

# Implementation Plan Development



# Implementation Plan

- **Objectives**

- Address water shortages or other identified issues
- Informed by the recommended water management strategies and other Plan recommendations made by the RBC

- **Schedule**

- Focuses on the first 5 years following adoption of the River Basin Plan

- **Budget**

- Budget needed to accomplish each objective
- Identifies potential funding sources

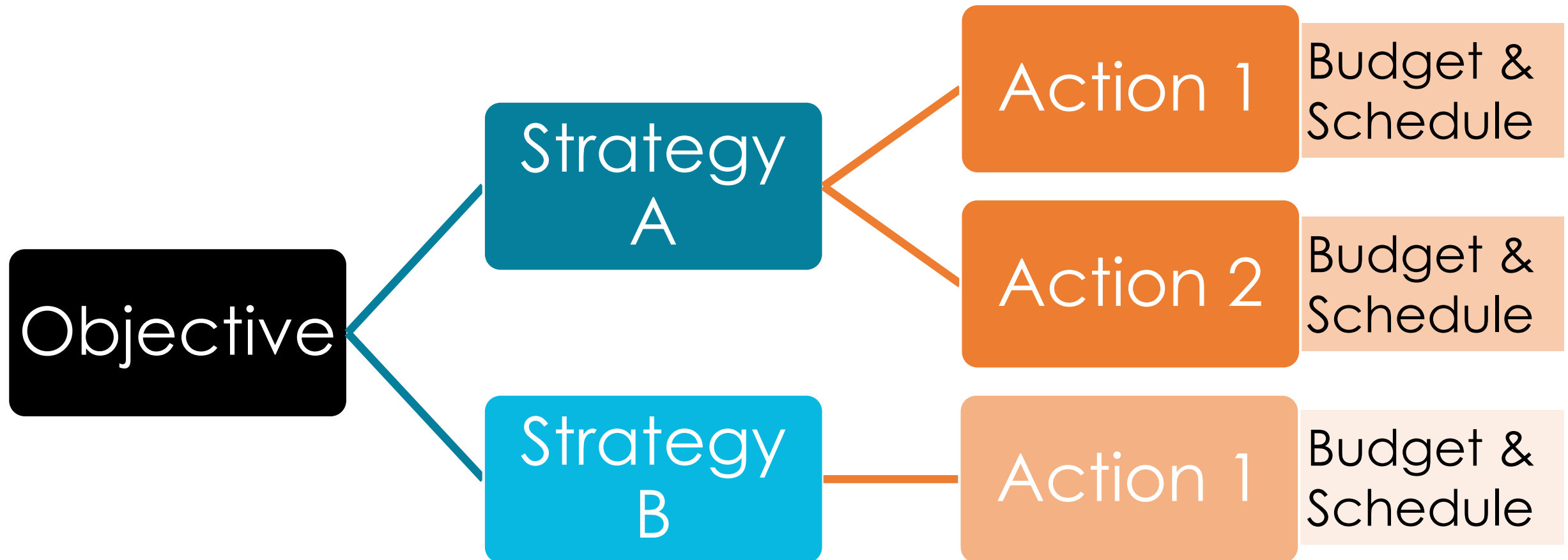
# Implementation Plan - Proposed Objectives

1. Reduce demand to conserve water resources
2. Conserve surface water during low-flow conditions
3. Augment sources of supply
4. Protect groundwater supplies and existing users
5. Improve technical understanding of water resource management issues
6. Effectively communicate RBC findings and recommendations

- Objectives should be ranked by importance and prioritized
- Each objective should include a justification describing its importance to water management in the basin

# Implementation Plan

## Objectives, Strategies & Actions



# 1. Reduce demand to conserve water resources

## Strategies

A. Agricultural Water Conservation and Efficiency

B. Municipal Water Conservation and Efficiency

## Proposed Schedule

Actions for Strategies A and B		Year				
		1	2	3	4	5
1	Identify funding opportunities					
2	Implement education and outreach program about recommended water management practices and funding opportunities					
3	Develop survey of practices implemented, funding issues, and funding sources utilized					
4	Review and analyze water usage to improve understanding of water savings of strategies					

## 2. Conserve surface water during low-flow conditions

### Strategy

#### A. Low-Flow Management Strategy

### Proposed Schedule

Actions for Strategy A		Year				
		1	2	3	4	5
1	Identify funding opportunities	■	■	■	■	■
2	Develop and implement communication strategy for low-flow declarations	■	■	■	■	■
3	Perform outreach and education to affected water users to communicate goals of low-flow strategy and approaches to meet voluntary reductions	■	■	■	■	■
4	Each affected user to develop a curtailment schedule	■	■	■	■	■
5	Evaluate effectiveness of low flow management strategy	■	■	■	■	■

# 3. Augment sources of supply

## Strategies

- A. Conjunctive Use (use groundwater to supplement surface water)
- B. Small Impoundments on tributaries (to increase storage)

## Proposed Schedule

Actions for Strategies A and B		Year				
		1	2	3	4	5
1	Identify funding opportunities					
2	Implement education and outreach program about these water management practices and potential funding opportunities					
3	Individual entities explore and implement these strategies as needed and as funding allows					
4	Develop survey of strategies implemented, funding issues, and funding sources utilized					

# 4. Protect groundwater supplies and existing users

## Strategies

A. Enhance groundwater monitoring program in groundwater areas of concern

## Proposed Schedule

Actions for Strategy A		Year				
		1	2	3	4	5
1	Continue to monitor water levels in existing wells throughout Edisto River basin					
2	Identify, seek access, and monitor existing production wells in groundwater areas of concern					
3	Drill new monitoring wells in groundwater areas of concern, as needed					
4	Conduct data analysis (analyze collected water level data)					



# 4. Protect groundwater supplies and existing users

## Strategies

B. Work with DHEC and the Groundwater Management Areas to encourage locating new pumping in aquifers that can better support additional withdrawals, where applicable

## Proposed Schedule

		Year				
		1	2	3	4	5
Actions for Strategy B						
1	Implement Strategy A					
2	Identify funding opportunities for drilling deeper wells (where applicable)					

# 5. Improve technical understanding of water resource management issues

## Strategies

A. Research how changes in land-use impact recharge

## Proposed Schedule

Actions for Strategy A		Year				
		1	2	3	4	5
1	DNR to continue on-going research into this subject and report findings to RBC	Active	Active	Active	Completed	Completed
2	Depending on findings of research, RBC to consider incorporating projections into future modeling as appropriate	Completed	Completed	Active	Active	Active

# 5. Improve technical understanding of water resource management issues

## Strategies

B. Develop a regional groundwater model to further evaluate potential drawdowns in groundwater areas of concern (e.g. Calhoun County)

## Proposed Schedule

Actions for Strategy B		Year				
		1	2	3	4	5
1	Develop regional groundwater model covering the potential groundwater areas of concern. Further calibrate the model to local land conditions, including seasonal drawdowns	█	█	█		
2	Evaluate the moderate and high growth demand scenarios using monthly or seasonal stress periods			█	█	█

# 5. Improve technical understanding of water resource management issues

## Strategies

C. Research impacts of seasonal drawdown below the top of aquifer (if monitoring indicates the occurrence)

## Proposed Schedule

Actions for Strategy C		Year				
		1	2	3	4	5
1	Conduct a literature review of impacts of seasonal aquifer drawdown					
2	Consider development of a test program to monitor for possible impacts (e.g. reduction in well yield, land subsidence, aquifer compaction)					

# 6. Effectively communicate RBC findings and recommendations

## Strategies

A. Conduct ERBC meetings to review, initiate, and support implementation actions

## Proposed Schedule

Actions for Strategy A		Year				
		1	2	3	4	5
1	ERBC to meet quarterly as needed following publishing of Edisto River Basin Plan. Meetings will focus on implementation plan actions and identifying funding					
2	Hold future ERBC meetings as deemed necessary (minimum 1 per year)					
3	DNR and/or Contractors to provide new member orientation					
4	Convene existing or form new ad-hoc subcommittees to address time-sensitive matters					

# 6. Effectively communicate RBC findings and recommendations

## Strategies

B. Encourage use of social media through professional accounts of ERBC, DNR, DHEC, and/or RBC members

## Proposed Schedule

Actions for Strategy B		Year				
		1	2	3	4	5
1	Develop a social media policy	█				
2	Develop social media accounts for the Edisto RBC	█				
3	Develop key messages from Edisto RBC to highlight using professional accounts of ERBC, DNR, DHEC, and/or RBC members	█	█	█	█	█

# 6. Effectively communicate RBC findings and recommendations

## Strategies

C. Communicate with legislative delegation throughout planning process to promote their familiarity with RBC activities and goals in advance of funding requests

## Proposed Schedule

Actions for Strategy C		Year				
		1	2	3	4	5
1	Develop talking points/script to provide consistent message from RBC					
2	Track which representatives have been spoken to and by whom from the RBC. Note outcomes of conversations.					

# 6. Effectively communicate RBC findings and recommendations

## Strategies

D. Coordinate with the Saluda and Santee RBCs on future monitoring, planning, modeling, and other activities focused on Calhoun County Groundwater Area of Concern

## Proposed Schedule

		Year				
Actions for Strategy D		1	2	3	4	5
1	Communicate the modeling results and decision process to establish a Calhoun County Groundwater Area of Concern to the Saluda and Santee RBCs (timing dependent on other RBC meeting schedules)					
2	Consider forming an Interbasin River Council (IRC) to collaboratively address the issue.					





# Funding Needs and Sources

- Funding needs for each action will be finalized before next RBC meeting
- Funding Sources
  - Annual Legislature-approved SCDNR State Water Plan funding
  - Federal Sources and USDA Disaster Assistance Programs

# Potential Sources of Federal Funding

Program	Agency	Grant/Loan Funds Available	Description
U.S. Economic Development Administration (EDA) Grants	EDA	No limit (subject to federal appropriation)	EDA's Public Works Program and Economic Adjustment Assistance Program aid distressed communities by providing funding for existing physical infrastructure improvements and expansions.
Water Infrastructure Finance and Information Act (WIFIA)	EPA	Up to 49 percent of eligible project costs (minimum project size is \$20M for large communities and \$5M for small communities)	A federal credit program administered by EPA for eligible water and wastewater infrastructure projects, including drought prevention, reduction, and mitigation.
Section 502 Direct Loan Program	USDA Rural Development	Loans based on individual county mortgage limits	Loans are available for wells and water connections in rural communities. Availability is based on community income.
National Rural Water Association (NRWA) Revolving Loan Fund	USDA Rural Utilities Service	\$100,000 or 75% of the total project	Provides loans for predevelopment costs associated with water and wastewater projects and for existing systems in need of small-scale capital improvements.
Emergency Community Water Assistance Grants	USDA Rural Development	Up to \$100K or \$1M depending on the type of project	Offers grants to rural areas and towns with populations of 10,000 or less to construct waterline extensions, repair breaks or leaks, address maintenance necessary to replenish the water supply, or construct a water source, intake or treatment facility.
HMGP	FEMA	Variable	Provides funds to states, territories, tribal governments, and communities for hazard mitigation planning and the implementation of mitigation projects following a presidentially declared disaster event
BRIC	FEMA	Variable	Building Resilient Infrastructure and Communities (BRIC) will support states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards
Planning Assistance to States	USACE	Variable – funding is 50% federal and 50% nonfederal	USACE can provide states, local governments, and other nonfederal entities assistance in the development of comprehensive plans for the development, utilization, and conservation of water resources.
Drinking Water State Revolving Fund (DWSRF)	SCDHEC and SC Rural Infrastructure Authority (RIA)	Congress appropriates funding for DWSRF that is then awarded to states by EPA based on the Drinking Water Infrastructure Needs Survey and Assessment.	This program is a federal-state partnership aimed at ensuring that communities have safe drinking water by providing low-interest loans and grants to eligible recipients for drinking water infrastructure projects.

# USDA Disaster Assistance Programs

Program	Agency	Description
Crop Insurance	Risk Management Agency (RMA)	Provides indemnity payments to growers who purchased crop insurance for production and quality losses related to drought, including losses from an inability to plant caused by an insured cause of loss.
Conservation Reserve Program (CRP) Haying and Grazing	Farm Service Agency (FSA)	Provides for emergency haying and grazing on certain CRP practices in a county designated as D2 or higher on the U.S. Drought Monitor, or in a county where there is at least a 40 percent loss in forage production.
Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Program (ELAP)	FSA	Provides assistance to eligible owners of livestock and producers of honeybees and farm-raised fish for losses.
Emergency Conservation Program (ECP)	FSA	Provides funding and technical assistance for farmers and ranchers to restore farmland damaged by natural disasters and for emergency water conservation measures in severe droughts.
Emergency Forest Restoration Program (EFRP)	FSA	Provides funding to restore privately owned forests damaged by natural disasters. Assistance helps landowners carry out emergency measures to restore forest health on land damaged by drought disasters.
Farm Loans	FSA	Provides emergency and operating loans to help producers recover from production and physical losses due to natural disasters and can pay for farm operating and family living expenses.
Environmental Quality Incentives Program (EQIP)	FSA	Provides agricultural producers with financial resources and assistance to plan and implement improvements on the land in support of disaster recovery and repair and can help mitigate loss from future natural disasters. Assistance may also be available for emergency animal mortality disposal from natural disasters.
Emergency Watershed Program (EWP-Recovery)	Natural Resources Conservation Service (NRCS)	Offers vital recovery options for local communities to help people reduce hazards to life and property caused by droughts.
Emergency Community Water Assistance Grants	Rural Development (RD)	Offers grants to rural areas and towns with populations of 10,000 or less to construct waterline extensions, repair breaks or leaks, address maintenance necessary to replenish the water supply, or construct a water source, intake or treatment facility.

# Proposed Objectives – Prioritize?

1. Reduce demand to conserve water resources
2. Conserve surface water during low-flow conditions
3. Augment sources of supply

4. Effectively communicate RBC findings and recommendations
5. Improve technical understanding of water resource management issues
6. Protect groundwater supplies and existing users

## Post-Meeting Notes

These 3 objectives are associated with water management strategies. The RBC decided not rank and prioritize these, for several reasons.

These objectives are mostly associated with recommendations, not water management strategies. The RBC prioritized items 4, 5, 6 in this order.