



Edisto River Basin Council Phase 3 Progress Report

July 2022

1.0 Introduction

The South Carolina State Water Planning Framework requires River Basin Councils (RBCs) to prepare and submit progress reports after each phase of the river basin plan development. This progress report covers the remainder of Phase 3 of the Edisto River basin planning process which was not covered in the previous, Phase 2/3 report. This progress report spans the period from February 19, 2022 through July 15, 2022.

This progress report summarizes the activities and accomplishments of Phase 3, including key milestones reached, and identifies potential issues and challenges for completion of Phase 4 of the planning process.

2.0 Activities and Accomplishments

2.1 RBC Meetings

Four RBC meetings were held during this planning period. The meetings covered activities associated with completing Phase 3, including evaluation of surface and groundwater water management strategies. Meetings were held monthly at the Clemson Edisto Research Center in Blackville. The meetings were also broadcast using the Zoom platform for virtual attendees. Meeting durations ranged from 4 to 5 hours.

Twenty RBC members attended each meeting. There were 11 unexcused absences during the 4 RBC meetings. Unexcused absences occur when neither an RBC member nor their alternate are in attendance.

2.2 Phase 3 Objectives

The objectives of Phase 3 were to:

- Identify and evaluate the effectiveness of water management strategies to reduce or eliminate shortages and enhance water availability.
- Evaluate the feasibility of water management strategies, including assessing costs and benefits.
- Select and prioritize the water management strategies.
- Finalize Reaches of Interests and Groundwater Areas of Concern.

2.3 Accomplishments

Subcommittees Activities

The Groundwater Subcommittee met on May 16th to review USGS modeling results of two water management strategy scenarios and one simulation to assess the model's sensitivity to recharge. The



Subcommittee made suggestions to the USGS on how best to present model results. The River Basin Plan Subcommittee continued to review draft River Basin Plan chapters as they were completed.

Assessment of Groundwater Availability

During this reporting period, the USGS completed model simulations to assess groundwater availability for the Moderate (Business-as-Usual) and High Growth scenarios, supplementing the Predevelopment, Current, and Permitted groundwater use scenarios that had been completed in early 2022. Modeling identified an area in Calhoun County where pumping from the Crouch Branch aquifer was simulated to cause water level declines below the top of the Crouch Branch aquifer. A smaller area in Lexington County was identified where model simulations showed that pumping from the McQueen Branch aquifer would cause water levels in the aquifer to drop below the top of the aquifer's confining unit. The RBC voted to establish areas of groundwater concern in regions where groundwater data indicate and/or groundwater modeling predict water levels to drop below the top of the aquifers. The RBC also made a recommendation to conduct monitoring in these areas.

Evaluation and Selection of Surface Water and Groundwater Management Strategies

At the RBC's direction, the USGS completed groundwater modeling to evaluate (1) the impact of transitioning a portion of the pumping from the Crouch Branch aquifer to the McQueen Branch aquifer in Calhoun County; (2) the impact of a 15 percent reduction in agriculture water demands, as represented by potential increases in agricultural water use efficiency; and (3) a combination of both these strategies. The USGS also conducted a sensitivity simulation to assess the impact of a 20 percent increase in annual average recharge. The results of the water management strategy evaluations were presented to the RBC.

CDM Smith prepared a draft memorandum summarizing the feasibility of the identified water management strategies and distributed it to the RBC for review and comment. During the May meeting, the RBC voted to approve the portfolio of municipal and agricultural water management strategies and include them in the River Basin Plan as recommended demand-side strategies.

A low flow management strategy was considered, discussed, debated and approved by the RBC by a majority (16 to 1) vote. The low flow management strategy calls for reductions in surface water use by the largest users in the basin during low flow periods. The strategy will trigger whenever the total basin discharge (measured at Givhans) drops below a surface condition of 20 percent median flow (currently about 332 cubic feet per second) with the goal of reducing withdrawals equal to the exceedance of the surface condition in 20 percent increments. The low flow strategy excludes withdrawers whose peak monthly withdrawals are less than 60 million gallons per month and will be implemented over time contingent upon available funding.

All the Phase 3 objectives were met by completion of the June RBC meeting. Water management strategies were identified, evaluated, and prioritized (where the RBC felt prioritization was warranted). The RBC elected not to identify any reaches of interest but did identify groundwater areas of concern.



3.0 Issues Impacting Schedule and Funding

Issues associated with updating and applying the groundwater model initially slowed the planning progress and delayed completion of Phase 3; however, those issues have been resolved and all groundwater modeling, including evaluation of management strategies was completed by June.

No significant issues have been identified that impact funding of the planning process through completion of Phase 4. While an additional two or three meetings may be required beyond the originally planned 24, there has been no identified need for additional budget for contractor support.

4.0 Challenges

As the planning process winds down, one challenge has been maintaining RBC membership. One member was voted off the RBC in May, after missing seven consecutive meetings. Another member resigned prior to the June RBC meeting noting personal reasons. Following the recent member resignation, the Water Based Recreation Interest Group is represented by only one RBC member. All other interest groups have at least two representatives, except for electric-power utilities which has always had one member representing the single water-using energy facility in the basin.

RBC members that were assigned a two-year term have agreed to stay on the RBC until completion of the River Basin Plan, scheduled for late fall.