

## Memorandum

*To: Savannah-Upper Ogeechee Regional Water Planning Council*

*From: Laura Hartt, Jacobs and Ashley Reid, CDM Smith*

*Date: March 8, 2022*

*Subject: Savannah-Upper Ogeechee Regional Water Planning Council Hybrid In-Person and Virtual (Zoom) Meeting Summary (subject to Council review and approval)*

### Registration/Welcome

Ashley Reid (CDM Smith) welcomed members to the venue, and Michelle Vincent (Jacobs) welcomed members virtually.

### Council Business (Chairman Bruce Azevedo)

Chairman Bruce Azevedo asked for motions and seconds to approve both the draft agenda and the September 23, 2021 meeting summary. Both motions were received, and the agenda and minutes were approved unanimously.

Council Member Patrick Goran asked what was meant by AAHU. Jennifer Welte (EPD) replied “Average Annual Habitat Unit.” Chairman Azevedo responded that it was a good reason to keep it on the acronym list for the plan update.

### Council Updates (Ashley Reid, CDM Smith & Haydn Blaize, EPD)

Ashley Reid (CDM Smith) provided an overview of the planning update timeline. She noted that the current meeting was the meeting for Quarter 1 which would be followed by three more quarterly meetings. She also noted the possibility of additional either joint Council or subcommittee meetings. Ms. Reid stated that she would send out a survey to assess interest in joint and subcommittee meetings.

Ms. Reid then noted the updated plan’s new cover and mentioned that the region had received some federal relief grant awards.

Haydn Blaize (EPD) provided an update on past and newly awarded Seed Grants, which included awards to University of Georgia (2020), City of Augusta (2020 and 2022), City of Savannah (2021), and the Phinzy Center for Water Sciences (in partnership with UGA, 2022).

Chairman Azevedo noted that both the Seed Grant applications and the progress reports were extremely detailed and probably contribute to the region's success in acquiring the grants. Mr. Blaize noted that the SUO Council was the largest and most frequent recipient of Seed Grants.

### **Metro North Georgia Water Planning District Updates (Danny Johnson, MNGWPD)**

Danny Johnson (MNGWPD) provided an update on the District's timeline for completing their five-year update. He then reviewed the primary action items added to the draft plan:

- New residential customer leak reduction programs
- New plumbing code efficiency requirements (showerheads, faucets)
- Update landscape irrigation efficiency requirements
- Update drought response ordinance requirement
- Update water loss control program

Chairman Azevedo asked if the leak reduction action item only applied to new construction.

Mr. Johnson responded that there were multiple ways to satisfy the requirement, and that utility readings are an effective way of communicating back to the homeowner of a potential leak. Incentives such as rebates could be offered to help encourage homeowners to fix leaks.

Mr. Johnson then summarized the stormwater forecasting effort, noting that the District was attempting to address the gap between what the Blue Book addresses and what is remaining as far as stormwater management needs. He further noted that the District will be working with communities to offer local pilot programs that will help assess total potential stormwater runoff.

Chairman Azevedo expressed interest in adding stormwater forecasting to the SUO plan. Mr. Johnson noted that the ongoing effort was the first time the District was aware of any municipal planning entity attempting to forecast stormwater runoff. Chairman Azevedo suggested that the Council investigate how they might also attempt to forecast runoff, given all the rural areas. He further noted that Oscar Flite (City of Augusta) may be able to address some of the runoff issues under the City of Augusta Seed Grant.

Mr. Johnson suggested the Council ask either Katherine Atteberry (MNGWPD) or David Bell

(Jacobs) to present at a future council meeting if they were interested in learning more. Mr. Johnson then informed the Council that a draft version of the plan would be available for public comment sometime in April. The MNGWPD will offer a webinar to review the draft and answer any questions Council members might have.

### Plan Section 1.3 Vision and Goals - Review and Update (Ashley Reid, CDM Smith)

Ms. Reid reviewed the Council's vision. The Chairman noted that the vision was broad and well vetted, and then asked the Council if they had suggested changes. No changes were recommended by the Council.

Ms. Reid then reviewed the Council's seven goals. With respect to the second goal:

Provide support for state laws regulating interbasin transfers in Official Code of Georgia (OCGA) 12-5-584(f) and OCGA 12-5-31 and further described in EPD Rule 391-3-6-.07. Promote the development of a mandatory comprehensive evaluation process that protects donor basins from adverse impacts from proposed interbasin transfers between State Water Planning Districts.

The Chairman noted the extensive history behind the Council's goals, emphasizing efforts to protect the SUO basin from interbasin transfers (IBTs). Council Member Jerry Boling noted that the IBT goal was debated among the members and voted on. Ms. Welte noted that the EPD rule has not been updated since the last plan update.

The Chairman reminded the Council that the opportunity to revisit the vision and goals remains open. He then pointed to goal six as the reason for the Council receiving so many Seed Grants, namely:

*Maintain and strive to improve the quality and quantity of the water of the region to protect species and habitat while balancing the needs of humans.*

The Chairman also stated that he found goal seven to be interesting, given the difficulties in maintaining membership without receiving new appointments:

*Form a permanent Savannah and Ogeechee water planning organization as the conduit for bringing together all stakeholders and assisting the State with implementation of*

*water resource goals in the entire basin. Grandfather one- third of the current Water Planning Council on the permanent organization.*

Laura Hartt (Jacobs) then asked the Council if they wanted to add any goals, including perhaps something related to stormwater management, given the earlier conversation. The Chairman stated that he wasn't sure what that goal might be at the moment, but that maybe Mr. Flite and others could be tasked with drafting a goal.

Ms. Hartt suggested that the Council examine how other Councils were addressing stormwater. The Chairman agreed to that approach. He then asked for volunteers. Hearing none, he then volunteered Mr. Flite and Tonya Bonitatibus (Savannah Riverkeeper) to take a closer look at the issue.

## Break

### Seed Grant Project Highlight – Drought in the Savannah River (Kelsey Laymon, UGA)

Kelsey Laymon presented an update of UGA's Seed Grant project, *Drought in the Savannah River*.

She described the landscape changes that occur in response to drought, noting that drought frequency was expected to increase over the next 30-50 years due to climate change. She further noted that we could expect greater hydrological variability and increased stress on aquatic ecosystems. Physiochemical parameters will change, resulting in increased temperatures, decreased dissolved oxygen (DO), and increased ions. However, she noted that nutrient trends were less predictable.

The Seed Grant study looked at temperature, DO, conductivity, pH, total nitrogen, nitrate, nitrite, ammonia, phosphorus, and carbon. In total, there were five (5) study sites, all below J. Strom Thurmond Dam. The droughts of 2006-8 and 2016-19 were examined.

Some key findings included the following:

- Mean water temperature lower during drought, which was unexpected

- DO concentrations higher during drought, which was unexpected
- pH higher during drought, likely due to presence of point source pollutants
- conductivity response depended on the site—sites 3, 4, & 5 below Augusta had higher readings
- nitrates were higher during drought, likely due to decreased ability to dilute effluents
- total nitrogen and carbon decreased during drought, likely due to a decreased connection with landscape

Ms. Laymon noted the importance of monitoring water quality parameters after the first rainfall following drought. Lower temperatures and higher DO levels were due to dam operations. The Ogeechee River also had lower temperatures, most likely drive by groundwater supply. Ms. Layman noted that the next project will look at how biota responds to droughts.

The Chairman asked if the current study was completed. Ms. Laymon said it would be completed within a month or so and that it was currently in review.

The Chairman then asked if the information presented was new information that perhaps conflicts with what is in the current regional plan meriting further exploration.

Ms. Laymon again emphasized that the critical period for data collection is when the floodplain reconnects during the first rainfall after a drought event.

The Chairman noted that he asked Ms. Laymon for an update because he believes her results may impact the Council's plan.

Ms. Laymon was asked to explain "flux" again. She reiterated that flux is the product of concentration times flow, which determines how much is going down the river at a certain point. She emphasized that flux is used to help standardize across small and large basins.

### **Resource Assessments – Surface Water Quality (Jennifer Welte & Elizabeth Booth, EPD)**

Ms. Welte introduced a video recording made by Elizabeth Booth (EPD) providing an overview of current water quality standards. The video presentation included an update on the 2019 Triennial Review, recent changes in designated uses for select water body segments, and the

addition of recreational use as well as metal and bacteria water quality criteria to support recreational use along those water body segments.

Ms. Booth's video noted that 14 water body segments, most in south GA, supported year-round recreational use. She also noted that the 2022 triennial review will consider additional uses and water quality criteria to support those uses. Ms. Welte commented that the video and basin-specific findings would be shared with the Council.

The Chairman noted that Ms. Booth had mentioned "gaps" and that gaps at the Eden node are usually an issue. Ms. Booth noted that gaps reflect lack of assimilative capacity and acknowledged that there may be some new ones during this planning iteration. In particular, she mentioned that some private institutional facilities with secondary limits (e.g., ammonia, DO) had not been previously modeled. The Chairman asked if that new information impacts the current planning update effort. Ms. Welte responded that she would review the information and provide the Council with a summary of how it relates to the existing plan.

Ms. Bonitatibus commented that the most recent triennial review process was one of the more transparent and collaborative efforts in which she had been engaged. She then asked if EPD would adopt a similar process for engaging stakeholders during the next triennial review. Ms. Booth responded affirmatively, noting the importance of having stakeholder buy in.

Ms. Bonitatibus then asked if EPD is considering adding criteria for litter, i.e., trash in streams, to support recreational use. Ms. Booth replied that it was not under consideration but that there is an Adopt-a-Stream program that addresses the issue. Ms. Bonitatibus asked if the triennial review was the appropriate venue for getting litter addressed. Ms. Welte responded affirmatively, noting that the kick-off for triennial review would begin later in March 2022.

Ms. Bonitatibus asked how often water samples were taken in waters designated for recreational use. Ms. Booth responded that all lakes are sampled monthly; freshwater beaches weekly, May through September; and coastal beaches weekly or monthly, depending. She further noted that not every recreation water body is sampled every year, and that only subsets of water bodies other than lakes and beaches are sampled annually.

Ms. Bonitatibus asked about Corps lakes. Ms. Booth responded that those are monitored regularly and have eight water quality standards. She further noted that EPD may propose

standards for lakes Rabun, Burton, and Tugaloo.

Ms. Booth then presented SUO Basin results, noting that the model was conservative in that it assumes low flow and high temperature conditions. She also emphasized that the results represented current conditions and that results for future conditions would be presented at the next Council meeting. Current conditions assume that wastewater treatment plants are discharging at their monthly permit limits. When looking at future conditions, EPD will adjust effluent limits for select facilities. In general, the modeling showed that the Upper SUO basin was meeting assimilative capacity needs. However, the lower part of the basin was showing some exceedances, particularly in the Ogeechee sub-basin.

Ms. Booth then briefly discussed land use changes and corresponding changes in nutrient runoff. Initial model runs did not address phosphorus or nitrogen capacity issues, but future permits may require limits for both. She noted a similar concern for dissolved oxygen (DO). Council Member Goran asked if DO was important to model because of fish. Ms. Booth confirmed that was the case, noting however that some south Georgian fish have been able to adapt to lower DO levels. She also noted that lakes in the basin are impaired for fish consumption as well as chlorophyll.

## **Lunch**

### **Resource Assessments – Surface Water Availability (Wei Zeng, EPD)**

Dr. Zeng provided an overview of the Basin Environmental Assessment Model (BEAM) and its use in generating the Surface Water Availability Resource Assessments. He then presented some examples of performance metrics that could be used to evaluate surface water availability under different climatic conditions and management scenarios. These metrics include water supply challenges as well as boating and fish habitat availability.

Ms. Bonitatibus asked if the Council could request a recreation metric, and if so, would they only be able to evaluate the main stem. Ms. Welte responded that with more nodes in the model, there was greater potential to move off the main stem. Ms. Welte then asked the Council if they wished to use a recreation metric. The Chairman responded affirmatively. Dr. Zeng stated that it was possible to look at recreation off the mainstem, but that stakeholder input would be needed.

Dr. Zeng then noted that there were two other parallel efforts investigating various flow metrics which could inform the SUO Council's work. One was an Upper Oconee Council Seed Grant concerning stakeholder driven metrics supporting fish, wildlife, and recreational interests in the Upper Oconee basin. The other effort involves the Upper Flint Working Group, which is focused on recreational and ecological interests, some of which are tied to flows.

The Chairman then suggested that the Council convene a subsequent call to discuss other metrics. Ms. Welte noted that the next meeting would entail presenting future conditions for surface water availability. If the Council reaches a consensus about additional metrics, Dr. Zeng might be able to add those to the evaluation.

The Chairman requested a file containing the nodes used in BEAM. Ms. Welte said she would coordinate with their modeling team to provide the csv file to the Council.

The Chairman asked if there was a deadline for the Council to provide additional metrics to Dr. Zeng for evaluation. Ms. Welte replied there wasn't, but any metric added beyond recreation probably would not be vetted in time for the next Council meeting.

Ms. Hartt suggested that the Council consider fishing as well. Ms. Reid stated that she would set up a call for the Council to discuss metrics further.

#### **Plan Section 4 Forecasting Future Water Resource Needs – Review Revisions (Ashley Reid, CDM Smith)**

Ms. Reid reviewed draft Section 4 (Forecasting Future Water Resource Needs), highlighting the changes from the prior plan update, including the large increases in population size for select counties, the inclusion of more accurate industrial forecasts, as well as an increase in wastewater discharges from 2020 to 2060 due to Plant Vogel.

The Chairman encouraged the Council to take their binders home with them, so they could work from them and add the drafts for new sections as they were made available. He then asked if the Contractors could make sure the acronym list was included and updated. Ms. Reid said that she would ensure that was the case.

## Meeting Wrap Up/Public Comment

The Chairman asked if there were any public comments.

Pam Allgood (Anthony Shoals Preservation Group) thanked the Council for allowing her to attend and said it was great to hear that people were concerned about water quality.

The Chairman reminded the Council to think about any committee needs.

Ms. Bonitatibus mentioned a letter that Richard Dunn had circulated concerning Council appointments and wanted to know if there had been any follow up. Ms. Welte replied that state officials were working on filling the vacancies.

Meeting adjourned at approximately 1:30 pm.

## Meeting Participants

### Council

- Bruce Azevedo (Chair)
- Jerry Boling
- Charles Cawthon
- Patrick Goran
- Tom Jordan
- Chris McCorkle
- Dink NeSmith
- Suzanne Sharkey
- Lee Vaughn
- Lee Webster
- Scott Williams
- Tenia Workman

### EPD

- Haydn Blaize
- Jennifer Welte
- Elizabeth Booth
- Wei Zeng

### Contractors

- Ashley Reid
- Bill Davis
- Michelle Vincent
- Laura Hartt

### Public

- Pam Allgood (Anthony Shoals Preservation Group)
- Tonya Bonitatibus (Savannah Riverkeeper)
- Danny Johnson (Metro District)
- John Joiner (USGS)
- Kelsey Laymon (UGA)
- Ritchie Mullen (Georgia Forestry Commission)
- Jason Mallard (UGA)
- Frank Nemeth (S.C. Dept. of Health & Environmental Control)
- Callie Oldfield (Phinizy Center for Water Sciences)
- Martin Wunderly (UGA)