergency needs.
 - vi. Make recommendations to the Governor and other identified parties concerning state-level response and recovery.
 - vii. Monitor trends and serve as the technical advisor for the State and local decision-makers.
 - viii. Provide information for the public and media.

- ix. Make recommendations relating to proposed State actions, including the activation of Impact Task Forces to monitor and review potential impacts on the State's agriculture, economy, environment, and natural resources.
- x. Identify resource deficiencies that may aggravate drought effects.

e. Impact Task Forces

- i. The following Impact Task Forces may be activated to collect information and report their findings and recommendations to the DAC: Agriculture, Wildfire, Fish and Wildlife, Recreation and Tourism, Public Water Supplies, and Economic Impacts. Refer to Attachment 3 for more information on composition, activities and responsibilities of the Impact Task Forces.
- f. Drought Alerts will be canceled once rainfall, stream flows, reservoir levels, ground-water levels, and well conditions return to normal or near normal levels for that time of the year.

3. Phase III- Conservation Phase

A Conservation Phase may be activated when Drought Severity Index readings in any of Ohio's ten Climatological Divisions are observed that indicate that stream flows, reservoir levels and ground-water levels continuing to decline, and forecasts indicate that an extended period of below-normal precipitation is expected, and/or the DAC determines that Phase III activities as listed in Attachment 6 to this Appendix are required.

- a. During a Conservation Phase, monitoring, oversight, and analysis activities, particularly by the Task Forces, may be increased. Water conservation measures may also be increased. Partial activation of the Ohio Emergency Operations Center (Ohio EOC) may occur during a Phase III activation, but will depend on the needs/requests of citizens and public officials in drought-affected areas of the State.
- b. A Conservation Phase may return to a Drought Alert Phase when precipitation increases, stream flows, reservoir levels, and ground-water levels stop their decline, and Drought Severity Index observations begin to indicate that conditions are improving, and/or when the DAC determines Phase II actions are required. Extended forecasts may also indicate a return to more-normal conditions.

4. Phase IV- Drought Emergency

- a. A Drought Emergency may be activated when the Drought Severity Index readings for all or a portion of the State of Ohio are observed that indicate that precipitation levels, stream flows, reservoir levels, and ground-water levels will continue to decline, and/or that Phase IV activities as listed in Attachment 6 to this appendix are required.
- b. The Governor may issue a Drought Emergency when water supplies are inadequate to meet projected demands and extreme measures must be taken. The Governor's emergency declaration may empower State agencies to review allocation of supplies in communities not adequately responding to their water shortages, and to implement emergency programs and actions as provided in the Ohio Revised Code.
- c. Drought Executive Committee (DEC)

During a Phase IV activation, the Governor may activate the DEC. The DEC will be chaired by the Executive Director of Ohio EMA and will meet on a regular basis for the purpose of administering and coordinating drought assistance in Ohio.

The DEC is charged with developing short- and long-term drought response recommendations as they relate to agricultural assistance and protection of public and private water supplies. Recommendations and options will be based upon data provided by the Drought Assessment Committee (DAC).

- 1) The Directors of the following agencies and organizations will appoint representatives to the DEC: Ohio Department of Natural Resources, Ohio Environmental Protection Agency, Ohio Department of Health, Ohio Department of Agriculture, Ohio Department of Commerce, Ohio Department of Job and Family Services, Ohio Attorney General, Public Utilities Commission of Ohio, State Representatives as named by the Speaker of the House, and State Senators as named by the President of the Senate.
- d. A Drought Emergency may be canceled and may return to a Conservation Phase when precipitation levels, stream flows, reservoir levels, and ground-water levels increase and the Drought Severity Index readings begins to rise above "Severe Drought" or "Extreme Drought" levels. Extended forecasts should indicate normal conditions over a four-week period before the emergency is lowered to the Conservation Phase.

C. Activation of the State Emergency Operations Center

1. In accordance with the provisions of the Ohio Emergency Operations Plan, the State Emergency Operations Center (SEOC) may be activated under any of the four Drought Activation Phases, and may operate at various levels of activation throughout a drought in accordance with Ohio's Crisis Action System (CAS).
2. Refer to the Base Plan of the Ohio EOP for general information on Emergency Operations Center activation and CAS activation.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. Organizational Overview

1. Federal

- a. The following organizations of the federal government may assist Ohio during drought emergencies with a variety of loans, grants, and programs for material and personnel support.

- 1) U.S. Department of Commerce
- 2) Small Business Administration
- 3) Federal Emergency Management Agency
- 4) U.S. Department of Labor
- 5) U.S. Army Corps of Engineers
- 6) General Service Administration
- 7) U.S. Department of the Interior

2. State

The following state organizations may provide programs to local governments during drought emergencies.

- 1) Ohio Department of Natural Resources
- 2) Ohio Water Development Authority
- 3) Ohio Department of Development
- 4) Treasurer of the State of Ohio
- 5) Ohio Department of Job and Family Services
- 6) Adjutant General's Department, Ohio National Guard
- 7) Ohio Emergency Management Agency

- a. Monitoring by the DAC will be maintained throughout Phase II- Phase IV, and appropriate state assessments and response/recovery recommendations will be made to the DEC.

- b. Most state assistance will become available after a Governor's emergency declaration is issued, as requested by local authorities. Some state assistance and resources may be released prior to a Governor's emergency declaration.

3. Local

- 1) Local jurisdictions may enact ordinances to assure equitable water distribution and may establish local drought emergency public information and education programs.

B. Assignment of Responsibilities:

1. Ohio Emergency Management Agency

- a. Provide chairperson for the Drought Assessment Committee and the Drought Executive Committee.
- b. Coordinate the use of Ohio National Guard water trailers and Ohio EMA pipe and pumps for use by local communities.
- c. Coordinate all drought-related press releases through the Joint Information Center.
- d. Maintain coordination with all Public Information Officers to ensure consistency in drought-related information through the Joint Information System.
- e. Assure that family emergency information is provided to the public.
- f. Develop written updates of the Ohio Drought Response Plan and submit to DAC members for review, recommendations and approval.

2. Ohio Department of Natural Resources

- a. Monitor water resources on a regular basis and report to EMA under Phase I, normal conditions.
- b. Provide information on available water resources within the State.
- c. Review and update public water supply plans for each community.
- d. Assist communities, industries, and others to develop water conservation plans and programs.

- e. Monitor hydrologic and water supply conditions, gather and interpret water data regarding supply, use and trends.
 - f. Maintain information on outlet discharge capacity of State-owned reservoirs and improve structural work for State-owned reservoirs as appropriate.
 - g. Register all water withdrawals greater than 100,000 gallons per day, collect annual reports, and analyze annual usage statewide and regionally.
 - h. Assist in education of the public concerning general water management needs and answer requests for water resource information.
 - i. Chair the following task forces; Wildfire, Fish and Wildlife, and Recreation and Tourism.
 - j. Mediate conflicts of source utilization in cooperation with EPA.
 - k. Provide technical information regarding private water supplies, as resources allow.
 - l. Coordinate use of Lake Erie water, in cooperation with EPA.
 - m. Provide information on the status of feeder canals throughout the State of Ohio.
3. Ohio Environmental Protection Agency
- a. Monitor water availability and quality on a regular basis and report to EMA under Phase I, normal conditions.
 - b. Recommend voluntary cutbacks in water usage.
 - c. Initiate recommendations for water conservation based upon recognized priorities.
 - d. Mediate conflicts of source utilization in cooperation with DNR.
 - e. Post streams where water quality standards are not met.
 - f. Coordinate with the Department of Health on the release of drought-related health advisories.
 - g. Assist in encouraging cut backs of industrial use of water.
 - h. Chair Public Water Supply Task Force.

4. Ohio Department of Health
 - a. Provide increased surveillance of private water supplies and water haulers through the appropriate district offices.
 - b. Issue registrations for private water system contractors.
 - c. Analyze water well samples from local health departments upon request.
 - d. Analyze water samples from bathing beaches at Lake Erie.
 - e. Provide public instructions on means of disinfecting drinking water.
 - f. Provide information on food safety.
 - g. Local health departments issue permits to drill water wells, and for water haulers and vehicles.
 - h. Provide technical information regarding private water supplies as resources allow.
5. Ohio Department of Agriculture
 - a. Coordinate with the U.S. Department of Agriculture in collecting information regarding critical shortages of food products and livestock feed.
 - b. Develop State request for federal assistance and declaration of drought related agricultural emergencies in coordination with the U.S. Department of Agriculture.
 - c. Plan for the emergency distribution of livestock feed.
 - d. Chair the Agriculture Task Force.
 - e. Assist in encouraging cutbacks of agricultural use of water.
6. Public Utilities Commission of Ohio
 - a. Regulated investor-owned utilities advise PUCO of their drought status, establish contact person for status reports and recommend conservation education.
 - b. Advise PUCO regulated investor-owned utilities to follow their tariffs with regard to voluntary and mandatory conservation measures.

- c. Provide reports on current status of PUCO regulated investor-owned utilities' ability to provide service to their customers. The reports will also contain any information that the PUCO Drought Coordinator would deem necessary to assist the Drought Task Force.
 - d. Monitor all events that may/will affect this or other PUCO regulated investor-owned utilities.
7. Ohio State University Extension
- a. Coordinate with County Extension Agents for local drought response activities.
 - b. Provide reports to the DAC on drought notifications and conditions in counties.
 - c. Assist in distributing drought-related Emergency Public Information (EPI)
8. U.S Department of Agriculture, Farm Service Agency (USDA-FSA)
- a. Implement federal drought assistance programs as requested.
 - b. Coordinate reports from Food and Agricultural Councils (FACs) with DAC.
 - c. Provide assessments of drought damage.
 - d. Coordinate requests for drought-related Presidential Declaration of Agricultural Emergency.
 - e. Administer drought-related federal relief in coordination with ODA.
9. U.S. Army Corps of Engineers (USACE)
- a. Coordinate the development of drought plans and procedures for lakes, dams, etc. within the State of Ohio with DNR and Ohio EMA.
 - b. Provide information/ reports to the DAC.
 - c. Coordinate USACE drought-related activities with DAC and affected Ohio localities.
 - d. Construct wells and transport water to ranchers, farmers and political subdivisions for human and livestock consumption.

- e. Sell supplies of water from USACE reservoirs during emergencies as available

10. State of Ohio Climatologist

- a. Provide research and reports related to statewide drought forecasts and durations.

11. National Weather Service

- a. Provide research and reports on local weather patterns and forecasts to support drought-related planning and response activities.

V. PLAN DEVELOPMENT AND MAINTENANCE

- A. The Emergency Management Agency is responsible for the maintenance of the Drought Incident Annex of the Ohio Emergency Operations Plan. It will be reviewed on an annual basis by all partner agencies and will be updated at least every four years.
- B. Partner agencies will develop and maintain standard operating procedures related to each of their assignments of responsibility in the Annex.

VI. ATTACHMENTS

- Attachment 1 - Climatological Divisions of Ohio
- Attachment 2 - Drought Severity Indexes
- Attachment 3 - Impact Task Force Descriptions
- Attachment 4 - Drought Response Matrix

Climatological Divisions of Ohio



DROUGHT SEVERITY INDICES

PALMER DROUGHT SEVERITY INDEX	
ABOVE +4	EXTREME MOIST SPELL
3.0 to 3.9	VERY MOIST SPELL
2.0 to 2.9	UNUSUAL MOIST SPELL
1.0 to 1.9	MOIST SPELL
0.5 to 0.9	INCIPIENT MOIST SPELL
0.4 to -0.4	NEAR NORMAL
-0.5 to -0.9	INCIPIENT DROUGHT
-1.0 to -1.9	MILD THOUGHT
-2.0 to -2.9	MODERATE DROUGHT
-3.0 to -3.9	SEVERE DROUGHT
BELOW -4.0	EXTREME DROUGHT

CROP MOISTURE INDEX	
ABOVE +3	EXTREMELY WET
2.0 to 2.9	WET
1.0 to 1.9	ABNORMALLY MOIST
0 to 0.9	FAVORABLY MOIST
0 to -0.9	SLIGHTLY DRY
-1.0 to -1.9	ABNORMALLY DRY
-2.0 to -2.9	EXCESSIVELY DRY
-3.0 to -3.9	SEVERELY DRY
BELOW -4.	EXTREMELY DRY

STANDARD PRECIPITATION INDEX	
ABOVE 2.0	EXTREMELY WET
1.5 to 1.99	VERY WET
1.0 to 1.49	MODERATELY WET
-.99 to .99	NEAR NORMAL
-1.0 to -1.49	MODERATELY DRY
-1.5 to -1.99	SEVERELY DRY
BELOW -2	EXTREMELY DRY

STATE DROUGHT IMPACT TASK FORCES

There are six state-level Drought Impact Task Forces. Drought Impact Task Forces will coordinate and facilitate individual agency actions and oversee cooperative efforts of agencies with assigned responsibilities under each Task Force. Task Force Agency Representatives must be able to speak for their agencies and have the authority to make reasonable commitments toward effective cooperation and coordination and the allocation of resources from their agency.

The duties and activities of each Task Force are to include, but are not limited to:

1. Develop, revise and update, as necessary, Task Force guidelines and procedures.
2. Establish procedures for coordination with other task forces, State and federal agencies, local government, and public and/or private groups.
3. Identify key contacts in State, Federal, and private support groups.
4. Review existing reporting and analyzing capabilities and identify information gaps.
5. Recommend the activation of drought response phase levels and response activities, and analyze response barriers.
6. Report to the Drought Assessment Committee on a monthly basis during the conservation phase and on a weekly basis in a drought emergency.
7. Report on status of drought response.
8. Maintain supporting data and records of activities.
9. When deactivated, prepare a final report on activities and submit to the Ohio Emergency Management Agency.

IMPACT TASK FORCE #1 – AGRICULTURE

PURPOSE

To assist farmers during drought conditions, assess and project likely impacts, identify alternative responses and sources of assistance and report to the Drought Assessment Committee.

LEAD STATE AGENCY: Ohio Department of Agriculture

The Agriculture Task Force is chaired by the Department of Agriculture and will consist of the following state and federal agencies.

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| 1. Ohio State University Extension | 3. USDA Farm Service Agency |
| 2. State and County Emergency Boards | 4. Division of Soil and Water Resources, DNR |

ACTIVITIES:

1. Review available data sources and existing drought reports, and analyze potential threats.
2. Provide timely data to farmers and state and federal agencies.
3. Assist in emergency livestock feeding and water hauling operations.
4. Survey and monitor animal health and care.
5. Operate and maintain hay-locator service.
6. Coordinate economic outlook reporting.
7. Make requests and recommendations with respect to emergency funding.
8. Identify any gaps in these various programs and recommend action on unmet needs.
9. Prepare a final report upon deactivation.

IMPACT TASK FORCE #2 – WILDFIRE

PURPOSE

To assess and address drought-related impacts due to threats of wildfire.

LEAD STATE AGENCY: Ohio Department of Natural Resources, Division of Forestry

The Task Force is chaired by the Division of Forestry and will consist of the following State and federal agencies:

1. Division of Air Pollution Control, EPA
2. Division of Wildlife, DNR
3. Division of Parks and Recreation, DNR
4. Division of the State Fire Marshal
5. U.S. Forest Service

ACTIVITIES:

1. Identify key personnel and contacts.
2. Assess and project the extent and potential impacts of wildfire threats.
3. Review existing wildfire protection capabilities and inventory ponds, lakes and dry hydrants, which may be available in firefighting efforts.
4. Project the need for additional resources.
5. Provide technical planning and preparedness assistance.
6. Recommend a burning ban, in specified areas or statewide, based on current and expected wildfire activity and available indicators.
7. Prepare a final report upon deactivation.

IMPACT TASK FORCE #3 – FISH AND WILDLIFE

PURPOSE:

Collect and evaluate data on fish and wildlife related impacts, project the potential severity of such impacts, and identify alternative mitigation measures and sources of assistance.

LEAD STATE AGENCY: Department of Natural Resources, Division of Wildlife

The Task Force is chaired by the Division of Wildlife and will consist of the following State and federal agencies:

1. ODNR, Division of Parks and Recreation
2. U.S. Fish and Wildlife Service
3. U.S. Forest Service
4. U.S. Army Corps of Engineers

ACTIVITIES:

1. Assess and project impacts on the State's fish and wildlife resources, including game and non-game species.
2. Recommend mitigation measures such as reservoir conservation pools, construction of watering ponds, etc.
3. Estimate funding and manpower requirements by project and species.
4. Review State-held water rights for fish and wildlife, and the potential impact of reservoir releases on domestic and other needs.
5. Prepare final report when deactivated.

IMPACT TASK FORCE #4 – RECREATION AND TOURISM

PURPOSE:

To assess the impact of drought on recreation and tourism, and coordinate public and private efforts to avoid or mitigate economic losses.

LEAD STATE AGENCY: Ohio Department of Natural Resources, Division of Parks and Recreation

The Task Force will be co-chaired by the Ohio Department of Natural Resources, Division of Parks and Recreation and will consist of the following State and federal agencies:

1. Ohio Department of Health
2. ODNR, Division of Wildlife
3. ODNR, Division of Forestry
4. ODNR, Division of Watercraft
5. State and Local Governments Commission
6. County Commissioners Association
7. U.S. Forest Service
8. National Park Service
9. U.S. Army Corps of Engineers

ACTIVITIES:

1. Provide timely information on drought conditions and recreational impacts to appropriate State agencies and the public.
2. Identify major commercial and industry specific problems and recommend solutions.
3. Develop and disseminate information to the media and public concerning restrictions or closing of State and/or federal parks and recreation *areas*.
4. Prepare a final report when deactivated.

IMPACT TASK FORCE #5 – PUBLIC AND PRIVATE WATER SUPPLY

PURPOSE:

To ensure adequate supplies of potable water for essential domestic uses, as well as municipal and industrial needs.

LEAD STATE AGENCY: Ohio Environmental Protection Agency, Division of Drinking and Ground Waters

The Task Force will be chaired by the Division of Drinking and Ground Water and will consist of the following State and federal agencies:

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| 1. Division of Soil and Water Resources, ODNR | 5. Ohio Water Development Authority |
| 2. Department of Health | 6. Public Utilities Commission of Ohio |
| 3. Ohio Emergency Management Agency | 7. U.S. Army Corps of Engineers |
| 4. State and Local Government Commission | 8. Ohio Municipal League |
| | 9. County Commissioners Association |

ACTIVITIES:

1. Provide water conservation program information.
2. Provide or coordinate water-hauling services by prioritized needs.
3. Develop a list of problem areas.
4. Facilitate approval of rate and operation changes.
5. Assess information concerning stream flows, reservoir levels, ground-water levels, and precipitation and recommend voluntary cutbacks of water usage by municipalities and industries.
6. Assess water quality.
7. Coordinate drought response activities with private water supplies as needed and encourage private water supplier conservation and cooperation for water usage during droughts.

8. The U.S. Army Corps of Engineers will make field investigations on eligibility for assistance when requested by the Governor to include: providing drinking water, transporting emergency water for human and livestock consumption and constructing wells based upon cost reimbursement to the government.
9. Prepare a final report upon deactivation.

IMPACT TASK FORCE #6 – ECONOMIC

PURPOSE:

To establish procedures and an organization to assess drought-related economic impacts and recommend and undertake specific responses.

LEAD STATE AGENCY: Office of Budget and Management

The Task Force will be co-chaired by the Office of Budget and Management and the Department of Taxation and many consist of the following State and federal agencies:

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| 1. State of Ohio Treasurer | 6. State and Local Government Commission |
| 2. Department of Commerce | 7. County Commissioners Association |
| 3. Department of Agriculture | 8. Ohio Municipal League |
| 4. Department of Job and Family Services | 9. Public Utilities Commission of Ohio |
| 5. Department of Development | |

ACTIVITIES:

1. Identify actual and potential economic impacts of drought by area of the State.
2. Develop and employ an economic simulation model to project drought impacts.
3. Identify actual or potential revenue loss by State and local governments.
4. Recommend mitigation measures.
5. Identify State and federal sources of financial assistance.
6. Monitor the costs incurred by State agencies responding to the drought.
7. Identify priority areas for additional State funding.

8. Prepare a final report upon deactivation.
9. Respond to needs of migrant workers in affected areas of the State of Ohio.
10. Prepare statistical information for Presidential Declaration of Disaster request.

Ohio Drought Incident Annex
 Attachment 4 - Drought Response Matrix

STATE-LEVEL AGENCY	PHASE I - NORMAL	PHASE II - ALERT	PHASE III - CONSERVATION	PHASE IV - EMERGENCY
Governor's Office	1. Work with OEPA, ODNR, and the General Assembly to pass water allocation and other appropriate legislation.	1. Receive recommendations from the Drought Assessment Committee regarding water supplies in Ohio.	1. Activate Impact Task Groups as appropriate.	1. Declare a Drought Emergency.
		2. Issue Drought Alert for areas of Ohio affected.	2. Continue public awareness and strongly encourage local governments to issue water restrictions.	2. Activate the Drought Executive Committee.
		3. Issue burning bans as needed by Executive Order.	3. Order state agencies to comply with local water conservation restrictions.	3. Encourage restrictions on non-essential uses of water.
		4. Establish liaison with local governments as needed.	4. Issue Executive Orders regarding waived permits, fees, and other restrictions for carriers bringing hay and needed supplies for agricultural relief.	4. Implement progressive restrictions as conditions require.
		5. Request voluntary water use reduction.	5. Request the USDA to declare an Agricultural Disaster in Ohio, if warranted.	5. Continue Conservation Phase activities.
			6. Seek emergency legislation if required.	

STATE-LEVEL AGENCY	PHASE I - NORMAL	PHASE II - ALERT	PHASE III - CONSERVATION	PHASE IV - EMERGENCY
Environmental Protection Agency	1. Develop criteria for public supply emergency plans.	1. Coordinate with OEMA and other responders for release of public information.	1. Post streams where water quality standards are not met.	1. Coordinate with Governor's representatives for Declaration of Emergency.
	2. Assist owners/operators of public water systems in developing supply emergency plans.	2. Increase monitoring in alerted areas.	2. Issue conservation guidelines.	2. Mediate in conflicts of source utilization in cooperation with ODNR.
	3. Review water supply plans.	3. Train/review Phase 2 - Phase 4 requirements with regional offices.	3. Coordinate with ODH on release of health advisories.	3. Support Governor in enforcing provisions as required.
	4. Determine backup supplies and storage systems for public water suppliers.	4. Water suppliers report status to regional EPA water supply officials.	4. Review and recommend approval of local drought emergency requests by local officials in coordination with ODNR, ODH, and OEMA.	4. Initiate rationing procedures based upon recognized priorities.
	5. Provide monthly reports to OEMA on public water quality and supplies, in anticipation of drought conditions.	5. Advise water suppliers in affected areas to activate local water supply emergency plans and contingency plans as needed.	5. Monitor all public water supply facilities; augment staff.	5. Coordinate with ODNR for use of Lake Erie water.
			6. Activate prioritization of publicly-supplied water usage.	
			7. As directed by the Governor, assist localities in enforcing cutbacks of publicly-supplied industrial/ agricultural use of water.	
			8. Issue advisories for local mandatory restrictions of publicly-supplied water usage (ORC 6901.06).	
			9. Chair Public Water Supply Impact Task Force, when activated.	

STATE-LEVEL AGENCY	PHASE I - NORMAL	PHASE II - ALERT	PHASE III - CONSERVATION	PHASE IV - EMERGENCY
Ohio Department of Natural Resources	1. Review and update water supply plans for each community.	1. Provide daily or weekly reports on water levels, hydrologic information, and developing shortages. Review status and availability of water storage in state or federal reservoirs.	1. Increase monitoring hydrologic and water supply conditions to weekly or daily.	1. Evaluate requests for down-+stream discharges from state-owned reservoirs for community water systems on emergency status and consider approval of water hauling from state-owned reservoirs for authorized purposes. Monitor uses and/or reservoirs.
	2. Gather and interpret water data regarding supply, use and trends.	2. Inform public regarding Ohio water rights and obligations for use of streams and groundwater.	2. Make calculation of draw down under various release rates for state-owned reservoirs.	2. Maintain close liaison with U.S. Army Corps of Engineers and Conservancy Districts regarding emergency water releases from respective reservoirs as appropriate.
	3. Analyze adequacy of existing water supplies and assist communities, agriculture, industries, and individuals to develop water-supply systems as needed to withstand appropriate drought conditions.	3. Coordinate with local water supply officials, review availability of water conservation plans and implementation of programs.	3. Make field checks to verify need and availability of water from state-owned reservoirs, including canals and associated lakes.	3. Confirm that water conservation measures have been implemented by communities or others requesting releases.
	4. Educate the public regarding general water management needs and answer requests for water information.	4. Review, correlate, and map data from weather information services and water level monitoring systems.	4. Coordinate requests for water from state-owned reservoirs with appropriate agencies.	4. Make recommendations to U.S. Department of Agriculture for harvesting hay or pasture on agriculture set-aside.
	5. Assist communities, industries and others to develop water conservation plans and programs; model conservation plans.	5. Analyze precipitation for deficiencies with communities known to have inadequate storage capacity.	5. Identify large withdrawals and consumptive uses and encourage water conservation.	5. Monitor hydrologic conditions as needed and provide updates.
	6. Monitor hydrologic and water supply conditions; evaluate conditions monthly and disseminate information.	6. Inform EOC and Governor's staff when conditions may warrant conservation and emergency status.	6. Restrict managed wetland pumping at selected locations as needed.	6. Make recommendations rationing withdrawals from state-owned reservoirs.
	7. Identify, evaluate, research, and document water sources.	7. Increase monitoring of hydrological and water supply conditions to twice monthly or weekly.	7. Through various Divisions, Chair the Wildfire, Recreation & Tourism, and Fish & Wildlife Impact Task Forces when activated.	7. Restrict recreational uses as required for health and safety.

Ohio Department of Natural Resources (Continued)	8. Evaluate, improve, and automate data collection network, including stream flow, ground water, precipitation, reservoirs, and consumption. Report this information to EMA on a regular basis.	8. Compare hydrologic information with past drought conditions and determine stressed areas.	8. Director sits on Drought Executive Committee when activated.	8. Issue restrictions on managed wetland pumping as needed.
	9. Maintain information on outlet discharge capacity of state-owned reservoirs and improve structural works as appropriate for state-owned reservoirs.	9. Prepare and disseminate a drought report weekly for decision-makers and press.		9. Coordinate use of Lake Erie water in cooperation with OEPA.
	10. Register all water withdrawals greater than 100,000 gpd. Collect source reports, analyze annual usage statewide and regionally.	10. Prepare for a substantial increase in the number of requests for general and technical water resource and other hydrologic information.		
		11. Assign personnel to correlate storage data and outlet discharge capacity; determine current operational status of outlets for state-owned reservoirs.		
		12. Coordinate activities within DNR and other local, state, and federal agencies as appropriate.		
		13. Identify large withdrawals and consumptive users in stressed areas.		
		14. Issue bans on open burning throughout Ohio including state forests and parks as required for safety.		

STATE-LEVEL AGENCY	PHASE I - NORMAL	PHASE II - ALERT	PHASE III - CONSERVATION	PHASE IV - EMERGENCY
Ohio Department of Agriculture	1. Prepare plans for the emergency distribution of livestock feed.	1. Coordinate with the U.S. Dept. of Agriculture and State and County Emergency Boards to assess the agricultural situation in Ohio.	1. Develop state request for federal assistance from the U.S. Dept. of Agriculture.	1. Continue activities from the Conservation Phase.
		2. Provide weekly agricultural reports on crops and animals affected by the drought.	2. Implement state plans for the emergency distribution of livestock feed.	
		3. Provide a representative to the Drought Assessment Committee when activated.	3. Assist in operation of a hay locator service.	
			4. Survey and monitor animal health and care.	
			5. Provide regular agriculture reports on crops and animals.	
			6. Investigate and enforce regulations regarding unfair pricing.	
			7. Chair the Agriculture Impact Task Force, when activated.	

Public Utilities Commission of Ohio	1. Review and update PUCO assignments in the Drought Incident Annex.	1. Encourage affected Commission-regulated utilities to notify customers of voluntary conservation measures.	1. Assure affected Commission-regulated utilities have considered notifying customers of conservation measures.	1. Coordinate with Governor's representative for Declaration of Emergency.
	2. Coordinate information/data received from Commission-regulated utilities.	2. Receive regular status reports from Commission-regulated utilities.	2. Provide status reports including developing emergencies concerning Commission-regulated water and electric utilities.	2. Enforce emergency provisions as required by Commissioner and Governor.
		3. Coordinate with EMA and other state-level responders for release of public information.	3. Follow EPA recommended prioritization of water usage to the extent of consistency with PUCO rules.	3. Activate drought emergency plans as required.

			4. Director sits on Drought Executive Committee, when activated.	
STATE-LEVEL AGENCY	PHASE I - NORMAL	PHASE II - ALERT	PHASE III - CONSERVATION	PHASE IV - EMERGENCY
State & Local Governments	1. Assist local communities in development of water shortage and drought response plans.	1. Receive notifications of Drought Alert Declarations.	1. Maintain liaison with local government concerning seriousness of situation.	1. Continue conservation phase activities.
		2. Contact local governments concerning the drought and keep them informed of situations.	2. Coordinate between levels of government as necessary.	2. Call for mandatory restrictions of water usage.
			3. Call for enactment of voluntary water conservation measures by local communities.	

Emergency Management Agency	1. Coordinate with ODNR, OEPA, and other agencies to assess the possibility of drought conditions developed in the state.	1. Provide a Chair of the Drought Assessment Committee (DAC).	1. Provide raw water pipe and pumps to local jurisdictions.	1. Control and coordinate activation of the State EOC.
	2. Manage the review and maintenance of the Drought Incident Annex.	2. Provide regular reports to members of the Drought Assessment Committee.	2. Coordinate the use of water trailers by local jurisdictions with the ONG.	2. Continue activities from Phase II and III.
	3. Coordinate with other state agencies in creating or amending drought-related legislation	3. Maintain regular information flow with key federal, state and local agencies concerning drought conditions.	3. Continue activities from Phase II.	
			4. OEMA Executive Director chairs the Drought Executive Committee when activated.	