

# South Carolina Drought and Water Shortage Tabletop Exercise

Wednesday, September 27, 2017

10:00 AM – 3:00 PM

SC Emergency Operations Center

2779 Fish Hatchery Rd.

West Columbia, SC 29712

## Motivation & Goals

Existing drought plans, ordinances, and procedures are important tools in guiding state-, basin-, and local-level response to drought. South Carolina has experienced several droughts over the past two decades, highlighting the need for multiple agencies and organizations to work together to effectively manage water resources during these events. The goal of this exercise is to enhance South Carolina's drought response and preparedness and the State's capacity to address a statewide water shortage. The exercise will convene various groups responsible for drought response. Participants will walk through a series of drought scenarios, rehearsing the actions that would occur at increasingly severe stages of drought.

## Objectives

1. Identify and understand the strengths and breaking points in the [SC Drought Response Act](#), [SC Drought Regulations](#), [SC Emergency Response Plan Drought Annex](#), and [local drought plans and procedures](#)
2. Improve awareness of local, state, and federal players in South Carolina's drought response
3. Identify key mission areas for each State Emergency Support Function
4. Collect ideas and strategies for future exercises

## Participation

Participants should be prepared to discuss their organization's drought plans and procedures and actively consider how their organization would respond to drought conditions of increasing severity and activation of the State's Emergency Operations Plan (EOP). Invited participants include Drought Response Committee (DRC) members, local water systems, reservoir managers (for example, US Army Corps of Engineers, Duke Energy), water users, and the State Emergency Response Team (SERT).

Since not all water systems in the state will be able to attend the exercise, water utility representatives from the SC Drought Response Committee are asked to specifically focus on how they would address a water shortage in their county. Challenges, opportunities, and lessons learned identified by this group will be important in developing strategies to further enhance local and state drought response and planning.

## Planning Team

Hope Mizzell – *South Carolina Department of Natural Resources, State Climatology Office*

Ekaterina Altman, Amanda Farris, Kirsten Lackstrom – *Carolinas Integrated Sciences & Assessments*

Robert Burton, Marshall Sykes – *South Carolina Emergency Management Division*

Jeff Allen, Dawn White – *South Carolina Water Resources Center*

## South Carolina Drought and Water Shortage Tabletop Exercise Agenda

9:45	<b>Registration</b>
10:00	<b>Welcome</b> <b>Overview of Goals and Objectives for the Exercise</b>
10:10	<b>Review of Relevant Legislation, Plans, and Documents</b> <i>SC Emergency Operations Executive Guide</i> <i>Surface Water Withdrawal, Permitting, Use and Reporting (Act and Regulations)</i> <i>Drought Response Act and Regulations</i> <i>Emergency Operations Plan – Appendix 10 (Drought Response Plan)</i> <i>Model Drought Management Plan and Response Ordinance</i>
10:50	<b>Drought Scenarios and Implementation of Plans</b> <i>Group responds to worsening drought conditions at four time points:</i> 1. <i>Moderate Drought Statewide</i> 2. <i>Severe Drought Statewide</i> 3. <i>Extreme Drought</i> – Widespread impacts to agriculture, fire risks, water systems, and water-dependent industries and businesses 4. <i>Extreme Drought Intensifies</i> – Conditions are deteriorating. Safety, health, and welfare are threatened. Drought Response Committee decides that State measures are necessary.
12:15	<b>Lunch</b>
1:00	<b>5. Emergency Operations Plan is activated</b> <i>Group implements the SC Emergency Operations Plan. SERT is activated.</i>
2:30	<b>Hot Wash</b> <i>Group provides feedback on exercise and suggestions for future activities</i> <b>Closing Remarks</b>
3:00	<b>Adjourn</b>

# South Carolina Drought and Water Shortage Tabletop Exercise

## Discussion Questions

### 1. Moderate Drought Statewide

*a. Questions for local water systems:*

- How current is the information in your local drought response plan and ordinance? (For example, water system information, drought triggers and response actions, and contact information)
- What currently works well at this stage?
- What does not work well at this stage?

*b. Questions for state agencies and other organizations:*

- Does your organization have a plan in place for monitoring, responding to, and preparing for drought?
- What does your organization do at this stage of drought?
- Do you have the necessary information, personnel, and/or resources to respond to this stage of drought?
- If not, what would help your organization more effectively respond to and prepare for drought?

*c. What, and how, is your organization communicating with the public?*

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**Notes:**

## 2. Severe Drought Statewide

- a. *How do inconsistencies at different organizational levels affect drought response and communications at this stage? For example:*
- State level: The Drought Response Committee encourages voluntary conservation and implementation of local ordinances and plans but does not recommend or impose mandatory restrictions.
  - Local level: Water systems ask for no, voluntary, or mandatory restrictions.
  - Basin level: Many basins have Low Inflow Protocols (LIPs) or other reservoir management plans and procedures, others do not have a coordinated approach.
- b. *Are local ordinances and plans up-to-date and consistent with other drought plans in your area (i.e., wholesale customers, neighboring communities) or basin (i.e., LIPs)?*
- Are actions at the severe drought stage, as outlined in the plans, adequate and effective?
  - Are wholesale customers required to implement conservation?
- c. *How are other sectors (agriculture, forestry, industry) responding to drought?*
- d. *What, and how, is your organization communicating with the public?*
- e. *What challenges are evident at this drought stage?*

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### Notes:

### 3. Extreme Drought Statewide

*Widespread impacts to agriculture, fire risks, water systems, and water-dependent industries and businesses*

- The South Carolina Forestry Commission may request an Executive Order from the Governor to activate the National Guard for state duty, to assist with fire suppression.
- Depending on local response, the Governor may issue a press release requesting voluntary water conservation.

*a. How do inconsistencies at different organizational levels affect drought response and communications at this stage?*

- State level: The Drought Response Committee does not impose mandatory restrictions, but requests implementation of local ordinances and mandatory restrictions if indicated by plans.
- Local level: water systems and communities are implementing and enforcing water use restrictions.
- Basin level: Plans may be at different levels of drought and response actions.

*b. Are local ordinances and plans up-to-date and consistent with other drought plans in your area or basin?*

- Are actions at the extreme drought stage, as outlined in the plans, adequate and effective?
- Are there different criteria for wholesale v. individual customers?
- To what extent are ordinances and restrictions coordinated across neighboring water systems and communities?

*c. How are the agriculture and forestry sectors being affected and responding? How are aid and assistance programs working?*

- What is required to seek assistance from other states?

*d. How are industry and individual businesses responding?*

- They are not required to have a drought plan, but might be considered a non-essential water use.

*e. What, and how, is your organization communicating with the public?*

*f. What challenges are evident at this drought stage?*

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**Notes:**

#### 4. Extreme Drought Intensifies

*Conditions are deteriorating. Safety, health, and welfare are threatened. Drought Response Committee (DRC) decides that State measures are necessary:*

- DRC submits recommendations to DNR to alleviate impacts.
- DRC evaluates non-essential water uses that can be curtailed.
- DRC recommends that Governor issue public statements about drought conditions. A first statement may recommend voluntary water use and withdrawal conservation. A second statement may recommend or impose mandatory restrictions on water use and withdrawals.
- DRC notifies SCEMD that drought conditions have progressed to a level that may require activation of the Emergency Operations Plan.

- a. *What resources, information, or additional capacity does the DRC need to assess conditions and recommend actions at this drought level?*
- b. *How will the equitable allocation of water be determined? (Drought Response Act Sec. 49-23-80)*
- c. *If the DRC requests mandatory restrictions, will affected parties appeal to the Administrative Law Judge, which has 5 days to hear the case?*
  - How will this affect timeliness and effectiveness of conservation and response efforts?
- d. *When, and how, is your organization communicating with the public?*
- e. *When exactly will the SC Emergency Operations Plan be activated?*
- f. *How long will the State Emergency Response Team (SERT) be activated?*
  - For a drought event, activation could last for months, or longer.
- g. *When is a SCEMD Drought Response Working Group formed to develop response, recovery, and mitigation plans in response to extreme drought conditions?*

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**Notes:**

## 5. Emergency Operations Plan (EOP) is Activated

*Group implements the SC Emergency Operations Plan. The State Emergency Response Team (SERT) is activated.*

- SERT develops a Drought Emergency Executive Order for Governor's signature.
- SERT, with the Drought Response Committee, works with local emergency management directors and water suppliers to develop response and recovery measures.
- The Governor may issue emergency regulations to require curtailment of withdrawals.
- State agencies are required to reduce water use by 10%.

Review the agency-specific actions outlined in the EOP:

- a. Are the necessary resources, expertise, and capacity available to fulfill these actions?*
- b. What tasks or actions are not listed here, but should be included?*
- c. When, and how, is your organization communicating with the public?*
- d. What challenges do you foresee in implementing the Emergency Operations Plan?*
- e. Does the Governor seek a federal disaster declaration? Are Individual and Public Assistance funding programs available?*
- f. What legislative action might be required?*
- g. How long will the SERT be activated?*
- h. How will SC coordinate with other states?*
  - Extreme drought conditions will likely affect our neighbors as well.

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**Notes:**