

## Memorandum

*To: Suwannee-Satilla Regional Water Planning Council*

*From: Shayne Wood, CDM Smith*

*Date: May 24, 2023*

*Subject: Suwannee -Satilla Regional Water Planning Council Meeting*

This memorandum provides the meeting summary of the Suwannee-Satilla Regional Water Planning Council (Council) Meeting held on May 24, 2023, at the University of Georgia Tifton Campus Conference Center in Tifton, Georgia. This meeting also included participation virtually via the MS Teams platform. This memorandum provides a summary of the major items discussed at the Council Meeting. The meeting was held from 10:30 AM to 2:30 PM and followed the agenda outlined below.

### **1) Welcome and Introductions**

Council Chairman Scott Downing, initiated the meeting, welcomed Council Members and guests, and asked each Council Member (CM) and attendee to introduce themselves. Grady Thompson welcomed guests to Tifton and provided a quick history of the city. An outline of the agenda items that would be covered during the Council Meeting was then presented.

Council Members reviewed the draft meeting minutes from the March 14, 2023, Council Meeting. Chairman Downing called for a Motion, which was seconded, and a vote from other council members in attendance to approve the previous meeting summary. Chairman Downing then asked Council Members to review the agenda. A motion was made to approve the agenda, followed by a second and a vote passed to approve the agenda.

Before reviewing public comments received on the draft Regional Water Plan, Chairman Downing asked for an update of current flows in the Suwannee River District. Mr. Sean King noted that in 2021 there was significant rainfall that increased flows in the area, but flows have slowed since January 2022.

### **2) Review and Discuss Public Review Comments Received on the Draft Updated Regional Water Plan (Shayne Wood, CDM Smith)**

Mr. Wood reviewed the public review comments received for the Draft Regional Water Plan during the review period ending on May 15, 2023. Mr. Wood provided a high-level summary of the comments and noted that the goal is to address comments and send the plan to EPD for final adoption by June 30<sup>th</sup>. This will be the third time the Regional Plan will be published and the second time it's been updated.

Mr. Wood summarized the 15 total comments were received from the following three organizations:

- Southern Georgia Regional Commission
- St. Marys River Management Committee
- WWALS Watershed Coalition

Mr. Wood added that three other overarching comments from a University of Georgia professor were sent to all 10 planning regions. GA EPD will draft a response to these comments, and Mr. Wood will circulate these draft responses to the Council for review and discussion over e-mail. Mr. Wood noted there's an agenda item later in the day where we will go through each comment in detail.

### **3) Suwannee River Water Management District Presentation on Minimum Flows and Levels (Sean King, SRWMD)**

Mr. Sean King provided a high-level summary of the Suwannee River Water Management District (SRWMD), their leadership structure (governing board), and an overview of their area of coverage and mission/areas of responsibility (water supply, water quality, flood protection and natural systems). He explained that the SRWMD is the smallest district in the state (out of five districts) in terms of area and population. The water use in the district is about 60% agriculture and 30% commercial/industrial use. Mr. King summarized that phosphate mining and pulp processing facilities are the two main industries in the SRWMD.

Mr. King also provided the following summary of the Suwannee River Basin:

- 57% of the Suwannee River Basin is located in Georgia, and 43% is in Florida
- The Suwannee River Basin is the second largest river in Florida, and is designated as an Outstanding Florida Water
- Most springs in Florida are located in this district
- There are no dams in the Suwannee River Basin

Mr. King also discussed minimum flows and levels (MFLs) and explained that these are the limits at which future withdrawals are tracked to try and avoid harm to water bodies, for example spring flows. A summary of MFLs was provided:

- The process to set MFLs includes data collection, analysis, peer review, public comment, status assessment, rule development and adoption
- Once MFLs are set, they are reviewed again on a regular basis
  - Chairman Downing asked why White Sulfur Spring is not flowing. Mr. King explained that it still flows but not like it used to. Blue Springs also still flows. River water flows back into spring when it floods, but this is a naturally occurring phenomena.
- The Upper Suwannee River (Florida portion) includes nine priority springs

- The Middle Suwannee River includes 24 priority springs and 4 Outstanding Florida springs. There are MFL compliance gages at Ellaville and Branford.
  - Chairman Downing asked what determines if springs are included in the list and why some have been excluded. Mr. King explained that there are second magnitude springs that are privately owned and are not included on this list. The magnitude of a spring is defined by its flow threshold; however, springs can be added if there is regional significance.

Mr. King discussed the SRWMD Regional Groundwater Modeling effort (North Florida Southeast GA Model (NFSEG)).

- Mr. Thompson asked if Jacksonville's pumping affects water levels in the Suwannee River District? Mr. King explained that pumping can affect the lower flows and that while pumping in Jacksonville does have some impact, the further you move west, there is less of an effect on the flows to rivers within the SRWMD.
- Mr. King reviewed the sensitivity map. He explained if you withdraw water, the map can tell you the effect proportionally the withdrawal will have on a river gauge point.
  - A CM asked if the St. Johns River Water Management District has a similar sensitivity map? Mr. King answered that they he did not think so.
  - A CM asked if there is saltwater intrusion in Jacksonville. Ms. Amy Brown (SRWMD) explained that there is an active water planning process that analyzes saltwater intrusion. She added that there is some degree of concern in the St. Johns River Water Management District and it is being tracked, but it is not as dramatic as other areas of Florida, like Tampa, for example. She explained that there is also desalination in Tampa.
  - A CM asked if there are salinity issues in the Lower Suwannee with higher tides. Ms. Brown explained that there are a few wells with higher chloride concentrations, but not as high as other areas in Florida.
  - Mr. Thompson asked if sand filters nitrogen from agricultural runoff. Ms. Brown said nitrogen is not completely removed. There are nitrogen enrichment issues in springs in the Suwannee River Basin.

Mr. King reviewed the 10 different water resource values (WRV) to evaluate when considering MFLs. The Upper and Middle Suwannee River MFLs WRV Metrics include recreation (paddling/boating), fish and wildlife habitat and fish passage, sediment loads, and water quality.

- Mr. King also discussed the sturgeon, a federally protected species. He said there are several fish that have been tagged in the Suwannee River Basin to track movement. There is a winter and fall period where the sturgeons swim up the river to where the Alapaha River comes in. Here, there is a gravel substrate where the sturgeons like to spawn. The

goals of the MFL work in this area were to maintain enough water on the spawning beds and make sure fish can get to spawning beds.

- Chairman Downing asked if the SRWMD is considering flexible permitting where users can withdraw more water when it is not a critical time. Mr. King explained that the SRWMD is not at this point yet. Permits are still based on long term conditions. It is currently not standard practice to approve one water usage during part of the year and another amount during a different time of year; however, this could be considered.
- Mr. Cliff Lewis (EPD) asked if all agricultural withdrawals are tracked on telemetry meters. Ms. Brown explained that if electric data are available, the SRWMD pulls monthly usage data from the electric company and based on known information on the pumps and electric usage they can estimate pumping within a reasonable amount of accuracy. She added that below a certain threshold, individual monitoring is not completed.
- Chairman Downing asked if we artificially sustain flows, are there other issues we are causing. Mr. King explained that when the MFL status assessment is completed, there is a focus on determining the groundwater withdrawal affect. If temperatures get warmer, there will be more water use by trees and vegetation. The SRWMD will re-evaluate MFLs over time to update any flow changes.
- Mr. King explained there are ongoing discussions with FDEP and SJRWMD to determine projects and conservation for prevention and recovery strategies. For example, how can we get more aquifer recharge or are there any alternative water supply options?
- Ms. Brown added that anything that saves water is eligible for cost share in the SRWMD. Soil moisture probes, remote control panels, retrofits for pivot operation, etc. are currently being evaluated. This program is primarily state funded.

#### **4) Lake Beatrice Seed Grant Project (Dan McGraw, Nathan Brown, and Pat McHugh, USACE)**

The US Army Corps of Engineers (USACE) team summarized that the Savannah District is working with Southern Georgia Regional Commission on the Lake Beatrice seed grant project. Mr. Dan McGraw presented the Hydraulic and Hydrologic (H&H) Model that was used in this seed grant project. The following items were discussed:

- Proposed dam location, alignment, and size
  - The preliminary work that GA EPD leading up to the Seed Grant project had identified a storage goal and this was the design storage used at normal pool
  - The H&H model was used to determine the peak water elevation and spillway size required to convey the largest flood event
  - The Lake Beatrice Dam is a Category 2 dam, which means it is exempt from a defined design storm event. The 100-year storm event was used as design storm for this dam
- Minimal changes to downstream flooding are expected

- Conclusions from the model are summarized below:
  - The proposed dam can meet EPD's goal and route the 100-year flood.
  - Dam alignment and height are limited by surrounding topography – there was some concern expressed regarding the length of the overall dam to tie into existing elevations to achieve the desired storage and how that length could potentially drive construction costs very high
  - Other auxiliary spillway designs may provide more efficient methods of discharge.

Mr. Nathan Brown presented the geotechnical evaluation of the primary spillway. Mr. Brown explained that the former Gristmill has deteriorating components and would need to be removed. The auxiliary spillway would also need to be removed due to corrosion and poor structural conditions. Mr. Brown then reviewed the following embankment conditions:

- Older dams were often not installed with state of the art equipment/materials. For the Lake Beatrice dam, dense material is found at the top, because it has been baked in the sun. There is also a layer of loose sand due to a lack of compaction, and then a transitional foundation zone with wood fragments. The foundation of the dam is a silty sand.
- Mr. Brown suspects that this dam did not fail from slow failure during 4-5 breaches, but rather from the dam being overtopped. The current dam is adequate when loading to the top for a transient load, but if the dam is raised 15 ft, the recommendation is to remove and replace the dam.
  - Mr. Thompson asked the Council to review the purpose of the dam. Mr. Wood explained that during the last planning update, there were downstream reaches in the Suwannee area that were impaired for low flows. The preliminary model from EPD suggested that if you can store water at Lake Beatrice and release water at low flows, up to 50% of the low flow gaps could be solved.
  - Mr. McGraw noted that water from the City of Fitzgerald's 2 mgd outfall ends up in the creek. The idea is to store this water and release it in periods of drought. He added that the Lake Beatrice dam is currently compromised from a past failer, so it's flowing more as a creek and not storing water as a lake would.
  - Mr. Wood asked if a lower level dam would be more feasible than a long, high dam. Mr. McGraw explained that the dam is 15 ft high at the main section and tapers to high ground. For this study, the dam design was constrained by the water storage goal at normal pool. Mr. Downing added that we may have to weigh feasibility, cost and size. Mr. Wood noted that this may not be in their current scope of work for the grant that maybe this would be considered for a future grant application.
  - Mr. Wood asked for an update on the project timeline. Ms. Elizabeth Backe (Southern Georgia Regional Commission) explained that the final report from USACE will be produced by the end of August. USACE is willing to present to the Council at the next meeting.

### **5) Seed Grant Updates (Shayne Wood, CDM Smith)**

Mr. Wood reminded attendees that if anyone would like to propose a seed grant project, they should present their grant to the Council in August/September to provide the Council with ample review time before the grant applications are due in late October. He summarized that one seed grant was received from the City of Valdosta. They are still working on getting the contract in place. The City of Valdosta said they are planning to contribute to the Lake Beatrice project as agreed in that original grant application. Dr. Gary Hawkins is willing to propose a project if there is an opportunity in his field of expertise. Chairman Downing asked Mr. Wood to reach out to Dr. Gary Hawkins and invite him to a future meeting.

### **6) Updates from EPD (Cliff Lewis, Georgia EPD)**

Mr. Lewis summarized that in the Flint Basin, there is a moratorium on Floridan aquifer groundwater permits and surface water permits. On June 22, 2023, there will be frost protection permitting meeting. In September 2023, applications for frost protection permits will be accepted, and permits will likely be distributed by December 2023.

### **7) Review and Discussion of Regional Water Plan Updating Process and Schedule to Finalize Updated Plan (Shayne Wood, CDM Smith)**

Mr. Wood reviewed the public comments received. Discussion items related to public comments are noted below:

- Twin Pines Minerals mine near the Okefenokee Swamp - A comment suggested that the plan mention the mine and its potential effects on groundwater and surface water. GA EPD is still reviewing the permits and requesting additional information. EPD offered to provide comments on this to inform the Council. The Council determined there is no reason to update the Draft Regional Water Plan in relation to this comment at this time as the permitting of this potential project is still being considered.
- Mr. Thompson asked if this titanium mine is different from the phosphate mines in Florida. Ms. Brown explained that phosphate mine water use is different.
- Mr. Thompson noted that some industries, such a power plants that recycle their effluent/cooling water. Mr. Wood added that there are some new combined cycle power plants that use a lot less water, as they cool water in the pond and recirculate it. He added that less efficient plants are being replaced with these newer technologies that are more water efficient. Mr. Wood will follow up with Bill on water uses for different cooling and water production in these power plants.

The Council did not request to make any changes to the Draft Regional Water Plan after reviewing the public comments. Chairman Downing reminded CMs that the Council should refrain from hypotheticals and focus on addressing anything that CMs have comments on or items they want addressed. The Council's responsibility is to develop and update the regional water plan and outline management practices to be utilized and implemented in the region and that it is up to EPD to deal with specific permitting actions.

## **8) Public Comments**

One public comment was received in person from John Quarterman, the Suwannee Riverkeeper. Mr. Quarterman noted that WWALS plans to submit another seed grant application. He added that he has asked Valdosta for a signed copy of their Okefenokee resolution and plans to ask for the same from Kingsland.

Mr. Thompson asked what problems would occur have if you mined the Okefenokee swamp. Mr. Quarterman said this could affect the aquifer, recreation, and potentially increase risk for forest fires.

Mr. Quarterman also commented on the MFL review process and said the MFL process should account for the extent of the need for water.

No online public comments were received.

## **9) Next Steps**

The Council decided to plan the next meeting for late August in Valdosta. Chairman Downing thanked everyone for attending the meeting, and the meeting was adjourned.

## **10) Meeting Attendance**

Suwannee- Satilla Regional Water Planning Council members in attendance:

- Scott Downing, Brent James, John McCall (proxy for Rusty McCall), Grady Thompson, and Doyle Weltzbarker

Georgia EPD Representative in attendance:

- Cliff Lewis

Regional Water Planning Council contractors in attendance:

- Shayne Wood, Emory Gawlik, and Bailey Peak (CDM Smith)

Public/Agency attendees:

- Elizabeth Backe (Southern Georgia Regional Commission)
- Pamela Backus (US Army Corps of Engineers)
- Amy Brown (Suwannee River Water Management District)
- Nathan Brown (US Army Corps of Engineers)
- Guy Hancock (University of Georgia)
- Sean King (Suwannee River Water Management District)
- Dan McGraw (US Army Corps of Engineers)
- Pat McHugh (US Army Corps of Engineers)
- John Quarterman (Suwannee Riverkeeper)
- Merrill Varn (St. Marys River Management Committee)
- Beth Williams (US Army Corps of Engineers)