Drought Response

Photo credit:
SC State Climate Office

Per the Planning Framework, the Specific Obligations of the RBC, with Support from the SCDNR, are:

1. Collecting and evaluating local hydrologic information for drought assessment.
2. Providing local drought information and recommendations to the DRC regarding drought declarations.
3. Communicating drought conditions and drought declarations to the rest of the RBC, stakeholders, and the public.
4. Advocating for a coordinated, basin-wide response by entities with drought management responsibilities.
5. Coordinating with other drought management groups in the basin as needed.

Planning Framework Outline for **Chapter 8. Drought Response**

1. Summarize **existing drought plans** and **drought advisory groups**
2. Summarize any **drought response initiatives** developed by the RBC
3. List **recommendations** on drought management or drought management strategies
4. Include a **communication plan** to inform stakeholders and the public on current drought conditions and activities regarding drought response

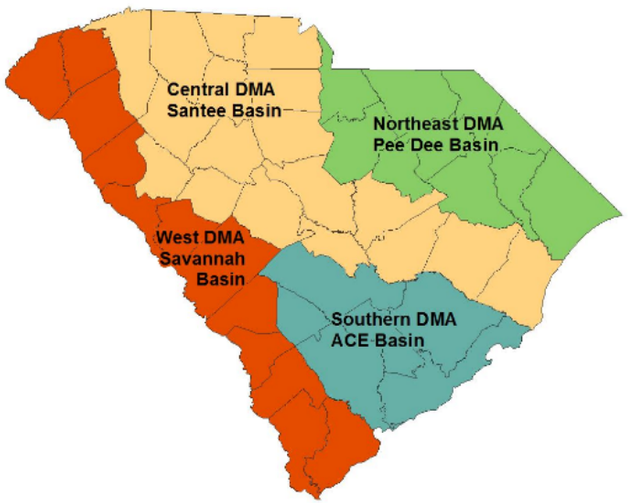
South Carolina Drought Response Committee

Drought Response Committee (DRC)

Representatives of each DMA serve on the DRC

Drought Management Areas (DMA)

- West DMA (Savannah Basin)
- Central DMA (Santee Basin)
- Southern DMA (ACE Basin)
- Northeast DMA (Pee Dee Basin)

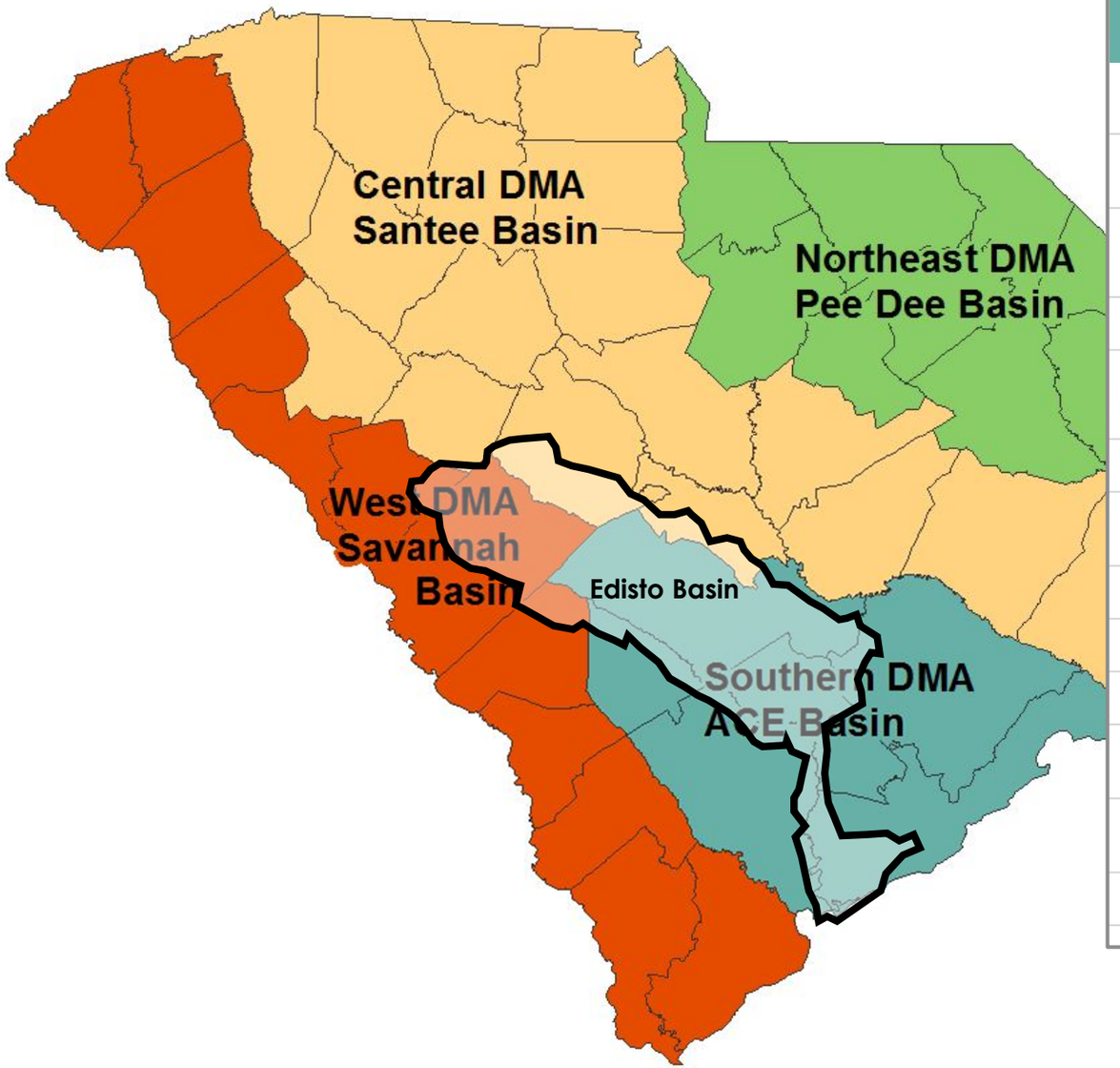


State Agency Members

Committee Member	Agency
Mr. Ken Rentiers	SCDNR, LWC Division
Mr. Marshall Sykes	SC Emergency Management Division
Mr. Rob Devlin	SCDHEC
Mr. Darryl Jones	SC Forestry Commission
Mr. Brad Boozer	SC Department of Agriculture

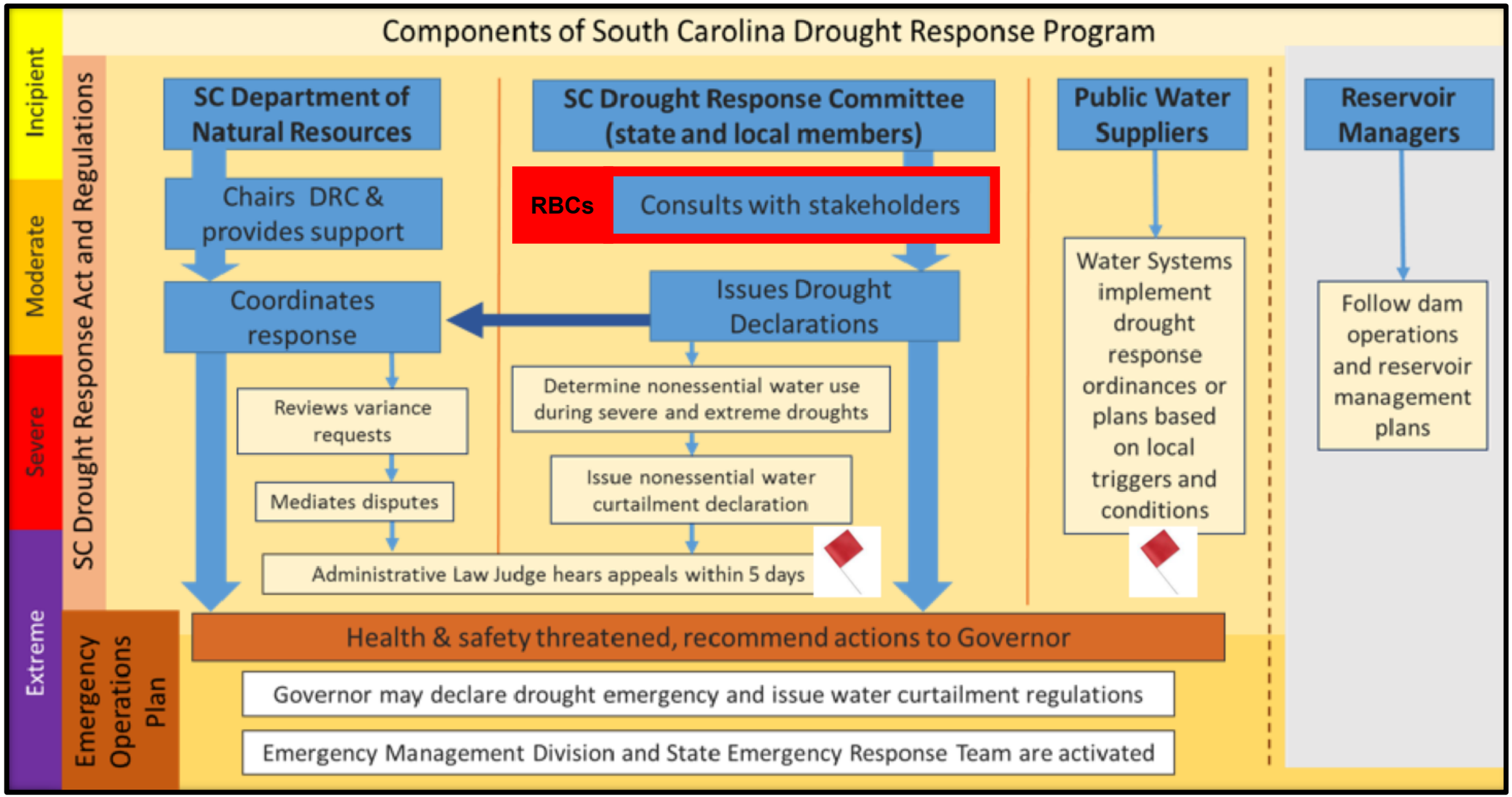
The DRC carefully and closely monitors, conserves, and manages the State's water resources in the best interest of all South Carolinians.

Drought Management Areas



Southern Drought Management Area

Group	Committee Member	County
Agriculture	James Traywick	Orangeburg
Commission of Public Works	Jason Thompson - Appointment 03/01/2018	Charleston
Counties	Vacant	
Domestic User	Chris Bickley - Appointment Pending	Colleton
Industry	Vacant	
Municipalities	Eric Odom	Orangeburg
Power Generation Facilities	Vacant	
Private Water Supplier	Vacant	
Public Service District	Vacant	
Regional Council of Gov.	Ronald E. Mitchum	Charleston
Soil & Water Conservation Dist.	Marion L. Rizer	Colleton
Special Purpose District	Vacant	



From: Edisto RBC Meeting #6, ***Drought Response and Planning in South Carolina***, Hope Mizzell, Ph.D.

Edisto Basin Drought Response Plans

Entity	DMA	Customers	Water Source	Drought Indicator/ Trigger Types[1]	Alternative Water Supply Agreements
Batesburg-Leesville	Central	Not specified, serves town of approximately 6,400	**Surface water** - reservoir in town with supplemental 2 MGD from Brodie Creek	Town Pond Reservoir 80%, 60%, or 50% full Brodie Creek flow below 5.0, 3.0, or 1.5 cfs 60, 45, or 21 days of raw water supply available Average daily use greater than 1.3 MGD for 45 consecutive days, 1.5 MGD for 50 consecutive days, or 1.5 MGD for 30 consecutive days Local average rainfall <6 inches for 60 days, 2 inches for 90 days, or 1 inch for 100 days	In early 2022, the Town has reached an agreement to connect to the Joint Municipal Water & Sewer Commission (JMWSC). Once this occurs, the Town will no longer withdraw from the Edisto basin.
Blackville	Southern	1,100	**Groundwater**	Storage below 60% capacity Aquifer levels less than 5, 10 or 15% of normal level Average daily use greater than 1 MGD for 28, 21 and 14 consecutive days	None
Bowman	Southern	Not specified, serves town of approximately 550 residents	**Groundwater**	Storage falls below 25%, 50%, or 75% of capacity and unable to recover Pumping levels at wells drop 25%, 50%, or 75% under normal conditions	None. In the extended future there maybe plans of connecting to Orangeburg DPU.
City of Aiken	Savannah	16,100	**Surface Water** - Shaw Creek, a tributary to South Fork Edisto River	Aquifer levels 5, 10, or 12 feet below historic static level Average daily use greater than 15.5, 16.5 or 17.5 MGD for five consecutive days Reservoir valve 1 discharge or reservoir valve 2 discharge required to maintain flow in Shaws Creek (severe and extreme drought phases)	The drought plan indicates the City of Aiken is considering an Alternative Water Supply Source Agreement with North Augusta.
Charleston Water System (CWS)	Southern	120,000 retail accounts wholesale service to 8 utilities	**Surface Water** - Edisto River Bushy Park Res. and Goose Creek Res. (both in Santee River Basin)	Edisto River: Edisto River flow 90%, 75%, or 50% of 7Q10[2] Bushy Park Reservoir: Specific conductance of water in Durham Canal is between 260 and 500, 500 and 1,500, or greater than 1,500 micro-siemens for a period of time greater than 48 hours	None
Denmark	Southern	1,530	**Groundwater**	Storage falls below 60% of capacity Aquifer levels less than 5%, 10%, or 15% normal level Average daily use greater than 1 MGD for 28, 21, or 14 consecutive days	The City of Denmark will soon be negotiating a Mutual Aid Agreement with the Bamberg Board of Public Works.

[1] When multiple trigger points are listed, those reflect trigger points for the moderate, severe, and extreme drought phases.

Edisto Basin Drought Response Plans

Entity	DMA	Customers	Water Source	Drought Indicator/ Trigger Types[1]	Alternative Water Supply Agreements
Dorchester County	Southern	2,600	**Purchase** - Charleston Commissioners of Public Works **Groundwater**	Dorchester will use Charleston CPW triggers except Edisto River extreme drought phase is triggered when Edisto River flow is between 50% and 75% of 7Q10 rather than below 50% of 7Q10	Has connections to Dorchester Water Authority and the Town of Ridgeville.
Dorchester Co. Water Authority (DCWA)-Reevesville	Southern	180	**Groundwater**	Proclamation by Drought Response Committee Static water levels drop 20, 40, or 60 feet below average Pumping water levels drop 20, 40, or 60 feet below avg. Determination by DCWA Administrator	None.
Edisto Beach	Southern	280	**Groundwater**	Average daily use greater than 0.392, 0.5, or 1.4 MGD for 7 consecutive days	None
Eutawville[2]	Southern	258	**Groundwater**	Aquifer levels are >100, 150, 200 ft from ground level Average daily use greater than 0.1, 0.125, or 0.15 MGD for 7, 14, or 71 consecutive days, respectively Information based on DNR Drought Committee's declaration	None
Gaston[2]	Central	2,500	**Groundwater**	Storage falls below 25%, 50%, or 75% of capacity and is unable to recover Pumping level at wells drops to 25%, 50%, or 75% under normal conditions	None
Holly Hill	Central	Not specified	**Groundwater**	Based on aquifer levels below normal, 10 feet below normal, or less than 10 feet above pump intake	Considering agreements with Santee Regional Water System and Lake Marion Regional Water
Monetta	West and Central	430	**Groundwater** **Purchase** – Ridge Spring Water System	Storage falls below 25%, 50%, or 75% of capacity	None
Norway	Southern	376	**Surface Water** - Edisto River **Purchase** - Orangeburg DPU	Norway will use the Orangeburg DPU triggers	Orangeburg DPU

[1] When multiple trigger points are listed, those reflect trigger points for the moderate, severe, and extreme drought phases.
[2] Eutawville and Gaston each have one groundwater well in the Edisto River Basin.

Edisto Basin Drought Response Plans

Entity	DMA	Customers	Water Source	Drought Indicator/ Trigger Types[1]	Alternative Water Supply Agreements
Orangeburg City Department of Public Utilities	Southern	60,000 customers plus 6 towns/cities/ unincorporated areas, and 2 wholesale customers	**Surface Water** - North Fork Edisto River	Elevation of North Fork Edisto River less than 151.6, 151.4, or 151.3 feet MSL at water plant Streamflow of North Fork Edisto River less than 125, 110, or 100 cfs Determination by DPU Manager	None
Pelion	Central	325	**Purchase** - Lexington Joint Municipal Water Authority	Trigger levels cannot be determined because Pelion purchases water from Lexington Municipal Joint. Any restriction of water use during a drought will be triggered by Lexington Municipal Joint and the West Columbia water system.	None
Perry	West	300	**Groundwater**	Static water level falls less than 180, 188, or 197 feet	Agreement with the Town of Wagener
Salley	West	200	**Groundwater**	Average daily use greater than 0.2, 0.3, or 0.4 MGD for 5 consecutive days	Project underway to connect to the Silver Springs Water District.
Silver Springs Water District	Southern	800-900, sells water to Town of Salley	**Groundwater**	Storage falls below 90%, 50% or 60% of capacity	By 12,000 gallons per day from Orangeburg DPU
Springfield	Southern	625	**Groundwater**	Trigger levels on wells cannot be determined, triggers based on DRC declaration for Orangeburg County	None
St. George	Southern	950	**Groundwater**	Storage falls below 75%, 65%, or 50% of capacity Average daily use greater than 0.45 or 0.5 MGD for 5 consecutive days (severe and extreme phases)	A 4th emergency well at 95 gpm tied on with Reevesville system. Considering a tie on to Dorchester Water Authority.
Wagener	West	512	**Groundwater**	Average daily use greater than 0.14, 0.18, or 0.22 MGD for 5 consecutive days	The Perry Water System may provide water during a supply emergency.

[1] When multiple trigger points are listed, those reflect trigger points for the moderate, severe, and extreme drought phases.

What Might a Coordinated, Basin-wide Response Look Like?

Example: Catawba-Wateree Water Management Group Low Inflow Protocol Response Actions

Stage *	Water Use Reduction Actions		
	Licensee (Duke)	Public Water Suppliers	Owners of Large Water Intakes
0	Reduce Wylie Recreation Flow Releases	None	None
1	Reduce Project Flow Requirements	Implement voluntary water use restrictions, 2 day/wk irrigation, reduce vehicle washing **GOAL: 3-5% water use reduction**	Request voluntary reductions of customers/employees
2	Eliminate recreation flows, further reduce other Project Flow Requirements	Implement mandatory water use restrictions, 2 day/wk irrigation, eliminate vehicle washing **GOAL: 5-10% water use reduction**	Request voluntary reductions of customers/employees
3	Reduce releases to Critical Flows	Implement increased mandatory water use restrictions, 1 day/wk irrigation, limit other outdoor water uses **GOAL: 10-20% water use reduction**	Request voluntary reductions of customers/employees

**** Triggers for each stage are based on a storage index, Drought Monitor 3-month avg, and 6-month average streamflows***

Drought Response

1. Does the RBC want to develop:
    1. **Drought response initiatives**?
    2. **Recommendations** on drought management or drought management strategies?

Drought Response – Communication Plan

1. How does the RBC want to **Communicate** to the rest of the RBC, the public, stakeholders?

One suggested approach (to start a discussion)…

ERBC Drought Subcommittee
Agriculture/Forestry/Irrigation Rep
Water & Sewer Utility Rep
Electric Power Utility Rep
Environmental Rep
Local Government Rep
Water Based Recreation Rep
At Large Rep

Meets if Incipient Drought Conditions appear in Basin. Meets more frequently if conditions worsen.

Chair collects and compiles drought information from the RBC and Drought Subcommittee members

Chair Reports to DMA Reps on the DRC

Vice Chair collects information and provides to SCDNR for posting on Edisto River Basin Planning Website and through Edisto Basin distribution lists