

## **Memorandum**

*To: Upper Oconee Regional Water Planning Council*

*From: Laura Hartt and Michelle Vincent, Jacobs*

*Date: April 14, 2022*

*Subject: Upper Oconee Council (UOC) Meeting (subject to Council review and approval)*

This memorandum provides the meeting summary of the Upper Oconee Regional Water Planning Council Meeting, held in person on April 14, 2022, at The Lake Club at Reynolds Lake Oconee (1100 Lake Club Drive, Greensboro) from 9:30 AM to 1:30 PM. The meeting also was offered on the Zoom platform.

### **1) Welcome and Council Business**

Council Vice-Chair Pat Graham called the meeting to order and welcomed the Council and other attendees. Roll was called. Vice Chair Graham asked for motions and seconds to approve the December 8, 2021 Draft Meeting Summary and the April 14, 2022 draft Meeting Agenda. Both were approved without dissent. Vice Chair Graham extended the Council's thanks to Council Member Rabun Neal for the wonderful hospitality for the meeting. Mr. Neal welcomed the Council and introduced the facility. Reynolds Lake Oconee currently has many job openings available, and is experiencing a lot of growth, including 182 homes under construction. Mr. Neal indicated they appreciated the Council being at the facility and looked forward to having them back.

Vice-Chair Graham asked the attendees to briefly introduce themselves.

### **2) EPD Updates on Current Efforts/Plan Timeline – Ania Truszczynski (EPD)**

Ania Truszczynski (EPD) gave the Council an update on the timeline for the overall Regional Water Planning process, noting the following key benchmarks:

- Technical work (e.g., forecasting, resource assessments) began in 2020 to support plan update efforts;
- Contractors and EPD will complete draft plans by September 30, 2022 for public comment;
- EPD will incorporate public comments into draft plans by November 30, 2022;
- State will approve final plans by December 31, 2022; and
- Council meetings will occur quarterly in 2022.

Ms. Truszczynski also reviewed the timeframe for when plan sections will be brought to the Council for review and approval.

### **3) Plan Section 1.3 – Upper Oconee Planning Region Vision and Goals – Laura Hartt (Jacobs)**

Laura Hartt (Jacobs) reviewed Section 1.3 Vision and Goals with the Council members present. Ms. Hartt gave some background on how the Vision and Goals were originally developed, and asked the Council to determine if any changes were needed, based on new water needs, challenges, or other additional information. No changes were proposed.

Vice-Chair Graham then asked for a 30-day period to give all Council members time to review. *(Post meeting update: Section 1.3 was emailed to the Council for review on April 26, 2022. Council was asked to provide any suggested updates by May 26, 2022. To date, six (6) members have approved the section as written. Chair approval is pending. Quorum needed is five (5) members.)*

#### **4) Metro North Georgia Water Planning District Update – Brian Skeens (Jacobs)**

Brian Skeens (Jacobs) provided the Metro District Plan update on behalf of Danny Johnson (Atlanta Regional Commission). The update included the schedule and a summary of proposed action item changes. Mr. Skeens also updated the Council on the status of the Stormwater Forecast. Ms. Hartt reminded the Council that the District Plan's Appendix B has pertinent information about water allocations for neighboring counties in the District.

Mr. Skeens reminded the Council of the upcoming District webinar (April 19, 2022) and the public comment deadline of May 11, 2022.

#### **5) Flow-Dependent Benefits and Values of Water Resources in the Upper Oconee Region – Dr. Gail Cowie (Georgia Water Planning & Policy Center (GWPPC))**

Please see posted slide presentation for more information on this agenda item.

Dr. Gail Cowie (GWPPC) gave a presentation on the Seed Grant project, *Flow-Dependent Benefits and Values of Water Resources in the Upper Oconee Region*. Dr. Cowie introduced herself by emphasizing her connection to the Oconee Basin and water planning in general, and then thanked the Council for their service.

Dr. Cowie noted that while the current regional water plans recognize a wide range of uses for all basins, this Seed Grant project provides basin-specific information on additional benefits and values of interest to Upper Oconee stakeholders. She explained that the two main sources of stakeholder input were water users in the basin as well as scientific/technical studies. Forty-eight people participated through interviews and meetings. Interactive maps were used to collect data. Products and deliverables include maps, reports, and a project summary.

The project identified multiple benefits and values which, based on participant input, were grouped in seven categories: water supply, water quality and wastewater assimilation, direct economic value, recreation on lakes and rivers, aquatic habitat and species, recreation and habitat on adjacent lands, and environmental and historical education.

Dr. Cowie presented an interactive map showing the sites that participants identified as important, organized in these seven categories. Sites include reaches used for water supply and wastewater assimilation; river and lake recreational sites; and fish and wildlife habitat (instream and along riparian areas and connected floodplains). She demonstrated how the map could be filtered to select benefits or locations of interest to the specific user.

Dr. Cowie then explained how the Seed Grant project could inform the metrics used to evaluate the results of the Basin Environmental Assessment Model (BEAM) used to derive the surface water availability resource assessments. She emphasized that, for this project, a “metric” is defined as a numeric threshold that either supports a use or benefit or produces an undesirable condition for a use or benefit. The Seed Grant project produced new information that could be used to evaluate BEAM modeling results, specifically for boating recreation and fish and wildlife habitat.

Dr. Cowie summarized the status of project, noting that she was collecting comments. She then asked the Council to review the website and draft summary report and to consider how the Seed Grant results might be incorporated into the Upper Oconee Council plan.

Question from Zoom chat: Can you please give an example of an historical site?

- Dr. Cowie responded that Skull Shoals in Greene County is an example of a site that has historical significance.

## **6) Surface Water Resource Assessment (BEAM Update) – Dr. Wei Zeng (EPD)**

Please see posted slide presentation for more information on this agenda item.

Dr. Wei Zeng (EPD) gave an update on the Basin Environmental Assessment Model (BEAM). He explained how the model differed from previous planning models, particularly with respect to the increase in nodes and improved spatial resolution. He also noted that the period of record from which data was collected spans 1939 – 2018.

Dr. Zeng presented five modeling results, each demonstrating unique water supply challenges. The first three focused on water supply shortages as follows:

1. City of Winder – The City experiences water supply shortage during severe drought periods (e.g., 2007-8)
2. Bear Creek Reservoir (Upper Oconee Basin Water Authority) – The reservoir is able to meet water supply demands for all years, including drought. However, storage may be drawn down significantly during extremely dry conditions or consecutive drought periods.
3. City of Statham – The City’s NRCS reservoir experiences some very small shortages during drought years. EPD did not receive reservoir information on storage and operations, and therefore assumed a run of river operation. If storage data is added, that could change the results.

Dr. Zeng then asked the Council if water supply challenges was a metric the Council would like to include in the Upper Oconee Regional Water Plan.

Question: Vice-Chair Graham asked for clarification on whether “moderately dry” current conditions are the appropriate baseline, and what the implications might be for municipal water users whose new or increased withdrawal permits might be contingent on data showing a shortage.

- Dr. Zeng responded that EPD chose a baseline of “moderately dry” current conditions (as opposed to “normal” conditions) as a precaution to ensure that future demands have incorporated potential drought conditions. If the baseline condition was “marginally dry” instead, the difference between current and future demands would be larger, suggesting a larger water supply challenge in the future.

Question: Vice-Chair Graham asked if an entity increases its water supply demand, what are the implications for using this metric in decision making?

- Dr. Zeng reiterated that the “moderately dry” baseline was chosen because the differences between current and future demands would be smaller.

Dr. Zeng suggested that one option might be to use drought year demands as the baseline demands. He noted that although the performance metric would be similar, the extent of water supply challenges in the future may be slightly different.

Ms. Hartt then suggested that it might be a good idea to set up a focused conference call with the Chair, Vice-Chair, and Dr. Zeng to go into more details regarding the water supply challenges metric. The Vice-Chair agreed, noting that the lack of a quorum at the meeting meant that no decision could be made about the use of the metric, in any case.

Dr. Zeng then presented a fourth modeling example concerning wastewater assimilation:

4. Athens-Clarke County Cedar Creek Water Reclamation Facility – EPD modeled wastewater flow for the period of record. The regulatory requirement of maintaining a minimum flow of the 7Q10, or 91 cubic feet per second, was breached 1% of the total time, primarily during the 2007-8 drought.

Dr. Zeng noted that this metric could be used to examine how often the 7Q10 regulatory requirement was breached under baseline conditions as compared to future conditions.

Ms. Hartt suggested that given the lack of a quorum, the Council’s decision to adopt this metric could wait until the next Council meeting. The Vice-Chair concurred.

Dr. Zeng presented the fifth modeling example, which focused on non-motorized boating performance metrics:

5. Using Flows to create a Boating/Paddling Performance Metric

- Performance metric 1 (Athens, GA) – Preferred kayaking and canoeing conditions fall within a specific range of river depths, as measured by gauge height. Levels too low inhibit movement while levels too high pose safety risks. This metric would indicate the number of days river flows fall within optimal river depths.
- Performance metric 2 (Athens, GA) - Shoal habitat is important for riverweed and caddisflies, both of which sustain other fish and wildlife. This metric would examine the number of days that flows fall below 100 cubic feet per second during the dry season, indicating loss of shoal habitat.
- Performance metric 3 (Athens, GA): Swift water habitat is important for fish and wildlife dependent on fast moving water for feeding, habitat, and refuge from predators. This metric would examine the number of days that flows fall below 265 cubic feet per second during the dry season, indicating loss of swift water habitat.
- Performance metric 4 (Dublin, GA): Floodplain inundation is important because these flooded areas provide nurseries for larval/juvenile fish as well as breeding grounds for wading birds. This metric would assess the number of days that flows fall below 15,000 cubic feet per second from November to March, indicating loss of floodplain habitat.

Dr. Zeng noted that the Upper Oconee Council is the third Council to consider metrics beyond just water supply and assimilative capacity. He also noted that the additional data considerations make the project's modeling more defensible, and more robust.

Dr. Cowie commented that looking at future conditions doesn't necessarily set up an either or situation, but allows the Council to see what the effects of use are on the systems. She also noted that examining drought conditions was important not only for health and safety, but also recreation and fish and wildlife habitat.

Ms. Elizabeth Booth (EPD) acknowledged that it was a bit of a balancing act to consider the various metrics.

Dr. Cowie stated that the metrics can help inform what management practices the Council prioritizes.

Ms. Hartt suggested that given the lack of a quorum, the Council's decision to adopt any metrics could wait until the next Council meeting. The Vice-Chair concurred.

**7) Seed Grant Highlight: GIS Mapping – City of Madison – Bryce Jaeck (City of Madison)**

Bryce Jaeck (City of Madison) presented an update on the Seed Grant awarded to support GIS Mapping of the City of Madison's water and wastewater systems. To date, the water system has been mapped; mapping of the wastewater system will be completed in June. Currently, the City is coordinating with Morgan County to map a small system under their jurisdiction.

Once the project is complete, the information will be available online via ARC GIS, which does not require special software. The city's staff is receiving training on the system. Mr. Jaeck thanked Mary Gazaway (EPD) and staff at Rindt McDuff for their help on the project.

### **8) Water Quality (Assimilative Capacity) Resource Assessment – Elizabeth Booth and Anna Truszczynski (EPD)**

Please see posted slide presentation for more information on this agenda item.

Elizabeth Booth (EPD) shared a video presentation providing an overview of the recent Clean Water Act Triennial Review as well as an introduction to the Water Quality (Assimilative Capacity) Resource Assessments.

Ms. Booth then discussed the dissolved oxygen sag (DOSAG) modeling results, reviewing the maps of the region and the amount of assimilative capacity available in water bodies under both current and future conditions. She explained that some stream segments appear to show lower assimilative capacity in the future, but not low enough to violate water quality standards. She also noted that some stream segments show improved future conditions due to tighter permit limits. For example, the Little River currently has low dissolved oxygen due to wastewater facilities discharging in the upper basin. However, when those facilities expand to accommodate larger discharges in the future, they will receive tighter permit limits for ammonia and dissolved oxygen. Also, future ammonia limits will have toxicity limits to protect mussels. Ms. Booth further noted that many facilities in the basin are secondary treatment plants that do not have dissolved oxygen or ammonia limits but will have them in the future after expansions or renewals.

Ms. Booth then explained the watershed and lake modeling results, focusing on total nitrogen and phosphorus for Lake Jackson, Lake Oconee and Lake Sinclair. She noted that EPD recently established chlorophyll a criteria for Lake Oconee and Lake Sinclair. In particular, several locations within Lake Oconee have new criteria, including the Oconee Arm at Highway 44, Richland Creek Arm, and upstream of the Wallace Dam Forebay. Ms. Booth stated that EPD's model for future conditions assumes total phosphorus limits for all dischargers, including those currently lacking limits. These criteria are undergoing EPA review.

Question: What is the method for controlling chlorophyll a?

- Ms. Booth responded that chlorophyll a is influenced by nutrients, primarily phosphorus, found in wastewater discharges. Wastewater discharge facilities are assigned phosphorus limits to control the levels, and may need nitrogen limits in the future. However, EPD and other stakeholders also need to work to reduce non-point sources. One example is nutrient management plans for cattle farmers and other agriculture. Ms. Booth further explained that once a nutrient limit is approved for a lake, that limit is essentially a nutrient TMDL (i.e., the Total Maximum Daily Load, which is an estimate of the maximum amount of pollutant a water body can receive and still meet water quality standards). As a result, point source dischargers are given total phosphorus limits. Major dischargers are assigned limits

of 0.5 mg/L while minor dischargers are assigned limits of 4.17 mg/L. These loads are maintained in the future.

## **9) Plan Section 4 Forecasting Future Water Resource Needs – Brian Skeens (Jacobs)**

Please see posted slide presentation for more information on this agenda item.

Brian Skeens (Jacobs) reviewed how previous forecasting efforts for the municipal, industrial, agriculture, and energy sectors were incorporated into Section 4 of the Regional Water Plan. He noted that some of the forecasting information and methods had changed with the latest update. In particular, new population projections were incorporated.

Question: Are most counties flat for agricultural growth?

- Bill Davis (CDM Smith) responded that agricultural forecasting is driven primarily by irrigated acres within a county. Many counties have a small number of irrigated acres, so an increase over time is very negligible and may not be detectible. There are other counties that show more pronounced agricultural growth.

Comment: Jackson County population is growing faster than is shown by the numbers.

- Mr. Skeens responded that the Council will have the opportunity to revisit the numbers during the next update.

Question (Vice-Chair Graham): Do the 2020 numbers reflect the latest U.S. Census data? If not, could we add a column to show the 2020 U.S. Census data?

- Mr. Skeens responded that the 2020 U.S. Census data does not change the forecasting results, but that the data could be added to the population table. He suggested discussing the issue further with the Council to see how best to incorporate that information.

## **10) Public Comment**

Vice Chair Graham asked if there were any comments from members of the public or local officials.

Bryce Jaeck (City of Madison) offered some observations for consideration related to the discussion on the BEAM model. He suggested that if the Council uses a more drought-oriented model, it may give suppliers a little bit of cushion. He noted that using a drought-oriented model would give flexibility to catch up on water demands as development pressure grows, particularly for those water suppliers reliant on Bear Creek Reservoir. He emphasized that water suppliers should not wait for the state to act before planning for drought.

He also commented that when selecting a baseline period of time that it might be helpful to select a representative time period capturing a range of temperatures.

Vice Chair Graham affirmed that the data and modeling though BEAM is far superior to the information relied upon when the first regional water plan was developed. She also noted that the improved data and modeling will allow the Council to make informed decisions about management practices, particularly those needed to address drought.

Vice-Chair Graham thanks Mr. Jaeck for his comment, stating that he makes a good point. Namely, a supplier should not necessarily depend upon the state to waive requirements during drought, and that all users are subject to what happens with the weather.

### **11) Next Steps/Wrap Up/Adjourn**

Vice Chair Graham reminded Council members to return their comments on Sections 1.3 and 4 within 30 days.

The Vice Chair noted that the next meeting most likely would be held in June or July, pending new appointments. She then asked Council members to contact Ms. Hartt with any specific concerns or to provide any input on meeting location, dates, and agenda items. Vice Chair Graham stated that she hoped that the Council would receive new appointments before the next meeting. She thanked the meeting organizers, speakers, and participants for joining the meeting.

The meeting adjourned at approximately 1:40 pm.

### **Meeting Attendance**

#### Council Members

- Pat Graham (Vice-Chair)
- Hunter Bicknell
- Jim Luke
- Rabun Neal (welcomed participants but was not available for the rest of the meeting)

#### Georgia EPD Staff

- Anna Truszczynski
- Liz Booth (virtual)
- Wei Zeng (virtual)

#### Public Attendees and Agency Partners

- Ritchie Mullen, Georgia Forestry Commission (virtual)
- Jeremy Hess, GHD Services Inc. (virtual)
- John Joiner, USGS (virtual)
- Laura Rack, UGA River Basin Center (virtual)
- Bryce Jaeck, City of Madison
- Paul McDaniel, Georgia Forestry Commission
- Carol Flaute, Northeast Regional Commission

- Robert Crouc, BASF

Planning Contractors

- Laura Hartt, Jacobs
- Brian Skeens, Jacobs
- Michelle Vincent, Jacobs (virtual)
- Bill Davis, CDM Smith (virtual)
- Gail Cowie, Water Planning and Policy Center