ARE WE THERE YET?
A STATE PERSPECTIVE ON DROUGHT PLANNING AND RESPONSE

U.S. DROUGHT MONITOR FORUM
APRIL 16, 2013

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BACKGROUND ON PLANNING

- Initial Executive Order on drought planning (EO# 70) issued by the Governor on May 2002
  - Established organization and process
    - Alabama Drought Assessment & Planning Team (ADAPT)
    - Monitoring & Assessment Group (MAG)
    - Drought Impact Group (DIG)
  - Alabama Drought Plan – Released 2004
First Alabama statewide drought plan

Established 4 drought levels:
- Advisory
- Watch
- Warning
- Emergency

Focus on communication and coordination with water managers and users
Drought Indicators

- Precipitation
- Soil Moisture
  - Lawn & Garden
  - Crop Moisture
  - Palmer Drought Severity Index
- Forestry Fire Conditions
- Streamflows
- Groundwater levels
- Reservoir elevations

- Impacts in 5 areas
  - Agriculture
  - Industrial
  - Domestic Supply
  - Recreation
  - Environment
Map of Alabama Reservoirs
RESERVOIR SYSTEM COORDINATION

- TVA System
- COE System
  - ACF Basin
  - ACT Basin
  - Tenn-Tom
  - Warrior-Tom
- Alabama Power Reservoirs
  - Coosa System
  - Tallapoosa System
  - Warrior River
Map of Alabama Groundwater Monitoring Sites
ALABAMA
DROUGHT
PLANNING
REGIONS
ALABAMA DROUGHT MONITOR – AUGUST 21, 2007

<table>
<thead>
<tr>
<th>Week</th>
<th>Nothing</th>
<th>D0-D4</th>
<th>D1-D4</th>
<th>D2-D4</th>
<th>D3-D4</th>
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<tr>
<td>August 21, 2007</td>
<td>0.00</td>
<td>100.00</td>
<td>95.95</td>
<td>91.73</td>
<td>87.45</td>
<td>74.3</td>
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BACKGROUND (CON’T)

- 2007 drought was first time to exercise Alabama Drought Plan in actual drought
  - Coordination and communication worked very well
    - Especially with regard to reservoir systems
  - Developed process for Alabama input to national drought monitor map (US Drought Monitor)
  - Lessons learned included:
    - Importance of monitoring conditions and impacts
    - Adjustments to drought regions
    - Adjustments to drought indicators
    - Need for local and timely impact information
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/
<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>D0-D4</th>
<th>D1-D4</th>
<th>D2-D4</th>
<th>D3-D4</th>
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<tr>
<td>Current</td>
<td>91.01</td>
<td>8.99</td>
<td>0.00</td>
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<td>Last Week</td>
<td>94.22</td>
<td>5.78</td>
<td>0.00</td>
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<td>(04/02/2013 map)</td>
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<tr>
<td>3 Months Ago</td>
<td>39.94</td>
<td>60.06</td>
<td>33.67</td>
<td>19.42</td>
<td>9.81</td>
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<td>(01/08/2013 map)</td>
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<tr>
<td>Start of</td>
<td>40.07</td>
<td>59.93</td>
<td>33.67</td>
<td>19.47</td>
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<td>Calendar Year</td>
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<tr>
<td>Start of</td>
<td>71.58</td>
<td>28.42</td>
<td>19.42</td>
<td>15.36</td>
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<td>One Year Ago</td>
<td>57.87</td>
<td>42.13</td>
<td>32.96</td>
<td>24.67</td>
<td>16.85</td>
<td>3.98</td>
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<td>(04/03/2012 map)</td>
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</tbody>
</table>

**Intensity:**

- **D0 Abnormally Dry**
- **D1 Drought - Moderate**
- **D2 Drought - Severe**
- **D3 Drought - Extreme**
- **D4 Drought - Exceptional**

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

Released Thursday, April 11, 2013
David Miskus, NOAA/NWS/NCEP/Climate Prediction Center
DROUGHT DECLARATIONS

For Public Dissemination
Alabama Drought Declarations

Release Date: February 28, 2013

In accordance with the Executive Order 19 and the Alabama Drought Management Plan, the ADECA Office of Water Resources (OWR), based on a review of current and anticipated conditions, has declared the following portions of the State of Alabama to be under the specified drought declaration levels.

<table>
<thead>
<tr>
<th>Declaration Level</th>
<th>Emergency</th>
<th>Warning</th>
<th>Watch</th>
<th>Advisory</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>


Recent rains have continued to improve conditions in the state. However, public water systems and other non-public and private water users should continue to monitor water conditions and review plans as we head into the drier spring and summer seasons. The OWR will continue to provide updated notifications as needed.

For further information, please visit our web site at [www.adeca.alabama.gov/water](http://www.adeca.alabama.gov/water) and follow the links to the Office of Water Resources. You may also reach our office by phone at (334) 242-5499, fax at (334) 242-0776, or e-mail at drought@adeca.alabama.gov.

OWR periodically revises the Drought Declarations based on current and projected conditions.

Broad based agency and stakeholder input.

Latest issued on February 28, 2013.
ALABAMA DROUGHT MONITOR PERCENTAGES
(% OF ALABAMA IN DROUGHT SINCE 2000)
ALABAMA DROUGHT MONITOR PERCENTAGES (D2 OR WORSE DROUGHT LEVELS SINCE 2000)
ALABAMA DROUGHT MONITOR PERCENTAGES
(D2 OR WORSE DROUGHT LEVELS SINCE 9/7/2010)
EXECUTIVE ORDER 19 – DROUGHT MANAGEMENT

- Released on June 24, 2011
- Makes minor revision to the ADAPT organizational structure
  - Slight adjustment to ADAPT:
    - Added DCNR Commissioner
    - Added FSA Director
    - Added Alabama State Forester
    - Deleted DIG position
  - MAG and DIG combined into MIG
- Establishes formal requirement for Drought Plan
- Requires ADAPT to adopt formal procedures for operation
ALABAMA WATER RESOURCES COMMISSION
DROUGHT MANAGEMENT SUBCOMMITTEE

2012 Report on Alabama Drought Planning and Management

SUMMARY OF RECOMMENDATIONS

The following is a brief summary of the recommendations developed by the Drought Subcommittee of the Alabama Water Resources Commission. More detailed discussion and descriptions of each recommendation are contained in the Recommendations Section of the report beginning on Page 3.

Recommendation Area: Alabama Drought Legislation and Alabama Drought Management Plan

Recommendation 1: The AWRC should support the Alabama Drought Planning and Response Act legislation including actions to formalize procedures for the state level Drought Declaration process and the Alabama input into the U.S. Drought Monitor map.

Recommendation 2: The subcommittee endorses the current draft update to the Alabama Drought Plan and recommends that the AOWR proceed with formalizing those edits into a final document.

Recommendation 3: The AOWR and the MIG should improve the criteria and flexibility in the Alabama Drought Declaration process including the ability to delineate smaller geographic areas and by water use sectors.

Recommendation Area: Funding and Staffing

Recommendation 4: Additional funding for the AOWR in support of drought-related activities should be provided.

Recommendation 5: Additional funding for the Office of the State Climatologist in support of drought-related activities should be provided.

Recommendation Area: Data Needs

Recommendation 6: The AWAWG should include drought-related data needs in its assessment of overall water resources data needs for Alabama.

Recommendation 7: Public water systems should be required to report the status of water sources and any response to drought conditions to the AOWR.

Recommendation Area: Education and Outreach

Recommendation 8: The Subcommittee recommends the AOWR consult with the ADECA CID office on how best to work with media outlets to better publicize drought conditions and impacts.

Recommendation 9: The AOWR should take the lead in coordinating state level activities for water conservation and water efficiency programs in Alabama.

Members:

+ Ashley Cousins, Chairperson
+ Willard Bowers
+ Dennis Bragg
+ Joe Howle
+ Buddy Morgan
+ Malcolm Steeves, Ex Officio

Nine Specific Recommendations
AWRC DROUGHT PLANNING SUBCOMMITTEE RECOMMENDATIONS

Recommendation Area: Alabama Drought Legislation and Alabama Drought Management Plan

1. The AWRC should support the Alabama Drought Planning and Response Act legislation including actions to formalize procedures for the state level Drought Declaration process and the Alabama input into the U.S. Drought Monitor map.
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6. The AWAWG should include drought-related data needs in its assessment of overall water resources data needs for Alabama.
7. Public water systems should be required to report the status of water sources and any response to drought conditions to the AOWR.

Recommendation Area: Education and Outreach

8. The Subcommittee recommends the AOWR consult with the ADECA CID office on how best to work with media outlets to better publicize drought conditions and impacts.
9. The AOWR should take the lead in coordinating state level activities for water conservation and water efficiency programs in Alabama.
ALABAMA DROUGHT PLAN – 2013 REVISION

- Reflects current process for inter-agency and stakeholder coordination, US Drought Monitor input and Drought Declaration revisions
- Adds ADAPT operating procedures
- Adds coordination roles with:
  - Alabama Water Resources Commission
  - Alabama State Climatologist
- Clarification of drought triggers and added flexibility in drought declaration area designations
- Incorporates compliance with Alabama Open Meetings Act
ALABAMA DROUGHT PLANNING & RESPONSE ACT

- Outgrowth of efforts by the Permanent Joint Legislative Committee on Water Policy and Management
  - Extensive public review and input over the last few months of 2012
  - Companion bills in the 2013 legislative session
  - SB 208 Introduced 2/14 by Sen. Beasley
  - HB 382 introduced 3/5 by Rep. Tuggle

SYNOPSIS: This bill would codify the establishment of the Alabama Drought Assessment and Planning Team created by the Governor's June 24, 2011, Executive Order Number 19, and provide for its membership, duties, responsibilities, and powers.

This bill would establish the Monitoring and Impacts Group Subcommittee and provide for its membership, duties, responsibilities, and powers.

This bill would codify the charges given to the Alabama Office of Water Resources which is a division of the Alabama Department of Economic and Community Affairs, with the responsibility of developing a State Drought Plan and periodically issuing drought declarations.

The bill would reaffirm the Governor's ability to respond to extreme drought conditions under the powers provided under the Alabama Emergency Management Act of 1955.

This bill would allow the Office of Water Resources to promulgate rules.
BASIC PROVISIONS

- Maintains current focus of coordination and communication
- Incorporates key aspects - Executive Order 19
  - Requirement for State Drought Plan
  - Role of the Office of Water Resources
  - Drought organizational structure
    - Alabama Drought Assessment and Planning Team (ADAPT)
    - Monitoring and Impact Group (MIG)
BASIC PROVISIONS (CONT’D)

- Formalizes process for Alabama input into National Drought Monitor map
- Clarifies role of State Climatologist in drought response processes
- Improves reporting by public water systems on the status of local conditions and water sources
BASIC PROVISIONS (CONT’D)

- Formalizes the state’s drought declaration process
- Reaffirms Governor’s emergency powers for restrictions on water use under the drought-related states of emergency
- Goal is to ensure drought planning and procedures can easily be incorporated into comprehensive statewide water resources planning process
Companion Bills

- SB 208 - Sen. Beasley
  - Introduced on 2/14
  - Amended 3/5 in Committee to add to ADAPT membership
    - State Executive Director of the Soil & Water Conservation Committee
    - State Conservationist from the Alabama NRCS
  - Past Senate on 4/11

- HB 382 - Rep. Tuggle
  - Introduced with the Senate amendments
  - Referred to the House Committee on Commerce & Small Business
  - Rec’d Favorable Committee Vote on 4/10
NEXT STEPS

- Alabama Drought Plan Update Publication
  - Endorsed by AWRC
  - Endorsed by Monitoring & Impact Group (MIG)
  - Anticipated endorsement by Alabama Drought Assessment and Planning Team (ADAPT) on April 30, 2013

- Monitor the Drought Planning and Response Act legislation (SB 208/HB 382) for passage and implications to Plan

- Also continuing to work with MIG on review of drought indicators and triggers
THE HYDRO-ILLOGICAL CYCLE

1. CONCERN
2. PANIC
3. RAIN
4. AWARENESS
5. DROUGHT
6. APATHY
CONTACT INFORMATION

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       or (334) 242-5499

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