Edisto River Basin Council

Minutes

Members Present:
Jason Thompson, Hugo Krispyn, Hank Stallworth, Mike Mosley, Alta Mae Marvin, Jerry Waters, Alan Mehrzad, Johney Haralson, Will Williams, Eric Odom, Joel Duke, Jeremy Walther, Kirk Bell, Mark Aakhus & JJ Jowers

Members Present Online:
Alex Tolbert, Danny Burbage, David Bishop, John Bass, Laura Bagwell & Richard Hall

Members Absent:
Landrum Weathers (Charles Wingard, Alternate, Present) & Trey McMillan

Staff Present: John Boyer, Murray Dodd, Scott Harder, Joe Gellici, Andy Wachob, Jeff Allen, Tom Walker, Rob Devlin, Leigh Ann Monroe, Matthew Petkewich, Chikezie Isiguzo & Elliot Wickham

Presenters:
John Boyer, Eric Krueger & Luke Bower

Others Present:
13 Total

1. Call the Meeting to Order

John Boyer called the meeting to order at 9:05 AM after confirming RBC member quorum to convene.

The meeting began with John Boyer reviewing the meeting objectives: to review surface water modelling results, discuss surface water issues, and review the proposed RBC schedule for the remainder of the year.

John Boyer invited Dr. Jeff. Allen to brief the RBC on the new temporary mask requirements of Clemson University and all Clemson buildings including the Clemson Edisto REC.

The Edisto RBC approved the RBC meeting agenda and the June 23rd minutes and summary.

2. Public Comment

A public comment period was held with no comments received.

3. Introduction of New Edisto RBC Member

John Boyer introduced a new member of the RBC, Alan Mehrzad, Assistant Manager, Bamberg Board of Public Works, representing the Water and Sewer Utilities interest group.

4. July Field Trip Summary

John Boyer gave a summary presentation for the July 2021 South Fork Edisto RBC canoe field trip and noted that the event was successful and included a visit to the Charleston Water System water intake.

5. Review and Summary of Surface Water Modeling Results for All Scenarios

John Boyer presented and explained the results of the scenarios run for Surface Water Modeling. The results were presented in the following scenarios: Unimpaired (naturalized flow), Current Use, Fully permitted and registered, 2070 Business as Usual, and 2070 High Demand at strategic nodes.

Analysis of the results yielded the following conclusions: *Widespread shortages are not projected, as a function of projected demand increases. This includes new Agriculture demands. Impacts on river low flows are discernable: Absolute low flow at Givhans during drought of record is projected to go to zero for 2 months. Increase in frequency of low flows at Givhans. Potential supply thresholds reached for Charleston and Aiken with 2070 High Demand scenario. Climate could be a bigger driver of supply shortages than population demographics.*

Following the presentations, members were invited to discuss Reaches of Interest and Surface Water Conditions. Members were requested to determine what the Edisto RBC should address for the next phase of planning with identified issues and management strategies.

See Appendix for additional Zoom discussion.

6. Comparison of Performance Measures Including Flow-biological Health Results

Eric Krueger and Luke Bower presented the Flow-Stream health relationships results. The four flow-ecology metrics were Mean Daily Flow, Base Flow Index, Duration of Low Flow, and Timing of Low Flow. To summarize: *in general, the study did not find high flow alteration for the selected nodes for the different planning scenarios, except for some metrics in the Fully Permitted and Registered (Full Allocation) Scenario. The study only evaluated four metrics and therefore does not rule out potential ecological health impacts resulting from other flow-related changes.*

Following the presentations, the members of Edisto RBC were invited to propose additional data, analysis, and model requirements that would facilitate planning. Another challenge presented to the Edisto RBC was to determine if it is appropriate to set Surface Water Conditions for the Edisto River Basin and where?

See Appendix for additional Zoom discussion.

7. Discussion of Surface Water Issues

Discussing the issues in the Edisto River Basin from the models, the members expressed concerns about issues such as low flows at the lower parts of the basin, the sustainability and ecological health of the entire system, and defining desired outcomes of the Edisto RBC plan. Thereafter, the members of the Edisto RBC agreed on the need to capture Reaches of Interest that address specific issues bearing in mind the need to define scope. The members discussed what could be classified as Reaches of interest or not and how to address the locations where there are shortages and agreed to continue the discussion looking at managed strategies for the primary locations where there are shortages.

The Edisto RBC resolved to continue the discussion on Reaches of interest and surface water modeling results in the next meeting. Also, the council plans to review the Groundwater model covering the results of at least two scenarios.

See appendix for additional Zoom discussion.

8. Upcoming RBC Schedule

John Boyer informed the members of the Edisto RBC that from now to the end of the year, the goal is to conclude the surface water portion, understanding groundwater availability, reviewing the results of all the scenarios, and move into the identifying and evaluating management strategies phase. Consequently, the Edisto RBC required longer meeting times to allow for more discussion. The next meeting of the Edisto RBC will be held September 15, 2021, at the Clemson Edisto REC and on the Zoom platform. The meeting will be scheduled to run from 9am to 2pm with a lunch break. The remaining meeting dates for 2021 of the Edisto RBC will be on October 20, November 17, and December 15.

9. Meeting Conclusion

The meeting concluded at 12:05 PM.

Minutes: Chikezie Isiguzo & Tom Walker

Approved: September 15, 2021

Appendix: Zoom Chat

Introduction of RBC member

09:08:39 From Laura Bagwell to Everyone:

Welcome Alan! Some of us know Alan from the WCUA groundwater team. Great addition to ERBC.

09:13:05 From Thomas Walker to Everyone:

rbc members or alternates feel free to send in questions

Review and Summary of Surface Water Modeling Results for All Scenarios

09:24:42 From David Bishop to Everyone:

Is the shortage for a particular year or over the entire time frame of record?

09:48:14 From Laura Bagwell to Everyone:

I think it would be informative and enlightening to do what Jeremy asked, specifically to run a "Full Allocation Minus Two Recent Registrations" scenario. It would be interesting to see how much closer the Full Allocation curve would move toward the 2070 High Demand curve. That said, I agree with Hank's observations and I do recognize the importance of the Full Allocation scenario.

09:50:46 From R. Karthi Karthikeyan to Everyone:

One quick question: How the supply/safe yield in the river system is estimated for present and future scenarios?

09:51:32 From David Bishop to Everyone:

Currently, safe yield is not considered. That would be as surface water condition, I believe.

09:52:55 From R. Karthi Karthikeyan to Everyone:

Thank you, David. How future flows are "predicted" for various scenarios? or is the flow considered the same for the future?

09:55:21 From David Bishop to Everyone:

I think the flow is considered the same based on historical data

09:56:08 From R. Karthi Karthikeyan to Everyone:

Thank you, David. It helps.

10:05:42 From Laura Bagwell to Everyone:

A question about John's hydrographs (e.g. slide 45, I think): Does the gray "current use" curve represent the actual hydrograph curve for 2002 (low flow drought)?

10:06:05 From Laura Bagwell to Everyone:

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10:06:34 From Laura Bagwell to Everyone:

Got it. Thank you!

10:11:15 From John to Thomas Walker(Direct Message):

SC dept of Agriculture keeps track of all forested land in SC by major Company

Discussion of Surface Water Issues

11:11:33 From John to Thomas Walker(Direct Message):

a sustainable level of streams will answer the use of low flow rate for surface water withdrawal

11:12:40 From Thomas Walker to John(Direct Message):

can you clarify a little

11:13:15 From John to Thomas Walker(Direct Message):

low flow rates will ultimately determine level of stream flow

11:14:33 From Laura Bagwell to Everyone:

Following Hugo's and Jason's comments, I am interested in how population growth in the midlands and low country may eventually drive municipalities toward more groundwater-based systems. Would it be informative to specify reaches of interest +/- surface water conditions for areas (e.g., Aiken, Charleston) that may continue to experience high population growth?

11:16:44 From Laura Bagwell to Everyone:

Thank you Jason.

11:17:36 From Laura Bagwell to Everyone:

You're right -- sounds like that concern is already captured in high-demand scenario.

11:21:04 From David Bishop to Everyone:

I think an issue is that under current rules, existing permitted and registered water users allocations are not really protected. I understand that some current registrations on the South Fork may not be realistic, but they legally could be or a new one could. I think we need to plan for the worst case scenario, which includes full allocation. I also think we have to include the surface water conditions - i.e. how much water is left in the river and not allocated. Lastly, I vote we ignore the current laws and create what works and then compare it later.

11:22:15 From R. Karthi Karthikeyan to Everyone:

David, nice comments. But can we do that? ("ignore the current laws and create what works for the basin"?)

11:23:16 From R. Karthi Karthikeyan to Everyone:

I totally agree with Laura's comment on how population growth drive the water use. Good one to consider.

11:27:21 From John to Thomas Walker(Direct Message):

also need to consider land along basin under the wetland reserve program USDA

11:29:37 From Richard Hall (Orangeburg County) to Everyone:

Land use planning is handled at the local level. Orangeburg county has a future land use plan and zoning maps that would indicate the likely use of those properties. Subdivision and land development regulations are a local authority only.

11:50:03 From John to Thomas Walker(Direct Message):

did I make it clear that the data already presented shows the low flow at 80cfs and therefore the low flow of the basin is the data showing the 80cfs if we accept that as a low stream flow for our recommendations

Conclusion

12:05:05 From John to Thomas Walker(Direct Message):

we could meet 2 times a month